

CURRICULUM VITAE

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EDUCATION

1992-1996 Undergraduate, University of Illinois at Urbana-Champaign

1996 B.S., Chemistry, Magna cum Laude with Highest Distinction,
University of Illinois at Urbana-Champaign

1996-1997 Graduate Student, Chemistry, University of Texas

1997-2002 Graduate Student, Chemistry, University of Illinois at Urbana-
Champaign

2002 Ph.D., Chemistry, University of Illinois at Urbana-Champaign

PROFESSIONAL TRAINING AND EXPERIENCE

2003 Postdoctoral Fellow, Chemistry, University of Illinois at Urbana-
Champaign

2003-2007 Postdoctoral Fellow, Pharmacology, Vanderbilt University

2007-present Instructor, Pharmacology, Vanderbilt University

HONORS AND AWARDS

1996 Marvel Award for Outstanding Undergraduate Thesis

1996-1997 Welch Foundation Fellow

1997 NIH Biotechnology Trainee

1997-1998 Roger Adams Fellow
1997-2000 NIH Cell and Molecular Biology Trainee
2004-2007 NIH NRSA Postdoctoral Fellow

PROFESSIONAL MEMBERSHIPS

1996-present *Phi Beta Kappa*
2000-present American Chemical Society
2003-present Society for Neuroscience

RESEARCH SUPPORT

9/01/2004 – 8/31/2007 Development of allosteric potentiators of mGluR4.
5 F32 NS049865 Alice L. Rodriguez, Postdoctoral Fellow
Direct Costs: \$141,700

9/01/2007 – 8/31/2009 Allosteric potentiators of mGluR5 for the treatment of schizophrenia.
SMRI Grant #07R-1802 Alice L. Rodriguez, Principal Investigator
Direct Costs: \$150,000

ORAL PRESENTATIONS

2007 From HTS to lead optimization using technology enabled synthesis: Development of novel allosteric potentiators of mGluR5. Gordon Research Conference, Combinatorial Chemistry: Accelerating Drug Discovery. June 3-8, 2007 Colby-Sawyer College New London, NH.

PUBLICATIONS

1. Mortensen DS, **Rodriguez AL**, Sun J, Katzenellenbogen BS, Katzenellenbogen JA. Furans with basic side chains: Synthesis and biological evaluation of a novel series of antagonists with selectivity for the estrogen receptor α . *Bioorg. Med. Chem. Lett.* **2001**, *11*, 2521-2524. PMID: 11549460
2. Mortensen DS, **Rodriguez AL**, Carlson KE, Sun J, Katzenellenbogen BS, Katzenellenbogen JA. Synthesis and biological evaluation of a novel series of furans: Ligands selective for estrogen receptor α . *J. Med. Chem.* **2001**, *44*, 3838-3848. PMID: 11689070

