

This is the 1<sup>st</sup> affidavit of David Kenney in this case and was made on \_\_\_\_/Mar/2015

VANCOUVER REGISTRY

## IN THE SUPREME COURT OF BRITISH COLUMBIA

**BETWEEN:** 

NEURVANA RECOVERY AND WELLNESS INC. and DAVID KENNEY

PETITIONERS

AND:

HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA (MINISTRY OF CHILDREN AND FAMILY DEVELOPMENT - DIRECTOR OF CHILD PROTECTION)
HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA (MINISTRY OF HEALTH - MEDICAL HEALTH OFFICER, INTERIOR HEALTH AUTHORITY) and INTERIOR HEALTH AUTHORITY

**RESPONDENTS** 

### **AFFIDAVIT**

- I, DAVID KENNEY, businessman, of the City of Barrie, in the Province of Ontario, SWEAR THAT:
- 1. I am the sole director and a shareholder of the petitioner, NeurVana Recovery and Wellness Inc. ("NeurVana"), and the former Chief Executive Officer and Executive Director of a residential wellness centre that, until the events described in this Affidavit, operated under the name of NeurVana in Kelowna, British Columbia, and as such I have personal knowledge of the facts and matters set out below, except where stated to be made upon information and belief, and where so stated, I verily believe the same to be true.
- 2. I have reviewed the facts in a signed but unfiled copy of the Petition, which are a summary of the facts I depose to in this Affidavit, and I accordingly believe those facts to be true.

3. NeurVana has ongoing duties of confidence to the approximately 100 clients who attended our program, as well as to their parents. Accordingly, I have not referred to certain clients in this Affidavit by their names.

## My Background

- 4. I was born in Oakville, Ontario, and currently live in Barrie, Ontario.
- 5. Following my graduation from high school, I played and coached hockey for a number of years before returning to Northern Arizona University to earn my Bachelor of Arts degree, which I earned in 1995. I then earned my Masters of Education degree from Northwestern State University, in Louisiana, in 1996.
- 6. After obtaining my Masters of Education, I worked as a faculty member at Kent School, in Kent, Connecticut; owned and operated my own advertising agency; and was Director of Admissions, Marketing, Communications and Alumni Relations and a member of the leadership team for Athol Murray College of Notre Dame, in Saskatchewan.
- 7. During my time with Kent School and Notre Dame College, I was struck by the lack of support in some private school settings for students who had learning and behavioural challenges.
- 8. I was eventually recruited and hired by Venture Academy, a therapeutic program for troubled youth. I was hired as an independent contractor to be the Team Leader for the Kelowna campus and was then promoted to Executive Director of Venture Academy.
- 9. During this time, I discovered Brainwave Optimization® ("BWO"). BWO is a non-invasive technology created by a computer programmer named Lee Gerdes of Brain State Technologies from Scottsdale, Arizona. My research into BWO led me to believe that it could be a promising modality for helping youth and adults. However, to my knowledge, it had never been integrated into a residential program.
- 10. Subsequently, I left Venture Academy, and in August 2011, my wife Susan and I opened NeurVana, as a co-educational, residential wellness program for teens and young adults with personal challenges.
- 11. In May 2012, we also enrolled in the education program run by Brain State Technologies to be certified as BWO technologists. Prior to becoming certified ourselves, we contracted with a third party BWO provider to provide BWO sessions for NeurVana's clients.
- 12. I have also earned a certification as a SMART Recovery Coach ("Self-Management for Addiction Recovery"). SMART Recovery is a science-based approach to recovery and is recognized by the American Academy of Family Physicians; the Centre for Health Care

Evaluation; the National Institute on Drug Abuse; the US Department of Health and Human Services; and the American Society of Addiction Medicine.

13. Overall, I have more than 25 years of hands-on experience in mentoring, educating, coaching and leading young people, principally teens and young adults.

### NeurVana

- 14. NeurVana was set up to be a facility for teenagers and young adults who were struggling with behavioural and emotional challenges, including depression, anxiety, poor memory, learning challenges, addiction, eating disorders, anger management, and low motivation. In most cases, the clients who came to NeurVana had previously received treatment for their challenges from medical professions, and parents often referred to NeurVana as a last resort. In some cases, including where they were on prescription medication, our clients were still under the care of medical professionals (meaning persons not employed or otherwise working for NeurVana).
- 15. The concept of NeurVana was to offer a holistic brain-centric approach to wellness (meaning good health). We combined individual care and attention with yoga, music, art, exercise, healthy eating, meditation, sleep, fun and play, life coaching and sessions with the BWO technology. Attached as Exhibit "A" is a copy of a document prepared by NeurVana to assist parents in understanding the holistic nature of the activities and modalities that their children would engage in at NeurVana.
- 16. The programs offered by NeurVana were tailored to the clients to the maximum extent possible without compromising the core values and methodology of the program as a whole.
- 17. NeurVana did not offer or provide medical or psychiatric treatments. For instance, it was not our policy, or part of our concept, to provide recommendations regarding prescriptions. NeurVana also did not offer services such as clinical psychology or talk therapy.
- 18. When in operation, NeurVana provided wellness services to teens aged 13 to 19, and in some cases young adults up to the age of 24, and could accommodate up to ten individuals at a time.
- 19. By December 2013, NeurVana's program lasted typically 30 to 45 days, but sometimes lasted as long as 90 days.
- 20. Over the two-plus years following NeurVana's establishment, we received positive feedback from attendees of the program and their parents. Attached as Exhibit "B" are copies of documents showing some of the positive feedback we received and obtained permission to publish:

- (a) an email, dated December 18, 2014, from one of the clients at NeurVana on December 5, 2013;
- (b) an undated testimonial from the mother of a NeurVana graduate, a Clinical Psychologist & Clinical Director, Mental Health; and
- (c) an email, dated January 28, 2014, from a NeurVana graduate.
- 21. That is not to say that there were not cases where the results achieved did not reach the level to which we aspired, and in some cases clients withdrew from NeurVana's program prior to completing it. We understood our methodology is not suitable for everyone.

# NeurVana's Operations

- 22. NeurVana's main premises, referred to as "The Ranch", were in a converted house located on the outskirts of Kelowna. The Ranch was rented in my name. The building consisted of separate wings for male and female clients, as well as a media room, a music/coaching room, office space, a dining room (which doubled as an art room), a large great room (for yoga, games, activities and group gatherings), an open kitchen and a breakfast/lunch area.
- 23. In August 2013, NeurVana expanded and I rented, again in my name, a second property two kilometres away, referred to as "The Mountain". This second property contained administrative offices and three private rooms in which BWO sessions were conducted.
- 24. My wife, Susan, and I also lived at The Mountain.
- 25. As of December 2013, NeurVana employed 16 full-time team members with educational experience and backgrounds with youth. In addition, NeurVana employed ten part-time employees, and had contracts with local professionals to support in its program's offerings.
- 26. I was responsible for the day-to-day management of NeurVana, including both sets of premises at The Ranch and The Mountain, and all business related matters.

## Brainwave Optimization®

- 27. As I have referred to earlier in this Affidavit, an aspect of NeurVana's program involved clients participating in BWO sessions.
- 28. BWO involves sitting in a zero-gravity chair, in a private room, for approximately 90 to 120 minutes per session, with headphones on listening to sound waves in the form of musical tones.
- 29. The effect of listening to the sound waves could be likened to the effect of listening to meditation programs for some people. They can induce relaxation, a more heightened sense of awareness, motivation and many more beneficial states of mind.

- 30. BWO is a wellness tool, much like meditation, acupuncture, reflexology, body talk, and so many more wellness modalities.
- 31. There have been pilot studies and clinical trials conducted looking at the efficacy of BWO. Attached as Exhibit "C" are copies of some abstracts and presentations regarding the effects associated with BWO.
- 32. For instance, in 2012, Dr. Charles Tegler, a neurologist at the Wake Forest State University Hospital, published an article regarding a pilot study that suggested that BWO may assist those suffering from moderate to severe insomnia. Attached as Exhibit "D" is a copy of a paper published by Dr. Tegler regarding a pilot trial on the effects of High-resolution, Relational, Resonance-based, Electroencephalic Mirroring, which is the technical name for BWO technology, to relieve insomnia.
- 33. Typical clients in NeurVana's program would complete ten BWO sessions in their first week, and 15 30 BWO sessions over the course of their time at NeurVana.

# The Gans Report

- 34. In approximately September 2013, NeurVana engaged Roger Gans to conduct a survey to examine the satisfaction level of families with respect to NeurVana's holistic approach to recovery and wellness.
- 35. I understand Mr. Gans to be experienced in the design and analysis of surveys. He is a senior writer and consultant for The Kaleel Jamison Consulting Group, Inc., which provides services regarding strategic organizational change for companies. He is also an adjunct professor at the business and communications departments at the Sage Colleges of Albany, and Russell Sage College, Troy, New York.
- 36. Mr. Gans was given a mandate to track and measure satisfaction with NeurVana's program by surveying former client families. Mr. Gans carried out his analysis of the results of his survey independently, i.e. without the assistance or involvement of any member of NeurVana's team. Attached as Exhibit "E" is a copy of the Program Evaluation Survey Analysis prepared by Mr. Gans.
- 37. An invitation to participate in the survey was sent to the parents of all 86 of NeurVana's clients who completed its program. An invitation was not sent to the parents of the 14 clients who either choose not to complete the program or were withdrawn from the program by NeurVana. In cases where a client's parents were separated or divorced, and provided different contact information, an email containing an invitation to participate in the survey was sent to each parent. In total 103 emails were sent inviting parents to participate in the survey, and 36 responses were received.

38. As set out in Exhibit "E", the results of Mr. Gans's analysis included that 97.2% of responding parents reported significant positive results with NeurVana, and 79.4% reported being very or completely satisfied.

Interior Health's Introduction to NeurVana's Operations

- 39. On January 21, 2013, Susan and I met with two representatives of Interior Health Elizabeth Ruppel RN, ABI Coordinator, Community Integrated Health Services ("CIHS"), a suborganization of Interior Health; and her colleague whose first name is Erika, to discuss the possibility of CIHS (Interior Health) employing NeurVana to help people suffering with traumatic brain injuries who were under the Province's care, within the region covered by Interior Health. The meeting was set up as a result of a telephone inquiry I received from Ms. Ruppel.
- 40. The meeting was held at NeurVana's premises, and the two representatives from Interior Health were given a comprehensive site tour, and each participated in a one-hour BWO session.
- 41. We discussed the details of and provided information in relation to NeurVana's program, teachings and modalities. The Interior Health representatives also met with both clients and team members in a group setting, and we encouraged them to ask any questions they had directly to NeurVana's clients. Attached as Exhibit "F" is a copy of the email exchange between NeurVana and Ms. Ruppel of CIHS.
- 42. While the possibility of CIHS working with NeurVana and retaining it for use by some of their clients was discussed, I understood from a conversation with Ms. Ruppel that the arrangement did not proceed because the Province was unwilling, or unable, to pay NeurVana's fee for services.
- 43. During the January 21, 2013 meeting and the communications that followed, we were not asked whether NeurVana was licensed, or required to be licensed, under the *CCALA*. Following the conclusion of NeurVana's communications with Ms. Ruppel, we had no further contact with the Ministry of Health, CIHS, or Interior Health, until December 2013.
- 44. On December 3, 2013, I received a voicemail message from Celeste Fabris of Interior Health requesting a meeting. I returned her call right away, on December 3, and a meeting was set up for the following day. During my call with Ms. Fabris, she did not mention the purpose of the meeting or her position with Interior Health.
- 45. The following day, December 4, 2013, I met with Ms. Fabris and another representative of Interior Health, whose name I cannot remember (nor did I get a business card). The meeting took place at the Kelowna offices of Interior Health.

- 46. At the beginning of the meeting, I learned that it was a licensing review meeting. I was told Interior Health was assessing whether NeurVana needed to be licensed as a community care facility under the British Columbia Community Care and Assisted Living Act (or "CCALA").
- 47. After about an hour and a half of reviewing a Ministry of Health document called a "Prescribed Services Worksheet" in detail, both Interior Health representatives expressed to me the view that they were unable to reach a decision regarding whether NeurVana required a licence under the *CCALA*, but that it seemed that NeurVana did not meet the definition of community care facility.
- 48. Ms. Fabris told me Interior Health would have to complete a site visit and we provisionally arranged for one the following Tuesday, December 10, 2013. Ms. Fabris said she would confirm this appointment in the coming day or two.
- 49. During the course of the meeting, Ms. Fabris and her colleague asked questions regarding to what extent, if any, NeurVana monitored, recorded or gave directions with respect to the taking of medication. I told them NeurVana did not provide medication to its clients and that while prescription medications were kept in a safe, when a client wished to take his or her medication, he or she would simply ask a staff member to open the safe and the client would take his or her medication.
- 50. Ms. Fabris said one of her concerns was NeurVana's hot tub. She told me that, due to public health and safety concerns, a hot tub needed to be regularly serviced and tested by government officials.
- 51. At the conclusion of the meeting, I asked what the licensing process might entail if it was in fact deemed that NeurVana fell under the *CCALA* and required licensing. Ms. Fabris handed me a two-page document regarding the licensing process, but said not to worry about spending too much time on it for the moment as they were not sure it applied to our program. Ms. Fabris also told me that if it was determined that NeurVana required a license, Interior Health would work with us over a 60 to 90 day period to ensure we met any compliance issues.
- 52. Ms. Fabris said she and her colleague would have to meet with their superiors to review the file. I asked if I could meet with her superiors to engage in the process and work collaboratively. However, Ms. Fabris denied my request. The meeting then ended.

## Removal of NeurVana's Clients

53. On December 5, 2013, there were nine teenagers, between the ages of 14 and 17, enrolled in NeurVana's program.

- 54. That morning, Susan and I had taken a new client to see Dr. Shelby Enter, a naturopathic doctor, in Vernon, British Columbia.
- 55. While I was away from NeurVana's premises, I received a phone call from Heather van der Hoop, a NeurVana employee. She told me officials from the provincial government had arrived at The Ranch and The Mountain. She indicated they had presented themselves suddenly and aggressively. She asked me what she should do.
- 56. I asked Ms. van der Hoop if I could speak directly to whoever was in charge. The phone was handed to Cheryl Beauchamp, and I asked her what was going on. Ms. Beauchamp indicated her office had received a phone call from someone and was concerned that we were holding people "against their will." She said they needed to interview the young people in NeurVana's program. Her tone during this conversation was brusque and confrontational.
- 57. I understood by this time that Ms. Beauchamp was a social worker and that the provincial government officials who had come to NeurVana's premises were from what I now understand to the office of the Director of Child Protection (the "Director") in the British Columbia Ministry of Children and Family Development ("MCFD").
- 58. I told Ms. Beauchamp that none of the clients at NeurVana was in harm's way and that we were not holding anyone against their will. In an effort to try to de-escalate the sense of confrontation I was getting from Ms. Beauchamp, I told her NeurVana's staff would cooperate with the officials, and that I would be at The Ranch as soon as I could.
- 59. I then spoke to Ms. van der Hoop again and told her to do what the officials asked, and to ensure all NeurVana staff understood to do the same thing.
- 60. In saying these things I did not think about what authority Ms. Beauchamp might be acting under. I was surprised and taken off-guard. Nor did I have an understanding of what kind of process was taking place.
- 61. I later learned from Ms. van der Hoop, and two other NeurVana employees Sarah Nystrom and Katie Reum that a team of four social workers had arrived at both NeurVana's properties, simultaneously, at about 10:00 am. Two social workers showed up at each of the two properties, requiring entry. Ms. Beauchamp was first met at the front door of the main property, The Ranch, by Ms. van der Hoop.
- 62. As stated above, the officials entered both locations without advance notice, and for the sake of clarity without warrant, or any documentation or authorizations being provided to NeurVana. Neither location is open, or meant to be accessible, to the public.

- 63. At some point, I also received a telephone call from Ms. Reum, who told me the two social workers who attended at the second NeurVana property, The Mountain, came inside and told NeurVana's staff to immediately stop the BWO sessions for the three clients present at The Mountain. The social workers brought the three clients to The Ranch and would not allow any NeurVana team members to accompany them.
- 64. After my conversation with Ms. Beauchamp, I called NeurVana's lawyer, Mathew Dober, and asked him to meet me at The Ranch.
- 65. I then started driving to The Ranch. I got there about 30 to 40 minutes after my phone call with Ms. Beauchamp ended.
- 66. When I arrived, Ms. Beauchamp met me just inside the front door of the property. I saw most of the clients sitting in the music room all alone, with no staff. As I started to walk towards the clients, Ms. Beauchamp stopped me and told me not to talk to them.
- 67. Susan then introduced herself to Ms. Beauchamp. Susan told Ms. Beauchamp she was an owner of NeurVana and proceeded to walk towards the clients. I saw Susan approach the clients and begin speaking with them.
- 68. At that point, I asked Ms. Beauchamp to move to a more private location, so we could talk and not upset our clients. We walked to the dining room entrance where we stood and talked.
- 69. I asked Ms. Beauchamp to explain what she was doing at NeurVana. She again said something to the effect that we were holding youths against their will.
- 70. I explained to Ms. Beauchamp that the week before, one client staying at The Ranch had walked off the property to a neighbour's house, where she had reported to the neighbour that she had run away and wanted to go home. Ms. Nystrom and I had followed the client, to make sure she was safe, although we did not stop her or block her path. While at the neighbour's house, the client called her parents. I was aware of this, as I had called her parents to seek their directions and was on the phone with them when the client called their home phone.
- 71. An RCMP constable also came to the neighbour's property. My understanding from speaking with the constable was that he spoke to the client, her parents and the neighbour. Following this, the client left the neighbour's house with the constable, and voluntarily got into my car and told me she had decided to come back to The Ranch.
- 72. I explained this to Ms. Beauchamp. I told her she could talk directly to the client in question to assure herself the client was safe, or talk to Ms. Nystrom. I offered to go and get the client or Ms. Nystrom, but Ms. Beauchamp told me "no".

- 73. Mr. Dober arrived at The Ranch about this time and also spoke to Ms. Beauchamp. The three of us then went to the media/coaching room, at the back part of the house.
- 74. At some point during our conversation in the media/coaching room, I again asked why the Director's representatives were there. During this discussion, Ms. Beauchamp told me they were there because we were "not licensed". I acknowledged this fact as being true. However, I explained I had met with Ms. Fabris and her colleague from Interior Health the previous day. I related what I had been told, i.e. that they were unsure if we needed to be licensed, and that a follow-up meeting and on-site inspection had been tentatively set up for December 10, 2013.
- 75. Mr. Dober asked Ms. Beauchamp whether she had the authority to be at NeurVana. She told him that she had full authority to be there but did not elaborate. She also indicated that if there was any interference, she would have me arrested.
- 76. As Ms. Beauchamp had given as the initial reason for her investigation that the clients were at NeurVana's premises against their will, I also offered to show her a specimen agreement that NeurVana had entered into with the parents of the nine current clients, which established the basis for NeurVana's custody of them. I mentioned our agreements contained a clause providing that NeurVana had the authority to act on behalf of the parents, while the clients were enrolled in the program. Ms. Beauchamp refused to look at the agreements or consider my comments. Attached as Exhibit "G" is a copy of NeurVana's standard form agreement. This is the form of agreement that had been entered into between NeurVana and the parents of all nine clients who were present at NeurVana on December 5, 2013.
- 77. I told Ms. Beauchamp the clients were at NeurVana at the request of their parents, that I believed the parents were happy with the program, and that she should speak to the parents to verify this. She refused. She said something like: "the parents' wishes have nothing to do with this."
- 78. I told Ms. Beauchamp that each of our clients had been told on entering NeurVana's program that their attendance was voluntary and that if they wished to leave at any time, they could do so. I told her that each client signed a voluntary enrolment form upon admission and the details of the form were explained to each client before it was signed. I offered to give these forms to Ms. Beauchamp, but again she declined to look at them. Attached as Exhibit "H" is a copy of NeurVana's standard Enrolment Form, which was entered into between NeurVana and each of the nine clients who were present at NeurVana on December 5, 2013.
- 79. At some point, I was also made aware that Ms. Beauchamp had asked to have all parent contact information provided. My recollection is that Ms. Nystrom, and possibly one other team member, had gone to my office at The Mountain, copied this personal information and given it to Ms. Beauchamp.

- 80. During this period, I called Ms. Fabris multiple times to try to discuss what was going on and our meeting of December 4, 2013. My calls went to her voicemail and I requested an urgent call back. I received no response from Ms. Fabris to these calls.
- 81. For about three hours, Ms. Beauchamp's officials interviewed our clients. These interviews, which were closed-door, took place in two offices at The Ranch which Ms. Beauchamp required we provide access to. During this time, Susan and I were instructed to remain in the back part of the house and to have no contact with any of the clients. Ms. Beauchamp advised us that if we did not comply with this direction, she would have us arrested.
- 82. During this period, there were a number of short meetings between Susan, Mr. Dober, myself and Ms. Beauchamp. Ms. Nystrom and some of the Director's other representatives also participated in some of these meetings. There were also two extensive meetings involving Susan, Mr. Dober, Ms. Nystrom, myself and all four of the Director's representatives.
- 83. When I asked Ms. Beauchamp what her investigation was focussing on, she told me that ultimately everything boiled down to one question "does the child want to be at NeurVana?" Mr. Dober responded that this was not a fair question to ask any parent or child given the context of their presence there. Ms. Beauchamp declined to provide any further clarification although she did say that if one client said he or she did not want to be at NeurVana, she would take away all nine of them. She also said again that the parents' wishes had no bearing.
- 84. At a different point, Ms. Beauchamp returned to our meeting room with two other officials and questioned me as to why I would have parent calls in my car and listen to them. I explained that my car had a good speakerphone, and was a private area for each client. I also explained that I sat in on all calls, as per NeurVana's policy, to help coach clients and their parents, as reestablishing positive parent-youth relationships and communications was one of the most important aspects of the NeurVana program. Ms. Beauchamp stated to me that my actions were in violation of our clients' right to privacy, and that I had no right to listen in on and participate in a family call.
- 85. One of the other officials also said at one point that our clients "did not need to be at NeurVana", because "they were not bad kids."
- 86. Neither Ms. Beauchamp nor any other representative of the Director asked me or any other member of NeurVana's staff why our clients were attending NeurVana, or asked to review the applications or enrolment information, which I offered to provide. They did not make inquiries regarding any of the personal issues affecting each client.
- 87. Throughout the day at The Ranch, Ms. Beauchamp and the Director's other representatives walked throughout the house without asking my permission. They conducted themselves as if they had the right to go wherever they wanted, look at whatever they wanted

and issue directions to me and others. At the time, I assumed that they had authority to do these things.

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- 88. Once it became clear Ms. Beauchamp was going to remove our clients, Susan pleaded with them to do something less drastic, as we were concerned about the clients.
- 89. Susan offered that NeurVana would allow any of the Director's representatives to stay on site where they could monitor our clients, while we worked in a rational way with the parents to get them home within the ensuing 24 to 48 hours. However, this request was rejected immediately by Ms. Beauchamp.
- 90. Ms. Beauchamp then stated that her officials were taking all the clients and expected our cooperation. I understood then we were not going to change her mind. I then concentrated on trying to make the transition as easy as possible for our clients. So I again instructed senior staff to comply with Ms. Beauchamp's directions.
- 91. I asked Ms. Beauchamp at that point if I could call our clients' parents to let them know what was happening.
- 92. Ms. Beauchamp told me that if I called our clients' parents before she contacted them, I would be obstructing her investigation and she would have me arrested. I asked Ms. Beauchamp what I should do if a parent called me. I was told that if a parent called me, I could talk to them, but only if I could prove that they initiated the call. A number of parents did contact me following the youths' removal.
- 93. I also asked Ms. Beauchamp if I could meet with a representative of the Director and Interior Health the following day to discuss everything and find a resolution. However, I was told this was not going to happen.
- 94. Near the end of the removal process, two clients were left waiting for a car with one of the Director's representatives. The social worker who remained indicated to Susan and I that the two clients wanted to see us to say goodbye. She came to the room where Susan and I had been instructed by Ms Beauchamp to remain. We hugged our clients and cried. Just before they left, one of the youths asked for a NeurVana 'gratitude circle'. This was something we did each night at the formal dining room table at dinner to give our thanks or blessings. We all held hands in a circle (about 10 to 12 people). I noticed the MCFD official watching and invited her to join, which she did. Everyone took turns saying prayers of thanks and gratitude. This lasted 4 to 5 minutes. The clients then left. As the MCFD official walked out the door, she hugged me and said: "Hurry, do whatever you need to do to get reopened," or words to that effect. She then left.

- 95. In the end, all nine clients were taken from NeurVana's premises. MCFD arranged for the clients to fly home to their parents, one as far away as Missouri. I learned from one client's family that he had to be housed in a foster home all night until his parents arrived the following day.
- 96. To date, NeurVana has not received any written report relating to the removal, or any other aspect of the investigation and events of December 5, 2013, from MCFD.

Director's Seizure of Materials from NeurVana's Premises

- 97. When the Director's representatives left The Ranch, on December 5, 2013, they removed a number of documents, manuals and other material belonging to NeurVana.
- 98. I saw various proprietary coaching binders and other materials being carried out of NeurVana's premises by the social workers. I did not intervene because I wanted to minimize any confrontation in front of the clients and to remain compliant in light of what Ms. Beauchamp had said to me previously and because I was unsure of whether they were entitled to remove these documents or not.
- 99. I can confirm, however, that I was not asked by Ms. Beauchamp or any other MCFD official for permission to remove any documents from NeurVana's premises.

The Immediate Aftermath

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- 100. On December 8, 2013, I wrote a letter to the parents of the nine clients who had been removed by the Director, apologizing for the sudden interruption in NeurVana's ability to deliver the services that had been contracted and paid for in advance. Attached as Exhibit "I" is a copy of my letter.
- 101. On December 9, 2013, I received, by email, a letter dated three days prior, December 6, 2013, from Interior Health providing formal notice that NeurVana had "been deemed to be operating in contravention of the [CCALA]". The letter further provided that:

This letter will serve as a demand that you comply with the requirements of the [CCALA] by immediately ceasing the operation of your unlicensed community care facility. ... If you fail to comply with this demand, court action in B.C. Supreme Court may be commenced...

Attached as Exhibit "J" is a copy of the December 6, 2013 letter from Interior Health and email screen shots I took showing that the letter was emailed to for the first time twice on December 9, 2013.

- 102. Despite what was said to me on December 4, 2013 by Ms. Fabris and the other representative of Interior Health, Interior Health did not conduct a site-visit of NeurVana prior to sending the December 6, 2013 cease-and-desist letter.
- 103. In the days following the events of December 5, 2013, NeurVana's team met to discuss possible solutions to the problems we were facing, and Susan and I considered our options for NeurVana. Initially, we considered staying in Kelowna, and offering a day program and housing the clients in homes in a billet situation, or with a host family, like the model used by Venture Academy. Our main concern, however, was the hostile view of the Director given its recent actions.
- 104. Further, NeurVana's lawyer, Mathew Dober, advised me of a conversation he had with Ms. Fabris, on or about December 9, 2014, in which she indicated that Interior Health may also have concerns with NeurVana operating a day program and that they were also demanding that Venture Academy comply with the *CCALA*.
- 105. As a result, and on the recommendation of my brother, Martin Kenney, a lawyer in the British Virgin Islands, in late December 2013, Susan and I started to explore alternative locations, where we could reopen NeurVana in a less hostile environment.
- 106. During this time, a number of staff members remained at NeurVana's premises in Kelowna to assist in preparing an inventory of equipment and records, selling furniture and packing any remaining items at The Ranch. In or about mid-January 2014, I was told by one of those staff members Jody Furneaux that, while Susan and I were away from The Ranch, a female employee of the Director arrived at the front door accompanied by an RCMP constable. The individual did not produce any form of identification or a business card. Ms. Furneaux advised me that the individual said she was there to ensure that NeurVana was in fact closed and not housing any children, or words to that effect. I believe this was the last contact that anyone from NeurVana had with the Director's representatives, while in British Columbia.

## Exploring Alternatives for NeurVana

- 107. In early January 2014, Susan and I flew to the Cayman Islands to meet with officials there to discuss the possibility of reopening NeurVana on Grand Cayman.
- 108. My brother, Martin Kenney, had alerted us to the fact that the Cayman Islands Government was encouraging the start of a large scale medical tourism business, with upwards of \$1 billion being spent on new medical tourism facilities, as a part of an initiative called 'Health City Cayman Islands'.

