

# The Jacobs Institute Newsletter

*A Dose of Medical Innovation*

Issue: #23

September 2019



## A Heart-Warming Summer Experience

### Intern Projects Highlight Aortas, Atherosclerosis & ART...eries



Three talented summer interns joined us for an unforgettable summer experience from June through August, where their projects focused on creating life-like heart vessels and strengthening JI's marketing materials.

[See a video of their final presentations here!](#)

[See the new intern recruitment video here!](#)

*Pictured left (clockwise): Zachery Struczewski, Emma Vogan, and Gianna Damico.*

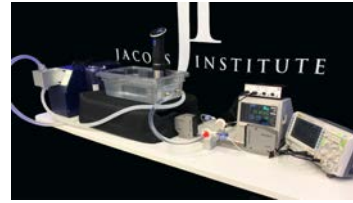
JI's ability to replicate properties of human arteries, including disease states and their ability to comply or stretch, is an engineering achievement. This has tremendous applications for a variety of audiences: surgeons practicing procedures, inventors testing devices, and device companies seeking to improve training of their sales representatives and engineers. All require a safe and anatomically-accurate model in which to work.



**Emma Vogan**, a Messiah College biomedical engineering senior from Orchard Park, created a 3D printed replica of a diseased human cadaver

aorta. The aorta is the large blood vessel coming from the heart which, in this case, was narrowed and hardened due to a build-up of fat and plaque, known as atherosclerosis. Emma used a special camera placed inside the actual heart and then inside the 3D printed model, to verify that the replica included all calcified build-up.

A recent University at Buffalo (UB) graduate, **Zachery Struczewski**, studied compliance--or stretchiness--of blood vessels, in order to design an accurate and repeatable test set-up for the JI's 3D printed models. The test set-up would help JI's 3D printed models better mimic human blood vessels, which pulsate as blood pumps through them.



**Gianna Damico**, a UB junior studying fine art and anthropology, designed marketing materials for the JI, including a library of interactive web-based files that highlight [our 3D printed models](#) in a new way. She also collected endless photographs and videos of engineering, product testing, and everyday activities, to be used in marketing materials for the JI and for industry clients. Gianna produced a new intern recruitment video, [featured above](#), which is also on our web site and YouTube channel. She also drafted a Brand Style Guide for the JI, setting design standards that will be incorporated into future marketing materials.



We are already beginning to recruit for summer 2020. Please encourage eligible students to visit our web site and apply by Friday, January 17, 2019. <https://jacobsinstitute.org/programs-services/internships/>

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