3. Nishiguchi GA, **Rodriguez AL**, Katzenellenbogen JA. Diaryl-dialkyl-substituted pyrazoles: Regioselective synthesis and binding affinity for the estrogen receptor. *Bioorg. Med. Chem. Lett.* **2002**, *12*, 947-950. PMID: 11959000
4. Mull ES, Sattigeri VJ, **Rodriguez AL**, Katzenellenbogen JA. Aryl cyclopentadienyl tricarbonyl rhenium complexes: Novel ligands for the estrogen receptor with potential use as estrogen radiopharmaceuticals. *Bioorg. Med. Chem.* **2002**, *10*, 1381-1398. PMID: 11886802
5. **Rodriguez AL**, Tamrazi A, Collins ML, Katzenellenbogen JA. Design, synthesis, and *in vitro* biological evaluation of two classes of small molecules as inhibitors of estrogen receptor α coactivator binding. *J. Med. Chem.* **2004**, *47*, 600-611. PMID: 14736241
6. Nettles KW, Sun J, Radek JT, Sheng S, **Rodriguez AL**, Katzenellenbogen JA, Katzenellenbogen BS, Greene GL. Allosteric control of ligand selectivity between estrogen receptors α and β : Implications for others nuclear receptors. *Mol. Cell.* **2004**, *13*, 317-327. PMID: 14967140
7. Tamrazi A, Carlson KE, **Rodriguez AL**, Katzenellenbogen JA. Coactivator proteins as determinants of estrogen receptor structure and function: Spectroscopic evidence for a novel coactivator-stabilized receptor conformation. *Molecular Endocrinology* **2005**, *19*, 1516-28. PMID: 15661830
8. Poisik, O., Raju, D., Verrault, M., **Rodriguez, A.L.**, Abeniya, O.A., Conn, P.J. and Smith, Y. Metabotropic glutamate receptor 2 modulates excitatory synaptic transmission in the rat globus pallidus. *Neuropharmacology* **2005**, *49*, 57-69. PMID: 15993439
9. Zhang, Y., **Rodriguez, A.L.**, and Conn, P.J. Allosteric potentiators of metabotropic glutamate receptor subtype 5 have differential effects on different signaling pathways in cortical astrocytes. *J Pharmacol Exp Ther.*, **2005** *315*(3):1212-9. PMID: 16135701
10. Ruggero Galici, Nicholas G. Echemendia, **Alice L. Rodriguez** and P. Jeffrey Conn. A selective allosteric potentiator of mGlu2 receptors has similar effects to an orthosteric mGlu2/3 agonist in mouse models predictive of antipsychotic activity. *J Pharmacol Exp Ther.*, **2005** *315*(3):1181-7. PMID: 16123306
11. **Rodriguez, A.L.**, Nong, Y., Sekaran, N.K., Alagille, D., Tamagnan, G. and Conn, P.J. A close structural analog of MPEP acts as a neutral allosteric site ligand on metabotropic glutamate receptor subtype 5 and blocks the effects of multiple allosteric modulators. *Molecular Pharmacology*, **2005** *68*(6):1793-802. PMID: 16155210

12. **Rodriguez, A.L.** and Williams, R. Recent progress in the development of allosteric modulators of mGluR5. *Curr Opin Drug Discov Devel.* **2007** 10(6):715-22. PMID: 17987523
13. Jana K. Shirey, Zixiu Xiang, Darren Orton, Ashley E. Brady, Kari A. Myers, **Alice L. Rodriguez**, Colleen M. Niswender and P. Jeffrey Conn. Development and use of allosteric potentiators to examine the role of M4 mAChR in modulating hippocampal neurotransmission. *Nature Chemical Biology*, **2008**, 4(1): 42-50. PMID: 18059262
14. Sharma S, **Rodriguez AL**, Conn PJ and Lindsley CW. Synthesis and SAR of a mGluR5 allosteric partial antagonist lead: unexpected modulation of pharmacology with slight structural modifications to a 5-(phenylethynyl)pyrimidine scaffold. *Bioorg. Med. Chem. Lett.* **2008**, 18(14):4098-101. PMID: 18550372
15. Colleen M. Niswender, Kari A. Johnson, C. David Weaver, Carrie K. Jones, Zixiu Xiang, Qingwei Luo, **Alice L. Rodriguez**, Joy E. Marlo, Tomas de Paulis, Analisa D. Thompson, Emily L. Days, Tasha Nalywajko, Cheryl A. Austin, Michael Baxter Williams, Jennifer E. Ayala, Richard Williams, Craig W. Lindsley, and P. Jeffrey Conn. Discovery, characterization, and antiparkinsonian effect of novel positive allosteric modulators of metabotropic glutamate receptor 4. *Molecular Pharmacology* **2008** 74(5):1345-58. PMID: 18664603
16. Marlo JE, Niswender CM, Days EL, Bridges TM, Xiang Y, **Rodriguez AL**, Shirey JK, Brady AE, Nalywajko T, Luo Q, Austin CA, Williams MB, Kim K, Williams R, Orton D, Brown HA, Lindsley CW, Weaver CD, Conn PJ. Discovery and characterization of novel allosteric potentiators of M1 muscarinic receptors reveals multiple modes of activity. *Molecular Pharmacology* **2008** 75(3):577-88. PMID: 19047481
17. Engers, D.W.*, **Rodriguez, A.L.***, Oluwatola, O., Hammond, A.S., Venable, D.F., Williams, R., Sulikowski, G.A., Conn, P.J., and Lindsley, C.W. Synthesis, SAR and unanticipated pharmacological profiles of analogs of the mGluR5 ago-potentiator ADX-47273. *ChemMedChem.* **2009** 4(4):505-11. PMID: 19197923
18. **Rodriguez AL**, Williams R, Zhou Y, Lindsley SR, Le U, Grier MD, David Weaver C, Jeffrey Conn P, Lindsley CW. Discovery and SAR of novel mGluR5 non-competitive antagonists not based on an MPEP chemotype. *Bioorg Med Chem Lett.* **2009** 19(12):3209-13. PMID: 19443219
19. Kulkarni SS, Zou MF, Cao J, Deschamps JR, **Rodriguez AL**, Conn PJ, Newman AH. Structure-Activity Relationships Comparing N-(6-Methylpyridin-yl)-Substituted Aryl Amides to 2-Methyl-6-(substituted-arylethynyl)pyridines or 2-Methyl-4-(substituted-arylethynyl)thiazoles as Novel Metabotropic Glutamate Receptor Subtype 5 Antagonists (dagger). *J Med Chem.* **2009** 52(11):3563-75. PMID: 19445453

