

The Jacobs Institute Newsletter

A Dose of Medical Innovation

Issue: #24

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Grant Awarded to Boost our Engineering Capabilities

James H. Cummings Foundation Continues to Support our Vision



We are fortunate to receive a grant from James H. Cummings Foundation to pave the future of our engineering applications in vascular medicine and device development to bring treatments to patients faster. This grant will enhance data management tools to increase productivity and efficiency of our engineering processes. These

engineering applications support our upcoming ISO (International Organization for Standardization) 13485 certification to meet medical device regulatory standards. This certification provides quality assurance to our clients, while fostering vascular device innovation for patients. Our i2R, Idea to Reality Center, accelerates the development of new technologies to treat vascular diseases, such as heart attack and stroke. In the U.S., heart attack is the number one cause of death and stroke is the number one cause of disability ([American Heart Association, 2019](#)).

Bill Maggio, our chief executive officer, said, "The continuous generosity of James H. Cummings Foundation empowers the JI to remain at the forefront of medical device innovation that accelerates the development of technologies to treat patients suffering from devastating vascular diseases, such as heart attack and stroke, which are prevalent in our WNY community and worldwide."

James H. Cummings Foundation's mission to advance medical research, science, and post-secondary medical education in Buffalo, aligns with our goal of using our vast clinical, research, engineering, and business experience to pioneer a new future for healthcare. Forging industry partnerships contributes to the evolution of our overall value to the vascular device industry and, ultimately, patients.

Philanthropy Corner

Director of Development Joins Us

We recently hired Brian Sas as our Director of Development. He is tasked with building out strategic partnerships and philanthropic support programs. In conjunction with the JI's overall goals, the philanthropic mission is simple: to be the catalyst for our donors' affinity to help develop improvements to healthcare in WNY. We recruit the best clinical and engineering staff to pioneer new methods of treatment for vascular disease.



Brian comes with a diverse business background with start-ups and large companies. He has over ten years of experience in international business and operations. Brian would like to offer you a tour of our facility and learn ways you may be interested in volunteering or supporting our organization, with a gift of any value. You can reach him at bsas@jacobsinstitute.org. If you prefer to donate while shopping for your favorites on Amazon.com, please consider our [AmazonSmile account](#) which helps us while you do your everyday shopping!

Physicians Train on Unique 3D Printed Model



More Than Forty Neurosurgeons Get Hands-On Experience

Our research director and course director, Jason Davies, MD, PhD, recently hosted the Congress of Neurological Surgeons' course,

Advanced Endovascular Techniques and Devices. More than 40 attendees—neurosurgeons from across the U.S.—joined us at the JI for the course, which highlighted new and emerging technologies to treat stroke, aneurysms, and other

vascular malformations. The participants gained hands-on experience using the new techniques and devices on our lifelike 3D printed vascular flow models. The models are designed with the same level of engineering one would expect of medical devices themselves. The 3D models' development is subject to a rigorous design control process to be as lifelike as possible.

A new engineering method unique to us, allowed participants to perform the steps of a new surgical procedure on a 3D printed model, designed specifically for the course. The model was robust enough to allow participating neurosurgeons to expose a particular blood vessel, place a new device, and suture the vessel closed at the end of the procedure.

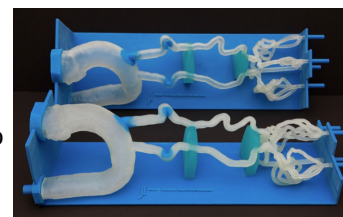
Attendees left with a greater understanding of the procedures and devices, and the benefit of physician perspectives from some of our [JI and JI-affiliate experts](#) who use new devices on a regular basis.

Stratasys Digital Anatomy Printer Launch

Continued Advancements in Printing

When 3D printer manufacturer Stratasys, Ltd., announced the launch of its J750™ Digital Anatomy™ 3D Printer in October, our use of it was already underway, owed to a longstanding partnership.

Our unique team of engineers and physicians continue to collaborate and advance the realism of our 3D models, bringing quality engineering to each model we produce for clinical training programs and engineering services for start-ups and medical device manufacturers, alike.



"3D printing has been wonderful for recreating patient-specific anatomy. However, the final frontier for organ model realism has been live-tissue feel

and biomechanical realism," said Dr. Adnan Siddiqui, our chief medical officer. "That's exactly what the Digital Anatomy 3D Printer gives us. We believe these models give us the best opportunity to recreate human physiological conditions to simulate actual clinical situations and to study new devices to establish their effectiveness before introducing them to patients."

About the Jacobs Institute

The Jacobs Institute mission is to accelerate the development of next-generation technologies in vascular medicine through collisions of physicians, engineers, entrepreneurs, and industry.

Our vision is to improve the treatment of vascular disease in Western New York and the world, while fostering local economic development, and honoring the memory of Lawrence D. Jacobs, MD.

Located in the heart of the Buffalo Niagara Medical Campus (BNMC) in downtown Buffalo, the Jacobs Institute is positioned between University at Buffalo's Clinical and Translational Research Center (CTRC) and Kaleida Health's Gates Vascular Institute (GVI).



The JI is uniquely positioned to foster collaboration of our key partners. We have the right people in the right place at the right time.

Come innovate with us.

Please visit [the JI web site](#)

Sincerely, The Jacobs Institute