- 109. We met with a number of senior government officials and the head of the new medical tourism centre, Mr. Gene Thompson. The officials we met with were encouraging and interested in the prospect of us establishing a wellness and recovery centre on Grand Cayman.
- 110. In early February, 2014, we returned to Grand Cayman for a second trip to continue our meetings and advance our proposal further. In particular, we had arranged to meet with the Honourable Minister Osbourne V. Bodden, Cayman MLA and Minister for Health, Sports, Youth & Culture.

## Media Reports of Civil Actions

- 111. On February 7, 2014, while we were in the Cayman Islands, the first of a series of news articles was published in Canada regarding NeurVana. These articles reported that the British Columbia Government had shut down NeurVana's Kelowna facility, and that three civil actions had been brought by the parents of three of the nine clients who were removed from NeurVana's premises.
- 112. In the first news article, which appeared on *The Province* website, initially dated February 7, 2014, the lawyer representing the families who had commenced the civil actions, Marco Francesco Lilliu, was quoted as stating:
  - ... We have received word from the ministry that most likely, if they have not left the country, they are planning to leave the country within the next week," he said. "Right now, the speculation is that they are actually relocating the facility to the Cayman Islands. However that is not substantiated yet.
- 113. However, the article was removed from *The Province* website on February 8 or 9, 2014, and when it reappeared on February 12, 2014, the above quote, had been removed. Attached as Exhibit "K" are copies of the online articles which appeared on *The Province* website, on February 7 and February 12, 2014, respectively.
- 114. Subsequent news articles repeated these allegations and also reported allegations of abuse and mistreatment by NeurVana. For example, on February 19, 2014, an article appeared on Castanet's website, which stated, in part:

More people are stepping forward and saying their children were victims of abuse and neglect at the hands of David and Susan Kenney, who ran [NeurVana] ...

Attached as Exhibit "L" are two news articles published in February 2014.

115. On February 24, 2013, the media reports reached the Cayman Islands, including the suggestion that we had left Canada in the face of the families' allegations. Mr. Lilliu's

statements went public in the Cayman Islands the morning we were scheduled to meet with Minister Bodden. This was our first and only meeting with the Minister. Attached as Exhibit "M" is a copy of an online article which appeared on a news website in the Cayman Islands on February 24, 2013.

116. As a result of the negative international media attention, we believed that the only option available to us was to withdraw our application to establish NeurVana in the Cayman Islands, until such time as we could defeat these false accusations.

Move to Barrie, Ontario

117. By the end of February 2014, our hopes and efforts to re-establish NeurVana in the Cayman Islands had ended.

118. It was not until August 2014 that Susan and I were able to start a new wellness program in Barrie, Ontario. This is a day program (non-residential) for helping families and adults.

119. On October 23, 2014, I received a telephone call from an unidentified woman. At the conclusion of this call, I immediately took notes, which I have reproduced in their entirety below for ease of reference:

"Today [23 October 2014] at 4:24pm (EST) I received a strange call from a 250 area code (BC area code). Here is the call:

"DK: Hello, this is Dave.

Caller: Hi, is this Dave Kenney?

DK: Yes, this is Dave.

Caller: Is this Dave Kenney?

DK: Yes, this is Dave Kenney. How can I help you?

Caller: This is BC Child Protection Services calling. We closed you down last year. I understand you have re-opened.

DK: NO. That is not true. We have NOT re-opened. Who is calling?

No reply (2-3 secs pass)

DK: Who is this? Who is calling?

No reply (3-5 secs pass)

DK: Who is this?

No reply (3-5 secs pass)

DK: Who is calling, please?

No reply (3-5 secs pass)

DK: What's your name...who is this?

No reply (3-5 secs pass)

Caller hangs up."

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120. The call left both Susan and me concerned and wondering who the caller was.

121. The call lasted 59 seconds and the caller ID showed the caller's phone number as: 250-712-7567. I did reverse number search, which came up as a phone number in Kelowna. I called the number later that day, at 6:10 pm PST. The call went to the voice mail of Ms. Beauchamp. I also went to the British Columbia Government Directory, which at the time showed that the telephone number belonged to Ms. Beauchamp. Attached as Exhibit "N" is a copy of a screen shot I took from my IPhone screen to document the call.

122. Our lawyer, Sean Kelly, sent a letter to Ms. Beauchamp, on October 24, 2014, demanding that she cease and desist from making any more phone calls to either Susan or me, and requested a written explanation for the call and hang-up. Ms Beauchamp did not reply to the first letter. A second such letter was also hand-delivered by a process server to Ms. Beauchamp on November 14, 2014. To date, we have not received a reply to either of Mr. Kelly's letters. Attached as Exhibit "O" and Exhibit "P" are copies of Mr. Kelly's letters to Ms. Beauchamp.

123. Further, after this phone call, we submitted a *Freedom of Information Act* (FOI) request to both the MCFD and Interior Health, by letters dated October 31, 2014 and November 3, 2014 respectively. Attached as Exhibit "Q" and Exhibit "R" are copies of letters dated October 31, 2014 and November 3, 2014, from Pushor Mitchell LLP, counsel for NeurVana, seeking information from the MCFD and Interior Health, respectively.

124. On February 16, 2015, Interior Health responded to our FOI request. However, it appeared from a review of the material provided by Interior Health that there may be additional notes and materials, which should have been provided. Accordingly, on February 26, 2015, we sent a letter to Interior Health requesting further details and information. Attached as Exhibit "S" is a copy of a letter dated February 26, 2015, from Sean Kelly, also counsel for NeurVana, seeking further information from Interior Health.

- 125. On February 27, 2015, we sent a follow up letter to the MCFD requesting a response to our FOI request. Attached as Exhibit "T" is a copy of a letter dated February 27, 2015, from Mr. Kelly, on behalf of NeurVana, to the MCFD.
- 126. To date, no response has been received from the MCFD.
- 127. More recently, it appears that another official with Interior Health has been looking for information regarding me. On January 22, 2015, someone called "Jamie B" who describes himself on LinkedIn as "Director Strategic Initiatives, Corporate Policy and Information Disclosure at Interior Health Authority," inspected my profile on LinkedIn. Attached as Exhibit "U" is a screenshot of my email account of January 22, 2015 showing this LinkedIn probe by an Interior Health official.

## Personal Impact

- 128. The events described above have had a profound impact on me and my family.
- 129. Being the subject of media reports referring to the "abuse" or "mistreatment" of children has been personally devastating.
- 130. Susan and I have both worked hard over the years to further ourselves in the field of education. We had built a good reputation for caring for troubled teens and young adults. I have long stood up for, and fought for, youths who are faced with personal challenges. The public perception appears to be that Susan and I stand accused of running an unlicensed, rogue community care facility, where young people were held against their will. We have further been accused of trying to flee justice.
- 131. We continue to suffer the effects of what has been reported in the media. We have had the experience more than once of inquiries from potential clients being dropped without explanation. Occasionally, we have been able to find out that the reason is the false information still available online concerning what led to NeurVana closing its Kelowna premises.
- 132. The successful business that Susan and I had grown was destroyed. However, my hope is that in the future we will be able to re-open, in British Columbia, a residential wellness program similar to that previously run by NeurVana.

SWORN BEFORE ME at Toronto, Ontario, on 2//Mar/2015.

A Commissione for taking oaths for the

Province of Ontario

Deepshikha Dutt
Dentons Cunada LLP
18
17 King Street West, Suite 400
Toronto, ON MSK OAI

DAVID KENNEY

A Commissioner for taking oaths for the Province of Ontario

Deepshikha Dutt

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# What your child will experience at NeurVana and included with tuition:

Our weekdays begin at 7:00 am with a "Move-It" Class and are filled with challenge, laughter, learning and sometimes tears (frustration or joy!) until heading off to bed at 9:30 pm. Weekends we begin our day a little later with breakfast at 8:00 a.m.

Weekdays from 7:00 a.m. – 9:30 p.m. we have 870 minutes of possible Coaching time – we fill it with GREATNESS! On the weekends we begin our day with breakfast at 8:00 a.m. Saturdays and Sundays are less structured and filled with more planned activities as well as time for rest and reflection.

# We build our daily schedule to include THE BIG SIX:

- 1. Brain BrainWave Sessions as well as learning and caring for your brain
- 2. Mangez! maximizing nutrients (eating and learning)
- 3. Physical Movement indoor and in nature
- 4. Coaching/Learning Mindfulness and developing creative solutions
- 5. Play/laughter Connection
- 6. Sleep/Rest honoring the body's natural circadian rhythm
- 18 24 BrainWave sessions plus an initial assessment (approx. 2 hour appointment, based on a 4 week program)
  - o That's approximately 36 50+ hours of BrainWave sessions
- Chef prepared Paleo (gluten, soy and dairy free) meals and snacks plus one on one time each week in the kitchen with our Chef to learn skills that will last a lifetime
- Life-Coaching and Experiential Coaching one on one and group 25 30 hours per week. Focusing on real life situations and humanities to create awareness to make good life choices!
  - o Our Life Coaching is founded on the principles of Positive Psychology
- A large segment and theme of our Coaching is about food. We teach about whole
  foods, as close to nature intended as possible and how important choosing what to
  eat is essential to our energy and happiness
- We teach extensively about the brain what makes it healthy and keeps it healthy
- Daily physical activities lead by our certified personal trainers
- Music no matter what your current level you will build a greater repertoire
- BodyTalk takes an integrative approach to health care by supporting our body's own natural healing mechanisms. NeurVana's BodyTalk practitioner's role is to restore communication systems within the body/mind. The body's response is to supply holistic, non-invasive ways to end physical, mental and emotion pain, relieve stress and attain optimum health.
- Many opportunities for adventure. Depending on the season and the group we ALWAYS make sure that we have play time built into the day! This is critical to rewire the brains healthy rewards centres. These activities are great for the spirit.



- Group Meetings We meet formally as a group to talk about different topics and challenges that arise and create awareness around behaviours and choices. When we meet it is much like a family to have discussions and make decisions.
- Yoga 2 to 3 times each week
- Indoor/Outdoor Rock Climbing (depending on the season)
- Value Village Day... (can ONLY be experienced)
- Introducing culture whenever possible we attend concerts, attend drama and other performance of the arts
- A day each week dedicated to "Acts of Kindness"
- A Vision Board Project (happens during the last week)
  - o The youth defines 'what' they want in their life
- 3 4 hours per week meeting with a Registered Art Therapist
- Innovative learning about understanding the origin of addiction and the effects of neuro-toxins on the brain, the body and the person
- Inspirational Hikes and Turk (our Golden Retriever) walks 4 to 7 per week
- We focus on the importance of being on time and personal integrity being the foundation of trust. Within the first week youth are responsible for following a posted daily schedule and showing up on time – being self-managing is key to independence
- We help kids build strong character...combined with compassion and empathy.
- Games including board games, table tennis, bingo, karaoke, Wii, foosball...and outdoor fun as well
- Many inspiring video clips, movies...some are part of the learning and others are just because they are great wholesome entertainment
- Personal Chores everyone participates in taking care of The Ranch and we create the foundation for your child to feel the pride of contributing to a community
- A 'Personal Success Commitment Plan' that details next steps for success after departure from the program (co-created with families in the last week of stay after all Coaching is completed)
- Stimulating conversation focusing on appropriateness and value of words
- Our Coaches work diligently with youth regarding personal hygiene and manners it
  is an important part of success and ultimate happiness
- We supply ALL personal grooming items. NeurVana is a perfume free, chemical free environment. All clothing is washed in eco-friendly laundry soap and natural fabric softeners. All cleaning products are non-toxic.
- We introduce holistic health and work at detoxing the body with ionic foot detox, infrared saunas, and traditional steam saunas. Teaching focuses on using the body's natural healing



# What parents/families will experience while your child is enrolled in the program:

- At least one picture of your child each day with regular progress updates by telephone and/or email
- You will also be learning along with your child through books, video clips and participating in the Environmental Life Coaching curriculum
- You will learn about the brain specifically how to keep your child's brain healthy for a lifetime
- Recommendations to implement for your child and your family post NeurVana

# Optional to the NeurVana experience and subject to additional cost:

-

Since we create a very unique and tailored program for each person that attends NeurVana – there may be some additional recommendations to complement our educational offerings. Families provide a personal account. Individual or group experiences (outside of our regular curriculum) and personal purchases will be deducted from this account. These may include:

- A consultation with our Naturopathic Doctor to introduce full body health and natural healing (there may be a recommendation of homeopathic remedies depending on health at time of admission).
- A hair/clothing style/image makeover these costs are pre-approved and paid for by families
- Natural make-up purchased to replace chemical based make-up
- Private or group lessons/education outside of our regular curriculum e.g. dance lessons, horseback riding, wake boarding, white water rafting, dolphin therapy, swimming with stingrays...these vary with the individual and group depending on the desire and season
- Personal clothing items to replace items packed that are not wearable or to purchase necessary basic items
- Personal appointments/learning/Coaching outside of our NeurVana team (discussed with parents before implementation). There are times when we draw from outside of our NeurVana Team to help youth overcome or learn skills that will greatly enhance and support their individual challenges. We are creative and will do whatever it takes to have dramatic and profound change!

# Parent Coaching - highly recommended

- Six (6) private one on one Parent Coaching sessions to commence after enrollment (by telephone) with Parent Coach Professionals. While your child is working through the NeurVana program we highly recommend that you engage in your own learning
- Your personal Parent Coach is dedicated to explore your past parenting and allow you to create new, effective communication strategies

This is Exhibit "B" referred to in the affidavit of David Kenney sworn before me at Toronto, Ontario this \_9\_ day of March, 2015.

A Commissioner for taking oaths for the Province of Ontario

Deepshikha Dutt

From: D

Sent: December 18, 2014 11:01 PM

To: skenney@neurvana.ca; dkenney@neurvana.ca

Subject: 1 year

To Dave and Susan,

Well guys, it's around the time where it's been about a year since I left neurvana. Maybe a little over, maybe a little under. However i've always thought about the place and how it struck me. In reality, I'm writing this letter to say thank you. For changing my life. For really opening my eyes in ways you can't imagine, and to let you know how i've been doing. To start, after I came back from neurvana life was still tough. I ended up staying sober, but for reasons different than you may think. To be honest, all the talks about how drugs were bad to me were bs in my eyes. I had heard it so many times beforehand aswell so when it was talked about there I didn't really believe it. Also I feel like the brainwaves didn't really help with that stuff either. I mean, don't get me wrong, it actually might have but I don't think it helped really. However, I did stop because when I came back, I actually wanted to be open with my parents about smoking weed. One of the biggest things I had learned from neurvana was about being honesty. How I came face to face with the realization that I was a deceitful, lying, conniving...how I realized I was a snake. And I also learned about the realization of family. I never have gone through a worse feeling than not getting those phone calls 3 weeks in a row, thinking to myself that that was truly it, that I wasn't gonna be apart of the family anymore...wasn't gonna see my dog, wasn't gonna move into the new house, that my parents didn't really love me anymore. I guess we call it tough love :p. But when I came back I never valued my parents anymore. So for the first few months it wasn't that bad staying sober. I was in the house for about 2 months, only leaving here and there for outings with my parents or with my grandma and only 1 friend that wasn't involved with drugs. However after that time period staying clean it started to become tough...I exploded one day and had an emotional time with my parents explaining to them that I still did want to smoke weed and I missed my old life so much. But I still valued my honesty with them, and in an effort to work things out we then started to go to family counseling for 2 months. I built my relationship even stronger with my parents during that time...and near the end had came to a dilemma. No matter how much I tried to come with a perfect medium on my parents on giving me some leeway on being able to openly smoke weed, they just couldn't do it. And it makes sense, I mean it's the way their brain is wired, you can't really blame someone for that. The only problem was that if I wanted to continue with my old ways, I would have to move out. I even went through all the costs of living on my own with the counsellor, but then one day when it was brought up, it was clear someone had to budge. It was at home though, and I thought about it, thought about neurvana, the fact that it had been 4-5 months since I'd been clean, thinking about everything me and my parents had been through, thinking about how far I'd stepped forward....and so I decided to put my parents before. To this day I've been clean, and that's what all happened. But this letter isn't as much focused around this, but more of a thank you to you guys for opening my eyes. At neurvana, I'm not really sure why, but what I did believe was everything you guys and the coaches had taught me about believing in myself. Through all the lessons that went down, watching finding Joe, learning about a vision board, and watching the secret and such truly shaped me in such a different way. I'm not really sure why, but watching the secret changed my life in so many ways. I say I'm not sure because in reality the film and story was about you believing in something, and then getting exactly that. Ask, believe, receive. To the everyday person telling them that, they would think that it's straight gibberish. But for some reason it made sense...and I also thought to myself, what do I have to lose to NOT believe in that? In hindsight, it's actually believing in yourself. And I've never believed more in myself to this day. Also with finding Joe. After watching the movie and learning about the heros journey and how you have your calling one day, for some reason it all made sense to me. It made me think that my life was actually special, that I was put on this earth for a reason, it made me believe in destiny. There would be times after the family counsellor sessions where I'd tell myself if I came here this far then i'm here for a reason. It made me realize that everything happens for a reason...and the no matter what i'll become when i'm older will have happened for a reason. Through all the talks about positivity, I thank you and the team. It showed the the glass half full side to life, the brighter way to look at things, to find the positive when it's dark. I kinda came up with my own mindset. I personally feel that whenever there is a tough time in your life, its like life is testing you to see how you can handle it. You can sulk and fall deeper into the negativity which is actually easier, or you can go against the grain, train your mind to think positive, know that it'll get better but only if you put an effort, and whatever is happening is happening for a reason, so to try and find the light in the dark. Tough times don't last, but tough people do. To this day Im probably one of the most positive dudes you'll ever meet. To my close friends that I help with life, I try my best to be a positive influence. Just a few days ago I was talking to a close friend and she was telling me how she was sad and I told her to turn her frown upside down. She said she couldn't and I told her do you wanna know why? I

told her it was because she said she couldn't, and I actually made an impact in her life. Those words actually contain power, because I learned that half the time we actually limit ourselves. I also learned about being positive that you truly lose nothing over having a positive mindset!!!! Like, people will be all negative about stuff, but why? You lose no money or time in thinking positively, but actually gain so much. Another thing I learned about neurvana was the people that are in your life. I am very tough on the friends that I am with, and when I came back my friendship deck was shuffled greatly, I had to cut a lot of people off, or "piers" how you guys would've said. Most of them were everything but friends. I learned that a good friend is a real friend, a best friend. The mass amounts of people I was close with before weren't really anything, they were all temporary, I learned through the year that people are very temporary...many of them will leave your life. However, fear not, because it's actually a good thing. I learned that when people leave your life, it opens the door and spot for the right people, so sometimes you have to cut a few people off to meet the right people to truly enhance you. To this day I have some very good friends, and it's because of, well my standard I guess. So much stuff from before doesn't interest me anymore, and it's because of my vision in life and where I wanna be. One of the biggest things neurvana taught me was what I wanted to be, indirectly of course. But when I was there, I read the steve jobs biography book, and that book changed my life. I learned many things about my life. One of the things I learned was that I wanted to truly achieve greatness. A life so amazing, it would be like a movie. I didn't wanna be average. I also learned my vision and what I wanted to be when I grow up. People ask me sometimes, Darian what do you want to be when you grow up? And i'll reply with one word. Rich. In the steve jobs biography, at the age of 24 when apple had gone public after the success of the apple 2, steve jobs networth overnight grew to like 224 million dollars I believe. I don't know if it was exactly that number, but it was in the 200 million dollar scale. I was so mind blown of how that happened, damn I even remember going around and showing people because it truly blew my mind. After that, and thinking about it so often, I came up with a goal, that by the age of 25 I wanna have a networth of 250 million dollars. You guy's may say it's farfetched, and it damn right is! By the age of 30, after also reading the book, I wanna be a billionaire! I don't share that with a lot of people, because sadly society is taken over by reality and many people would laugh when they hear that. Luckily, neurvana changed me into a dreamer, a believer. So the cheque that I wrote on my vision board wasn't 1 million like most people, it straight says 250 million to myself from the universe. Do you guys wanna know the best part? It's actually going to happen. I plan on making it through businesses like steve jobs, or through investments, Both of which I am very involved with, learning about the market, always thinking of ideas. I have quite a few ideas for businesses actually, I'm always trying to think about something new and creative, and the more I thought in that area in my brain it got honed and so my creativity is quite good. I also look up to people like warren buffet. How successful he was through penny stocks. That's the vision though. Not dream, vision. Because I learned from a video one day, you gotta change it from dream to vision. All throughout my day, I fantasize about what I'll be able to do with 250 million dollars. I envision myself driving a ferrari, while I'm driving my 2001 chrysler sebring. I envision myself daily wearing christian louboutins even though i'm wearing regular sneakers. I can see myself taking 3 years of my life going to africa and actually trying to help with starvation, and truly impact the world. I envision myself having multiple houses across the world, arranging my private jet to pick me up and my family for us to go for random day trips for lunch. I trained myself from the secret, the believe part. I don't even use my vision board anymore even though it stays in my room. Reason is, because my vision board is in my head. I get so emotional talking about my future plans and how much it excites me because i've never wanted anything more in my life. I have this ambition in me, this power, that drives me to think like that. I also learned from neurvana that I wanted to change the world in some way. I never have believed more in myself. I believe the world is limitless, that you can truly do whatever you have in store for your mind, and that everything really happens for a reason, but you can make whatever you want happen, so when you don't achieve your dreams, don't blame anyone but yourself. Luckily for me, I will, so it's just a matter of years until I blow up;) I tell my parents, that they actually won the lottery, it's just a matter of time until it'll come true. I never have believed more in myself. So, with all this being said, I wanted to thank you guys, for opening my eyes, and changing my life and others because through what I learned, I also changed the way some people view the world. So thank you guys. For everything. All smiles from me and the family and I hope the best with you guys. :)

-Darian



# My Dream Came True.

My son spent four (4) weeks at NeurVana and my dream came true, he finally has a shot at life!!!

He is the third of four boys, and he has had a long and hard journey of therapies that included language, fine motor skill, gross motor skills, psychotherapy and medication, following a near drowning at the age of two and a half. Evaluations and testing presented multiple diagnoses at different stages of his development, these included: Obsessive Compulsive Disorder (OCD), Depression, Anxiety, Sleep Disorder, Pervasive Developmental Delay NOS, Attention Deficit Disorder (ADD), Processing Disorder, Social Phobia, Non Verbal Learning Disability and who can remember what else. They all said something about him but none really fit entirely.

We uprooted the family for three months of the year for many years to provide him with the therapies he needed; he had a shadow at school for many years, he was on various medications since the age of six, he attended two different therapeutic camps, he spent a year at a specialized therapeutic boarding school, and the whole family attended counseling to support him for many years.

At age 18 it was evident to me that he was going down a very dangerous path very quickly (that now included substance abuse) in spite of all the protecting factors he had in his life. I was terrified for him.

As a last attempt, thinking we had done everything else for him, wanting to leave no stones unturned we sent him to NeurVana. As parents we wanted to feel peace with ourselves, that no matter what became of him and what he decided for himself that we had put our time, effort, energy, interest, attention and resources to helping him have a good life.

At this point I was very worried and I was secretly pessimistic about his future. And then the unexpected happened!!! Thanks to NeurVana's innovative approach, my son emerged from somewhere dark...

My belief is that NeurVana's Brainwave Optimization opened a pathway into him I had never seen before and did not know existed. He stopped the two different antidepressant medications, the medication for Attention Deficit and his sleep aid. He is happier and more engaged than ever before, by far! This advanced neuro-technology enabled the NeurVana team to provide him with the coaching and life lessons he had not been able to learn until now. The NeurVana team was kind, firm, supportive and very creative while they worked with him.



Thanks to Dave & Susan Kenney, and the entire team of professionals at NeurVana, my son is succeeding at a leading boarding school in the U.S. completing a post graduate year of studies. He is living in a dorm room by himself and for the first time in his life he is cleaning, doing laundry, exercising, studying, organized, punctual, and he is meeting or exceeding all expectations being placed on him. His self-destructive patterns are a thing of his past. He is happy and self-motivated to have a positive and productive life for himself. He even tried out for and got a leading role for the schools major drama production!

Oftentimes when we call him he is energetic and laughing with friends. We are getting beautiful reports from his teachers of his effort to achieve academic excellence. Instead of crying and being afraid of his future he now has brilliant plans! My son now has dreams and hope, and he is preparing himself for university!

A.K., Psy.D.

- Clinical Pyschologist & Clinical Director, Mental Health
- Testimonial from the Mother of a NeurVana Graduate

From: Madeleine Riande [mailto:maderiande33@gmail.com]

Sent: January 28, 2014 4:05 PM To: <a href="mailto:dkenney@neurvana.ca">dkenney@neurvana.ca</a>

Subject: Hi Dave

Jan 28, 2014

Hi Neurvana,

Its been a year waiting for the right moment to share this with you all. I underestimate what life is really about. I always thought i "knew" the meaning of life but never understood how fascinating, mysterious and spontaneous it is until today. Since i left Neurvana, brains and my brain specifically is kept in my heart and mind for a mysterious reason. In my fall quarter i did my first sculpture of a brain. On Jan 17 2014 i won a price in a competition. Its been a while since i felt the need to cry for happiness. Not just only because i won a price but because i pursuit my first step towards my own success, the feeling of greatness in my heart and the will to not be afraid to give my mind, brain and heart to what i love. I realize that i can do anything that makes me want to feel alive. To me, alive is living to pursuit what we all call happiness. Im writing this letter with tears in my eyes and a smile in my heart to give thanks for helping me open my mind and to not be afraid. for giving me the change to understand what being happy is all about.

"You are not what you have, you are what you are as a person".

My todays gratitude starts with being everyday more myself and feeling alive, . "Its not happy people who are grateful, Its grateful people who are happy". My favorite part of the day was this morning. My parents receive a letter from my school saying i was part of the Deans List. I did it. I am capable of doing anything that my mind and soul really wants to do. My today's gratitude ends with how grateful i am to be able to write this letter with honesty and heart and with how grateful i am to be part of Neurvana for letting go of my fears and learning how to really love life. I send you all a hug from here to the moon and a smile of thanks from my sincerely soul.

Dave, I give you my permission and i would love you to share this as a group when you have the time to.

With love

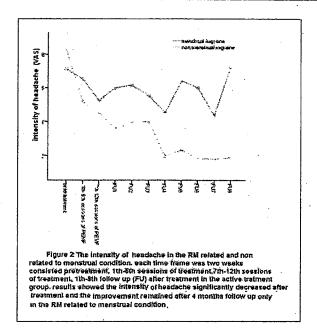
Madeleine Riande



This is Exhibit " C " referred to in the affidavit of David Kenney sworn before me at Toronto, Ontario this 1 day of March, 2015.

A Commissioner for taking oaths for the Province of Ontario

Deepshikha Dutt



### P128

## Rapid Rollout of a Pediatric Migraine Prevention Study Conducted in Academic Research Centers

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<sup>1</sup> Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA; <sup>2</sup> Clinical Trials Statistical & Data Management, University of Iowa, Iowa City, IA, USA.

Objectives: This study provides a pathway for investigators and institutions who are seeking a successful route for rapid startup of a multicenter pediatric migraine research study. We detail the infrastructure, strategic decisions and processes employed in the startup of an investigator initiated pediatric migraine prevention study funded by NINDS, based at an academic research institution.

Background: Creation of the study infrastructure included recruitment of a committed trial team at the central coordinating center(CCC), development of a collaborative relationship with a co-investigator statistician at an experienced data coordinating center(DCC), recruitment of site investigators committed to migraine research with established research sites and adequate potential subjects, partnering with the funding group to meet the agency's criteria, and recruitment of experienced consultants to provide guidance during planning.

Methods: The principal investigators created ongoing collaboration among the CCC, DCC, the research site investigators and internal and external consultants. This included: weekly teleconferences, clear timelines /accountability for deliverables, project management, IND regulatory, budget management, legal contracting, recruitment/ retention/ marketing, site management, data base development, and a novel statistical plan. Site investigators received frequent updates regarding study development. They contributed opinions regarding study design and became stakeholders. Detailed pre-work resulted in a clinical package that included a complex protocol based upon a novel statistical design allowing for three trials in one. Biweekly contact with the research sites maintained momentum at the sites.

Results: The timeline from date of clinical package delivery to first patient in was 13 weeks. The timeline from delivery to site activation of the initial group of 5 sites was 13-20 weeks, compared to the reported 36 weeks for academic centers. The second group of 10 sites achieved activation at 21 weeks. The remaining 13 sites were activated by 31 weeks, 5 weeks ahead of the industry average. To date, 84 % of site have been activated and open to enrollment, with 50 % of the sites open to enrollment at 24 weeks. The overall average time to site activation was 26 weeks.