20. Sharma S, Kedrowski J, Rook JM, Smith RL, Jones CK, **Rodriguez AL**, Conn PJ, Lindsley CW. Discovery of molecular switches that modulate modes of metabotropic glutamate receptor subtype 5 (mGlu5) pharmacology in vitro and in vivo within a series of functionalized, regioisomeric 2- and 5-(phenylethynyl)pyrimidines. *J Med Chem.* **2009** 52(14):4103-6. PMID: 19537763
21. Felts AS, Saleh SA, Le U, **Rodriguez AL**, Weaver CD, Conn PJ, Lindsley CW, Emmitte KA. Discovery and SAR of 6-substituted-4-anilinoquinazolines as non-competitive antagonists of mGlu5. *Bioorg. Med. Chem. Lett.* **2009** 19(23):6623-6. PMID: 19854049
22. Zhou Y*, **Rodriguez AL***, Williams R, Weaver CD, Conn PJ, Lindsley CW. Synthesis and SAR of novel, non-MPEP chemotype mGluR5 NAMs identified by functional HTS. *Bioorg. Med. Chem. Lett.* **2009** 19(23):6502-6. PMID: 19875287
23. Mueller R*, **Rodriguez AL***, Dawson ES, Butkiewicz M, Nguyen TT, Oleszkiewicz S, Bleckmann A, Weaver CD, Lindsley CW, Conn PJ, Meiler J. Identification of compounds that potentiate activity of metabotropic glutamate receptor subtype 5 using a machine-learning based virtual high-throughput screen. *ACS Chemical Neuroscience.* **2010** 1(4):288-305. PMID: 20414370
24. Zhang P, Zou MF, **Rodriguez AL**, Jeffrey Conn P, Newman AH. Structure–activity relationships in a novel series of 7-substituted-aryl quinolines and 5-substituted-aryl benzothiazoles at the metabotropic glutamate receptor subtype 5. *Bioorganic & Medicinal Chemistry* **2010** 18(9):3026-35. PMID: 20382541
25. Felts AS, Lindsley SR, Lamb JP, **Rodriguez AL**, Menon UN, Jadhav S, Jones CK, Conn PJ, Lindsley CW, Emmitte KA. 3-Cyano-5-fluoro-N-arylbenzamides as negative allosteric modulators of mGlu(5): Identification of easily prepared tool compounds with CNS exposure in rats. *Bioorg Med Chem Lett.* **2010** 20(15):4390-4. PMID: 20598884
26. Lowe EW Jr, Ferrebee A, **Rodriguez AL**, Conn PJ, Meiler J. 3D-QSAR CoMFA study of benzoxazepine derivatives as mGluR5 positive allosteric modulators. *Bioorg Med Chem Lett.* **2010** 20(19):5922-4. PMID: 20732812
27. Hammond AS, **Rodriguez AL**, Townsend SD, Niswender CM, Gregory KJ, Lindsley CW, Conn PJ. Discovery of a Novel Chemical Class of mGlu(5) Allosteric Ligands with Distinct Modes of Pharmacology. *ACS Chem Neurosci.* **2010** 1(10):702-716. PMID: 20981342
28. **Rodriguez AL**, Grier MD, Jones CK, Herman EJ, Kane AS, Smith RL, Williams R, Zhou Y, Marlo JE, Days EL, Blatt TN, Jadhav S, Menon UN, Vinson PN, Rook JM, Stauffer SR, Niswender CM, Lindsley CW, Weaver CD, Conn PJ. Discovery

