News Stories

Research Led by Rumi Faizer Published in Journal of Vascular Surgery
IEM Member Dr. Rumi Faizer, Associate Professor of Surgery, led research, published in the *Journal of Vascular Surgery*, showing decreased mortality associated with local versus general anesthesia resulting from surgery to repair abdominal aortic aneurysms. As reported by the publication *Healio*, the research was based on the analysis of 226 patients who had local anesthesia and 1,510 who had general anesthesia during the surgical procedure. Those receiving local anesthesia had a 7.8% decrease in mortality after 30 days and 9.8% less after 1 year. In addition, the research suggested that local anesthesia was most beneficial in the two-thirds of patients who present either hemodynamically stable or under the age of 75. “This analysis of the national [Vascular Quality Initiative] database demonstrates that EVAR under [local anesthesia for ruptured AAA] may be a safe treatment option compared with [general anesthesia] associated with lower morbidity and improved 30-day and 1-year mortality,” stated Dr. Faizer and his colleagues, who also noted that the findings would need to be confirmed by future studies.

Gail Bernstein & Kathryn Cullen Part of a Research Team Published in the Journal of the American Academy of Child and Adolescent Psychiatry
IEM Members Dr. Gail A. Bernstein, Professor in the Department of Psychiatry, and Dr. Kathryn R. Cullen, Associate Professor and Division Chief, Child & Adolescent Psychiatry, also in the Department of Psychiatry, were members of a team that performed research published in the *Journal of the American Academy of Child and Adolescent Psychiatry*, on the effectiveness of adjusting treatment, as needed, during the course of interpersonal psychotherapy for depressed teens. The researchers determined that outcomes of the treatments were significantly improved when teens, who were not responding to the therapy after 4 weeks, received either increased therapy sessions or the addition of the antidepressant medication, fluoxetine. As reported in *Science Daily*, the leader of the research, Dr. Meredith Gunlicks-Stoessel, Assistant Professor of Psychiatry, and her team, are performing a larger trial in a community mental health care setting to assess the treatment’s effectiveness in general clinical practice.
Better Outcomes in Depression Therapy with New Innovations in Treatment Planning>

Article in Journal of the American Academy of Child & Adolescent Psychiatry>

Research Led by Samuel Dudley Reveals a Cause of and Possible Treatment for Diastolic Heart Failure

A team of researchers led by IEM Member Dr. Samuel Dudley, Professor of Medicine, discovered that diastolic heart failure can be caused by cardiac mitochondrial oxidative stress, and that the condition can be treated with a magnesium supplement. “Since magnesium is an essential element for mitochondrial function, we decided to try the supplement as a treatment,” says Dr. Dudley. “It eliminated the poor heart relaxation that causes diastolic heart failure.” As reported by the University of Minnesota Medical School, the findings, which were published in the Journal of Clinical Investigation Insights, are especially significant due to the high mortality rates and treatment costs associated with diastolic heart failure. “This is an exciting step forward in the cardiovascular field,” says Dr. Dudley, who authored the article. “Right now there are no specific treatments for patients with diastolic heart failure, but now we have a theory of why diastolic heart failure occurs and what we can do to get rid of it.”

University of Minnesota Medical School Researchers Discover How to Treat Diastolic Heart Failure>

Henry Buchwald Discusses Obesity Among NFL Players with New York Times

IEM Member Dr. Henry Buchwald, Professor of Surgery, was interviewed for a story in The New York Times about obesity among N.F.L. players following their retirement, and resulting health problems experienced by the former players later in life. Dr. Buchwald, who specializes in bariatric surgery, works with the Living Heart Foundation, which provides former N.F.L. players with free medical tests. The results of these tests showed that two-thirds of the several thousand former N.F.L. players who had been examined were at least moderately obese, and that one-third of them were significantly obese, due in-part to a lack of a support system to motivate them to change eating habits they developed during their careers and injuries that made it difficult for them to exercise. “Linemen are bigger, and in today’s world, rightly or wrongly, they are told to bulk up,” says Dr. Buchwald. “Their eating habits are hard to shed when they stop playing, and when they get obese, they get exposed to diabetes, hypertension and cardiac problems.

The NFL’s Obesity Scourge>

IEM & DMD to Host Career Event on April 17th During DMD Week; Free & Open to All Job Seekers

The Institute for Engineering Medicine and Design of Medical Devices Conference are hosting the IEM & DMD Career Event from 5:30 to 7:30 P.M. at the McNamara Alumni Center on Wednesday, April 17th. This is free to all job seekers and open to the public, from undergraduates to mid-career professionals. The objectives of the event are to help job seekers learn about hiring companies and the various opportunities they can offer, and to help representatives of those companies get to know prospective employees. If your company is interested in participating, contact Ken Rosen for details (krosen@umn.edu).

Register for the IEM & DMD Career Event Today! >
Announcements

Become an Innovator and Join the 2019-2020 Innovation Fellows Class; Apply Early!
The University of Minnesota Earl E. Bakken Medical Devices Center is recruiting a dynamic, cross-disciplinary team for 10½ months of collaborative medical device innovation. Build an extensive network within the world premier MN med tech ecosystem and gain the experience necessary to develop a commercially viable product. **Apply Early!** Applications will be reviewed on a rolling basis and qualified candidates invited for on-site interviews. Email [ifpinfo@umn.edu](mailto:ifpinfo@umn.edu) with questions.

Apply online for Requisition Number 327776 at the [University of Minnesota Employment Opportunities](https://jobs.umn.edu/) website.

Registration Open for New Carlson Course: SCO 6096: Supply Chain Management in the Health Care and Medical Devices Sector
Supply Chain Management in the Health Care and Medical Devices Sector (SCO 6096) prepares students to develop capabilities for designing and sustaining reliable, responsive, resilient, and responsible supply chains to enable the delivery of high quality, high volume, and affordable physical and mental health care equitably in both developed and developing countries. The course advances an end-to-end, supply chain-centric view of the health care and medical devices sector - i.e., linking the development of care to the delivery of care: “from bench to bed.” The course will highlight the inter-dependencies between organizations on the upstream (e.g., medical devices, pharma, and biotech firms) and downstream (e.g., hospitals and clinics) of the health care supply chain. The implications of scientific and technological advancements - specifically, precision medicine, surgical robots, mobile & wearable devices, telemedicine and IoT - for designing and sustaining health care supply chains will be a theme that will run through the entire course, which will be held during the Spring Semester, 2019 (Term B); Tuesdays (March 12 and 26; April 2, 9, 16, 23 and 30), from 5:45 to 9:05 PM in CSOM 1-142. For more information on the course, contact the instructor: Prof. Kingshuk Sinha ([ksinha@umn.edu](mailto:ksinha@umn.edu)).

Registration Open for Consumer-Driven and DIY Science Lecture Series for Spring 2019
Registration is open for the [Consumer-Driven and DIY Science: Promise & Peril Lecture Series](https://law.umn.edu/compliance-matters/consumer-driven-and-diy-science-promise-peril), organized by the Consortium on Law and Values in Health, Environment & the Life Sciences. Science enthusiasts are conducting do-it-yourself (DIY) experiments in their basements or community laboratories. Biohackers are working with microbes, implantable materials, or gene editing in hopes of enhancing human capacity. This revolutionary democratization of science raises big questions – What limits should apply? What oversight is needed? How do we reap the promise while avoiding the peril? These lectures will address major successes in family-driven genetic research, the dangers of DIY research bioweapons, and the frontiers of biohacking. The speakers will suggest guidelines to ensure these powerful new tools are developed safely.