Conclusions: A diverse research team in frequent communication with site investigators and complex pre-work with clinical package development enabled the rapid roll out of a multicenter pediatric migraine prevention study. The timeline to site activation for this pediatric migraine prevention study is ahead of industry standards.

#### P129

Randomized, Placebo-Controlled Pilot Trial of a Novel, Noninvasive EEG-Based Intervention, HIRREM, for Alleviation of Episodic Migraine

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<sup>1</sup>Wake Forest School of Medicine, Winston Salem, NC, USA; <sup>2</sup>Brain State Technologies, LLC, Scottsdale, AZ, USA.

Objectives: To pilot test high-resolution, relational, resonance-based electroencephalic mirroring (HIRREM<sup>TM</sup>) for reduction of headache (HA) frequency and severity in episodic migraine (MI) and to estimate effect sizes for use in a larger trial.

**Background:** Studies have identified altered proportionation of power across broad-band bins of the EEG

frequency spectrum in MI. HIRREM is a novel, noninvasive technology designed to facilitate relaxation and auto-calibration of neural oscillations. HIRREM involves collection of EEG data from 2-channel recordings, analysis of the data at high spectral resolutions (0.001 hertz), and delivery of auditory tones for resonance in near real time with dynamically varying dominant EEG frequencies.

Methods: Sixty-three subjects were screened, 33 enrolled, and 30 (16 HIRREM, 14 placebo; mean age 51 ± 11, 26 women) completed an IRB-approved, randomized, single-blind, placebo-controlled, pilot trial. Individuals assigned to active HIRREM underwent a series of 90-minute sessions (mean 10.0, range 8-12) over a mean of 2.7 weeks (range 1-5), each of which consisted of listening to near real time auditory feedback derived from their own dynamically varying EEG activity. Individuals assigned to placebo had a comparable number of visits but listened to randomly generated musical tones. Subjects maintained a daily HA diary prior to undergoing intervention (2 weeks), during intervention, and for 2 months afterward. Primary outcome was defined as a joint distribution of HA frequency and intensity during the post-intervention follow up period. Analysis used a mixed effects, mixed distributions model to predict probability of an attack, and, when present, intensity of the attack. Using random effects, the model considers the hierarchical data structure of multiple diary days nested within a person.

Results: Three subjects had malfunctions in electronic daily diary tools and were excluded from analysis. Before the intervention, the HIRREM group tended to have greater likelihood of HA compared to placebo, OR 1.56 (95% CI: 0.97 to 2.53, p = 0.064). However, during the post-intervention period, the HIRREM group had a reduction in the likelihood of experiencing headache compared to controls, OR 0.74 (95% CI: 0.55 to 1.03, p = 0.077). This clinically meaningful effect size did not reach statistical significance in this pilot sample. No adverse events occurred. A comparable number of subjects in each group (50%) guessed that they received active HIRREM.

Conclusions: In this pilot trial, a promising effect size for reduction in headache frequency was observed for the HIRREM intervention beyond that observed for a placebo condition. The effect size associated with HIRREM as well as its safety and lack of side effects suggest that larger controlled trials are warranted.

P130

## Atopic Disorders Are More Common in Childhood Migraine Than TTH

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<sup>1</sup>Neurology, Mersin University School of Medicine, Mersin, Turkey; <sup>2</sup>Neurology, Maltepe University School of Medicine, Istanbul, Turkey; <sup>3</sup>Neurology, Istanbul University Cerrahpasa School of Medicine, Istanbul, Turkey; <sup>4</sup>Child and Adolescent Psychiatry, Mersin University School of Medicine, Mersin, Turkey.

**Objectives:** In order to determine and investigate the correlates of atopic disorders in a specific dataset, we performed this retrospective cross-sectional clinical based study.

**Background:** There are supportive clinical and pathophysiological data about the relationship between migraine and atopic disorders far from a coincidence.

Methods: Data set was composed from three tertiary center web based data (www.childhoodheadache.org). Headache diagnosis and differential diagnosis had been made according to ICHD-II and DSV-IV. Migraine (MwA, MwoA and chronic migraine) and TTH (episodic TTH and chronic TTH) patients included and all other causes of headache disorders also comorbid headache disorders like migraine plus TTH or "possible" causes of headache had been excluded.

Results: Out of 765 patients, identical age and gender distributed 293 migraine and 178 TTH, totally 471 patients included the study. After descriptive statistics accordingly, 49 migraine (16.7%) and 3 TTH (1.7%) reported specific atopic disorders (p=0.000). Among migraine sufferers MwA (21.6 %) were more frequent association than MwoA and CTTH (p=0.000). Most common types of atopic disorders were seasonal rhinitis, conjunctivitis and asthma. There were also a close relationship between atopic disorders and generalized anxiety disorders of the patients and positive atopic disorders or migraine history of the families, especially mothers.

Conclusions: Atopic disorders are common pathophysiological mechanisms with migraine. Although ICHD-II did not require, atopic disorders have to be questioned in all patients and relatives, not only accurate diagnosis but also planning to prophylactic medications such as beta blockers.

[P5.287] Use Of A Non-Invasive Neurotechnology, HIRREM, Is Associated With Improved Sleep And Mood In A Heterogeneous Cohort.

Jared Cook, <sup>1</sup>Catherine Tegeler, <sup>1</sup>Sung Lee, <sup>2</sup>Hossam Shaltout, <sup>1</sup>Meghan Franco, <sup>2</sup>Charles Tegeler <sup>1</sup>Winston Salem, NC, USA, <sup>2</sup>Scottsdale, AZ, USA

### **OBJECTIVE:**

To evaluate a non-invasive neurotechnology, High-resolution, relational, resonance-based, electroencephalic mirroring (HIRREM), for individuals with insomnia and depressive symptoms.

#### **BACKGROUND:**

Studies of brain electrical activity suggest disturbances of neural oscillatory patterns in various neuropsychiatric conditions, which may be more explanatory of underlying neurobiology than DSM-based diagnostic categories. For example excess high frequency amplitudes (hyperarousal) have been reported in insomnia, and right-sided frontal asymmetry in negative mood states. High-resolution, relational, resonance-based, electroencephalic mirroring (HIRREM) is a noninvasive feedback technology designed to support auto-calibration of neural oscillations by using auditory tones derived from software algorithms to reflect brain frequencies in near real time.

### **DESIGN/METHODS:**

115 subjects (74 female, median age 50, range 13-83) were enrolled in an open label, IRB-approved feasibility study of HIRREM for individuals with diverse clinical conditions including insomnia, traumatic brain injury, post-traumatic stress disorder, hot flashes, and others. 55 subjects reported moderate to severe insomnia (Insomnia Severity Index, ISI, score ≥15), and 56 had clinically relevant depressive symptoms (score≥16 on the Center for Epidemiologic Studies Depression Scale, CES-D). Subjects underwent serial sessions of HIRREM in accordance with standard protocols, which included an average of 14 sessions, 90 minutes each, over 2 to 4 weeks.

### **RESULTS:**

For those with an initial ISI score  $\geq 15$ , mean ISI reduced from 20.34 (SD=4.07) to 11.00 (SD=6.33, p<<0.0001) post-HIRREM. For those  $\geq 16$  on the CES-D at baseline, mean scores reduced from 29.36 (SD=9.85) to 14.59 (SD=11.04, p<<0.0001) post-HIRREM. No serious adverse events occurred.

#### **CONCLUSIONS:**

Use of HIRREM was associated with clinically relevant, statistically significant reductions in symptoms of insomnia and depression in this heterogeneous cohort, without adverse side effects. Thematic disturbances of brain oscillation patterns may underlie diverse symptoms. Auto-calibration of neural oscillations towards client-unique, self-optimized states is a strategy for facilitating neuropsychiatric health that warrants further exploration.

Study Supported by: The Susanne Marcus Collins Foundation, Inc.

Category - Sleep: Therapeutics

Wednesday, April 30, 2014 3:00 PM

P5: Poster Session V: Sleep: Parasomnias and Measurement Technologies (3:00 PM-6:30 PM)

Poster presented at the 4<sup>th</sup> Concussion Conference of the American Academy of Neurology, Chicago, IL, July 11-13, 2014.

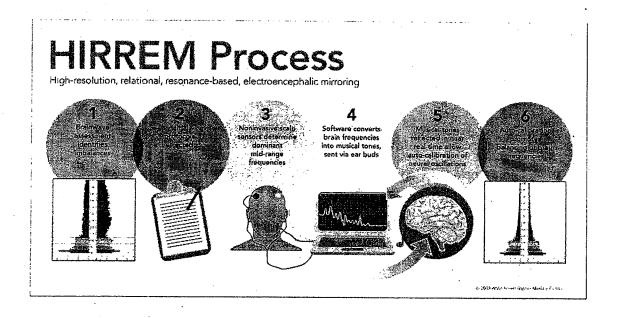
Use of HIRREM is associated with improved symptoms and neural oscillatory balance in athletes with post-concussion symptoms

Tegeler CH1, Tegeler CL1, Cook JF1, Lee SW2, Gerdes L2, Shaltout HA3, Miles CM4

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### Introduction

Concussed athletes are at risk for developing persistent post-concussion symptoms (PPCS) such as insomnia, depression, and others, many associated with autonomic dysregulation. High-resolution, relational, resonance-based, electroencephalic mirroring (HIRREM) is a closed-loop neurotechnology to facilitate relaxation and auto-calibration of neural oscillations. HIRREM generates feedback as audible tones of varying pitch and timing. These are derived from software algorithm-driven analysis of real time changes in brain electrical activity from scalp recordings, measured at high-spectral resolutions. In a controlled pilot trial for insomnia, use of HIRREM was associated with reduced symptoms of insomnia and depression. Exploratory analyses have shown increased heart rate variability (HRV) after HIRREM, suggesting improved auto-regulation in the autonomic nervous system.



### Methods

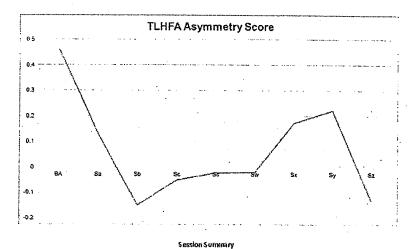
Twelve athletes (6 female, median age 17.5, range 14-23) with PPCS lasting from 9 days to 3 years, and inability to return to athletic activity, were enrolled in an open label, IRB-approved, feasibility study. Concussions (mean 2, range 1-4) occurred with baseball, soccer, gymnastics, basketball, and/or snowboarding. All were previously evaluated and treated with rest, medications, vestibular therapy, or other modalities. After an initial HIRREM brainwave assessment, athletes received a median of 17 HIRREM sessions (range 13-36, 90 minutes each). Each session had from 5-9 protocols, ranging in time from 6-40 minutes, and could include two sessions per day. Review of brain patterns after each session informed choice of future protocols. Sessions were received over a median of 11 days (7-24). Nine athletes had at least one break in sessions, yielding a median total time in the active intervention phase of the study of 28 days.

Baseline and post-HIRREM assessments included symptom inventories for insomnia (Insomnia Severity Index, ISI), depression (Center for Epidemiologic Studies Depression, CES-D), concussion (Rivermead Post-Concussion Symptoms Questionnaire, RPQ, or ImPACT computer testing symptom scale, IMP). Asymmetry scores for temporal lobe high frequency amplitudes (TLHFA) were also calculated from 1 minute epochs of temporal (T3/T4, eyes closed) high frequency amplitudes (23-36 Hertz, microvolts) at baseline, the first four, and last four HIRREM sessions according to (T4-T3)/lesser of T3 and T4. Positive numbers show rightward dominance.

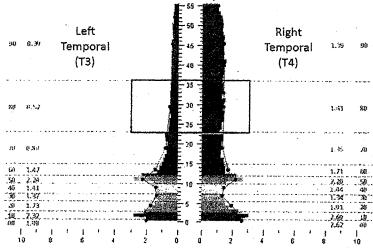
		Key	Outcome	s I	
Measure	n	Median Score Baseline	Median Score Post-HIRREM	Median Change	p value
ISI	12	7.5 (2 to15)	2 (0 to10)	-4.5 (-11 to 1)	p < 0.001
CES-D	7	22 (10 to 47)	/ " 9 (3 to 38)	-14 (-30 to -3)	p = 0.009
RPQ	9	23 (2 to 57)	2 (0 to 33)	-20 (-42 to 0)	p = 0:001
IMP	2	23 (13 to 33)	1.5 (0 to 3)	-21.5 (-30 to -13)	

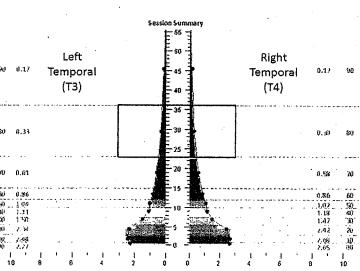
### Results

Subjects reported significant reductions for symptoms of insomnia (median ISI change of -4.5, range -11 to 0, p < 0.001), depression (median CES-D change of -14, -30 to -3, p = 0.009), and concussion (median RPQ change of -20, -42 to 0, p = 0.001). TLHFA scores decreased from 0.46 (rightward dominance) to -0.13 (slight leftward dominance), suggesting improved neural oscillatory balance. Ten out of twelve returned to full physical activity, while persistent chronic daily headache precluded return for two.



TLHFA asymmetry score at baseline (BA), and from the penultimate minute of the first four (Sa-d), and last four (Sw-z) HIRREM sessions. Rightward dominance at BA shifted to slightly leftward dominance by the final HIRREM session.





FFT spectral display, as example of observed electroencephalic data, with frequency (Hz, central Y axis) plotted against transformed amplitude (μν, Χ axis). Data represents one minute of data recorded from the T3/T4 montage with eyes closed at the baseline assessment (left panel) and at the penultimate minute of the 9th session (right panel) for a 23 year old male participant. Red boxes denote the high frequency, 23-36 Hz range analyzed for TLHFA asymmetry. Note the change of amplitudes with HIRREM resulting in improved balance.

#### Conclusions

There are currently few options for comprehensive management of the symptoms of PPCS, which may prevent return to athletic activity, and in some cases may be debilitating. Effective noninvasive, non-drug therapies are needed.<sup>4-5</sup>

In this case series, use of HIRREM by athletes with persisting post-concussion symptoms was associated with clinically relevant, statistically significant symptom reduction for insomnia, depression, and concussion. There was decreased TLHFA, suggesting improved brain balance. Ten of twelve athletes returned to full physical activity, and no adverse side effects were reported. A placebo-controlled trial is being implemented. For more information, visit <a href="https://www.wakehealth.edu/HIRREM">www.wakehealth.edu/HIRREM</a>.

#### Acknowledgements

This study was supported by The Susanne Marcus Collins Foundation, Inc.

#### References

- Gerdes L, Gerdes P, Lee SW, Tegeler H. HIRREM: a noninvasive, allostatic methodology for relaxation and auto-calibration of neural oscillations. Brain Behav 2013; 3: 193-205.
- 2. Tegeler CH, Kumar SR, Conklin D et al. Open label, randomized, crossover pilot trial of high-resolution, relational, resonance-based, electroencephalic mirroring to relieve insomnia. *Brain Behav* 2012; 2: 814-824.
- Tegeler CH, Tegeler CL, Lee SW, Shaltout HA, Pajewski NM. Neural-oscillatory intervention for auto-calibration improves EEG asymmetry in heart rate variability (HRV). [abstract] Annals of Neurology 2013; 74(S17): S77.
- 4. Cifu DX, Walker WC, West SL et al. Hyperbaric oxygen for blast-related postconcussion syndrome: Three-month outcomes. *Ann Neurol* 2014; 75: 277-286.
- Silverberg ND, Hallam BJ, Rose A et al. Cognitive-behavioral prevention of postconcussion syndrome in at-risk patients: a pilot randomized controlled trial. J Head Trauma Rehabil 2013; 28: 313-322.

This is Exhibit " D " referred to in the affidavit of David Kenney sworn before me at Toronto, Ontario this \_\_\_\_\_\_ day of March, 2015.

A Commissioner for taking oaths for the Province of Ontario

Deepshikha Dutt

## Brain and Behavior

Open Access

## Open label, randomized, crossover pilot trial of high-resolution, relational, resonance-based, electroencephalic mirroring to relieve insomnia

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#### Keywords

Biofeedback, EEG, HIRREM, insomnia, neural oscillations

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#### **Funding Information**

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Brain and Behavior 2012; 2(6): 814-824

doi: 10.1002/brb3.101

#### **Abstract**

Effective noninvasive interventions for insomnia are needed. High-resolution, relational, resonance-based, electroencephalic mirroring (HIRREM<sup>TM</sup>) is a noninvasive, electroencephalography (EEG)-based method to facilitate greater client-unique, autocalibrated improvements of balance and harmony in cortical neural oscillations. This study explores using HIRREM for insomnia. Twenty subjects, with an Insomnia Severity Index (ISI) score of ≥ 15 (14 women, mean age 45.4, mean ISI 18.6), were enrolled in this randomized, unblinded, wait-list control, crossover, superiority study. Subjects were randomized to receive 8-12 HIRREM sessions over 3 weeks, plus usual care (HUC), or usual care alone (UC). Pre- and post-HIRREM data collection included ISI (primary outcome), and many secondary, exploratory measures (CES-D, SF-36, HR, BP, neurocognitive testing, and VAS scales). The UC group later crossed over to receive HIRREM. ISI was also repeated 4-6 weeks post-HIRREM. All subjects completed the primary intervention period. Analysis for differential change of ISI in the initial intervention period for HUC versus UC showed a drop of 10.3 points (95% CI: -13.7 to -6.9, P < 0.0001, standardized effect size of 2.68). Key secondary outcomes included statistically identical differential change for the crossed-over UC group, and persistence of the effect on the ISI up to > 4 weeks post-HIRREM. Differential change in the HUC group was also statistically significant for CES-D (-8.8, 95% CI: -17.5 to -0.1, P = 0.047), but other exploratory outcomes were not statistically significant. For all receiving HIRREM (n = 19), decreased high-frequency total power was seen in the bilateral temporal lobes. No adverse events were seen. This pilot clinical trial, the first using HIRREM as an intervention, suggests that HIRREM is feasible and effective for individuals having moderate-to-severe insomnia, with clinically relevant, statistically significant benefits based on differential change in the ISI. Effects persisted for 4 weeks after completion of HIRREM. Larger controlled clinical trials are warranted.

#### Introduction

Insomnia is the most prevalent sleep disorder and is associated with significant psychosocial and somatic pathology. Up to 50% of the U.S. adult population reports symptoms of insomnia on a weekly basis and approximately 12% meets criteria for insomnia disorder (Ohayon 2002). Cross-sectional studies demonstrate that 40–60% of individuals with insomnia exhibit depressive symptoms

(Foley et al. 1995; Ohayon et al. 1998), 10–25% may have clinical depression, and 20–30% have anxiety disorder (Ohayon and Roth 2003; Taylor et al. 2005). Chronic insomnia is associated with reduced quality of life, higher absenteeism, impaired job performance, and higher healthcare utilization (Kuppermann et al. 1995; Simon and VonKorff 1997). In a large population-based study, a linear relationship was demonstrated between insomnia prevalence and number of self-reported comorbid medical

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disorders (Budhiraja et al. 2011). Insomnia severity has been correlated with suicidal thinking in a clinical trial population (McCall et al. 2010).

Although these cross-sectional associations are often interpreted to suggest that a variety of pathologies can result in secondary insomnia, prospective studies have found insomnia to be a risk factor for acute myocardial infarction (Laugsand et al. 2011) and depression (Jaussent et al. 2011). In long-term follow-up of 1741 individuals who had undergone polysomnography, insomnia was found to confer an independent and significantly increased risk for mortality (Vgontzas et al. 2010). The question of how or why insomnia should be a risk factor for other pathologies likely overlaps with the question of what processes are responsible for the pathogenesis of insomnia itself. To answer one or both of these questions, conceptualizations and data from several lines of inquiry may be helpful.

The "hyperarousal" theory (Perlis et al. 1997) highlights interplay between psychological and physiological factors in the etiology and perpetuation of chronic insomnia, including increased autonomic activity (Monroe 1967; Adam et al. 1986); activation of neuroendocrine and neuroimmunological axes (Vgontzas et al. 2001; Burgos et al. 2006), and altered brain metabolism, especially during the night (Nofzinger et al. 2004). For instance, compared with normal controls, insomnia patients show significantly increased ratio of low- to high-frequency spectral power (LF/HF, sympathetic activation) of heart rate variability (Bonnet and Arand 1998), increased production of cortisol (activity of the hypothalamic-pituitary-adrenal axis) and interleukin-6 (IL-6, activation of neuroimmunological axes) (Riemann et al. 2009), and increased power in higher frequencies as measured by spectral analysis of the sleep electroencephalogram (EEG) at sleep onset (Perlis et al. 2001a) and during nonrapid eye movement (REM) sleep (Perlis et al. 2001b). Greater amplitudes, as measured by event-related EEG potentials, were observed in several latency ranges prior to, during, and on awakening (Devoto et al. 2005; Steiger 2007; Yang and Lo 2007; Bastien et al. 2008). Taken together, these data suggest that heightened cortical arousal may be either part of the pathogenesis of chronic primary insomnia or a consequence of it, or both.

Disruption of biological rhythms is another way to model the etiology and sequelae of insomnia (Reid and Zee 2009). Virtually all physiological systems function on a rhythmic basis, and timing of their cycles is entrained through the influences of ambient light, physical activity, and feeding. Forced desynchronization of these systems by prolongation of a normal "day" from 24 to 28 h has been shown to cause reversal of the usual pattern of diurnal cortisol release, increases of insulin and post-

prandial blood glucose, and alterations in levels of epinephrine, norepinephrine, and leptin (Sheer et al. 2009). Technological advances with cultural and economic shifts encouraging round-the-clock stimulation may exacerbate or cause insomnia in susceptible individuals through desynchronization of physiological mechanisms from their otherwise endogenous rhythms. Individuals with shiftwork sleep disorder, for example, have been found to have electrophysiological evidence of reduced sensory memory and hyperattention to novel sounds, compared with healthy day workers (Gumenyuk et al. 2010).

In convergence with the hyperarousal theory, it is well established that sleep disturbances including insomnia are common sequelae of traumatic stress (Spoormaker and Montgomery 2008; Charuvastra and Cloitre 2009; Pigeon et al. 2011). A review of polysomnographic studies found that individuals with post-traumatic stress disorder (PTSD) have reduced slow wave sleep (Kobayashi et al. 2007). Furthermore, it appears that pretraumatic sleep disturbance is a predictor for development of psychiatric morbidity after a traumatic event (Bryant et al. 2010). Thus, with respect to traumatic pathology as well, it appears that sleep disturbance may be not only a secondary phenomenon but possibly also a causal factor.

Fundamentally, the nature of what sleep itself "is," has not been established with definitive consensus. A long tradition of investigation has conceptualized sleep as a global state under top-down, central regulatory control (e.g., Saper et al. 2005). This model describes competing homeostatic drives for sleep versus wakefulness and focuses on biochemical mediators of sleep including "sleep regulatory substances." In contrast, a view of sleep focusing on synchronization of activity in local neural networks has been recently proposed (Krueger et al. 2008). In this model, local assemblies of neurons (individual cortical columns) synchronize with one another in an activity-dependent way (i.e., following a period of stimulation). Perhaps counterintuitively, some regions of the brain can be described as being in a "sleep-state" while other regions are "awake." Global, whole-organism sleep is explained as an emergent property of the local networks.

Although the local network synchronization model does not exclude the role of metabolic factors (and pharmacological interventions) as primary initiators of local sleep states, it would appear that the model has potential to re-frame the approach to therapeutics in sleep medicine, given the physics of oscillatory synchronization (as well as the relative ease of measuring phenomena related to neural synchronization, e.g., through EEG). Therapeutic strategies that target neural oscillatory aspects of sleep, through nonpharmacological mechanisms, may be particularly attractive, in consideration of the risk of side effects

and dependency associated with many pharmacological interventions for sleep disorders.

High-resolution, relational, resonance-based, electroencephalic mirroring (HIRREM<sup>TM</sup>, Brain State Technologies, LLC, Scottsdale, AZ) is a noninvasive approach to enhancing neurodynamic self-regulation by giving the brain an opportunity to perceive its own oscillatory pattern. HIRREM, also known as Brainwave Optimization<sup>TM</sup>, uses sound (musical tones) to reflect the brain's changing pattern of frequency-specific electrical activity back to itself. In essence, the individual is given an opportunity to "listen" to his or her own brain. HIRREM musical tones are chosen on the basis of pattern-recognition algorithms in HIRREM software. Because of the identity between the dominant EEG frequency and the frequency of the musical tone, the phenomenon of resonance occurs between the individual's brain and the musical tones. The operational theory is that neural-musical resonance may be a mechanism for autocalibration of neural networks. Because the technology does not rely on entraining the brain toward operator-defined norms for the neural energetic ratios, HIRREM is considered a procedure for autocalibration of neural oscillations. Provision of the technology does not depend on clients' active cognitive engagement.

Use of HIRREM has been anecdotally associated with amelioration of a variety of symptoms including sleep complaints (L. Gerdes, pers. comm.), and so the aim of this pilot clinical trial was to evaluate the efficacy of HIRREM for relieving symptoms of insomnia. Our primary hypothesis was that the addition of HIRREM to usual care would be superior to usual care alone, for reduction of self-reported insomnia severity.

#### Methods

#### **Participants**

This single site study was carried out in the Department of Neurology at Wake Forest Baptist Health, an academic medical center in Winston-Salem, NC. A total of 20 men and women over the age of 18 having a clinical diagnosis of insomnia and an Insomnia Severity Index (ISI) score ≥ 15 were recruited by physician referral and by advertisements throughout the institution. This was a pilot superiority trial with no previous randomized clinical trials of HIRREM available on which to base power calculations. Subjects were excluded if they had a history of known sleep apnea, restless legs/periodic limb movement disorder, seizure disorder, urinary problems such as benign prostate hypertrophy, severe hearing impairment, or ongoing treatment with opiates, benzodiazepines, or antipsychotic medications. Subjects were requested to abstain from using alcohol or recreational drugs during, and for 3 weeks following the HIRREM study period. Subjects were also advised not to undergo selected health care cointerventions including manual therapies during, and for 3 weeks following the HIRREM portion of the study. Additionally, participants were requested to refrain from caffeine consumption after 1:00 PM. All subjects were also instructed to continue their usual care, which was defined as whatever other medications or therapies, outside of those listed above as exclusions, that subjects were using prior to enrollment.

#### Study design

A randomized, unblinded, wait-list control, crossover, superiority study design was utilized, and the protocol was approved by the Institutional Review Board of Wake Forest School of Medicine, which did not require data safety and monitoring board oversight. The 20 subjects were randomly allocated using a blocked randomization design, with a block size of four, and a 1:1 ratio. The randomization scheme, utilizing sequentially numbered sealed envelopes containing group assignments, was created independently by a team member having no contact with the subjects, and was maintained secure by the principal investigator. Group assignments were made independent of team members enrolling the subjects. This resulted in 10 subjects being assigned to the wait-list usual care control group (UC) and 10 assigned to HIR-REM plus usual care (HUC) groups. All subjects provided informed consent during an enrollment visit (V1), initial measures obtained, and past medical history obtained. During week #1, the HUC group received a HIRREM assessment and began HIRREM sessions which continued until week #4 (Fig. 1). During weeks #4 and #5, the HUC group returned for the study completion visit where posttreatment measures were obtained (V2). During weeks #5 and #6, the UC group returned for another data collection visit (V2). During week #7, the UC group had their brain energy assessments and began HIRREM sessions which lasted until week #9. During weeks #10 and #11, the UC subjects returned for study completion visits and HUC subjects were contacted for a telephone follow-up at least 4 weeks after their study completion visit. As usual care was maintained throughout the study, there was no washout period and no carryover effect needed to be calculated. There were no rules or restrictions placed on sleep hygiene or naps.