- of novel allosteric modulators of metabotropic glutamate receptor subtype 5 reveals chemical and functional diversity and in vivo activity in rat behavioral models of anxiolytic and antipsychotic activity. *Mol Pharmacol.* **2010** 78(6):1105-23. PMID: 20923853
29. Lamb JP, Engers DW, Niswender CM, **Rodriguez AL**, Venable DF, Conn JP, Lindsley CW. Discovery of molecular switches within the ADX-47273 mGlu5 PAM scaffold that modulate modes of pharmacology to afford potent mGlu5 NAMs, PAMs and partial antagonists. *Bioorg Med Chem Lett.* **2011** 21(9):2711-4. PMID: 21183344
30. Zou MF, Cao J, Rodriguez AL, Conn PJ, Newman AH. Design and synthesis of substituted N-(1,3-diphenyl-1H-pyrazol-5-yl)benzamides as positive allosteric modulators of the metabotropic glutamate receptor subtype 5. *Bioorg Med Chem Lett.* **2011** 21(9):2650-4. PMID: 21295978
31. Williams R, Manka JT, **Rodriguez AL**, Vinson PN, Niswender CM, Weaver CD, Jones CK, Conn PJ, Lindsley CW, Stauffer SR. Synthesis and SAR of centrally active mGlu5 positive allosteric modulators based on an aryl acetylenic bicyclic lactam scaffold. *Bioorg Med Chem Lett.* **2011** 21(5):1350-3. PMID: 21315585
32. Alagille D, DaCosta H, Chen Y, Hemstapat K, **Rodriguez A**, Baldwin RM, Conn PJ, Tamagnan GD. Potent mGluR5 antagonists: pyridyl and thiazolyl-ethynyl-3,5-disubstituted-phenyl series. *Bioorg Med Chem Lett.* **2011** 21(11):3243-7. PMID: 21546249
33. Lindsley CW, Bates BS, Menon UN, Jadhav SB, Kane AS, Jones CK, **Rodriguez AL**, Conn PJ, Olsen CM, Winder DG, Emmitte KA. (3-Cyano-5-fluorophenyl)biaryl negative allosteric modulators of mGlu(5): Discovery of a new tool compound with activity in the OSS mouse model of addiction. *ACS Chem Neurosci.* **2011** 2(8):471-482. PMID: 21927650
34. Noetzel MJ, Rook JM, Vinson PN, Cho H, Days E, Zhou Y, **Rodriguez AL**, Lavreysen H, Stauffer SR, Niswender CM, Xiang Z, Daniels JS, Lindsley CW, Weaver CD, Conn PJ. Functional Impact of Allosteric Agonist Activity of Selective Positive Allosteric Modulators of mGlu5 in Regulating CNS Function. *Mol Pharmacol.* **2012** 81(2):120-33. PMID: 22021324
35. Mueller R, Dawson ES, Meiler J, **Rodriguez AL**, Chauder BA, Bates BS, Felts AS, Lamb JP, Menon UN, Jadhav SB, Kane AS, Jones CK, Gregory KJ, Niswender CM, Conn PJ, Olsen CM, Winder DG, Emmitte KA, Lindsley CW. Discovery of 2-(2-Benzoxazolyl amino)-4-Aryl-5-Cyanopyrimidine as Negative Allosteric Modulators (NAMs) of Metabotropic Glutamate Receptor5 (mGlu(5)): From an Artificial Neural Network Virtual Screen to an In Vivo Tool Compound. *ChemMedChem.* **2012** 7(3):406-14. PMID: 22267125

36. Gregory KJ, Noetzel MJ, Rook JM, Vinson PN, Stauffer SR, **Rodriguez AL**, Emmitte KA, Zhou Y, Chun AC, Felts AS, Chauder BA, Lindsley CW, Niswender CM, Conn PJ. Investigating mGlu5 Allosteric Modulator Cooperativity, Affinity and Agonism: Enriching Structure-function Studies and Structure-activity Relationships. *Mol Pharmacol*. **2012** Nov;82(5):860-75. PMID: 22863693
37. Morrison RD, Blobaum AL, Byers FW, Santomango TS, Bridges TM, Stec D, Brewer KA, Sanchez-Ponce R, Corlew MM, Rush R, Felts AS, Manka J, Bates BS, Venable DF, **Rodriguez AL**, Jones CK, Niswender CM, Conn PJ, Lindsley CW, Emmitte KA, Daniels JS. The role of aldehyde oxidase and xanthine oxidase in the biotransformation of a novel negative allosteric modulator of metabotropic glutamate receptor subtype 5. *Drug Metab Dispos*. **2012** Sep;40(9):1834-45. PMID: 22711749
38. **Rodriguez AL**, Zhou Y, Williams R, David Weaver C, Vinson PN, Dawson ES, Steckler T, Lavreysen H, Mackie C, Bartolomé JM, Macdonald GJ, Scott Daniels J, Niswender CM, Jones CK, Jeffrey Conn P, Lindsley CW, Stauffer SR. Discovery and SAR of a novel series of non-MPEP site mGlu₅ PAMs based on an aryl glycine sulfonamide scaffold. *Bioorg Med Chem Lett*. **2012** Dec 15;22(24):7388-92. PMID: 23142615
39. Le U, Melancon BJ, Bridges TM, Vinson PN, Utley TJ, Lamsal A, **Rodriguez AL**, Venable D, Sheffler DJ, Jones CK, Blobaum AL, Wood MR, Daniels JS, Conn PJ, Niswender CM, Lindsley CW, Hopkins CR. Discovery of a selective M₄ positive allosteric modulator based on the 3-amino-thieno[2,3-b]pyridine-2-carboxamide scaffold: development of ML253, a potent and brain penetrant compound that is active in a preclinical model of schizophrenia. *Bioorg Med Chem Lett*. **2013** Jan 1;23(1):346-50. PMID: 23177787
40. D'Amore V, Santolini I, van Rijn CM, Biagioni F, Molinaro G, Prete A, Conn PJ, Lindsley CW, Zhou Y, Vinson PN, **Rodriguez AL**, Jones CK, Stauffer SR, Nicoletti F, van Luijtelaaar G, Ngomba RT. Potentiation of mGlu5 receptors with the novel enhancer, VU0360172, reduces spontaneous absence seizures in WAG/Rij rats. *Neuropharmacology*. **2013** Mar;66:330-8. PMID: 22705340
41. Niswender CM, **Rodriguez AL**, Sheffler DJ, Utley TJ, Vinson PN, Dawson ES, Jones CK, Wood MR, Daniels JS, Conn PJ, Engers JL, Le UM, Melancon BJ, Hopkins CR, Lindsley CW. Extended Probe Characterization: Development of an M4 PAM with Improved Activity and Brain Exposure, while Avoiding Species Bias. *Probe Reports from the NIH Molecular Libraries Program* [Internet]. Bethesda (MD): National Center for Biotechnology Information (US); 2010-2011 Oct 31 [updated **2013** Mar 7]. PMID: 21433368
42. Amato RJ, Felts AS, **Rodriguez AL**, Venable DF, Morrison RD, Byers FW, Daniels JS, Niswender CM, Conn PJ, Lindsley CW, Jones CK, Emmitte KA. Substituted 1-phenyl-3-(pyridin-2-yl)urea negative allosteric modulators of