#### **Primary intervention**

The HIRREM intervention began with an initial assessment (45 min), which enabled identification of relative balance or symmetry between homologous brain regions,

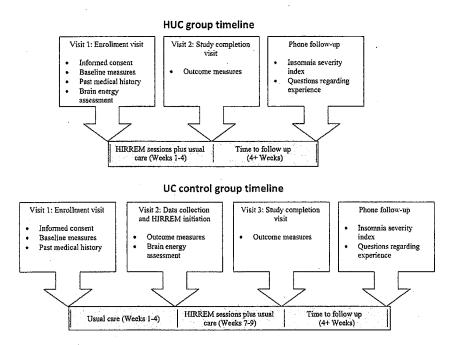


Figure 1. Timelines for occurrence of specific activities in the two groups (HUC and UC).

as well as the harmony or proportionation of energy among different frequency bands. The assessment was followed by a series of active HIRREM sessions (90 min each). The system uses unique sensors placed on the scalp according to standard International 10-20 EEG locations (Jasper 1958), and is held in place using standard EEG conductive paste. The sensors measure the frequencies (Hz) and amplitudes ( $\mu v$ ) of brain energy overlying the major lobes. The sensors utilize embedded computer chips to filter electromagnetic interference and artifact, allowing collection of precise frequency data to enhance resolution of the functional aspects of the brain. Two recording leads, two reference leads, and one ground were used in conjunction with an EEG preamplifier. Data were recorded and viewed with a Dell Precision T3500 PC running Windows Vista, and proprietary data collection software (Brain State Technologies, LLC, Scottsdale, AZ). For the assessment, measurements were taken at homologous regions of the bilateral hemispheres (F3/F4, C3/C4, T3/ T4, P3/P4, O1/O2 for both eyes closed (EC; 1 min), eyes partially open (1 min), and eyes open (EO; 1 min) conditions, while the subject was seated. For EC, and eyes partially open assessments, subjects were asked to take a deep breath and relax. For EO assessments, subjects were given standardized tasks involving numerical digit recall (F3/F4), reading silently (C3/C4), math calculations (P3/ P4), listening comprehension (T3/T4), and to relax with eyes open (O1/O2). A sixth midline measurement was taken at FZ/OZ, with an EO task to count number of appearances of a specific word as they read a standardized printed passage. The reference sensors were connected at A1/A2 and linked for assessments (Fig. 2).

HIRREM sessions generally consisted of between four and eight individual HIRREM protocols, lasting between 6 and 10 min each. Protocols were intended to facilitate balance and harmony between and within brain regions. Individual protocols included up to two recording leads, two reference leads, and one ground lead using the same equipment as for the assessment. Most protocols (a combination of sensor montage and the specific software design) were two channel and recorded homologous regions of the contralateral hemispheres, but occasionally two channel, single-sided protocols or one channel protocols were used. The sensor locations and names largely corresponded to the expanded international 10-20 system; the 10-5 system (Oostenveld and Praamstra 2001).

During a protocol, and with sensors in place over the desired scalp locations, a mathematical algorithm selected the musical tone to be reflected back to the user by identifying the dominant frequency of the individual's EEG spectrum in a floating middle range, at a given instant of time. The dominant EEG frequency was then translated to a musical tone based on that frequency. The musical tone was played back to the individual through earphones, and presented binaurally with less than a 25-msec delay. Resonance between the musical tones and oscillating neural circuits was presumed to facilitate autocalibration and movement toward improved balance and harmony. Some

#### **HIRREM** intervention Noninvasive Brain Brainwave Software translates read-only scale self-calibrates accossment Select initial sound sensors focus brain frequencies into identifies frequencies for balanced sound frequencies facilitates recalibration brain frequencies

Figure 2. Schematic of key components of the HIRREM intervention.

protocols were accomplished with eyes open (rostral brain regions) and some with eyes closed (caudal brain regions).

Subjects received 8-12 HIRREM sessions, of up to 90 min per session. The number of sessions was guided by the balance and stability of the energetic pattern and neurodynamics seen during HIRREM sessions. Subjects had two HIRREM sessions in a half day, separated by a 30- to 60-min break. The majority of clients underwent four sessions in a 2-day period, and all clients completed their HIRREM sessions within 3 weeks of beginning, with most administered during the day. Each HIRREM session comprises 4-8 protocols focused on balancing specific frequencies in targeted locations on the scalp. HIRREM sessions were administered by experienced technologists who were certified in the methodology by Brain State Technologies. During sessions, subjects were encouraged to recline in a zero gravity chair (PC6, Human Touch, LLC, Long Beach, CA).

#### **Outcome measures**

The primary outcome measure was the ISI (Bastien et al. 2001). All other outcomes were secondary, or exploratory. Outcome measures were obtained during the enrollment visit, post-treatment visit, and for the UC group at the repeat data collection visit (V3). Patients responded to the pencil and paper tests: ISI (primary outcome), the Center for Epidemiologic Studies Depression Scale (CES-D), the SF-36 health and well-being survey, the Medical Outcomes Survey Sleep Scale (MOS-SS), the Connor-Davidson Resilience Scale, and Visual Analogue Scales (VAS) for stress, depression, anxiety, fatigue, pain, relaxation, and overall well-being. A computerized battery of neuropsychological measures, was also administered to assess neuropsychological and psychophysiological function in multiple domains including verbal memory, visual memory, finger

tapping, symbol digit coding, Stroop testing, shifting attention, and continuous performance (CNS Vital Signs, Morrisville, NC). Physiological data collected included blood pressure (BP) and a 10-min continuous recording of heart rate recording with the subject at rest. The heart rate recordings were made using the Bioharness (Biopac Systems, Inc., Goleta, CA), a noninvasive chest strap worn by the participants. The heart rate recordings included beat to beat intervals, and the data could be processed to obtain heart rate variability (HRV) data. HRV statistics which could be generated included mean, variance, standard deviation of normal to normal RR intervals (SDNN), square root of the mean squared difference of successive normal to normal RR intervals (RMS-SD), very low frequency (VLF), LF, HF, total power (TP), LF/HF, sample asymmetry, sample entropy, and coherence. All of the algorithms for computation of these parameters are derived from information or source code from the Physionet archive (Goldberger et al. 2000).

#### Follow-up and safety

The brain becomes its own mirror

All outcome measures were recorded before the study began and before crossover for both groups. Only the UC group repeated all measures after the crossover intervention. Both groups had repeated ISI at a final phone followup at 4 or more weeks after completion of the HIRREM intervention. No adverse events or side effects were reported by any participant at any point in the study.

#### Statistical analysis

All analyses were conducted using SAS 9.2 (SAS, Inc., Cary, NC). Because this is a pilot trial, no a priori power calculations were conducted prior to initiating enrollment; sample sizes were selected based on a sufficient number to

estimate the treatment effect size. The primary and secondary analyses were conducted using multilevel random effects models. For the primary outcome, ISI score was modeled specifying random intercepts for participants (i.e., accounting for variance in the initial levels of insomnia across participants at baseline) with group (HUC vs. UC) and time (baseline vs. post-treatment) as fixed effects. The group x time interaction was interpreted as the differential change of the HUC group compared with the UC group. Secondary outcomes were similarly modeled, with the follow-up period added to examine the duration of change. To estimate the size of effect, Cohen's d was calculated for all outcome measures to index the size of the group differences in terms of within-group standard deviations (e.g., 1.2 standard deviation difference between the groups). Although arbitrary ranges, standard deviation differences  $\leq 0.2$  are often considered "small", d = 0.5 are considered "medium," and d > 0.80 are "large." Descriptive statistics are presented as means (SD) or frequency counts (%) as appropriate. All point estimates of differential change are presented with 95% confidence intervals. Where appropriate, all hypothesis testing is two-tailed with P < 0.05 interpreted as statistical significance.

#### Results

#### Baseline data and subject flow

A total of 28 subjects were enrolled in the study at Wake Forest Baptist Health (Fig. 3). Recruitment took place from March 1, 2011, through May 1, 2011. Twenty participants were assigned to either the wait-list UC or HUC group. Demographics and baseline characteristics (Table 1) were not statistically different between the two groups. There were slightly more comorbidities noted in the HUC group (Table 2). Antidepressants were used by three subjects in the HUC group, and one in the UC group. All patients continued their usual care throughout the course of the study; HIRREM was added to usual care during the primary intervention epoch. All subjects completed the primary intervention period, and primary data collection visits. All 10 participants in the HUC group received HIRREM (mean of 10.3 sessions) and nine of 10 UC subjects subsequently received HIRREM after crossover. One in the UC group had a job change and the schedule prevented further participation. One subject from each group receiving HIRREM was not available for the late telephone follow-up.

#### **Primary outcome**

Mean baseline ISI for each group was identical, at the enrollment visit (mean = 18.6, P = 1.0). The primary

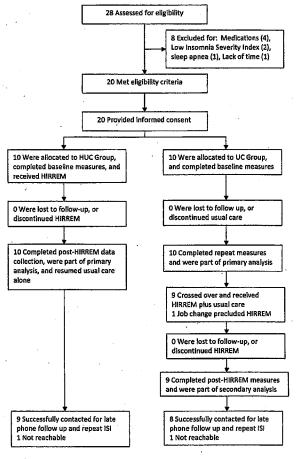


Figure 3. Subject recruitment and flow through the study.

Table 1. Baseline demographics.

	HUC intervention group (SD)	UC control group (SD)
N .	10	10
Mean age	41.3 (17.5)	49.5 (8.1)
Women/Men	8/2	6/4
Ethnicity	9/10 Caucasian	10/10 Caucasian
Mean baseline ISI	18.75 (2.7)	18.9 (3.2)
CES-D	17.1 (11.1)	12.6 (7.1)
SF-36: General health	72 (28.0)	69 (20.4)
Systolic blood pressure	115.7 (9.6)	116.2 (9.4)
Heart rate	74.4 (12.8)	71.6 (9.5)

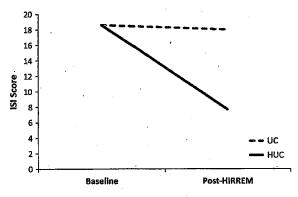
HUC, HIRREM plus usual care; UC, usual care; ISI, Insomnia Severity Index; CES-D, Center for Epidemiologic Studies Depression Scale.

outcome for the study, analysis for differential change in the ISI at V2 (Fig. 4), showed a statistically significant drop of 10.3 points (-13.7 to -6.9; P < 0.0001). Standard effect size (Cohen's d) was 2.68 for change in ISI.

Table 2. Self-reported comorbidities.

Medical condition/Comorbidity	HUC intervention group	UC control group
Hypertension .	2	2
Hyperlipidemia	· <b>3</b>	. 1
Headaches/Migraine	3	0
Stress/Anxiety disorder	· 2	1
Depression	3	. 2
Trauma/TBI	1	1

HUC, HIRREM plus usual care; UC, usual care; TBI, traumatic brain injury.

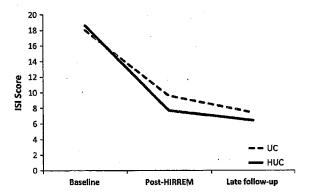


**Figure 4.** Baseline and post-HIRREM Insomnia Severity Index (ISI) scores for usual care (UC) and HIRREM plus usual care (HUC) groups. Differential change: -10.3 (95% CI: -13.7 to -6.9), P < 0.0001.

#### Secondary outcomes

The UC group was then offered crossover to receive HIR-REM. There was no statistical difference for analysis of differential change in the ISI following HIRREM intervention between the HUC group and the crossover UC group. The ISI was also administered at a telephone follow-up at least 4 weeks following completion of the HIRREM intervention. The improvement in insomnia symptoms reported following completion of the HIRREM sessions persisted through that period (Fig. 5).

Considering clinical threshold correlates for insomnia, based on the differential change in mean ISI, the HUC group improved to just under the cut point for subthreshold insomnia category, while the UC group remained in the moderate insomnia category (Table 3). As a way to consider clinically relevant changes for individual subjects, the number of subjects in each category, before and after each study epoch, shows that 9/10 in the UC group remained in the moderate-to-severe insomnia category, while 9/10 in the HUC group moved to the no insomnia or subthreshold categories following HIRREM. Following crossover and receipt of HIRREM, 6/9 in the



**Figure 5.** Baseline to post-HIRREM changes in Insomnia Severity Index (ISI) scores for usual care (UC) and HIRREM plus usual care (HUC) groups after cross-over, with 4- to 6-week late follow-up ISI scores.

UC group also improved to no insomnia or subthreshold insomnia, and the effects persisted with late follow-up after HIRREM for both groups.

Differential change in the CES-D score during the primary intervention period reached statistical significance with a drop of 8.8 points (-17.5 to -0.1; P = 0.047). Differential change was not statistically significant for the total SF-36 score, which increased by 4.0 (-6.8 to 14.8; P = 0.446), but there were small effect sizes for some components of the SF-36, with effect size values ranging from 0.07 for physical function to 0.58 for energy and fatigue. There were also no statistically significant changes for the neurocognitive measures, although several domains, psychomotor speed (0.38), neurocognitive index (0.24), and complex attention (0.22) showed small effect sizes. Due to the small sample size, there was inadequate power for analysis of other secondary and exploratory outcome measures. Poor technical quality of recordings precluded analysis of HRV measures.

Exploratory analysis of changes in the brain pattern following HIRREM, for all those who received HIRREM (n=19), suggested that there was a decrease in the overall power in high frequencies (23–36 Hz) at the temporal lobes in the T3/T4 location (Fig. 6), over the course of the required minimum of eight HIRREM sessions. The median for log transformed mean power values showed a steady decline over the first four HIRREM sessions. The median for high-frequency power then appeared to oscillate, seemingly around a lower set point, for the remaining sessions.

#### Discussion

This study represents the first use of HIRREM in a randomized clinical trial. HIRREM was a feasible, effective

Table 3. Changes in clinical category for insomnia after HIRREM based on ISI scores.

	HUC	interventic	n group	UC co	ntrol grou	ıp ,	
Clinical category by ISI score	Pre	Post	Late phone F/U	Pre	Post	After crossover HIRREM	Late phone F/U
No clinically significant insomnia (0–7)	0	5	5	0	Ö	2	5
Subthreshold insomnia (8-14)	0	4	4	0	1	4	1
Moderate insomnia (15-21)	9	. 1	0	. 7	8	3	3
Severe insomnia (22–28)	1	0	0	3	1	0	0

HIRREM, high-resolution, relational, resonance-based, electroencephalic mirroring; HUC, HIRREM plus usual care; UC, usual care; ISI, Insomnia Severity Index.

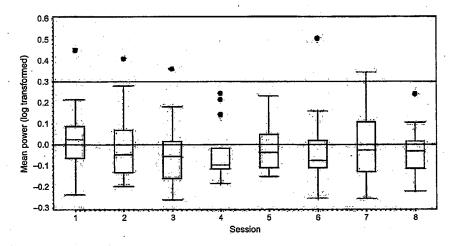


Figure 6. Tukey box plot of mean power (log transformed) in the high-frequency (23–36 Hz, "80") range at the temporal locations (T3 and T4, averaged together), over the course of eight HIRREM sessions, n = 19 subjects.

intervention for such an outpatient population, and appeared both safe and well tolerated. Based on our primary outcome measure of differential change in the ISI score, as an addition to usual care, use of HIRREM was associated with an improvement of insomnia symptoms in this study population of subjects with moderate-tosevere insomnia. The standard effect size suggested that as applied during this study, HIRREM had a strong effect. Based on telephone follow-up done at least 4 weeks following HIRREM, the improvement in ISI persisted. When crossed over to receive HIRREM, those in the UC group showed similar differential change in the ISI, with similar persistence of the effect on late telephone follow-up. When considered in light of clinical correlates with the ISI, nine of 10 subjects in the HUC group moved to an ISI score in the no insomnia or subthreshold insomnia categories. Following crossover, and receipt of HIRREM intervention, six of nine in the UC group also moved to no insomnia or subthreshold insomnia categories, suggesting clinically relevant changes in this population following HIRREM.

Among other secondary outcomes, differential change (improvement) in the CES-D measure of depression just reached statistical significance, while there was no significant change in formal measures of overall health and well-being (SF-36), or neurocognitive function, as measured by a computerized neurocognitive battery. Depression is closely intertwined with insomnia, and future studies may help elucidate whether improvement in either sleep or mood appears to be causal to improvement in the other. The small sample size and the specific measures used do not allow identification a specific effect for depression.

Although the exact mechanism of action of HIRREM has not yet been confirmed, the secondary finding of a decrease in overall high-frequency power in the temporal lobes may provide some insights. Exploratory analysis of brain changes was focused on the temporal lobes based on the supposition that temporal lobe activity may reflect autonomic functioning. Craig (2005) has reported a neuroanatomical basis for lateralization of autonomic nervous system management by the right and left insula for the

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sympathetic and parasympathetic divisions, respectively. Thus, increased overall power in the temporal lobes, if reflective of activation of autonomic functioning, is consistent with the hyperarousal theory regarding the underlying mechanism for insomnia. Quieting of high-frequency power in the temporal lobes could be understood as mitigating an underlying driver of insomnia.

#### Limitations

The limitations of this study include a small sample size, as well as the use of a wait-list usual care control group rather than an active control, or sham-placebo group. Because the study design entailed usual care for the control group, without blinding as to the intervention, it is not possible to rule out placebo or expectation effects as contributors to the improvements associated with the HIRREM intervention. HIRREM, like other interventions which entail social interaction and relaxation induction, may facilitate improvements not only through auditory tonal mirroring of dominant electroencephalic frequencies but also through nonspecific mechanisms. Placebo biofeedback interventions, for example, have in some cases been shown to offer benefits comparable to true biofeedback (Nicassio et al. 1982; Hunyor et al. 1997). Nonetheless other studies have reported that true biofeedback is more efficacious than placebo biofeedback (Henderson et al. 1998; Armagan et al. 2003; Becerra et al. 2006; Rao et al. 2007; Basta et al. 2011). The degree of improvement, and the standard effect size, coupled with persistence of benefit for at least 4 weeks following completion of HIRREM suggests the presence of a real change. In addition, subjects in both groups continued their usual care throughout the course of the study. It is unclear whether HIRREM alone would achieve the results observed or if combination is necessary. Placebocontrolled studies of HIRREM are warranted, and future studies should include physiological outcomes and follow-up to evaluate persistence of effect.

#### Conclusion

In this pilot clinical trial, the use of HIRREM in subjects with insomnia was feasible and effective and was safe and well tolerated. Based on differential change for a subjective clinical insomnia outcome measure, HIRREM improved insomnia compared with continuation of usual care alone. This appeared to be a strong effect based on the standard effect size, and the effect persisted for at least 4 weeks following HIRREM. The CES-D also showed improvement. Exploratory analysis suggested changes in brain pattern having relevance to the hyperarousal theory of insomnia, with potential implications

for understanding the mechanisms of HIRREM for individuals with insomnia. This study suggests a need for additional controlled clinical trials to both confirm the effect and further explore possible mechanisms of action.

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#### **Conflict of Interest**

None of the authors from Wake Forest School of Medicine have conflicts of interest, nor any direct financial relationships, or hold positions with Brain State Technologies, LLC. Sung Lee, MD, MSc, is Research Coordinator for Brain State Technologies. Lee Gerdes is the inventor of the HIRREM technology, and CEO of Brain State Technologies, LLC.

#### References

Adam, K., M. Tomeny, and L. Oswald. 1986. Physiological and psychological differences between good and poor sleepers.

J. Psychiatr. Res. 20:301–316.

Armagan, O., F. Tascioglu, and C. Oner. 2003.

Eletromyographic biofeedback in the treatment of the hemiplegic hand: a placebo-controlled study. Am. J. Phys. Med. Rehabil. 82:856–861.

Basta, D., M. Rossi-Izquierdo, A. Soto-Varela, M. E. Greters, R. S. Bittar, E. Steinhagen-Thiessen, et al. 2011. Efficacy of a vibrotactile neurofeedback training in stance and gait conditions for the treatment of balance deficits: a doubleblind, placebo-controlled multicenter study. Otol. Neurotol. 32:1492–1499.

Bastien, C. H., A. Vallieres, and C. M. Morin. 2001. Validation of the Insomnia Severity Index as an outcome measure for insomnia research. Sleep Med. 2:297–307.

Bastien, C., G. St-Jean, C. Morin, I. Turcotte, and J. Carrier. 2008. Chronic psychophysiological insomnia: hyperarousal and/or inhibition deficits? An ERPs investigation. Sleep 31:887–898.

Becerra, J., T. Fernandez, T. Harmony, M. I. Caballero, F. Garcia, A. Fernandez-Bouzas, et al. 2006. Follow-up study of learning-disabled children treated with neurofeedback or placebo. Clin. EEG Neurosci. 37:198–203.

Bonnet, M. H., and D. L. Arand. 1998. Heart rate variability in insomniacs and matched normal sleepers. Psychosom. Med. 60:610–615.

Bryant, R. A., M. Creamer, M. O'Donnell, D. Silove, and A. C. McFarlane. 2010. Sleep disturbance immediately prior to trauma predicts subsequent psychiatric disorder. Sleep 33:69-74.

- Budhiraja, R., T. Roth, D. W. Hudgel, P. Budhiraja, and C. L. Drake. 2011. Prevalance and polysomnographic correlates of insomnia comorbid with medical disorders. Sleep 34:859–867.
- Burgos, I., L. Richter, T. Klein, B. Fiebich, B. Feige, K. Lieb, et al. 2006. Increased nocturnal interleukin-6 excretion in patients with primary insomnia: a pilot study. Brain Behav. Immun. 20:246–253.
- Charuvastra, A., and M. Cloitre. 2009. Safe enough to sleep: sleep disruptions associated with trauma, posttraumatic stress, and anxiety in children and adolescents. Child Adolesc. Psychiatr. Clin. N. Am. 18:877–891.
- Craig, A. D. 2005. Forebrain emotional asymmetry: a neuroanatomical basis? Trends Cogn. Sci. 9:566-571.
- Devoto, A., S. Manganelli, F. Lucidi, C. Lombardo, P. M. Russo, and C. Violani. 2005. Quality of sleep and P300 amplitude in primary insomnia: a preliminary study. Sleep 28:859–863.
- Foley, D. J., A. A. Monjan, S. L. Brown, E. M. Simonsick, R. B. Wallace, and D. G. Blazer. 1995. Sleep complaints among elderly persons: an epidemiologic study of three communities. Sleep 18:425–432.
- Goldberger, A. L., L. A. Amaral, L. Glass, J. M. Hausdorff, P. C. Ivanov, R. G. Mark, et al. 2000. PhysioBank, PhysioToolkit, and PhysioNet: components of a new research resource for complex physiologic signals. Circulation 101:E215–E220.
- Gumenyuk, V., T. Roth, O. Korzyukov, C. Jefferson, A. Kick, L. Spear, et al. 2010. Shift work sleep disorder is associated with an attenuated brain response of sensory memory and an increased response to novelty: an ERP study. Sleep 33:703-713.
- Henderson, R. J., M. G. Hart, S. K. Lal, and S. N. Hunyor. 1998. The effect of home training with direct blood pressure biofeedback of hypertensives: a placebo-controlled study. J. Hypertens. 16:771–778.
- Hunyor, S. N., R. J. Henderson, S. K. Lal, N. L. Carter, H. Kobler, M. Jones, et al. 1997. Placebo-controlled biofeedback blood pressure effect in hypertensive humans. Hypertension 29:1225-1231.
- Jasper, H. H. 1958. The ten twenty electrode system of the International Federation. Electroencephalogr. Clin. Neurophysiol. 10:371–375.
- Jaussent, I., J. Bouyer, M. L. Ancelin, T. Akbaraly, K. Peres, K. Ritchie, et al. 2011. Insomnia and daytime sleepiness are risk factors for depressive symptoms in the elderly. Sleep 34:1103-1110.
- Kobayashi, I., J. M. Boarts, and D. L. Delahanty. 2007.
  Polysomnographically measured sleep abnormalities in PTSD: a meta-analytic review. Psychophysiology 44:660–669.
- Krueger, J. M., D. M. Rector, S. Roy, H. P. Van Dongen, G. Belenky, and J. Panksepp. 2008. Sleep as a fundamental property of neuronal assemblies. Nat. Rev. Neurosci. 9:910-919.
- Kuppermann, M., D. P. Lubeck, P. D. Mazonson, D. L. Patrick, A. L. Stewart, D. P. Buesching, et al. 1995. Sleep

- problems and their correlates in a working population. J. Gen. Intern. Med. 10:25-32.
- Laugsand, L. E., L. J. Vatten, C. Platou, and I. Janszky. 2011. Insomnia and the risk of acute myocardial infarction: a population study. Circulation 124:2073–2081.
- McCall, W. V., J. N. Blocker, R. D'Agostino, J. Kimball, N. Boggs, B. Lasater, et al. 2010. Insomnia severity is an indicator of suicidal ideation during a depression clinical trial. Sleep Med. 11:822–827.
- Monroe, L. J. 1967. Psychological and physiological differences between good and poor sleepers. J. Abnorm. Psychol. 72:255–264.
- Nicassio, P. M., M. B. Boylan, and T. G. McCabe. 1982. Progressive relaxation, EMG biofeedback and biofeedback placebo in the treatment of sleep-onset insomnia. Br. J. Med. Psychol. 55:159–166.
- Nofzinger, E. A., D. J. Buysse, A. Germain, J. C. Price, J. M. Miewald, and D. J. Kupfer. 2004. Functional neuroimaging evidence for hyperarousal in insomnia. Am. J. Psychiatry 161:2126–2129.
- Ohayon, M. M. 2002. Epidemiology of insomnia: what we know and what we still need to learn. Sleep Med. Rev. 6:97–111.
- Ohayon, M. M., and T. Roth. 2003. Place of chronic insomnia in the course of depressive and anxiety disorders.

  J. Psychiatr. Res. 37:9-15.
- Ohayon, M. M., M. Caulet, and P. Lemoine. 1998. Comorbidity of mental and insomnia disorders in the general population. Compr. Psychiatry 39:185–197.
- Oostenveld, R., and P. Praamstra. 2001. The five percent electrode system for high-resolution EEG and ERP measurements. Clin. Neurophysiol. 112:713-719.
- Perlis, M. L., D. E. Giles, W. B. Mendelson, R. R. Bootzin, and J. K. Wyatt. 1997. Psychophysiological insomnia: the behavioural model and a neurocognitive perspective. J. Sleep Res. 6:179–188.
- Perlis, M. L., H. Merica, M. T. Smith, and D. E. Giles. 2001a. Beta EEG activity and insomnia. Sleep Med. Rev. 5:365-376.
- Perlis, M. L., M. T. Smith, H. Orff, P. Andrews, and D. E. Giles. 2001b. Beta/gamma activity in patients with insomnia and in good sleeper controls. Sleep 24:110–117.
- Pigeon, W. R., C. Cerulli, H. Richards, H. He, M. Perlis, and E. Caine. 2011. Sleep disturbances and their association with mental health among women exposed to intimate partner violence. J. Womens Health (Larchmt.) 20:1923– 1929.
- Rao, S. S., K. Seaton, M. Miller, K. Brown, I. Nygaard, P. Stumbo, et al. 2007. Randomized controlled trial of biofeedback, sham feedback, and standard therapy for dyssynergic defecation. Clin. Gastroenterol. Hepatol. 5: 331–338.
- Reid, K. J., and P. C. Zee. 2009. Circadian rhythm disorders. Semin. Neurol. 29:393-405.

- Riemann, D., C. Kloepfer, and M. Berger. 2009. Functional and structural brain alterations in insomnia: implications for pathophysiology. Eur. J. Neurosci. 29:1754–1760.
- Saper, C. B., T. E. Scammell, and J. Lu. 2005. Hypothalamic regulation of sleep and circadian rhythms. Nature 437: 1257–1263.
- Sheer, F. A., M. F. Hilton, C. S. Mantzoros, and S. A. Shea. 2009. Adverse metabolic and cardiovascular consequences of circadian misalignment. Proc. Natl. Acad. Sci. USA 106:4453-4458.
- Simon, G. E., and M. VonKorff. 1997. Prevalence, burden, and treatment of insomnia in primary care. Am. J. Psychiatry 154:1417–1423.
- Spoormaker, V. I., and P. Montgomery. 2008. Disturbed sleep in post-traumatic stress disorder: secondary symptom or core feature? Sleep Med. Rev. 12:169-184.

- Steiger, A. 2007. Neurochemical regulation of sleep. J. Psychiatr. Res. 41:537–552.
- Taylor, D. J., K. L. Lichstein, H. H. Durrence, B. W. Reidel, and A. J. Bush. 2005. Epidemiology of insomnia, depression, and anxiety. Sleep 28:1457–1464.
- Vgontzas, A. N., E. O. Bixler, H. M. Lin, P. Prolo, G. Mastorakos, A. Vela-Bueno, et al. 2001. Chronic insomnia is associated with nyctohemeral activation of the hypothalamic-pituitary-adrenal axis: clinical implications. J. Clin. Endocrinol. Metab. 86:3787–3794.
- Vgontzas, A. N., D. Liao, S. Pejovic, S. Calhoun, M. Karataraki, M. Basta, et al. 2010. Insomnia with short sleep duration and mortality: the Penn State cohort. Sleep 33:1159–1164.
- Yang, C. M., and H. S. Lo. 2007. ERP evidence of enhanced excitatory and reduced inhibitory processes of auditory stimuli during sleep in patients with primary insomnia. Sleep 30:585-592.