- mGlu5: Discovery of a new tool compound VU0463841 with activity in rat models of cocaine addiction. *ACS Chem Neurosci*. **2013** Aug 21;4(8):1217-28. PMID: 23682684
43. Lovell KM, Felts AS, **Rodriguez AL**, Venable DF, Cho HP, Morrison RD, Byers FW, Daniels JS, Niswender CM, Conn PJ, Lindsley CW, Emmitte KA. N-Acyl-N'-arylpiperazines as negative allosteric modulators of mGlu1: Identification of VU0469650, a potent and selective tool compound with CNS exposure in rats. *Bioorg Med Chem Lett*. **2013** Jul 1;23(13):3713-8. PMID: 23727046
44. Manka JT, **Rodriguez AL**, Morrison RD, Venable DF, Cho HP, Blobaum AL, Daniels JS, Niswender CM, Conn PJ, Lindsley CW, Emmitte KA. Octahydropyrrolo[3,4-c]pyrrole negative allosteric modulators of mGlu1. *Bioorg Med Chem Lett*. **2013** Sep 15;23(18):5091-6. PMID: 23932792
45. **Rodriguez AL**, Tarr JC, Zhou Y, Williams R, Gregory KJ, Bridges TM, Daniels JS, Niswender CM, Conn PJ, Lindsley CW, Stauffer SR. Identification of a glycine sulfonamide based non-MPEP site positive allosteric potentiator (PAM) of mGlu5. *Probe Reports from the NIH Molecular Libraries Program* [Internet]. Bethesda (MD): National Center for Biotechnology Information (US); 2010-2012 Dec 17 [updated **2013** Mar 22]. PMID: 24027804
46. Felts AS, **Rodriguez AL**, Morrison RD, Venable DF, Manka JT, Bates BS, Blobaum AL, Byers FW, Daniels JS, Niswender CM, Jones CK, Conn PJ, Lindsley CW, Emmitte KA. Discovery of VU0409106: A negative allosteric modulator of mGlu5 with activity in a mouse model of anxiety. *Bioorg Med Chem Lett*. **2013** Nov 1;23(21):5779-85. PMID: 24074843
47. Cho HP, Engers DW, Venable DF, Niswender CM, Lindsley CW, Conn PJ, Emmitte KA, **Rodriguez AL**. A novel class of succinimide-derived negative allosteric modulators of metabotropic glutamate receptor subtype 1 provides insight into a disconnect in activity between the rat and human receptors. *ACS Chem Neurosci*. **2014** Jul 16;5(7):597-610. PMID: 24798819
48. Bates BS, **Rodriguez AL**, Felts AS, Morrison RD, Venable DF, Blobaum AL, Byers FW, Lawson KP, Daniels JS, Niswender CM, Jones CK, Conn PJ, Lindsley CW, Emmitte KA. Discovery of VU0431316: A negative allosteric modulator of mGlu5 with activity in a mouse model of anxiety. *Bioorg Med Chem Lett*. **2014** Aug 1;24(15):3307-14. PMID: 24969015
49. Cho HP, Garcia-Barrantes PM, Brogan JT, Hopkins CR, Niswender CM, **Rodriguez AL**, Venable D, Morrison RD, Bubser M, Daniels JS, Jones CK, Conn PJ, Lindsley CW. Chemical modulation of mutant mGlu1 receptors derived from deleterious GRM1 mutations found in schizophrenics. *ACS Chem Biol*. **2014** Oct 17;9(10):2334-46. PMID: 25137254