This is Exhibit " E " referred to in the affidavit of David Kenney sworn before me at Toronto, Ontario this \_\_\_\_\_\_ day of March, 2015.

A Commissioner fer taking oaths for the Province of Ontario

Deepshikha Dutt

# NeurVana Recovery & Wellness, Inc.

### Analysis of Program Evaluation

Abstract

This document provides a summary and analysis of a program evaluation survey in which parents of former residential clients of NeurVana Recovery and Wellness, Inc., were asked to evaluate their impressions and satisfaction with the NeurVana program as well as changes or improvements in their children's lives and behavior since their experience at NeurVana.

A review of the qualitative and quantitative data from the survey suggests that the NeurVana program produced remarkably positive results with a particularly difficult population.

Roger Gans Roger@ProfessorGans.com

**OVERVIEW** 

This document provides a summary and analysis of a survey in which parents of former residential clients of NeurVana Recovery and Wellness, Inc., were asked to evaluate their impressions and satisfaction with the NeurVana program as well as changes or improvements in their children's lives and behavior since their experience at NeurVana. A brief overview of the NeurVana program is also provided for context.

A review of the qualitative and quantitative data from the survey suggests that the NeurVana program produced remarkably positive results with a particularly difficult population:

- Most subjects were referred because of multiple behavioral and/or emotional problems
- Virtually all had failed to improve in previous therapeutic settings
- 35 of 36 (97.2%) responding parents reported significant positive results with NeurVana
- 27 of 34 (79.4%) responding parents reported being "very" or "completely" satisfied
- Serious negative behaviors (4 & 5 on a scale from 0-5) were reduced by 89.2%

#### ABOUT THE NEURVANA PROGRAM EVALUATION SURVEY

The NeurVana Program Evaluation Survey was designed by an independent consulting firm on commission from NeurVana Recovery and Wellness, Inc. for the purposes of documenting the experience of its graduates and their families, providing guidance for improving and expanding the NeurVana program, and as a source of advice and testimonials from parents of troubled youth to other parents experiencing similar problems.

Invitations to participate in the survey were emailed to the parents of all 103 adolescent subjects who had completed the NeurVana program from its inception on October 2, 2011, through December, 2013. Two invitational emails were sent, one on January 26, 2014, and a follow-up on February 1, 2014. Full anonymity was promised, although participants who were willing to participate in follow-up interviews for testimonial purposes were invited to supply their contact information. The survey was closed on February 2, 2014.

In addition to a number of open-ended questions asking for descriptions of parents' satisfaction with the program and changes in their child's behaviors, the survey included requests for quantitative ratings of the seriousness of their child's condition relating to 20 specific behavioral issues (e.g., school attendance and performance, anxiety and depression, drug abuse, suicidal thoughts and gestures, etc.) at three different points in time: immediately *before* beginning the NeurVana program, one month *after* completing the NeurVana program, and at the *current* time when they responded to the surveys (i.e., January or February, 2014), typically six months to a 'year after completing the program.

The response rate was 36%, which is fairly typical of such follow-up surveys. Copies of the invitational emails, the survey, and detailed summaries of responses to representative questions are included in the Appendix to this document.

#### **DISCLAIMERS**

This analysis does not attempt to evaluate the validity, scientific basis, therapeutic value or effectiveness of any of the elements of the NeurVana approach to promoting wellness and recovery.

There are many factors that prevent definitive evaluation of the effectiveness of treatment modalities for adolescents with behavioral, emotional and psychological problems. In addition to the recognized unreliability of self-reports—from therapists as well as patients—there are issues with what constitutes a "normal" adolescent condition or developmental process (Bychkova et al., 2011).

Among psychotherapy patients in general, adolescents are widely considered to be a difficult group to work with, and success rates with this age group have not been well studied (Bishop et al., 2005). Among the general population of psychotherapy patients, however, it is broadly accepted that "a significant minority of patients fail to improve or actually deteriorate while in treatment" (Bishop et al., 2005, p. 207-208), so it is safe to conclude that significant numbers of adolescent psychotherapy patients fail to show improvement.

#### ABOUT THE NEURVANA APPROACH

On its website, NeurVana Recovery and Wellness, Inc. describes itself as "a privately held and operated incorporated company" that "offers residential treatment for children and youth" (NeurVana Website, N.D.).

The following description of the NeurVana program is taken from its "Executive Summary":

NeurVana is a holistic recovery and wellness program for young people with self-destructive behavioural, emotional and psychological problems. Designed expressly to address issues affecting teen-agers and young adults, the innovative NeurVana program produces rapid, long-lasting and dramatic results by treating the underlying neurological imbalances that are at the root of most such problems. The program has achieved consistently positive results in treating a wide range of conditions including:

Anxiety
ADHD / ADD
Eating Disorders
Self-Destructive Behavior
Sleep Disorders
Self-Harm Patterns
Learning Challenges
Oppositional Defiance Disorder (ODD)
Obsessive Compulsive Disorder (OCD)

Depression
Substance Abuse
Anger / Rage
Impulsive Behavior
Suicidal Thoughts/Ideation
Weight Management
Low Self-Esteem
Post-Concussion Syndrome
Traumatic Brain Injury (TBI)

NeurVana's innovative program combines state-of-the-art neuro-balancing technology and experiential youth-centric life coaching with a brain-healthy Paleo/Omni organic diet and vigorous exercise in a highly structured, therapeutic environment. Supporting modalities include: yoga, meditation, music, art therapy, back-to-nature experiences (biophilia), family coaching and parent coaching. A vibrant after-care coaching program is also available. (NeurVana Executive Summary, N.D.)

According to the NeurVana website, the "heart" of its therapeutic approach is a "brain rebalancing" technology called "Brainwave Optimization," which was developed by Brain State Technologies of Scottsdale, Arizona. NeurVana was a licensee of this technology. The reasoning for this approach is based on the causal attribution of most behavioral and emotional problems (e.g., such as anxiety, depression and substance abuse) to brain imbalances or dysfunctions caused by physical or emotional trauma. The following description of this approach is from the "How We Help/Anxiety & Depression" page of the NeurVana website.

In our supportive, therapeutic environment, we help the young person bring the brain-centered symptoms under control through a series of meditation-like neuro-balancing sessions called Brainwave Optimization<sup>TM</sup>. This noninvasive, drugless therapy uses high-tech EEG sensors that read brain activity in real time and translate it into sound patterns. Stereo headphones then feed these sound patterns back in a way that lets the young person's brain hear its own activity, which enables the brain to reset itself into a state of harmony and balance. After a relatively short series of these sessions, the brain is able to heal itself. This leads to the elimination of the symptoms of brain imbalance, which can include addiction, depression, anxiety, PTSD, ADHD, self-destructive behaviour, rage and anger, eating disorders, and more.

Building on the foundation of these neuro-therapy sessions, our integrated program of structured activities, life coaching, healthy diet and exercise enables the young person to experience the rewards of a self-regulated lifestyle. We guide the young person through a path of self-discovery that leads to greater emotional intelligence, improved self-awareness, and better interpersonal and communication skills. We focus on identifying environmental, social and behavioral triggers than can help or hinder the achievement of personal objectives so the young person can take better control of the decisions that will continue to shape her or his life.

(NeurVana website, N.D.)

Peer-reviewed and sponsored research provides evidence that the Brainwave Optimization treatment modality is safe (Gerdes et al., 2013) and that it can be effective in relieving symptoms of insomnia (Tegeler, 2012), post-concussion and post-traumatic stress disorders (Lee, et al., 2014), migraine headaches, depression and a range of other behavioral, emotional and psychological problems (Brain State Technologies Case Studies, N.D.).

Presented as a "holistic" program, the NeurVana therapeutic experience also included dietary and lifestyle elements intended to promote and support "brain health," an approach advocated by Dr. Daniel Amen (Amen Clinics Website, N.D.). As the NeurVana "Executive Summary" document describes it:

The NeurVana program supplements this neuro-therapy with a brain-healthy regimen that includes organic OMNI/Paleo nutrition, vigorous exercise and well-regulated sleeping and waking cycles—inspired by the ground-breaking work of Dr. Amen and Dr. John Ratey of Harvard University—that enable the young person to experience the rewards of a balanced, healthy, positive approach to life's challenges.

NeurVana is one of the world's few advanced level certification centers for the use of Brainwave Optimization therapy, a state-of-the-art technology licensed through Brain State Technologies of Scottsdale, Arizona. NeurVana is the world's only therapy program that is affiliated and licensed by both The Amen Clinics and Brain State Technologies. (NeurVana Executive Summary, N.D.)

#### SURVEY RESULTS

It should be noted that survey invitations were not issued to the families of NeurVana clients who left the program before completion. It can be assumed that their opinions of the program may have been significantly different from those reported in the survey. It is also possible that parents who responded to the survey may have held significantly different opinions about the program than those who were invited but chose not to respond. Based on the data from those who did choose to respond, several themes seem to emerge.

#### A Multiply-Troubled Population

The survey asked respondents to indicate which of nine kinds of problems their child was experiencing at the time of referral, with instructions to indicate "all that apply," with an "other" category included.

**TABLE 1: Multiple Referring Problems Were the Norm** 

## Please indicate the problem(s) that led to your child's referral to NeurVana (check all that apply)

Answer Options	Response Percent	Response Count
Depression and/or anxiety	77.8%	28
Under-performance in school	58.3%	21
Alcohol and/or drug abuse	66.7%	24
Eating disorder	19.4%	7
Sleeping disorder	44.4%	16
ADD/ADHD	38.9%	14
Self-harm or suicide ideation	36.1%	13
Anger, rage or defiance issues	55.6%	20
Concussion or traumatic brain injury	25.0%	9
Other (please specify)		<b>3</b>

answered question 36 skipped question 1

As can be inferred from a review of Table 1, above, multiple problems were the norm among these adolescents, with the 36 respondents reporting 155 problems. If divided evenly, this would amount to nearly five presenting problems per child! The research literature on psychotherapy with adolescents suggests that co-occurring disorders tend to make successful treatment particularly problematic (e.g., Bishop et al., 2005; Bychkova et al., 2011).

#### A Population of Experienced Therapy Seekers

As can be seen in Table 2, below, the parents who referred their children to NeurVana were not "first-timers" in the experience of finding and engaging with behavioral interventions and adolescent psychotherapy. On average, these referring parents had had experience with three other kinds of treatment for their children before referring them to NeurVana.

**TABLE 2: Many Previous Attempts** 

## What other resources, if any, had you considered or tried before choosing NeurVana? (Choose all that apply.)

Answer Options	Response Percent	Response Count
Parental disciplinary strategies	84.4%	27
School counseling	71.9%	23
Private outpatient psychotherapy	62.5%	20
Medication-based treatment	59.4%	19
Special education program	37.5%	12
Academic-focused residential school	12.5%	4
Treatment-focused residential treatment facility	18.8%	*6 ** ***
Other (please specify)		8
	answered question	32
	skipped question	5

#### "Nothing worked... At our wit's end"

In response to open-ended questions about the results of prior attempts to deal with their children's problems and why they chose NeurVana, there was near unanimity among the respondents when it came to past results and a common theme for choosing NeurVana. Virtually all respondents noted that past attempts to address their children's behavior had ended in failure.

As for choosing NeurVana, some listed trust and other favorable reactions to Dave and Susan Kenney, NeurVana's founders and owners as the deciding factor; others focused on the program's natural, holistic, medication-free methods; but the overriding theme was that NeurVana seemed like a last resort—the only program that was willing to offer help, or had not already failed. (See Tables 3 & 4, Appendix, for complete listings of the parents' responses to these two questions.)

#### Lengths of Stay

The lengths of client stays at the NeurVana residential facility in Kelowna, BC, were negotiated between the parents of the referred adolescents and the NeurVana staff during a contracting session at time of referral. "Standard" length of stay for residents was 4 weeks, although shorter and longer stays were contracted for depending on family needs and wishes.

Among the 36 adolescents whose stays were reflected in the current study, the lengths of stay ranged from 2 weeks (3 clients) to 7 weeks (4 clients), with 4 weeks the modal value with 14 of the 36 clients contracting for stays of that length. The average length of stay for the 36 clients was 4.67 weeks.

Analysis of the effects of length of stay on parental satisfaction and reduction of problem behaviors revealed no significant relationship with either. Staying in the program longer was not associated with better results or worse results.

#### Parent Satisfaction and Adolescents' Behavioral Change

Respondents were asked to provide a quantitative evaluation of their level of satisfaction with the NeurVana program on a scale of 1 to 5, with "1" representing "Not at all satisfied" and "5" representing "Completely Satisfied." Results of this question are shown below, in Table 5.

TABLE 5: Most Parents "Very" or "Completely" Satisfied

Today, how satisfied are you with the results of the NeurVana program? (1 = Not at all satisfied; 5 = Completely satisfied)

Answer Options	1.	2	3	4	5	Rating Av	erage	Response Cou	ınt
	2	3	2	9	18	4.12		34	
						answered	question	34	
						skipped	question	3	

As can be seen in Table 5, above, 27 of the 34 (79%) responding parents rated themselves as "very" or "completely" satisfied, with an average rating of 4.12 (82.4% out of a possible 100%). While these satisfaction ratings are certainly a strongly positive parental endorsement of the NeurVana program, they are almost puzzlingly low when considered in relation to the parents' glowingly positive descriptions of the changes in their children's behaviors and lives.

In answer to the open-ended question, "In a sentence or two, please describe the change—if any—in your child's life since completion of the NeurVana program," 35 of the 36 (97.2%) responding parents reported positive results. Representative answers included, "Incredible," "She is herself again," and "It has been a miracle." (For a complete listing of the parental responses to this and another open-ended question, "In a sentence or two, please relate what you might say about the NeurVana program to a parent seeking help for a troubled teenager or young adult," see Tables 6 & 7, Appendix.)

#### Before and After: Quantitative Analysis of Change

In addition to the open-ended questions noted above, the survey included requests for parents to rate the seriousness of their child's behavioral issues in 20 specific areas (e.g., school attendance and performance, anxiety and depression, drug abuse, suicidal thoughts and gestures, etc.) at three different points in time: immediately *before* beginning the NeurVana program, one month *after* completing the NeurVana program, and at the *current* time (i.e., "T: Today" in Tables 8 and 9, below) when they responded to the surveys (i.e., January or February, 2014), typically six months to a year later.

The results of these questions are summarized in Table 8. The results present quantitative support for the anecdotal and discursive descriptions of positive behavior changes among the adolescent children who completed the NeurVana program.

"Before": 359 serious problems. On a six-point scale in which 0 = Not an Issue at All, and 5 = Extremely Serious, the 36 responding parents collectively rated their children as having 359 "very serious" or "extremely serious" behavioral issues (e.g., behavior patterns with ratings of 4 or 5) at the time of referral to the NeurVana program.

In other words, on average they considered their children to have "very serious" or "extremely serious" problems with 10 of the 20 behavioral issues on the list, which echoes the multiple-problem data displayed in Table 1.

"After": 39 serious problems. In contrast, the parents collectively identified just 39 behavioral issues they rated as "very serious" and "extremely serious" one month after their children completed the NeurVana program—an average of just one serious issue per child—a reduction of 89.2%.

"Later": continued improvement and stability. Review of the data in the "I" and "T" columns of Table 8 suggest that whatever gains were achieved during the young clients' therapeutic stays at NeurVana tended to be sustained over time. Indeed, issues identified as "Moderately Serious" (i.e., 3 on the 0-5 scale) seemed to be less prevalent at the time of the survey than during the clients' first month after completing the NeurVana program. Issues identified as the most serious (i.e., rated as 4s and 5s on the 0-5 scale) remained at essentially the same prevalence in the months between completion of the NeurVana program and the time of the survey.

How serious are/were Before: Immediately After: Or	rious ediate	serious are/were your child's issues in the following are Before: At time of referral to Neuryana Immediately After: One month after completing Neuryana program "Today": At time of survey, Jan-Feb, 2014	e/were your child's issues in the fo Before: At time of referral to Neuryana After: One month after completing Neury/ Today": At time of survey, Jan-Feb, 2014	At time	child e of re th afte	your child's issues in the following a At time of referral to Neuryana ne month after completing Neuryana progra At time of survey, Jan-Feb, 2014	to Ne	n the urvan o Neu	follo M.Vani 114	wing prog	areas? ram							
Answer Options	ii o	0 - Not an issue at all	豐五	<u></u>	- Rarely an issue	yan	Occ. ar	2 - Occasionally an issue	ally	3 Mode seri	3 - lerately rious	₹	4 - Seriously worrisome	- Serious! worrisome	° ₹	5 Extre seri	5 - Extremely serious	_ ~
B: Before Neuryana (e.g., at referral) I: Immediately After (e.g., first month) T: "Today" (e.g., time of survey)	8	_	-1	· 00		-1	æ	_		œ		-4	Ø		4	<b>8</b>		
hool or v	6	21	23	0	5	5	4	5	4	4	3	_	7	0	N	5		N
œ	-	12	19		14	5	ယ	4	7	7	ω	2	8	0	-	16	-	N
Fighting or bullying behavior	12	27	31	4	ယ	2	G	N	ယ	4	2	0	ဟ	0	0	5	0	0
Violence or destructive behavior	8	22	25	4	5	2	7	w	ω	6	2	4	4	2	2	7	+	0
Depression and/or anxiety	0	20	18	0	6	8	N	თ	ယ	9	ω	4	9	0	0	15	+	N
Drug abuse	9	27	25	ဒ	4	თ	_	2	ယ	N	0	0	ಪ	-	N	. ∞	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
Alcohol abuse	13	28	24	4	4	8	G	_	-	5		ယ	4		0	4	+	
Suicidal thoughts or gestures	9	29	30	5	6	ω	4	o		\ \ \	c	<u> </u>	) =	) c	\c	3 0	+	·   c
Self-destructive behaviors	ις	23	29	4	9	ယ	ω	2	_	4		<u></u>	o	c		5 2	1	بــا د
Relationships with family	0	15	15	ω	7	5	_	6	6	5	4		ō	C	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	5	1-	N
Relationships with peers	ယ	15	20	6	9	10	4.	. 5	N	2	1 0		3 6	1 ~	\ 	1	) c	) N
Relationships at school or work	ယ	≅	20	4	7	9	S	4	ω	6	U	-	Įē	-	)	1	) <	
Criminal activity or offenses	17	28	32	ယ	2	2	ω	2	0	2	_				0	4	^	-
Eating disorder	15	28	27	ω	2	ω	W	4	2	7	_	2	S	C	C	s C	<u> </u>	رم ا.
Sleeping disorder	6	23	23	_	7	7	4	N	N	4	2	w			0	9	1	
Personal habits (cleanliness etc)	6	19	23	ယ	6	5	6	8	4	7		4	7	-	0	1	1	lo
Lying, cheating or stealing	4	20	19		4	10	N	o	2	4	-	2	13	ω	1	12	~	N
Remembering/honoring appointments & commitments	ω	18	ಹ	Ŋ	8		6	7	ယ	တ	N	0	9	0	ယ	70		
Keeping promises	0	16	16	ω	œ	10	4	5	6	4	4	0	9	1	~	6	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	N
Socially irresponsible behavior	သ	20	27	2	6	4	N	4	N	ဟ	_	0	12		-	1	+-	
TOTALS	123	428	463	56	2	3	6	177	58	00	42	<u>د</u>	801	α	9	18	117	7

"Before-After" changes in the most common "very" or "extremely" serious issues at time of referral among the adolescents covered are summarized in Table 9, below.

**TABLE 9: Changes in Selected "Serious" Behaviors** 

N = 36	4 Very Serio			5 trem eriou:	•
B: Before NeurVana (e.g., at referral) I: Immediately After (e.g., first month) T: "Today" (e.g., time of survey)	В	<b>T</b>	В		Т
School or work attendance	7 0	.2	15	1	2
School or work performance	8 0	1.	16	1	2
Depression and/or anxiety	9 0	0	15	0	2
Drug abuse	13 1	2	8	2	1
Relationships with family	10 3	2	16	1	2
Lying, cheating or stealing	- 13   3	14	12	. 2	2
Keeping promises	9 41	2	16	2	2
Socially irresponsible behavior	12 1	1.1	12	3	2

Reflecting the complicated nature of adolescent behavioral issues, considerably more than half of the NeurVana clients were identified as having "serious" problems with *each* of these issues at their time of referral to the NeurVana program. After their children had completed the NeurVana program, parents saw significant reductions in serious behaviors, both in the first month after completing the program and at the time of the survey—about six months, on average, after completion.

In looking at the data, it appears that the most persistent "serious" issues were relationships with family and lying/cheating/stealing, but even with these issues there were reductions of 80% or more after completion of the NeurVana program. Serious issues with depression and/or anxiety were virtually eliminated during the first month after completion of the program.

#### CONCLUSIONS

After reviewing the NeurVana Program Evaluation Survey data, it is clear that the program produced impressively positive results with a particularly difficult population. While most therapeutic programs might be expected to address populations offering a continuum of success likelihoods ranging from "low chances for success" to "high chances for success," NeurVana's clientele—at least based on the sample represented in this study—seemed to range from "low" to "lower." These adolescents had already failed to achieve significant or lasting improvement after an average of three previous therapeutic and/or disciplinary engagements, and were identified as having "very" or ""extremely" serious problems in an average of 10 out of 20 possible behavioral areas. Despite this background, the success rate of the NeurVana program approached 90% in terms of reduction of "serious" behavioral issues and, based on parents' reports, exceeded 97% in achieving positive change.

#### LIMITATIONS

Since subjects were not and could not have been selected using a randomized assignment process and measured against a comparable control group, the "Before" and "After" results noted in this study lack full experimental validity. The results are suggestive of a highly effective program, but definitive support for this claim would require a more rigorous study design.

The self-selection process of respondents who were invited to participate may reflect a bias in favor of the NeurVana program that is not shared by those invitees who chose not to respond. This possibility is a common problem with all such program evaluation surveys. However, experience suggests that the desire to complain about a perceived wrong tends to be a stronger motivational force than the desire to praise a perceived act of competence, so a positive self-selection bias may not be a significant issue.

#### ABOUT THE CONSULTANT

Roger Gans is an Adjunct Professor in the Communications and Business Departments of The Sage Colleges of Albany and Troy, NY, and an independent consultant specializing in internal and external communication strategies for the fields of health care and higher education. He is currently completing his PhD studies at the SUNY University at Albany. His research paper, "The Politics of HPV Vaccination Advocacy: Effects of Source Expertise on Effectiveness of a Pro-Vaccine Message" (2013) received the Best Graduate Student Paper Award at the 71st New York State Communication Association Annual Conference.

See Appendix for CV.

Dated and signed in Albany, New York, on this the 12th day of February, 2015.

By: Roger Gans

Adjunct Professor

Communications & Business Departments

The Sage Colleges of Albany and Troy, NY

#### References

- Amen Clinics Website (N.D.) The Amen Method. Retrieved from: <a href="http://www.amenclinics.com/the-science/see-the-process/">http://www.amenclinics.com/the-science/see-the-process/</a>
- Bishop, M.J.; Bybee, T.S.; Lambert, M.J.; Burlingame, G.M.; Wells, G.; & Poppleton, L.E. (2005) Accuracy of a rationally derived method for identifying treatment failure in children and adolescents. *Journal of Child and Family Studies*, 14(2), pp. 207–222
- Brain State Technologies Case Studies (N.D.) Retrieved from: <a href="http://www.brainstatetech.com/resources/case-studies">http://www.brainstatetech.com/resources/case-studies</a>
- Bychkova, T.; Hillman, S.; Midgley, N.: & Schneider, C. (2011) The psychotherapy process with adolescents: A first pilot study and preliminary comparisons between different therapeutic modalities using the Adolescent Psychotherapy Q-Set. *Journal of Child Psychotherapy*, 37(3), pp. 327–348
- Gerdes, L.; Gerdes, P.; Lee, S.W.; & Tegeler, C.H. (2013) HIRREM™: a noninvasive, allostatic methodology for relaxation and auto-calibration of neural oscillations. *Brain and Behavior*, 3(2), pp. 193–205
- Lee, S.W.; Gerdes L.; Tegeler C.L.; Shaltout, H.A.; & Tegeler, C.H. (2014) A bihemispheric autonomic model for traumatic stress effects on health and behavior. *Frontiers in Psychology*, 5(843), pp. 1-14
- NeurVana Executive Summary (N.D.) NeurVana: Innovative recovery and wellness for teens & young adults. Executive summary. (Self-published document)
- NeurVana website (N.D.) How We Help: ADHD. Retrieved from: http://wellness.neurvana.ca/
- Tegeler, C.H. et al. (2012) Open label, randomized, crossover pilot trial of high-resolution, relational, resonance-based, electroencephalic mirroring to relieve insomnia. *Brain and Behavior*, 2(6), pp. 814-824 Online: http://onlinelibrary.wiley.com/doi/10.1002/brb3.101/full

## APPENDIX Survey Results Tables & Survey Instrument

**TABLE 1: Multiple Referring Problems Were the Norm** 

Please indicate the problem(s) that led to your child's referral to NeurVana (check all that apply)

Answer Options	Response Percent	Response Count
Depression and/or anxiety	77.8%	28
Under-performance in school	58.3%	21
Alcohol and/or drug abuse	66.7%	24
Eating disorder	19.4%	7
Sleeping disorder	44.4%	16
ADD/ADHD	38.9%	14
Self-harm or suicide ideation	36.1%	13
Anger, rage or defiance issues	55.6%	20
Concussion or traumatic brain injury	25.0%	9
Other (please specify)		3
PTSD	•	
In denial about mother's death 2 years ago		
Birth trauma		
	answered question	36

answered question 36 skipped question 1

**TABLE 2: Many Previous Attempts** 

What other resources, if any, had you considered or tried before choosing NeurVana? (Choose all that apply.)

Answer Options	Response Percent	Response Count
Parental disciplinary strategies	84.4%	27
School counseling	71.9%	23
Private outpatient psychotherapy	62.5%	20
Medication-based treatment	59.4%	19
Special education program	37.5%	12
Academic-focused residential school	12.5%	. 4
Treatment-focused residential treatment facility	18.8%	6
Other (please specify)		8

ECT [Electro-Convulsive Therapy, i.e., "Electro-Shock Therapy"]

Medical attention.

No benefit. If anything things became worse in time. Medications brought no relief.

Child & Adolescent Mental Healthcare counselling

AHS adolescent counselling

Counceling offered in town at local drug and alcohol center

None

We tried to get some sort of Counselling but most thought my son needed more then they could offer. There is lack of Mental Health help in this area where we live & the Mental Health Units in our area were booked for months. No chance of getting immediate help my son.

answered question

skipped question 5

#### TABLE 3: "Nothing Worked!"

#### What were the results of previous treatment attempts?

#### Answers (Open Ended Only)

Unsuccessful

Our daughter just did not improve

There was no relief. He attended 2 other treatment programs, but they did not address the real issues. They did not help.

There was just no answer with the exception for time, to alleviate symptoms post concussion.

Helped with depression but not with the drug use.

It confused me more.

no results

partial

As we look back objectively - the therapy, counselling and medications did not help our daughter.

limited success

Counselling was a good resource to do 'talk therapy' but only worked if our son was being honest which he wasn't all the time. Therefore it ultimately didn't work.

no improvement. Told the counsellors what they wanted to hear.

NeurVana: Analysis of Program Evaluation

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He refused to participate in counselling, school and authorities were no help - telling me that he was too old to intervene. Everything I did to discipline at home seemed to escalate things further. Was put on long waiting list to see a councillor in town.

Some were successful but short term. Some not at all and even made things worse

no improvement

no results that worked

failure

Very unsuccessful

NOT EFFECTIVE

Nothing worked. Meds seemed to make depression and anxiety worse.

Not measurably effective. Or only effective for a few days

Nothing worked!!

unsuccessful

They didn't help

Nothing

No change in drug habits

No changes in behavior

My son's school tried working with him but my son did not want their help so there was not much they could do for him but keep suspending him from school & they tried their hardest to get him to pass at least some of his classes.

Very little and short term.

unsuccessful

We were frustrated, the school was no help, he didn't like the therapist (neither did we), he didn't like taking medication (neither did we) and being in the special ed classes was holing him back.

there was some relief, but not long lasting

answered question 32

skipped question 5

#### TABLE 4: "No One Else Would Help"

#### Why did you choose NeurVana as a resource to help address your child's problems?

#### Answers (Open ended only)

No one else could help

They seemed to speak my language, they knew our problem without knowing us

We were at our wits end and we were desperate for help. Neurvana seemed to offer help and understand our sons problems and what was causing his self destructive patterns and suicidal thoughts.

I trusted the people running the ranch. NeurVana provided innovative answers for my healing in a way that I would have not found anywhere else.

Neurvana offered a holistic approach along with the brain wave optimization treatment that sounded very promising.