50. Gould RW, Amato RJ, Bubser M, Joffe ME, Nedelcovych MT, Thompson AD, Nickols HH, Yuh JP, Zhan X, Felts AS, **Rodriguez AL**, Morrison RD, Byers FW, Rook JM, Daniels JS, Niswender CM, Conn PJ, Emmitte KA, Lindsley CW, Jones CK. Partial mGlu5 Negative Allosteric Modulators Attenuate Cocaine-Mediated Behaviors and Lack Psychotomimetic-Like Effects. *Neuropsychopharmacology*. **2016** Mar;41(4):1166-78. Epub 2015 Aug 28. PMID: 26315507
51. Engers JL, **Rodriguez AL**, Konkol LC, Morrison RD, Thompson AD, Byers FW, Blobaum AL, Chang S, Venable DF, Loch MT, Niswender CM, Daniels JS, Jones CK, Conn PJ, Lindsley CW, Emmitte KA. Discovery of a selective and CNS penetrant negative allosteric modulator of metabotropic glutamate receptor subtype 3 with antidepressant and anxiolytic activity in rodents. *J Med Chem*. **2015** Sep 24;58(18):7485-500. PMID: 26335039
52. Felts AS, **Rodriguez AL**, Smith KA, Engers JL, Morrison RD, Byers FW, Blobaum AL, Locuson CW, Chang S, Venable DF, Niswender CM, Daniels JS, Conn PJ, Lindsley CW, Emmitte KA. Design of 4-Oxo-1-aryl-1,4-dihydroquinoline-3-carboxamides as Selective Negative Allosteric Modulators of Metabotropic Glutamate Receptor Subtype 2. *J Med Chem*. **2015** Nov 25;58(22):9027-40. PMID: 26524606
53. Felts AS, **Rodriguez AL**, Morrison RD, Venable DF, Blobaum AL, Byers FW, Daniels JS, Niswender CM, Jones CK, Conn PJ, Lindsley CW, Emmitte KA. N-Alkylpyrido[1',2':1,5]pyrazolo-[4,3-d]pyrimidin-4-amines: A new series of negative allosteric modulators of mGlu1/5 with CNS exposure in rodents. *Bioorg Med Chem Lett*. **2016** Apr 15;26(8):1894-900. PMID: 26988308
54. Gogliotti RD, Blobaum AL, Morrison RM, Daniels JS, Salovich JM, Cheung YY, **Rodriguez AL**, Loch MT, Conn PJ, Lindsley CW, Niswender CM, Hopkins CR. Discovery and characterization of a novel series of N-phenylsulfonyl-1H-pyrrole picolinamides as positive allosteric modulators of the metabotropic glutamate receptor 4 (mGlu4). *Bioorg Med Chem Lett*. **2016** Jul 1;26(13):2984-7. PMID: 27234146
55. Niswender CM, Jones CK, Lin X, Bubser M, Thompson Gray A, Blobaum AL, Engers DW, **Rodriguez AL**, Loch MT, Daniels JS, Lindsley CW, Hopkins CR, Javitch JA, Conn PJ. Development and antiparkinsonian activity of VU0418506, a selective positive allosteric modulator of metabotropic glutamate receptor 4 homomers without activity at mGlu2/4 heteromers. *ACS Chem Neurosci*. **2016** Sep 21;7(9):1201-11. PMID: 27441572
56. Wood MR, Noetzel MJ, Tarr JC, **Rodriguez AL**, Lamsal A, Chang S, Foster JJ, Smith E, Chase P, Hodder PS, Engers DW, Niswender CM, Brandon NJ, Wood MW, Duggan ME, Conn PJ, Bridges TM, Lindsley CW. Discovery and SAR of a novel series of potent, CNS penetrant M4 PAMs based on a non-enolizable

ketone core: Challenges in disposition. *Bioorg Med Chem Lett.* **2016** Sep 1;26(17):4282-6. PMID: 27476142