I didn't had an option, my parents were desperate.

we could not find any other resources offered without being on a long waiting list

A whole different approach

We were loosing or daughter!

we were desperate for help as we felt we were not getting anywhere as our child was fast going down the tube in terms of performance

Ran out of other options and it looked like something that was going to help.

Tailored to adolescents.

Liked the staff to client ratio.

Setting/location.

Telephone conversations with Dave allowed us to see a positive response from our son. He could tell Dave understood his situation.

Because after talking to Dave he seemed to get exactly what was going on in my family. He knew what corrective measures we would need to take, how long it would take, and what to expect.

Desperation. It was located in Canada. The holistic approach. The idea of brain wave technology

All Natura

Seemed to be right at the time.

they said they could help

It sounded like cutting edge technology. We thought balancing the brain would be more beneficial than a typical rehab center for teens.

It was a healthy choice.

Remote location, full range of supportive functions (diet, exercise, meditation, learning and coaching)

Impressed with Dave and Susan Kenney and their program

It was one of very few treatment centers for young persons in central Canada and it was recommended through research

Its and innovative and holistic approach and seemed to make sense

Because I always knew that it was my son's physiology that he was born with that was the problem. AND I agreed with the clean living program, structure and life skills they offered. I had tried every program out there, Neurvana just seemed to make REAL sense to me and there was no medication involved.

The brainwave optimization technology.

We called a few different places with our son present. When we spoke with Dave, our son immediately connected with him and liked the sound of the program

They were the only ones that actually called and talked with me about their program.

I felt it was better to try this than wait for my sons life to spiral out of control

Because of unique approach to Recovery

I did some research and found that they had some good results and this was our last hope for our son before he hit rock bottom.

I was desperate as my son was getting worse. There was nothing in our area where we live that anyone could offer any help for my son. I found NeurVana's website & started reading up on it. I called NeurVana & spoke to Dave Kenney. Dave reassured us he could help our son. My son had a major breakdown during this time so Dave suggested we send him sooner than later before he changed his mind. I was convinced after talking to Dave on the phone that this may be our answer. My son had so much anxiety it was hard to get him on a plane by himself so Dave scanned & emailed me a special note to allow myself through the security gates at the airport to make sure my son would not bolt or have an anxiety attack at the airport. That was a great help.

because NeurVana uses holistic approach to the problems.

Medication free - natural healing

It fit with our beliefs of a natural approach.

I believe in their holistic approach and brain health.

answered question 35

skipped question 2

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#### TABLE 5: Most Parents "Very" or "Completely" Satisfied

Today, how satisfied are you with the results of the NeurVana program? (1 = Not at all satisfied; 5 = Completely satisfied)

Answer Options	1 2	3 4	5	Rating Average	Rest	oonse Count
	9	2 0	1.0	4 12		34
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				skipped auesti	on 3	

#### TABLE 6: Parents' Descriptions of Change in Their Child's Behavior

In a sentence or two, please describe the change—if any—in your child's life since completion of the NeurVana program.

#### Answers (Open ended only)

New person.

She is herself again, and very insightful about her past and what went wrong

It has been a miracle. Every aspect of his life has been positively impacted and he is back on the schools honour roll again!

NeurVana helped me feel like myself again when I was at the lowest point in my life. Further.. NeurVana's program taught me about how we can live life in a way that brings unbounded possibilities and a greater love for myself.

Our son now eats a lot more fruits and vegetables than before the program and is usually having water instead of juices or sweet drinks with the meals. Stays true to his word and is very interested in maintaining a good relationship with us.

Well now i get to sleep whenever i lay my head in bed, no more insomnia. I get my work done and my responsibility just makes me realize how good it feels.

She has attended school this year

There is a path of communication that is now there

The change was and is all encompassing. Our daughter is back. Our family is back. Trust Neurvana and Dave and Sue -their program is incredible.

My child is much more cooperative in terms of listening to parents, getting up on time. She is more harder working and shows interest in terms of doing better

School behaviour has really improved and he is making an effort. Still choosing bad influences to hang with. He has the tools in his kit from the program and it is ultimately up to him how he decided to proceed with his life.

After graduation our lad went right back to the drug scene and lying about. After some telephone conversations between Dave, our son and ourselves he was asked to leave the house. Within weeks he recognized he was headed for certain death (within 6 months) if he didn't make some changes. He

is now clean and finishing high school with plans to carry on his apprenticeship as a heavy equipment mechanic.

My son has better communication skills now, he is more thoughtful, and eats better food, which effects his moods and behaviours.

My son shows far less anger than he did and he is more aware of his real self.

She has learned how to cope and understands life is a choice and the choices you make. She is living life and much much happier

The biggest change was in sleeping habits but that slowly went back to old habits even though we tried very hard to keep a similar routine to what she had been used to while at Nuervana

Although she is depressed about weight gain while there, she has a new outlook on life.

Regained our relationship with our son. He has lost weight & maintained it. No depressive behaviors or drug use. Sleeps the whole night. Not explosive over every issue if things don't go his way!! (thank god)! Lastly, he has a relationship with his sibling again. We weren't sure this was ever going to happen.

She talks of her stay and the program but when she came home within 2 days she took off with the boyfriend and became pregnant she is now 18 with a child.

He is happy, bright and focused. He has a strong commitment to achieving good grades in school and is totally engaged in the family.

He is much more focused, mature and accepts responsibilty

Non he went right back to doing what he wanted. He did not get any benefit, we don't understand he seamed to be doing well in the program! I think he just lied his way through the thing but we saw right through it as soon as he came home.

#### Incredible

He is so much easier to be around, more compliant. He will do things I ask him to do. He is still a teenager with some attitude, but he doesn't scare me anymore. We have built boundaries together and he sticks to them.

I questioned whether he would ever graduate or be able to keep a full time job. He has now graduated and has full time trade apprenticeship that he loves. He is loving life.

He is a happier, more respective, loving kid with a lot more knowledge of what he was doing to his brain!!

When first back from Neurvana, it was difficult to break old patterns and habits in our family. Our son relapsed into his addiction which was very difficult. He is now clean and was able to get there due to his stay at Neurvana and the things that he learned through the program. I'm very proud of the man my son is becoming.

More respect with adults, respecting rules

He is happy, calm and takes the time required to make appropriate decisions.

Very accountable, routine is set, more health conscious

He is bonding with his family talks respectfuly to his elders. He now understands why things happen, does what he is told with no arguing, can sit in school and do his work

After many months working with my son he has graduated from high school, he is starting a career by working in a diamond mine & plans to take courses so he can move up in the company that he is working for. I can honestly say I like my son again & enjoy him. I always loved him but I did not like him

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for his actions for a long period of time. I would say my son is 75% better & I will continue to work with him.

Wise, mature person who loves life and people; person whom I would asked advise.

She is making better choices - in her own life, with whom she associates and looking to long term goals that are realistic and based on her strengths.

Our son was struggling with academics and social issues, but was a great kid to be with. We were very worried that he would fall under bad influences if we didn't do something to help him. He left the program and went right into grade 9 and had his best academic year ever! He continues to do well and has some good friends too...he is no longer struggling and is not interested at all in the kids that are smoking and drinking. We can now feel positive about him graduating high school, and it being enjoyable for him and our family.

She is happier, more driven and focused, her sleep patterns are better, she does not abuse drugs, alcohol (does not drink!). She stopped smoking (use to be a heavy smoker). She is easy to be with.

answered question 36

skipped question 1

#### TABLE 7: "What might you say to a parent seeking help?"

In a sentence or two, please relate what you might say about the NeurVana program to a parent seeking help for a troubled teenager or young adult.

#### Answers (Open ended only)

If your calling u must need Neurvana....it works

If a child recognizes they need some help, this program is fantastic in guiding them back to normality

This program works. They deal with the core issues at a level no other professional identified or worked on. Trust this wonderful group of professionals.

It's a soft place for your child to land - it allows for a restart or second chance for your child to live their life authentically and happy.

When you see that nothing helps then give NeurVana a try. The results will greatly depend on the child's willingness to change and the environment that will surround him when he leaves NeurVana.

Dont be afraid, its gonna help somehow. We are all different.

Don't think you will be able to echo this program when your child gets home. you will need a staff of 10 people at least to accomplish this

It is the best first step you can take to bring your teenager back

In short, NeurVana saved our daughters life!

I would refer it to many troubled families . Parents should not suffer from adolescents who are troubling the parents in today's world. Adolescents must follow parents orders and do well in today's tough economy.

It's a good program but don't expect miracles. It's an ongoing process when your child comes home to maintain and utilize the tools they have provided the child and the family with.

Don't let the cost scare you off or limit the duration of residency.

Dave, Sue and their staff have the ability to reach many of these kids and get them to look inside themselves and recognize what their destructive behaviour patterns are. The lessons they teach and the self-confidence they instill run deep and may not be readily evident upon graduation but there is a foundation there the child can draw on down the road.

Their support for the parents is also exceptional.

This was life changing for my son and our family. From a parent who had nothing to lose, it was the best decision I ever made.

If it is affordable for you it is definitely worth it as long as you as a parent are also willing to do your own work.

I would suggest that they look for a therapeutic boarding school, the cost will be much easier to afford due to the fact you are looking at a 10 or 12 month program covering everything from counseling to schooling.

It really helped

Simply put, it works.

It is great for your child to come back healthy and fit.

Given the results I have seen after 2 months, I would not hesitate to send anyone through the program.

It had a fremendous, positive outcome for him. We have nothing but positive things to say about the people environment and program

I hope that it can help others, it did nor work for our Son. I just think it was not right for our Sons issues and he did not want it to work.

This program changed our son. Our son is back. Medications and talk therapy did nothing to relieve his pain or self destructive behaviours. Our son now has a future!

There is no down side to sending your child to Neurvana.

Results take time to completely materialize, as the person tries to find their path in a new way of perceiving the world. Results are not instant but grow over time. One can still make bad choices but consequences are more easily recognized.

I know many people that have sent there child to a rehab and none have them have given me the positive results that I have had from neurvana!! As far as I'm concerned they saved and changed my child's life!!!

Excellent communication from staff, parent coaching is extremely helpful. Dave and Sue are very caring and are great at what they do along with the rest of the staff.

Excellent program. Well worth it

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There is no time like now for change. Just do it!

Only possible residential treatment program to educate your child with the skills and knowledge they need to overcome their troubles.

I would say the cost was well worth the results. I have a son on no meds with a good respectfull attitude who does well in school and with no violence or behaviors.

I would say this is a great program but things do not change over night. When these teens go home, they go back into their same environment (school, peer pressure, etc...) & they can sink right back into things very easily. As a parent I realized how much I was responsible for this by allowing things to happen & not being firm enough. I had to toughen up in order to deal with my son. We spoiled him way too much. We had to teach him to be more independent & take responsibility for his own actions. Dave from NeurVana taught me this after many weeks of working with me on the telephone when my son returned home. I am very grateful for this. Hard work & perseverance paid off as I never gave up.

Extremely effective program, I would recommend it to my friends and those who are seeking help.

When medication and counseling has failed - we had nothing left to lose and are thrilled to have our daughter back - healthy, happy and fit.

Looking back, the changes have been amazing - in the long run. We did encounter some struggles, but looking back (2 years later) our daughter is realizing her potential and she is happy.

answered question 35

skipped question

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## **Email Invitations**

Two invitations to participate in the NeurVana Program Evaluation survey were emailed to the families of the 103 clients who had completed the NeurVana program. The first emails were sent by NeurVana's Executive Director on January 26, 2014, and follow-up emails were sent on February 1, 2014. Full anonymity was promised, although participants who were willing to participate in follow-up interviews for testimonial purposes were invited to supply their contact information. The survey was closed on February 2, 2014.

## Email 1

From: Dave Kenney [mailto:dkenney@neurvana.ca]

**Sent:** Sunday, January 26, 2014 1:01 PM **Subject:** NeurVana - Survey Request

Hello, graduates and parent/guardians of NeurVana clients.

In our efforts for continual improvement NeurVana has hired an independent marketing firm to do graduate/parent survey. Please take a few moments to help us track the results of your family's experience with the NeurVana Wellness and Recovery Program. Unless you specifically wish to provide identifying information at the end of this brief survey, your answers will remain anonymous. Your time is valued and as such this survey should take less than ten (10) minutes to complete.

This survey is hosted on Survey Monkey (link below). It is confidential and secure. The survey will be left open for one week, closing **Saturday**, **February 1**<sup>st</sup>. Please submit your response as soon as possible as your insights are greatly valued.

Neur Vana's survey, click here: https://www.surveymonkey.com/s/RWH3VM6

I thank you in advance for your time and for your insights.

With gratitude,
Dave – and the entire NeurVana team!

David J. Kenney, B.A., M.Ed. Executive Director & CEO

NEURVANA • Innovative Recovery and Wellness for Youth and Young Adults

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## Email 2:

From: Dave Kenney [mailto:dkenney@neurvana.ca]

**Sent:** February 1, 2014 1:34 AM

To: Dave Kenney

Subject: FW: NeurVana - Survey Request

Hi to all,

We have had a fantastic response to our online survey. The comments and feedback have been insightful and wonderful. For those who have participated, I thank you for your time.

If you have not completed our survey I ask that you please consider giving us ten (10) minutes to learn about your experience with NeurVana. The survey is being completed by an independent third party and your response is both anonymous and confidential. We have extended the **deadline to Sunday, Feb 2<sup>nd</sup>** – but please hurry as your response is greatly appreciate and valued.

Click here: (its only 10 minutes!) <a href="https://www.surveymonkey.com/s/RWH3VM6">https://www.surveymonkey.com/s/RWH3VM6</a>

With thanks and gratitude, Dave

David J. Kenney, B.A., M.Ed. Executive Director & CEO

NEURVANA • Innovative Recovery and Wellness for Youth and Young Adults

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## NeurVana Program Evaluation

## PLEASE HELP US MAKE OUR PROGRAM EVEN BETTER

ease take a few moments to help us track the results of accovery Program. Unless you specifically wish to provide aswers will remain anonymous.					
Please indicate the problem(s) that led to	your child's	referral to	Neur\	/ana (che	ck all that
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Depression and/or anxiety					
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Alcohol and/or drug abuse					
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ADD/ADHD			•		,
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Anger, rage or defiance issues					•
Concussion or traumatic brain injury					
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NeurVana Progra	am Eval	uation				
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work Criminal activity or offenses Eating disorder Sleeping disorder Personal habits (cleanliness	0000	0000	0000	0000	0000	0000
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Keeping promises Socially irresponsible behavior	0	0	0	0	0	0
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## NeurVana Program Evaluation 13. Today, how serious are your child's issues in the following areas? (0 = Least Serious; 5 = Most Serious) 0 - Not an issue at 2 - Occasionally an 3 - Moderately 4 - Seriously 5 - Extremely 1 - Rarely an issue serious School or work attendance School or work performance Fighting or bullying behavior Violence or destructive behavior Depression and/or anxiety Drug abuse Alcohol abuse Suicidal thoughts or gestures Self-destructive behaviors Relationships with family Relationships with peers Relationships at school or Criminal activity or offenses Eating disorder Sleeping disorder Personal habits (cleanliness Lying, cheating or stealing Remembering/honoring appointments & commitments Keeping promises Socially irresponsible behavior ' 14. During the first month after your child completed the NeurVana program, how satisfied were you with the results of the program? (1 = Not at all satisfied; 5 = Completely satisfied) 15. Today, how satisfied are you with the results of the NeurVana program? (1 = Not at all

satisfied; 5 = Completely satisfied)

7. In a sentence or parent seeking hel	² two, please re	3	. an sausneu; 5 = ( 	completely satisfied
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Curriculum Vitae - February 2015

## **ROGER GANS**

Communication Consultant/Researcher ● Educator ● Copywriter/Creative Director 1327 Old Post Rd, Valatie, NY 12184 ● (518) 322-1943 ● Roger@ProfessorGans.com Website - http://ProfessorGans.com ● LinkedIn - http://www.LinkedIn.com/in/rogergans

## PROFESSIONAL PROFILE

- Adjunct Professor of Advertising, Marketing, Public Relations, Public Speaking, and Interpersonal Communications
- Award-winning Copywriter/Creative Director, content developer and published author
- 20+ years experience developing marketing communications campaigns for education, healthcare & other markets
- Career focus in developing innovative audience-engagement strategies to promote branding, services utilization, performance improvement, retention and recruitment, fundraising, and positive behavioral change

#### **EDUCATION**

BA: CORNELL UNIVERSITY, Ithaca, NY. Major: Social Relations (Psychology/Sociology/Anthropology)

MA: SUNY UNIVERSITY AT ALBANY, Albany, NY. Department: Communication

INTERNSHIP: CENTER FOR TECHNOLOGY IN GOVERNMENT, Albany, NY. Research Assistant: AirNOW Project (2012)

PhD: SUNY UNIVERSITY AT ALBANY, Albany, NY. Department: Communication — May, 2016 (Est.)

## PROFESSIONAL EXPERIENCE

## PROFESSIONAL ADJUNCT PROFESSOR, Sage Colleges of Albany, Russell Sage College, Troy NY. 2007-present

I teach courses in the departments of Business (Advertising; Marketing; Digital Marketing; Writing to Persuade) and Communications (Public Speaking; Public Relations; Editing; Media & Society; Interpersonal Communication). My courses are typically fully subscribed and wait-listed. Course evaluations are available on request.

#### SENIOR WRITER, The Kaleel Jamison Consulting Group, Inc., Troy NY. 1993-present

Clients included: Mobil, Dun & Bradstreet, Freddie Mac, Kodak, CIGNA, Toyota, *Cultural Diversity at Work*. *Highlights:* Recognized by *Consulting Magazine* as one of the "Seven Small Jewels" of Management Consulting, The Kaleel Jamison Consulting Group specializes in strategic organizational change. During my years as an independent contractor for the firm, I helped conduct and write Culture Analyses and Culture Change plans for Fortune 100 companies; published 50+ articles on organizational change, business, leadership and diversity; and wrote many internal and external communication pieces, including executive speeches, successful conference presentation proposals, advertising collaterals, blog entries, and a "Betsy"-award winning video.

#### CREATIVE DIRECTOR, Berkshire Marketing Group, Troy NY. 2006-2011

Clients included: Yale-New Haven Hospital, Weill-Cornell Medical College, Cayuga Medical Center, HANYS, NYSARC, Cerebral Palsy Associations of New York State, SUNY Jefferson, Mohawk Valley Community College and others. Highlights: Helped plan and create award-winning strategic branding, advertising, advocacy and performance improvement campaigns for noted health care providers and colleges.

#### SENIOR COPYWRITER. R.T. Blass, Inc. (now Blass Communications), Old Chatham NY. 1985-1992

Clients included: GE Plastics, GE Silicones, Columbia County Tourism, Southern Berkshire Chamber of Commerce, *The Albany Times Union,* First American Bank, Siena College.

Highlights: "Sleeping Man".TV commercial for The Times Union won regional and national awards.

#### CHIEF COPYWRITER. Christopher Thomas Associates, Garden City, NY 1979-1985

Clients included: Long Island Tourism Commission, Suffolk County Economic Development Agency, European American Bank, Fallon Community Health Plan, Southampton College.

Highlights: During my tenure, CTA won more awards for creative excellence than any other LI Ad Agency, including the I Love NY committee's "Best New York State Tourism Advertising."

#### AWARDS Academic: 2013 NYSCA Conference "Top Graduate Student Paper"

Professional: HealthLeaders Media Gold, National Telly, Monitor, Mercury, Vision, Obie, Newspaper Association, Long Island Ad Club "Best On Long Island" and Albany Ad Club "NORI" awards for broadcast, print and outdoor media. "Best-Recalled" awards from Design News, Machine Design, Wooden Boat, Appliance and Ward's Auto World magazines. Big Apple and Long Island Radio Broadcasters "Best Radio Commercial" awards. I Love NY Committee's "Best Tourism Advertising."

## Curriculum Vitae ROGER GANS

## COURSES

Course Name	Course #	College	Semesters Taught
		RSC	Fall 2009
Public Speaking and		SAW	Fall 2009
Presentations	COM 104	SCA	Spring 2011, Spring 2012, Fall 2013, Spring 2014, Fall 2014, Spring 2015*
	MGT 304	RSC	Spring 2007, Spring 2009
Advertising and Promotion	BUS 304	SCA	Spring 2013
Editing	COM 202	RSC	Spring 2009
Principles of Marketing	MGT 202	RSC	Fall 2008, Spring 2010
Digital Marketing	BUS 320	SCA	Fall 2014
Special Topics in Communication—Writing to Persuade & Get Paid	COM 248	SCA	Spring 2014
A A - di d C - sisks	CON 110	RSC	Fall 2011
Media and Society	COM 110	SCA	Fall 2014
Introduction to Public Relations	COM 121	SCA	Spring 2011, Spring 2013
International Communications	COM 249	SAW	Fall 2011
Interpersonal Communications	COM 248	SCA	Spring 2012, Fall 2013

Russell Sage College: RSC; Sage College of Albany: SCA; Sage After Work: SAW \*In progress

# PUBLICATIONS (refereed)

Gans, R. (2014) The Politics of HPV Vaccination Advocacy: Effects of Source Expertise on Effectiveness of a Pro-Vaccine Message. *Proceedings of the New York State Communication Association*: Vol. 2013, Article 3

Miller, F.A., Katz, J.H., & Gans, R. (1998) Becoming a worthy organization: Attracting and retaining the workforce needed for success in the 21st century. *OD Practitioner*, 30(3), pp. 27-32

# PUBLICATIONS (other)

#### As Sole Author

>	As Sole Autho	r ,	
	Pub. Date 1/10/2012	<b>Publication</b> Magnet Media Labs	Title "Do I need an app for that?"
	11/28/2011	Magnet Media Labs	The challenge of mobile marketing for technology
	11/21/2011	Magnet Media Labs	The challenges of mobile marketing for entertainment
	11/14/2011	Magnet Media Labs	How to sell cloud anything to SMBs
	July 2001	Diversity Central	A survival guide to corporate golf culture
	June 2001	Diversity Central	Inclusion and the Tiger Woods factor
	Jan 2001	Diversity Central	Why managers must listen
	June 2000	Business Today	Black and white Issues
	May 2000	Business Today	A job for life: Not a fair trade

## Curriculum Vitae **ROGER GANS**

As Co-Author			
Pub. Date	Publication	Title	Co-Author(s)
Jan 2002	Diversity Central	There is nothing more diverse than "new"	Frederick A. Miller
May 2001	Diversity Central	The education of an agent of culture change	Dennis J. DaRos; Eugene Hamlett; Valerie V. Davis Howard
April 2001	Diversity Central	Agents of change transform the workplaceand themselves	Dennis J. DaRos; Valerie V. Davis Howard
March 2001	Diversity Central	Recruitment and retention: None have seen the promised land	Frederick A. Miller
March 2001	Diversity Central	Caution: Diversity results can be dangerous	Judith H. Katz
Feb 2001	Diversity Central	Managers must become agents of change	Monica E. Biggs
Jan 2001	Diversity Central	Bottleneck on the path to inclusion	Judith H. Katz: Frederick A. Miller
June 2000	Diversity Central	Post-downsizing recovery: Strategies for thriving	Khouri L. Jamison
May 2000	Diversity Central	Measuring up: Tracking progress to make progress	Khouri L. Jamison
April 2000	Diversity Central	Think small	Khouri L. Jamison
March 2000	Diversity Central	Downsizing syndrome: People practices suffer	Khouri L. Jamison
Feb 2000	Diversity Central	New leadership model ascends from the ashes of downsizing	Khouri L. Jamison
Jan 2000	Western City 76(1)	Confronting racism: What cities can do	Frederick A. Miller; Dennis DaRos
Nov 1998	Cultural Diversity at Work 11(2)	Making managers account for diversity	Judith H. Katz
July 1998	Cultural Diversity at Work 10(6)	Three causes of resistance and what to do about it	Judith H. Katz
March 1998	Cultural Diversity at Work 10(4)	What makes a good manager?	Frederick A. Miller

## **PRESENTATIONS**

CONFERENCE Gans, R. (2014) Can't Take a Joke: The Asymmetrical Nature of the Politicized Sense of Humor. Paper presented at the 72<sup>nd</sup> Annual Conference of the New York State Communication Association, October 17, 2014, Ellenville, NY

- Gans, R. (2013) The Politics of HPV Vaccination Advocacy: Effects of Source Expertise on Effectiveness of a Pro-Vaccine Message. Paper presented at the 71st Annual Conference of the New York State Communication Association, October 19, 2013, Ellenville, NY
- Berman, D. & Gans, R. (2008) Delivering the Right Message to the Right Audience. Multimedia presentation delivered to the NYSARC Inc. 2008 Public Information & Development Training Retreat, August 18, 2008, Syracuse, NY

This is Exhibit " referred to in the affidavit of David Kenney sworn before me at Toronto, Ontario this day of March, 2015.

A Commissioner for taking oaths for the Province of Ontario

Deepshikha Dutt

Email exchange between Ms Elizabeth Ruppel of Interior Health (CIHS) and Dave Kenney of NeurVana

January - February 2013

From: Ruppel, Elizabeth [mailto:Elizabeth.Ruppel@interiorhealth.ca]

Sent: February 19, 2013 7:11 PM

To: 'Dave Kenney'
Subject: RE: thank you

Hi Dave.

Thank you for this info. I actually watched this video as well as others...

I would love to listen in to Lee's talk but I have a care conference that afternoon out in Winfield...will this talk be downloaded at a future date?

I would love to get together again to discuss more about what your program offers but I have been "under the weather" with an ongoing laryngitis so am avoiding as much 'people' contact as possible until it clears. I have now finished the book 'Limitless You' and am impressed with this process and its' positive results. The opportunites to integrate this approach to the healing journey of brain injury would be so beneficial for many. Our current 'traditional" protocols again treat symptoms and the limitations of that symptomolgy.

Take care, give my regards to Susan Elizabeth

Elizabeth Ruppel,RN

ABI Coordinator

Community Integrated Health Services (CIHS)

118-1835 Gordon Drive,

Kelowna,BC V1 Y3H4

Phone: 250 980-1431

Fax: 250 980-1501

1 ax: 2)0 900=1)01

elizabeth.ruppel@interiorhealth.ca

From: Dave Kenney [mailto:dkenney@neurvana.ca]

Sent: Monday, February 18, 2013 3:20 PM

**To:** Ruppel, Elizabeth **Subject:** RE: thank you

Hi Elizabeth,

I saw this link and video testimonial and immediately thought of sharing it with you. It's focused on a TBI:

http://www.brainstatetech.com/blog/client-testimonial-brad-suffered-brain-injury-after-bike-accident

You will also see on the right margin of this page an online talk (Feb 21<sup>st</sup> @ 1:30PST) about Brain State Technologies and TBI's. I have seen many and they are always incredible and very educational.

I just hope this helps you in your efforts to improve the quality of life for so many who suffer from TBI's. I look forward to talking with you again in the near future.

Regards,

Dave

David J. Kenney, B.A., M.Ed. Executive Director & CEO

NEURVANA • Innovative Recovery and Wellness for Youth and Young Adults

p: 250.826.4532 f: 250.984.7686

w: www.neurvana.ca

fb: www.facebook.com/neurvana

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From: Dave Kenney [mailto:dkenney@neurvana.ca]

Sent: Thursday, January 31, 2013 2:21 PM

To: 'Ruppel, Elizabeth'
Subject: RE: thank you

Hi Elizabeth,

Thank you for your kind email. We too enjoyed meeting you and Erika. Your commitment to your clients well-being is clearly evident. I welcome an opportunity to continue our talks and how we may be able to work together. I am available this Monday or Tuesday (Feb 4 or 5). I welcome you here at The Ranch if you please or I can meet you in town. Just let me know.

In gratitude, Dave

David J. Kenney, B.A., M.Ed. Executive Director & CEO

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From: Ruppel, Elizabeth [mailto:Elizabeth.Ruppel@interiorhealth.ca]

**Sent:** Monday, January 28, 2013 8:59 AM

To: 'dkenney@neurvana.ca' Subject: thank you

Good morning David & Susan,

I want to thank you again for the time Erika and I spent with you Monday January 21,2013. The informative visit, experience with the technology and the enjoyable lunch provided us with new knowledge and a new perspective with the healing journey and options available. I would like to get together again to learn more and look forward to the possibility of working with you. Have a wonderful day... Elizabeth

Elizabeth Ruppel, RN
ABI Coordinator
Community Integrated Health Services (CIHS)
118-1835 Gordon Drive,
Kelowna, BC V1 Y3H4
Phone: 250 980-1431
Fax: 250 980-1501
elizabeth.ruppel@interiorhealth.ca

This is Exhibit " G " referred to in the affidavit of David Kenney sworn before me at Toronto, Ontario this \_\_\_\_\_\_\_ day of March, 2015.