57. Wood MR, Noetzel MJ, Melancon BJ, Poslusney MS, Nance KD, Hurtado MA, Luscombe VB, Weiner RL, **Rodriguez AL**, Lamsal A, Chang S, Bubser M, Blobaum AL, Engers DW, Niswender CM, Jones CK, Brandon NJ, Wood MW, Duggan ME, Conn PJ, Bridges TM, Lindsley CW. Discovery of VU0467485/AZ13713945: An M4 PAM Evaluated as a Preclinical Candidate for the Treatment of Schizophrenia. *ACS Med Chem Lett.* **2016** Dec 16;8(2):233-238. PMID: 28197318
58. Felts AS, **Rodriguez AL**, Blobaum AL, Morrison RD, Bates BS, Thompson Gray A, Rook JM, Tantawy MN, Byers FW, Chang S, Venable DF, Luscombe VB, Tamagnan GD, Niswender CM, Daniels JS, Jones CK, Conn PJ, Lindsley CW, Emmitte KA. Discovery of N-(5-Fluoropyridin-2-yl)-6-methyl-4-(pyrimidin-5-yloxy)picolinamide (VU0424238): A Novel Negative Allosteric Modulator of Metabotropic Glutamate Receptor Subtype 5 Selected for Clinical Evaluation. *J Med Chem.* **2017** Jun 22;60(12):5072-5085. PMID: 28530802
59. Tarr JC, Wood MR, Noetzel MJ, Bertron JL, Weiner RL, **Rodriguez AL**, Lamsal A, Byers FW, Chang S, Cho HP, Jones CK, Niswender CM, Wood MW, Brandon NJ, Duggan ME, Conn PJ, Bridges TM, Lindsley CW. Challenges in the development of an M4 PAM preclinical candidate: The discovery, SAR, and in vivo characterization of a series of 3-aminoazetidine-derived amides. *Bioorg Med Chem Lett.* **2017** Jul 1;27(13):2990-2995. PMID: 28522253
60. Bender AM, Weiner RL, Luscombe VB, Ajmera S, Cho HP, Chang S, Zhan X, **Rodriguez AL**, Niswender CM, Engers DW, Bridges TM, Conn PJ, Lindsley CW. Discovery and optimization of 3-(4-aryl/heteroarylsulfonyl)piperazin-1-yl)-6-(piperidin-1-yl)pyridazines as novel, CNS penetrant pan-muscarinic antagonists. *Bioorg Med Chem Lett.* **2017** Aug 1;27(15):3576-3581. PMID: 28633897
61. Bewley BR, Spearing PK, Weiner RL, Luscombe VB, Zhan X, Chang S, Cho HP, **Rodriguez AL**, Niswender CM, Conn PJ, Bridges TM, Engers DW, Lindsley CW. Discovery of a novel, CNS penetrant M4 PAM chemotype based on a 6-fluoro-4-(piperidin-1-yl)quinoline-3-carbonitrile core. *Bioorg Med Chem Lett.* **2017** Sep 15;27(18):4274-4279. PMID: 28866269

Granted Patents

1. Conn, P. Jeffrey, **Rodriguez, Alice L.**, and Jones, Carrie K. Partial mGluR5 antagonists for treatment of anxiety and CNS disorders. **US 7531541** May 12, 2009.

2. Conn, P. Jeffrey, Lindsley, Craig W., Weaver, Charles David, **Rodriguez, Alice L.**, Niswender, Colleen M., Jones, Carrie K., Williams, Richard. Bicyclic mGluR5 positive allosteric modulators and methods of making and using same. **US 8034806** October 11, 2011.
3. Conn, P. Jeffrey, Lindsley, Craig W., Emmitte, Kyle A., Weaver, Charles David, **Rodriguez, Alice L.**, Felts, Andrew S., Jones, Carrie K., Bates, Brittney S. and Chauder, Brian A. Substituted phenylamine carboxamide analogs as mGluR5 negative allosteric modulators and methods of making and using the same. **US 8501757** August 6, 2013.
4. Conn, P. Jeffrey, Lindsley, Craig W., Emmitte, Kyle A., Weaver, Charles David, **Rodriguez, Alice L.**, Felts, Andrew S., Jones, Carrie K., Bates, Brittney S. Substituted heteroarylamine carboxamide analogs as mGluR5 negative allosteric modulators and methods of making and using the same. **US 8569308** October 29, 2013.
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