A Commissioner for taking oaths for the Province of Ontario

Deepshikha Dutt

## NEURVANA RESIDENTIAL WELLNESS PROGRAM ENROLMENT AGREEMENT

This Agreement made as of DATE.

BETWEEN:

## NEURVANA RECOVERY & WELLNESS INC.

A body corporate duly incorporated under the laws of the province of British Columbia ("NeurVana")

AND:

[PARENT(S) NAME] [PARENT(S) ADDRESS] (the "Parent(s)")

#### **BACKGROUND**

- A. NeurVana provides wellness services, including BrainWave Optimization, to youth through a Residential Wellness Program administered in a residential setting in Kelowna, British Columbia;
- B. The Parent(s) is the legal guardian of NAME OF YOUTH (DOBXXX) (the "Youth") and wishes to enroll the Youth in NeurVana's [X week] Residential Wellness Program (add exact enrollment dates);
- C. The Parent(s) have completed an online admissions application (the "Application") on behalf of the Youth, which NeurVana has based its decision to accept the Youth into the Residential Wellness Program; and
- D. In consideration for NeurVana reserving a place for the Youth in the Residential Wellness Program, the Parent(s) has paid NeurVana a non-refundable enrolment deposit of one thousand five dollars (CDN\$1,500) (the "Enrolment Deposit").

THE PARTIES to this Agreement agree:

## 1. DELEGATION OF CUSTODIAL AUTHORITY

- 1.1 The Parent(s) affirms they are the legal parents or guardians of the Youth and that they expressly desire to enrol him/her in the NeurVana Residential Wellness Program.
- 1.2 The Parent(s) agrees temporarily to delegate their parental or guardian powers regarding the care, custody and property of the minor aged Youth to NeurVana for all times while the Youth is enrolled in the Residential Wellness Program, including without limitation, the authority to act in loco parentis.

## 2. ACCURACY OF APPLICATION INFORMATION

The Parent(s) represents to NeurVana that the information provided in the Application is true and correct and understand that NeurVana has based its decision to accept the Youth for enrolment in the Residential Wellness Program is based upon such information.

## 3. AUTHORIZATION FOR SEARCH

- 3.1 The Parent(s) hereby give(s) consent and authorize NeurVana to search the personal effects and person of the Youth. Searches may be conducted upon arrival and at other times as NeurVana staff may or may not suspect the Youth to be in possession of contraband items. Personal searches will be conducted only by employees or agents of NeurVana who are the same gender as the Youth.
- 3.2 NeurVana is hereby authorized to confiscate any and all items deemed by NeurVana as contraband. Contraband items are those items which the NeurVana so determines at its sole discretion from time to time but usually involves items relating to health, safety and well being of the Youth and others. The disposition of all contraband items shall be the sole responsibility of the Parent(s) who will receive same at appropriate times chosen by NeurVana. NeurVana will provide notice of any confiscation to the Parent(s).

#### 4. ENROLMENT FEES

In consideration for the enrolment of the Youth in the Residential Wellness Program, the Parent(s) agrees to pay NeurVana an enrolment fee of XXX thousand XXX hundred dollars (CDN\$XXXXX) (the "Enrolment Fee").

#### 5. ENROLMENT DEPOSIT

The \$1,500 non-refundable Enrolment Deposit shall be applied towards the Enrolment Fee upon the Youth's enrolment in the Residential Wellness Program.

## 6. PERSONAL USE ACCOUNT

- 6.1 The Parent(s) shall fund a Personal Use Account in the amount of five hundred dollars (\$500), to be maintained by NeurVana for the benefit of the Youth to cover personal expenses and incidental costs and expenses incurred by the Youth during his/her enrolment in the Residential Wellness Program.
- 6.2 The Parent(s) shall provide NeurVana with a credit card number to be kept on file for future funding of the Personal Use Account. NeurVana shall seek the verbal consent of the Parent(s) prior to expenditure from the Personal Use account in excess of \$100. Any unused portion of the Personal Use Account will be refunded to the Parent(s) within 15 days of the Youth's discharge from the Residential Wellness Program.

## 7. ADDITIONAL EXPENSES

7.1 The Parent(s) is financially obligated to pay all expenses incurred by the Youth while enrolled in the Residential Wellness Program within seven days of notice from NeurVana. The Parent(s) understands and agrees that the following expenses, among others, are not covered by the Enrolment Fee:

- (a) costs of any property damage and/or personal injuries the Youth causes to the person or property of the NeurVana facility, other youths, NeurVana employees, contracted professionals, or any visitors or third parties while the Youth is in the custody of NeurVana or during any abandonment of the Residential Wellness Program by the Youth;
- (b) costs to locate and keep the Youth safe during an abandonment of the Residential Wellness Program;
- (c) NeurVana's costs to collect on any delinquent amounts owed by the Parent(s) under this Agreement, including but not limited to reasonable legal fees and court costs;
- (d) the Youth's personal expenses; medical, dental, and prescription medication expenses; clothing purchases, haircuts;
- (e) the payment of any of the costs of the Youth's extracurricular activities, outings, or excursions, which are not specifically included in NeurVana's Residential Wellness Program; and
- (f) recreational equipment.
- 7.2 In the event that the Parent is unable or unwilling to pay the expenses incurred by the Youth while enrolled in the Residential Wellness Program, NeurVana may, at its option, use all or a portion of the Personal Use Account to fund such expenses, without further notice to the Parent.

## 8. ENROLMENT FEES AND ENROLMENT DEPOSIT NON-REFUNDABLE

The Parent(s) agrees and acknowledges that, with the exception of any unused portions of the Personal Use Account (as discussed herein), all fees are nonrefundable under any circumstances.

#### 9. PAYMENT TERMS

9.1 Unpaid accounts will be subject to interest calculated on the outstanding balance until the account is paid in full at the rate of 18% per annum.

## 10. DISCHARGE FROM RESIDENTIAL WELLNES PROGRAM

- 10.1 The Parent is responsible for all costs with the immediate transportation of the Youth upon discharge from the Residential Wellness Program.
- 10.2 NeurVana has the right to discharge the Youth for whatever reason, as determined in the sole discretion of NeurVana.
- 10.3 If NeurVana determines to discharge the Youth, NeurVana agrees to notify the Parent(s) of such intent at least twenty-four (24) hours prior to discharge. The Parent is responsible for the transportation of the Youth from the Residential Wellness Program immediately upon notification of discharge.

10.4 If NeurVana determines to discharge the Youth, the Enrolment Fee shall be deemed fully earned and no portion shall be refundable to the Parent(s).

## 11. EMERGENCY DISCHARGE

NeurVana will notify the Parent(s) as soon as reasonably possible in the event NeurVana determines, in its sole discretion, that an emergency discharge of the Youth is necessary for the Youth's own health or safety. The Youth may continue enrolment in the NeurVana Residential Wellness Program after the emergency situation has been resolved if, based on the judgment of NeurVana, the health and safety of the Youth will not be jeopardized by the Youth's continued enrolment.

## 12. YOUTH'S POSSESSION ON DISCHARGE

12.1 The Parent(s) agrees and acknowledges that NeurVana is not responsible for any possessions left behind by the Youth or Parent(s) when the Youth has left the Residential Wellness Program under any circumstances. The Parent(s) agrees and acknowledges that NeurVana will use its best efforts to return possessions left behind and at the Parent(s)'s expense.

## 13. YOUTH ABANDONMENT OF NEURVANA FACILITY

- 13.1 The Parent(s) acknowledges that NeurVana is not designed or staffed to prevent youth abandonment and is not liable in any way if the Youth abandons the Residential Wellness Program.
- 13.2 In the event of the Youth's abandonment of NeurVana's Residential Wellness Program, NeurVana will contact the Parent(s) as soon as reasonably possible. The Youth will be deemed to be discharged after twenty-four (24) hours from the time of the abandonment.

## 14. INHERENT DANGERS

The Parent(s) agrees and acknowledges that the Residential Wellness Program is carried out in a non-institutional setting and that the NeurVana facility is a typical family home. The Parent(s) acknowledges that there are inherent risks with a residing in a non-institutional setting.

#### 15. INFORMED CONSENT AND ASSUMPTION OF THE RISKS

- 15.1 By signing this Agreement the Parent(s) is acknowledging and representing to NeurVana that they fully understand the dangers and risks to the Youth associated with third-party custodial care, and the activities (including but not limited to BrainWave Optimization and recreational activities) and programs provided by NeurVana in connection with its Residential Wellness Program and that the Parent(s) agrees to assume any and all such risks.
- 15.2 Additionally, by signing this Agreement the Parent(s) gives informed consent on behalf of the Youth to participate in the NeurVana Residential Wellness Program, BrainWave Optimization and all recreational activities made available to the Youth through the Residential Wellness Program and fully understands all of the risks involved in such treatments and activities.

15.3 The programs and activities in which the Youth may participate, may include but are not limited to educational/therapeutic programs, BrainWave Optimization, work projects, testing and evaluations, training programs, horseback riding, river rafting, swimming, ropes course, skiing, snowboarding, rappelling, rock climbing and other various forms of recreation and athletics.

FOLLOWING SECTIONS 16, 17 AND <u> 18</u> CONTAIN RESTRICTIONS ON YOUR RIGHTS AND SHOULD BE **PLEASE** ACKNOWLEDGE <u>UNDERSTANDING</u> TO \_THESE PROVISIONS BY INITIALING IN THE SPACE PROVIDED BELOW EACH SECTION

## 16. WAIVER, RELEASE AND INDEMNITY

In consideration of the enrolment of the Youth and the services provided by NeurVana, the Parent(s) individually (and jointly and severally as the case may be), and on behalf of the Parent(s)'s executors, administrators, heirs, next of kin, representatives, successors and assigns, agrees:

- (a) to waive, release and discharge NeurVana and its successors, assigns, parents, subsidiaries, affiliates, employees, managers, members, officers, directors, agents and other representatives ("Released Parties") from any and all liability for the death, disability, illness or personal injury of the Youth, or damage or theft of the Youth's property, occurring while the Youth is enrolled in the Residential Wellness Program or during any period after the Youth has abandoned the Residential Wellness Program, whether occurring on or off the NeurVana facility, and covenants not to sue any of the Released Parties with regard to the same;
- (b) to protect, defend, hold harmless and indemnify each of the Released Parties from and against any and all claims, actions, causes of action, proceedings, suits, costs, liabilities, damages, and expenses, whether known or unknown (including but not limited to all direct, special, incidental, exemplary and consequently damages, and losses of any kind and lawyer's fees) based upon, resulting from and/or relating in any way to Youth's enrolment in the Residential Wellness Program; and
- (c) that in the event that NeurVana shall be made a party to any litigation in connection with this Agreement and/or the Youth's enrollment in the Residential Wellness Program, then the Parent(s) agree to indemnify and save harmless NeurVana from all costs and expenses (including without limitation, the actual fees and disbursements of NeurVana's legal counsel) incurred by NeurVana in connection with such litigation.

## PARENT(S) INITIALS \_\_\_\_\_

#### 17. LIMITATION OF LIABILITY

17.1 NeurVana shall not be liable for any indirect, incidental, special, consequential, exemplary or punitive damages occurring out of or in connection with Neurvana's performance or non-

performance of this Agreement or arising from any breach of this Agreement (including fundamental breach) or from the negligence of NeurVana.

17.2 Notwithstanding anything else in this Agreement, NeurVana's liability under this agreement shall not exceed the amount of the Enrolment Fee.

## PARENT(S) INITIALS \_\_\_\_\_

#### 18. UNAUTHORIZED EMPLOYEE ACTIONS

The Parent(s) understands and agrees that NeurVana only assumes responsibility for its employees to the degree that the employees operate within the scope of their employment and outlined job responsibilities. The Parent(s) therefore agrees to hold harmless and release NeurVana and its successors, assigns, parents, subsidiaries, affiliates, members, officers, directors, attorneys, agents and other representatives (other than the employee who acted outside of the scope of his or her employment) from all liability or damages for any actions of NeurVana employees that act outside the training they have received or the scope of their constituted responsibilities or realm of their employment, and the Parent(s) hereby waives any right to claim make any claim against NeurVana for negligent hiring of employees.

## PARENT(S) INITIALS \_\_\_\_\_

## 19. PHOTOGRAPHS TESTIMONIALS AND COMMENTS

Please acknowledge your agreement or disagreement with the following section by checking one of the two options below.

NeurVana may use photographs, testimonials or other written or verbal comments of the Youth for promotional and commercial use without compensation to the Parent or Youth. To receive pictures of your youth while enrolled in the program you must give NeurVana your approval, without your approval no pictures can be sent to you due to possible legal implications.

Agree	Disagree

#### 20. PERSONAL INFORMATION

Throughout the course of providing services under this Agreement, NeurVana will be required to collect personal information from the Parent and the Youth, such as names, telephone numbers, addresses, birthdates, email addresses and drivers license numbers. The Parent acknowledges that throughout the course of providing services under this Agreement, NeurVana may be required to share such personal information with third parties, health professionals or law enforcement. NeurVana shall not disclose personal information unless reasonably required to in carrying out this Agreement or unless required to do so by law. NeurVana shall not use the personal information for promotional or market purposes unless previously authorized by the Parent.

#### 21. INTERPRETATION

Grammatical variations of any terms defined herein have similar meanings; words importing the singular number shall include the plural and vice versa; words importing the masculine gender shall include the feminine and neuter genders. The division of the Agreement into separate sections, subsections and clauses and the insertion of headings are for convenience of reference only and shall not affect the construction or interpretation of this Agreement.

## 22. ASSIGNMENT

This Agreement shall not be assigned.

## 23. TIME

Time shall be of the essence of this Agreement.

## 24. SUCCESSORS AND ASSIGNS

This Agreement shall enure to the benefit of and be binding upon the successors and permitted assigns of the parties hereto.

## 25. SEVERABILITY

If any provision of this Agreement is determined to be invalid or unenforceable in whole or in part, such invalidity or unenforceability shall attach only to such provision or part thereof and the remaining part of such provision and all other provisions hereof shall continue in full force and effect.

#### 26. COUNTERPART EXECUTION

This Agreement may be executed by the parties hereto in counterparts and upon execution of a counterpart by each party and delivery thereof to the other party, this Agreement shall be binding upon and enforceable in accordance with its terms.

## 27. WAIVER

No consent or waiver, express or implied, by a party to or of any breach or default by another party in the performance of such other party of its obligations hereunder shall be deemed or construed to be a consent or waiver to or of any other breach or default in the performance by such other party hereunder. Failure on the part of the party to complain of any act or failure to act of another party or to declare the other party in default, irrespective of how long such failure continues, shall not constitute a waiver by such first mentioned party of its rights hereunder.

#### 28. FURTHER ACTS

The parties hereto agree to execute and deliver such further and other documents and perform or cause to be performed such further and other acts and things as may be necessary or desirable to give effect to this Agreement in every part thereof.

#### 29. ENTIRE AGREEMENT

This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof and cancels and supersedes any prior understandings and agreements

between the parties hereto with respect thereto. There are no representations, warranties, forms, conditions, undertakings or collateral agreements, express or implied, between the parties other than as expressly set forth in this Agreement.

## 30. EXPENSES

All costs and expenses (including, without limitation, the fees and disbursements of legal counsel) incurred in connection with this Agreement and the transaction contemplated under this Agreement shall be paid by the party incurring such expenses.

## 31. AMENDMENTS

NEURVANA RECOVERY & WELLNESS INC.

This Agreement may not be modified or amended except with the written consent of the parties hereto.

IN WITNESS WHEREOF the Parties have duly executed this Agreement as of the date and year first above written

Per:	
Authorized signatory	
[PARENT NAME]	WITNESS
	Print Witness Name
	Witness Occupation
	Witness Address
[PARENT NAME]	WITNESS
	Print Witness Name
	Witness Occupation

Witness Address

This is Exhibit " H " referred to in the affidavit of David Kenney sworn before me at Toronto, Ontario this \_\_\_\_\_ day of March, 2015.

A Commissioner for taking oaths for the Province of Ontario

Deepshikha Dutt

## VOLUNTARY INFORMED CONSENT FOR ENROLMENT, ASSESSMENT AND TO DISCLOSE INFORMATION

•	MOOFFORMERIAL	731 133	TO DISCHOSE	
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This Agreemen	t made as of DATE, 2	2013.		

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			<b>\</b> •

## NEURVANA RECOVERY AND WELLNESS INC.

A body corporate duly incorporated under the laws of the province of British Columbia ("NeurVana")

AND:



- A. NeurVana provides wellness services to Youth and Young Adults through a Residential Wellness Program administered in a residential setting in Kelowna, British Columbia;
- B. It is understood by both parties that, by the nature of its services, NeurVana has an interdisciplinary team and program. It is understood and agreed that NeurVana has the ability to discuss, share, conference with, consult, and provide and receive professional assessments, without limitation, as long as it pertains to the health and wellbeing of said Youth. This Consent includes interaction with all direct employees of NeurVana; as well as any/all affiliates, partners, contractors, vendors, and other professionals deemed necessary in the health and well-being of the Client.
- C. It is understood and agreed that NeurVana may also contact immediate family members to discuss parts or all conversations, assessments, findings and results that are deemed in the best interest of the health and well-being of said Client.
- D. Client agrees to actively participate in the program and will, to the best of his/her ability, abide by rules and expectations deemed in the Clients best interest by NeurVana team members.
- E. BY SIGNING BELOW CLIENT AGREES THIS IS A **VOLUNTARY** INFORMED CONSENT FOR ENROLMENT, ASSESSMENT AND TO DISCLOSE INFORMATION

IN WITNESS WHERE OF THE Parties have duly executed this Voluntary Consent as of the date and year first above written.

Client Name	Witness Signature
	PRINT Witness Name
NEURVANA YOUTH RECOV	ND WELLNESS INC.
Per:	
Authorized Signature	

This is Exhibit " T " referred to in the affidavit of David Kenney sworn before me at Toronto, Ontario this \_\_\_\_\_\_\_ day of March, 2015.

A Commissioner for taking oaths for the Province of Ontario

Deepshikha Dutt



December 8th, 2013

## CONFIDENTIAL

Dear Parent(s),

I am writing this letter in response to the recent events regarding NeurVana and the province of British Columbia which resulted in your child being removed from NeurVana's program on Thursday, December 5<sup>th</sup>, 2013. We have received incredible support from our parents and from many of the youth themselves. I thank you all for your support during these times of uncertainty. However, there remains many unanswered questions as to what transpired. My goal with this letter is simply to share with you the facts surrounding the events of December 5<sup>th</sup>, as we know them to be true and accurate, without prejudice.

In early spring 2013, I met with two members of the BC Interior Health on NeurVana's campus. It was my goal to work directly with the BC Interior Health to set up a contract to service clients who would be funded by the BC Interior Health (followed with multiple phone calls and emails). Both employees from BC Interior Health eagerly completed a mini BrainWave session (each) as part of their experience, were given full disclosure of our program teachings and modalities, enjoyed a lunch with our team and clients, and met with both clients and team members.

On Tuesday, December 3<sup>rd</sup>, I received a phone call from the BC Interior Health requesting a meeting directly with me ASAP. With great eagerness I accepted the invitation, as I believed this to be the follow up to my earlier meetings. The meeting was scheduled for the following day, December 4<sup>th</sup>.

At the December 4<sup>th</sup> meeting I was informed that I was there to discuss possible licensing requirement for NeurVana. I met with two licensing officers from the BC Interior Health Licensing Department.

They stated that after reading NeurVana's website they were unclear if NeurVana needed to be a licensed facility and that it was their goal to render a decision at the conclusion of our meeting. We spent the next eighty (80) minutes going detail-by-detail through the Prescribed Services Worksheet. The vast majority of the worksheet does not apply to NeurVana's program. As a result, I was informed by both workers that they were unable to reach a decision and NeurVana may in fact fall outside the scope of the BC Interior Health Licensing department. They further stated they would have to meet with their superiors to review our file. I asked to meet with their superiors and to be part of this process and to work collaboratively. They denied my request. They said they would be back in touch in a couple of days with any follow up questions. They requested a visit to our properties to do a general walk-thru inspection. We set up an



on-site visit for Tuesday, December 10<sup>th</sup>. I was lead to believe that they needed to do a site tour before making a recommendation or decision regarding licensing.

My last question was about the process. I was told directly that 'IF' it was determined NeurVana required licensing they would walk us through this process during the coming 3-4 months. They did hand me a four page overview of the application process but informed me not to spend much time on it until an official decision had been rendered.

At approximately 10:15 a.m., Thursday, December 5<sup>th</sup>, four workers from the Ministry of Children and Family Development arrived at both NeurVana locations and forced their way into both NeurVana locations. No paper work, authorization, or warrant was provided at any time to any NeurVana employee. All NeurVana employees were instructed to comply or face legal action. I was off property at the time but did receive a phone call immediately from senior NeurVana team member and was able to talk with the leader of the Child and Family Development group. I was told that they were there to ensure the safety and well-being of the youth in our charge, due to an allegation from a neighbor that we were holding minors against their will. They wanted to meet and interview all the youth privately. NeurVana openly complied with and accommodated all requests.

Once on campus I met with the lead investigator. Contrary to our telephone conversation she now stated that, 'we were not licensed', and this is her primary concern. This is a fact I agreed with. I then explained I had just met with the BC Interior Health licensing department and they did not and have not issued a ruling on whether NeurVana needed to be licensed. In short, as of the 5<sup>th</sup> of December we were not required to be licensed. I did urgently call the BC Interior Health Licensing Department on numerous occasions, none of my calls were returned that day.

Fact: as of the date of this letter, NeurVana has yet to receive notification from the BC Interior Health Licensing Department whether NeurVana must be a licensed program or not. To date, there has been NO official ruling, indication or announcement (verbal, written or electronic) that states or implies NeurVana must be licensed.

The private interviews with the youth lasted for approximately three (3) hours. All NeurVana team members were instructed to have no contact with any youth. They told us that they would <u>render a decision only after meeting with all youth</u>. We implored them to contact all the parents and to include the parents in part of the investigation. We were staunch parent advocates. We were told that the parents' wishes and choices had no bearing. At one point we were told by a senior worker that the children in the Ministry's care are 'bad' kids, going so far as to say that none of the youth in our care had challenges or needed professional help. I smiled and thanked her and the team for



the compliment, because that meant they youth presented well and were handling the stressful situation very well as the result of NeurVana's innovative, holistic program.

We informed them that every youth had freely executed a Voluntary Enrollment form, which they did not want to review.

We requested to have an opportunity to be included in the process and to work collaboratively. This request was denied.

I was not privy to the questions asked of each child and as such I will not comment.

Some parents have informed us that the Child and Family Development worker informed you that NeurVana was not licensed. IF this is the reason for removing the youth from our program then it begs the question, "Why did they continue to interview the youth for three hours before making any decision?". Logic leads me to believe if it was a licensing issue they simply would have walked in and immediately removed all of the youth.

NeurVana requested meetings with both Child and Family Development and the BC Interior Health Licensing Department for anytime Friday. Our meeting request was denied.

Fact: NeurVana has not been given any warning, no paper work of wrong-doing, no citation, no ticket, no violations, no fines, no arrests, no court appearance, no licensing notification, et al.

Unfortunately, we continue to have more questions than answers at this time. I remain steadfast to uncover the issues of concern and invite both provincial bodies to work collaboratively with NeurVana to create a solution. In fact, NeurVana's wonderful, highly experienced and talented team have already begun to develop both short term and long term solutions so that NeurVana will continue to deliver our innovative recovery and wellness services to youth and families in the near future.

In gratitude,

David J. Kenney, B.A., M.Ed. Executive Director and CEO

This is Exhibit " T " referred to in the affidavit of David Kenney sworn before me at Toronto, Ontario this \_\_\_\_\_\_ day of March, 2015.

A Commissioner for taking oaths for the Province of Ontario

Deepshikha Dutt

From: Fabris, Celeste [mailto:Celeste.Fabris@interiorhealth.ca]

Sent: December 9, 2013 3:03 PM To: 'dkenney@neurvana.ca'
Subject: license is required

Please see the attached letter.

If you have any questions please feel free to contact me.

Regards,

## Celeste Fabris RN

Licensing Officer, Residential Care Health Protection Interior Health Authority Kelowna Health Center 1340 Ellis Street, Kelowna, BC V1Y 9N1

Direct: 250-868-7848

Cell: 250-878-8223 Fax: 250-868-7760 E-mail: <a href="mailto:celeste.fabris@interiorhelath.ca">celeste.fabris@interiorhelath.ca</a>

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Please consider the environment before printing this email.

From: Fabris, Celeste [mailto:Celeste.Fabris@interiorhealth.ca]

Sent: December 9, 2013 3:34 PM To: 'dkenney@neurvana.ca'
Subject: FW: license is required

Please see the attached letter.

If you have any questions please feel free to contact me.

Regards,

## Celeste Fabris RN

Licensing Officer, Residential Care Health Protection Interior Health Authority Kelowna Health Center 1340 Ellis Street, Kelowna, BC V1Y 9N1

Direct: 250-868-7848

Cell: 250-878-8223 Fax: 250-868-7760 E-mail: <a href="mailto:celeste.fabris@interiorhelath.ca">celeste.fabris@interiorhelath.ca</a>

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Please consider the environment before printing this email.



December 6, 2013

### VIA EMAIL AND REGISTERED MAIL

Mr. David Kenney NeurVana – Innovative Recovery and Wellness 1438 Black Mountain Cr. Kelowna, BC VIP IP6

Dear Mr. Kenney:

### Re: Cease and desist operations at NeurVana - Innovative Recovery and Wellness

This letter is formal notice that NeurVana, located at 2275 Brentwood Road, Kelowna BC, VIP IH2 as well as associated premises, of 1438 Black Mountain Crescent, Kelowna BC, has been deemed to be operating in contravention of the Community Care and Assisted Living Act (SBC 2002 c 75, "the Act").

Section 1 of the Act defines a community care facility as "a premises or part of a premises (a) in which a person provides care to 3 or more persons who are not related by blood or marriage to the person and includes any other premises or part of a premises that, in the opinion of the medical health officer, is used in conjunction with the community care facility for the purpose of providing care".

Further, Section 5 of the Act requires that "A person who does not hold a licence must not (a) operate, or hold themselves out as operating, a community care facility, (b) provide, or hold themselves out as providing, care in a community care facility, or (c) accommodate, or hold themselves out as accommodating, a person who, in the opinion of a medical health officer, requires care in a community care facility".

This letter will serve as a demand that you comply with the requirements of the Act by immediately ceasing the operation of your unlicensed community care facility. In addition, you must cease advertising online, as well as any other forms of advertising. If you fail to comply with this demand, court action in B.C. Supreme Court may be commenced to invoke the Offence and Penalty section of the Act, or to seek an injunction against you requiring that you comply with the provisions of the Act. If such a court application is necessary, the Court will be provided with copies of the relevant documents, including a copy of this letter, to show that you have been made aware of the requirements of the Act.

To avoid court action, you must immediately provide written confirmation to Licensing that you have come into compliance with this letter, and all sections of the Act and its applicable regulations.

It is an offence, pursuant to Section 33 of the Act, to contravene Section 5, and a person who commits an offence is liable "to a fine of up to \$10 000". The Act provides that if the offence "is of a continuing nature, each day that the offence continues constitutes a separate offence".

Bus: 250-868-7848 Fax: 250-868-7760 Email: celeste.fabris@interiorhealth.ca Web: http://www.interiorhealth.ca

HEALTH PROTECTION
Less Risk - Better Health

Kelowna Health Centre 1340 Ellis Street Kelowna, BC VIY 9NY The purpose of the Community Care and Assisted Living Act and the Residential Licensing Regulation is to protect the health, safety, and dignity of persons in care. The Regulation sets the standard for the minimum acceptable service that can be provided to persons in care in British Columbia. Services operating below the minimum standard are considered to put persons at risk.

If you have any questions, please contact me directly.

Sincerely,

Celeste Fabris, Licensing Officer Community Care Licensing

CF/eu

c.c. Dr. Robert Parker, Medical Health Officer

This is Exhibit " K "referred to in the affidavit of David Kenney sworn before me at Toronto, Ontario this \_\_\_\_\_\_ day of March, 2015.

A Commissioner for taking oaths for the Province of Ontario

Families left in lurch after troubled teens removed from private Kelowna care facility

#### BY KEITH FRASER, THE PROVINCE FEBRUARY 7, 2014

Three families are suing a private Kelowna facility that cared for troubled youth after their children were allegedly mistreated and then abruptly removed from the home by the B.C. government.

The families had placed their kids in the overnight care facility in hopes that it could deal with issues the teens were grappling with.

But the lawsuits filed in B.C. Supreme Court paint an unflattering picture of the work done at Neurvana Recovery and Wellness Centre.

Cameron and Sandra Colquhoun, who paid \$18,300 for their son to spend three weeks at the facility, say the teen lost about 20 pounds, was threatened on a number of occasions and ridiculed constantly.

David and Arleen Thordarson, who paid out \$25,280 for their daughter's care, say the girl felt as if she was in a prison and was forbidden access to her belongings and phone calls with her family.

Douglas and Shirley McLachlin, who paid \$25,280 for their daughter's care, say the girl was verbally bullied on numerous occasions, suffering major emotional trauma, and was not given her prescription medication for depression.

After being deprived of her meds, the girl suffered a panic attack, severe anxiety, physical weakness and hyperventilation.

Rather than comfort her, the defendants bullied her and locked her out of the facility for an extended period in sub-zero temperatures, the parents say.

In December, the families received a surprise phone call from the ministry of children and family development.

They were told that the ministry had just visited Neurvana and had removed the children because the home was not meeting required guidelines for maintaining youth adolescents.

The shocked families were told they could fly up to Kelowna that night and pick up their children, or have the children kept temporarily in foster care for the weekend.

"You could imagine how difficult it was for our clients to first assess the situation and then frantically go online and try to book flights for that evening," said Marco Francesco Lilliu, the families' lawyer. "And how traumatizing it would have been on the children themselves, who are approximately 17 years of age."

The families and their kids have suffered great anxiety from the mistreatment and the ministry's closure of the facility, added Lilliu.

"Especially because you're taking children that were already suffering from certain issues and required healing. Unfortunately, they're put in the middle of this mess."

Lilliu said the facility operators, David and Susan Kenney, did not have the proper government or business licenses.

He said he has not yet been able to serve the lawsuits on the Kenneys,

"We have received word from the ministry that most likely, if they have not left the country, they are planning to leave the country within the next week," he said. "Right now, the speculation is that they are actually relocating the facility to the Cayman Islands. However that is not substantiated yet."

The facility had operated in Kelowna for about two years and prior to that is believed to have been operated in the U.S., he said.

The families are suing for recovery of the fees they paid the facility and for general and special damages. No response has been filed to the lawsuit, which contains allegations that have not been proven in court. The defendants could not be reached.

kfraser@theprovince.com

twitter.com/keithrfraser

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# Teens mistreated at care facility, suit claims

Three families are suing a private Kelowna facility that cared for troubled youth after their children were allegedly mistreated and then abruptly removed from the home by the B.C. government.

By The ProvinceFebruary 12, 2014

Three families are suing a private Kelowna facility that cared for troubled youth after their children were allegedly mistreated and then abruptly removed from the home by the B.C. government.

The families had placed their kids in the unlicensed care facility in hopes that it could deal with issues the teens were grappling with.

But the lawsuits filed in B.C. Supreme Court paint an unflattering picture of the work done at NeurVana Innovative Recovery and Wellness centre.

Cameron and Sandra Colquhoun, who paid \$18,300 for their son to spend three weeks at the facility, say the teen lost about 20 pounds, was threatened on a number of occasions and ridiculed constantly.

David and Arleen Thordarson, who paid out \$25,280 for their daughter's care, say the girl felt as if she was in a prison and was forbidden access to her belongings and phone calls with her family.

Douglas and Shi rley McLachlin, who paid \$25,280 for their daughter's care, say the girl was verbally bullied on numerous occasions, suffering major emotional trauma, and was not given her prescription medication for depression.

After being deprived of her meds, the girl suffered a panic attack, severe anxiety, physical weakness and hyperventilation. Rather than comfort her, the defendants bullied her and locked

## http://www.canada.com/story.html?id=494b5baf-a254-45a1-8863-a8188654ab39

her out of the facility for an extended period in sub-zero temperatures, the parents allege. The lawsuit claims in December the families received a surprise phone call from the Ministry of Children and Family Development.

They were allegedly told the ministry had just visited NeurVana and had removed the children because the home was not meeting required guidelines for maintaining youth adolescents.

Marco Francesco Lilliu, the families' lawyer, said he has not been able to locate the facility operators, David and Susan Kenney, to serve legal papers. The facility is now closed. The families are suing for recovery of the fees they paid the facility and for general and special damages.

kfraser@theprovince.com

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This is Exhibit " L " referred to in the affidavit of David Kenney sworn before me at Toronto, Ontario this 2 day of March, 2015.

A Commissioner for taking oaths for the Province of Ontario

Castanet.net

## Youth treatment centre shut down

by CBC | Story: 108881 - Feb 13, 2014 / 1:17 pm



Photo: CBC

The NeurVana Recovery and Wellness Centre website advertises 'brain balancing' through advanced 'neuro-technology.' (NeurVana)

Three families are suing a private youth treatment centre in Kelowna claiming their children were mistreated and bullied before being abruptly removed from the home by the provincial government.

The NeurVana Recovery and Wellness Centre advertises the use of advanced neuro-technology to "harmonize the brains" of the youths it treats.

## http://www.castanet.net/news/Kelowna/108881/Youth-treatment-centre-shut-down



Photo: Contributed

The house matching the address for the NeurVana Recovery and Wellness Centre in Kelowna.

The province says the facility was operating without a license.

Documents filed by the families in B.C. Supreme Court allege owners David and Susan Kenney told them NeurVana was a licensed and qualified residential care facility for teenagers struggling with diagnosed psychological conditions, including depression and drug addiction.

Sandra Colquhoun of Burnaby, one of the plaintiffs in the lawsuit, says she hoped NeurVana could help her 16-year-old son overcome his marijuana addiction. She says she was told it could also help him with a wide range of psychological issues.

"You know if he had any other anxiety issues or self-esteem issues, they said they most definitely could help with them."

Her family paid \$20,000 for a three-week stay.

Two weeks later government officials told her to come pick up her son. NeurVana was being closed for not having a license.

"I was really concerned about my son and from there I found out what happened to him, what he had been through and he was very traumatized."

Colquhoun says her son lost 20 pounds while at NeurVana and was threatened and ridiculed.

#### Families pay big money

Another family, who paid \$25,000 for their daughter's care, allege in court documents their daughter felt as if she was in a prison, and was not allowed to access her belongings or phone home.

## http://www.castanet.net/news/Kelowna/108881/Youth-treatment-centre-shut-down

A third family says they also paid \$25,000 only to have their daughter suffer a panic attack after she was bullied and denied her prescription medication for depression.

David Kenney, one of NeurVana's owners, is the brother of federal Employment Minister Jason Kenney.

However, there is no evidence the cabinet minister was involved in the facility in any way. Kenney's office declined to comment, saying the case has nothing to do with the federal government.

The court documents laying out the basis of the lawsuit are allegations and only represent one side of the story. They have not yet been proven in court.

The families are suing to get their money back and are also seeking general and special damages.

# NeurVana owners leave country

by <u>Ragnar Haagen</u> | Story: 109314 - Feb 19, 2014 / 3:30 pm 23

More people are stepping forward and saying their children were the victims of abuse and neglect at the hands of David and Susan Kenney, who ran the <u>NeurVana Recovery and Wellness Centre</u> in Kelowna.



Photo: Contributed - LinkedIn

David Kenney

A lawyer representing the three original families named in the civil suit now says a fourth family has stepped forward to become part of the litigation, and that number could rise even higher.

"We've had two other families contact us, as parents of children who were placed in NeurVana. And then I believe we've had four former employees (or volunteers) contact us as well," says Marco Francesco Lilliu.

With so many people accusing the Kenney's of injustice, the possibility of a class action lawsuit has been raised, but Lilliu says that is unlikely.

"The logistics of the case might make it more suitable for individual actions for a number of reasons. Although they all have a common thread, they're quite different. Every child was treated differently and had different issues."

## http://www.castanet.net/news/Kelowna/109314/NeurVana-owners-leave-country

He adds that parents are expressing additional outrage after learning the Kenney's have skipped town and left the country. They are believed to have settled in the Cayman Islands where they are said to be attempting to open the same business once again.

"I know from speaking with my clients that they're extremely disappointed and frustrated," he says.

"Its quite unfortunate that they've up and left the jurisdiction, for one. And two, its also unfortunate, at least in our opinion, that they're setting up shop in the Cayman Islands."

The centre, which was actually a private residence, was shut down in December by Interior Health after finding out it was operating without a license under the Community Care and Assisted Living Act.

Lilliu says he is currently awaiting a response to the civil claims and expects to hear from the Kenney's lawyer by the middle of next month.

This is Exhibit " M " referred to in the affidavit of David Kenney sworn before me at Toronto, Ontario this \_\_\_\_\_\_ day of March, 2015.

A Commissioner for taking oaths for the Province of Ontario

http://www.caymannewsservice.com/world-news/2014/02/24/troubled-youth-treatment-centre-eyes-cayman

# Troubled youth treatment centre eyes Cayman

Posted on Mon, 24/02/2014 - 22:53 in World News

(CNS): A Canadian couple whose unlicensed youth treatment centre was shut down by the authorities in British Columbia may be seeking to set up a new rehabilitation centre for troubled youngsters in the Cayman Islands. However, it is unlikely to solve any of Cayman's young offender problems. David (left) and Susan Kenney are facing at least four law suits from different families who say their children were bullied, abused and mistreated while in the care of the couple at the NeurVana Recovery and Wellness centre, which charged thousands of dollars a week to treat the young people placed there.

The centre advertised the use of advanced neuro-technology to "harmonize the brains" of the youths it treats for a range of problems from self harming to drug misuse.

Reports from Canada suggest the Kenneys, who have relatives in Cayman according to local sources, are now attempting to create a new centre here by the spring despite having had their Canadian centre closed down the legal difficulties over the law suits. The legal action taken by the families involved allege various incidences of abuse, breach of contract, fraud and negligence at the former residential treatment facility which was located in Kelowna. From forcing vegetarians to eat meat to withholding medication from teen patients the law suits accuse the couple of numerous types of abuse and bullying none of which has yet been proven.

Concerns were raised by the families through their lawyers that the couple had not only left Canada in the face of the allegations and the sudden closure of the facility but were attempting to start the same kind of centre somewhere else.

The Kenneys, who say they have worked with children in various places for 20 years have via their attorney denied all of the allegations.

This is Exhibit " u " referred to in the affidavit of David Kenney sworn before me at Toronto, Ontario this u day of March, 2015.

A Commissioner for taking oaths for the Province of Ontario

10:06 PM

Recents

Info

# 1 (250) 712-7567

British Columbia, Canada

**Today** 

4:24 PM

Incoming Call 59 seconds

Call

FaceTime

FaceTime Audio

Send Message

# **Create New Contact**

Add to Existing Contact











Favorites

Recents

Contacts

Keypad

Voicemail

This is Exhibit " O " referred to in the affidavit of David Kenney sworn before me at Toronto, Ontario this \_\_\_\_\_\_ day of March, 2015.

A Commissioner for taking oaths for the Province of Ontario

# SEAN KELLY LAW LITIGATION & DISPUTE RESOLUTION

October 24, 2014

VIA Fax: 250-712-7510

Ministry of Children & Family Development 400-1726 Dolphin Ave Kelowna, BC V1Y 9R9

Attention: Cheryl Beauchamp

Dear Ms. Beauchamp:

Re: Telephone Call to David Kenney on October 22, 2014

Please be advised that I am litigation counsel for David and Susan Kenney. Mr. Kenney received a disturbing phone call on Wednesday of this week at 4:24 pm Eastern Time from someone at (250)712-7567, which we understand is your telephone number. This call from your phone number was made to my client in Ontario on an Ontario phone number.

The person using your number represented she was from BC Child Protection Services but refused to identify herself. The unidentified voice was that of a woman. The unidentified woman who called also claimed to have "closed down" my client in BC and stated "I understand you have reopened". My client advised that he had not reopened and continued to politely ask who it was that was calling. The caller refused to answer and hung up. The call lasted 59 seconds.

Self evidently, employees or agents of your agency do not have jurisdiction in Ontario.

My clients have been harassed, bullied and intimidated by the receipt of a phone call in Ontario, from someone claiming to be representing the BC government, who refused to identify themselves, were claiming that they had "closed him down", then unprofessionally hung up on him.

## Page 2

There is a substantial difference between investigation and intimidation. This call was the latter and will not be tolerated by my clients or the courts.

We request a written explanation. We also demand that this improper activity cease and desist immediately.

Yours truly,

SEAN M. KELLY

/cje

This is Exhibit " **Q** " referred to in the affidavit of David Kenney sworn before me at Toronto, Ontario this \_\_\_\_\_\_ day of March, 2015.

A Commissioner for taking oaths for the Province of Ontario

# SEAN KELLY LAW LITIGATION & DISPUTE RESOLUTION

November 14, 2014

#### **HAND DELIVERED**

MINISTRY OF CHILDREN & FAMILY DEVELOPMENT 400-1726 Dolphin Ave Kelowna, BC V1Y 9R9

**Attention: Cheryl Beauchamp** 

Dear Ms. Beauchamp:

Re: Telephone Call to David Kenney on October 22, 2014

Further to our letter to you of October 24, 2014, we confirm that we have still not received a reply from you, or anyone on your behalf. Enclosed is a copy of that letter in case it did not reach you for any reason.

Please provide a reply explaining your actions and addressing the serious concerns raised by my clients on or before December 1, 2014.

Yours truly,

**SEAN M. KELLY** 

/lk

# SEAN KELLY LAW LITIGATION & DISPUTE RESOLUTION

October 24, 2014

VIA Fax: 250-712-7510

Ministry of Children & Family Development 400-1726 Dolphin Ave Kelowna, BC V1Y 9R9

**Attention: Cheryl Beauchamp** 

Dear Ms. Beauchamp:

Re: Telephone Call to David Kenney on October 22, 2014

Please be advised that I am litigation counsel for David and Susan Kenney. Mr. Kenney received a disturbing phone call on Wednesday of this week at 4:24 pm Eastern Time from someone at (250)712-7567, which we understand is your telephone number. This call from your phone number was made to my client in Ontario on an Ontario phone number.

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Self evidently, employees or agents of your agency do not have jurisdiction in Ontario.

My clients have been harassed, bullied and intimidated by the receipt of a phone call in Ontario, from someone claiming to be representing the BC government, who refused to identify themselves, were claiming that they had "closed him down", then unprofessionally hung up on him.

#204 - 1630 Pandosy Street, Kelowna, BC V1Y 1P7
Tel: 250-860-4201 Fax: 1-855-387-0215
sean@seankellylaw.ca

### Page 2

There is a substantial difference between investigation and intimidation. This call was the latter and will not be tolerated by my clients or the courts.

We request a written explanation. We also demand that this improper activity cease and desist immediately.

Yours truly,

SEAN M. KELLY

/cje

This is Exhibit " Q " referred to in the affidavit of David Kenney sworn before me at Toronto, Ontario this \_\_\_\_\_ day of March, 2015.

A Commissioner for taking oaths for the Province of Ontario

Our File: SAW/39146.020

Writer's Direct Line: (250) 869-1170 Serena's Direct Line: (250) 869-1171

BY FAX: (250) 470-0890

October 31, 2014

MINISTRY OF CHILD & FAMILY DEVELOPMENT OF BRITISH COLUMBIA ("MCFD")

400 – 1726 Dolphin Avenue Kelowna, British Columbia V1Y 9R9

Dear Sirs/Mesdames:

COPY
FOR YOUR INFORMATION:
FROM
PUSHOR MITCHELL LLP

RE:

Kenney and NeurVana Recovery and Wellness Inc. ats Mclachlin, Thordarson and Colquhoun Supreme Court of B.C., Vancouver Registry, Action Nos. 140835, 140810 and 140828

We are legal counsel for NeurVana Recovery and Wellness Inc. ("NeurVana")

We enclose herewith an Authorization form executed by David and Susan Kenney, the only directors of NeurVana.

The purpose of this letter is to formally request, on behalf of our clients, the following information pursuant to the *Freedom of Information and Protection of Privacy Act* (the "Act"):

- (a) information relating to NeurVana's business practices, including any licenses, permits or other grants of authority from the MCFD in your possession;
- (b) information, including reports, records, minutes of meetings, memorandums, or any other documents, in respect of NeurVana's business, whether prepared by and/or for the MCFD; and
- (c) information relating to any complaints, concerns, inquiries, or questions, whether prepared by or for the MCFD, including those of parents or any other organizations in respect of NeurVana's operations in your possession,

(the "Requests").

Telephone: (250) 762-2108

Fax: (250) 762-5219

- Please be advised you are statutorily obligated under the *Act* to assist and make every reasonable effort to respond to our Requests without delay; openly, accurately and completely.

We look forward to the prompt receipt of materials pertaining to our Requests.

Yours truly,

### PUSHOR MITCHELL LLP

Per:

STEVEN A. WILSON

\*Providing services through a law corporation

SAW/brc/smn

Encis.

cc: Client

This is Exhibit " R " referred to in the affidavit of David Kenney sworn before me at Toronto, Ontario this \_\_\_\_\_\_ day of March, 2015.

A Commissioner for taking oaths for the Province of Ontario



Our File: SAW/39146.020

Writer's Direct Line: (250) 869-1170 Serena's Direct Line: (250) 869-1171

BY FAX: 250 868 7760

November 3, 2014

INTERIOR HEALTH AUTHORITY

1340 Ellis Street

Kelowna, British Solumbia V1Y 9N1

Attention: Licensing Direct

Dear Sirs/Mesdames:

COPY
FOR YOUR INFORMATION:
EROM

PUSHOR MITCHELLED

RE:

Kenney and NeurVana Recovery and Wellness Inc. ats Mclachlin, Thordarson and Colquhoun Supreme Court of B.C., Vancouver Registry, Action Nos. 140835, 140810 and 140828

We are legal counsel for NeurVana Recovery and Wellness Inc. ("NeurVana").

We enclose herewith an Authorization form executed by David and Susan Kenney, the only directors of NeurVana.

The purpose of this letter is to formally request, on behalf of our clients, the following information pursuant to the Freedom of Information and Protection of Privacy Act (the "Act"):

- (a) information relating to NeurVana's business practices, including any licenses, permits or other grants of authority from the Interior Health Authority in your possession;
- (b) information, including reports, records, minutes of meetings, memorandums, or any other documents, in respect of NeurVana's business, whether prepared by and/or for the Interior Health Authority; and
- (c) information relating to any complaints, concerns, inquiries, or questions, whether prepared by or for the Interior Health Authority, or any other third parties, including parents or other organizations in respect of NeurVana's operations in your possession,

(collectively the "Requests").

Telephone: (250) 762-2108

Fax: (250) 762-5219

Page 2

Please be advised you are statutorily obligated under the *Act* to assist and make every reasonable effort to respond to our Requests without delay; openly, accurately and completely.

We look forward to the prompt receipt of materials pertaining to our Requests.

Yours truly,

### PUSHOR MITCHELL LLP

Per:

STEVEN A. WILSON
\*Providing services through a law corporation

SAW/brc/smn Encls, cc: Client This is Exhibit " < " referred to in the affidavit of David Kenney sworn before me at Toronto, Ontario this \_\_\_\_\_ day of March, 2015.

A Commissioner for taking oaths for the Province of Ontario

# SEAN KELLY LAW LITIGATION & DISPUTE RESOLUTION

File No. 1913.1

February 26, 2015

VIA MAIL & VIA FAX: (250) 387-1696

Information and Privacy Commissioner 4<sup>th</sup> Floor 1675 Douglas Street Victoria, BC V8V 1X4

Dear Sir or Madam,

Re: Response to Request for Information pursuant to the Freedom of

Information and Protection of Privacy Act ("the Act").

Ref: NX01803555580000

We act on behalf of NeurVana Recovery & Wellness Inc. ("NeurVana") with registered address at 101-1449 St. Paul Street, Kelowna, B.C., V1Y 2E5.

We refer to the request for information made on behalf of our clients by Pushor Mitchell LLP, pursuant to the Freedom of Information and Protection of Privacy Act ("the Act"), by letter dated November 3<sup>rd</sup>, 2014 ("the Request"), a copy of which is attached hereto as Schedule 1.

By letter dated February 16<sup>th</sup>, 2015 Interior Health issued a response to the Request, notwithstanding the elapse of over three months, thus well in excess of the statutory time limit for responding ("the Response"), a copy of which is attached hereto as Schedule 2.

The Response was sent to Pushor Mitchell LLP, who in turn requested clearer copies of the attachments to the Response, as some were illegible or difficult to decipher. The Response, with clearer copies of the attachments thereto, was provided to us, by Pushor Mitchell LLP, by letter dated February 24<sup>th</sup>, 2015. We

therefore treat this date as the date of notification of the decision made by Interior Health for the purposes of S.53 of the Act, and note that we are afforded thirty (30) days from notification of the Response to request a review of the decision under that section. We assume that the reference in the Response to a three (3) day period within which to request a review is a typographical error.

We also point out that a similar request was made under the Act to the Ministry of Child and Family Development ("MCFD") by letter dated October 31, 2014. To date no response has been received. This failure to respond may be the subject of a separate request for a review under S.52 of the Act, we note that in this regard the time limit in S. 53 (2) (a) for delivering a request for review does not apply.

The grounds upon which we request a review of the Response are as follows:

- 1. At page 10 of the attachments to the Response, bullet point Nov 27<sup>th</sup>, reference is made to information that
  - i. was received by the Licensing Investigations Officer regarding NeurVana's premises; and
  - ii. "was sent to the Residential Team Leader and forwarded to the LO"

This information was not included with the Response and we therefore request a full description of the form of such information and either (a) a copy of this information; or (b) an explanation for refusal to disclose same.

- 2. At page 10 of the attachments to the Response, bullet point Dec 5<sup>th</sup>, reference is made to the fact that Licensing "met with MHO to discuss this case."
- 3. The Response does not include any notes of this meeting and we therefore request (a) all records pertaining to this meeting, including, but not limited to (aa) any notes of the meeting prepared by any or all present; (bb) a list of all those in attendance; and (cc) any correspondence or notes thereof pertaining to that meeting; or (b) an explanation for refusal to disclose same.
- 4. Further at page 10 of the attachments to the Response, bullet point Dec 5<sup>th</sup>, reference is made to the fact that Licensing "learned that MCFD did a site visit and removed the youth."

We point out that nowhere in the records provided is there any indication of how licensing learned of the site visit, it is clear from the above entry that MCFD communicated the fact of the site visit and what occurred on the occasion thereof, to Licensing and that therefore there should be some record of this communication.

This information was not included with the Response and we therefore request a full description of the form of such communication and either (a) a copy of this communication and any notes pertaining thereto, identifying all parties thereto; or (b) an explanation for refusal to disclose same.

5. At page 10 of the attachments to the Response, bullet point Dec 6<sup>th</sup>, reference is made to a meeting that took place with "MHO, director, manager, team leaders and FLO" present and following which a cease and desist operations letter was sent to Mr. David Kenney.

The Response does not include any notes of this meeting and we therefore request (a) all records pertaining to this meeting, including, but not limited to (aa) any notes of the meeting prepared by any or all present; (bb) a list of all those in attendance; and (cc) any correspondence or notes thereof pertaining to that meeting; or (b) an explanation for refusal to disclose same.

6. At page 12 of the attachments to the Response is the Cease & Desist Operations letter dated December 6<sup>th</sup> 2013 from Celeste Fabris, copied to a Dr. Robert Parker, Medical Health Officer ("CDO Letter").

The Response does not include any other communications to and or from Dr. Robert Parker. It would appear that Dr. Parker had an important role to play in regard to the issue of whether NeurVana required to be licensed, and we therefore request (a) all (not just those post dating the CDO Letter) records pertaining to Dr. Parker's involvement with the NeurVana facility file, including, but not limited to (aa) any notes of meetings at which Dr. Parker was present; (bb) any communications passing between Dr. Parker and any other arm; organ; servant; or agent of B.C. Government; and (cc) any recommendations; reports; or decisions made by Dr. Parker; or (b) an explanation for refusal to disclose same.

7. At page 14 of the attachments to the Response is an email dated December 5<sup>th</sup> 2013 from an undisclosed person (name and identifying details redacted) that makes a request to Celeste Fabris and Jeremiah Powell to contact another undisclosed person (name and identifying details redacted) "prior to talking to David Kenney..."

It appears from the above entry that Celeste Fabris and or Jeremiah Powell were to communicate with this unidentified person, however nowhere in the records provided is there any indication that such a communication took place. We therefore request a full description of the date and form of such communication and either (a) all records pertaining to this communication/meeting, including, but not limited to (aa) any notes prepared by any or all party thereto; (bb) a list of all those party thereto; and (cc) any correspondence or notes thereof pertaining thereto; or (b) an explanation for refusal to disclose same.

- 8. With reference to the email dated December 5<sup>th</sup> 2013 at page 14 of the attachments to the Response we request a detailed explanation for the redactions therein.
- 9. At page 16 of the attachments to the Response is a copy of the envelope in which a registered letter was enclosed, addressed to Mr. David Kenney. Upon said envelope is a note dated January 8, 2014 which states that the letter was returned to sender Celeste Fabris and that letter "has been shredded."

We request (a) disclosure of any or all drafts of said letter; and (b) a detailed explanation for the destruction of the original thereof.

10. At pages 22 and 23 of the attachments to the Response is a letter dated December 8<sup>th</sup> 2013, addressed "Dear Parent(s)" and headed "Confidential", sent by David Kenney to a group of parents of clients of NeurVana. This letter was not copied to Interior Health, nor indeed to any arm; organ; servant and or agent of the B.C. Government.

We request a full explanation of how this letter came within the possession, power or procurement of Interior Health, such that it was in a position to disclose it as a record under the Act.

Should you have any queries in relation to the above please do not hesitate to contact me directly on the following telephone number (250) 860-4201.

We look forward to hearing from you.

Yours truly.

SEAN M. KELLY

/eo

Enclosures (2)

Cc: Client

This is Exhibit " T referred to in the affidavit of David Kenney sworn before me at Toronto, Ontario this 2 day of March, 2015.

A Commissioner for taking oaths for the Province of Ontario

# SEAN KELLY LAW LITIGATION & DISPUTE RESOLUTION

File No. 1913.1

February 27, 2015

#### VIA FAX (250) 470-0890

Chief Information Officer

Ministry of Child and Family Development
400-1726 Dolphin Avenue
Kelowna, BC V1Y 9R9

Dear Sirs, Mesdames;

Re.

Kenney and NeurVana Recovery & Wellness Inc., ats. McLachlin, Thordarson and Colquhoun, Supreme Court of B.C., Vancouver Registry, Action Nos. 140835; 140810; and 140828

We act on behalf of NeurVana Recovery & Wellness Inc. ("NeurVana").

We refer to a request for information made on behalf of our clients by Pushor Mitchell LLP, pursuant to the Freedom of Information and Protection of Privacy Act ("the Act"), by letter dated October 31, 2014 ("the Request") and attach same for your convenience.

To date no response has been received to the Request, notwithstanding the elapse of over three months, thus well in excess of the statutory time limit for responding. We point out that a similar request was made under the Act to the Interior Health Authority for B.C. ("IH") by letter dated November 3, 2014. While over three months late in responding and albeit not fully in compliance with the Act in other respects, IH did finally respond by letter dated February 16, 2015.

We therefore call upon you to respond to the Request without further delay, failing which we will be obliged to take whatever measures are deemed appropriate to ensure compliance with your obligations under the Act.

Yours truly,

SEAN M. KELLY-

/eo.

Enclosure

Cc: Client

#101 – 1353 Ellis Street, Kelowna, BC V1Y 1Z9 Tel: 250-860-4201 Fax: 1-855-387-0215

sean@seankellylaw.ca

This is Exhibit " U " referred to in the affidavit of David Kenney sworn before me at
- <b>a</b> .
Toronto, Ontario this day of March,
2015.
A Commissioner for taking oaths for the Province of Ontario

O I 

×

Someone from Interior Health Authority looked at your profile - Message (HTML)

Screen shot from Dave Kenney's email account

January 22, 2015

MESSAGE

FILE

ď Mark Follow Translate Select\*

Zoom

Zoom

Move Actions Unread Up

Nove

Ouick Steps

্রে To Manager ্রি Reply & Delete

All Keply Reply Forward 何More 7 Create New All

Thu 2015-01-22 1.01 PM

Delete

Respond

LinkedIn <messages-noreply@linkedin.com>

Someone from Interior Health Authority looked at your profile

To David Kenney

If there are problems with how this message is displayed, click here to view it in a web browser.

See who discovered you on LinkedIn this week

1 Profile View



Information Disclosure at Interior Initiatives, Corporate Director - Strategic Policy and

Health Authority

View profile,