Kevin James Cyr

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Experience

Medical Student Researcher in Cardiac Surgical Arrhythmia Lab | *Stanford University, CA* 2017 – Present

- Created new 3D printed surgical tools to improve cardiac arrhythmia detection and enable patient-specific treatment of atrial fibrillation
- Research detailed in international publications https://www.medgadget.com/2018/08/stanford-researchers-print-patient-specific-heart-mapping-sensors.html

Undergraduate Research Fellow | Vanderbilt University | *Nashville, TN* 2014 – 2017

- Invented a low-cost device to diagnose Sickle Cell Disease which was patented by Vanderbilt University and licensed to a medical device development firm and is undergoing FDA approval.
- Published a review article on microfluidic devices used to improve drug screening and pharmaceutical development

Engineering Intern | Pendant Biosciences | *Nashville, TN* 2014 – 2017

- Intern for an orthopedic device and drug delivery company specializing in nanoparticle technologies for medical devices.
- Supported fundraising efforts during a $1.2 million bridge funding round leading to an award as a Johnson and Johnson JLabs company in residence.

Intellectual Property, Publications, Presentations

Patents

U.S. Provisional Patent 62674627. Systems and Methods for Stimulating the Periosteum May 2018

- Stanford Biodesign project to develop a novel orthopedic implant for treatment of leg fractures that fail to heal

U.S. Patent 1734059. Devices, Kits, and Methods for Monitoring Disease States May 2017

- Primary inventor of a new diagnostic method and device for diagnosis of Sickle Cell Disease. The device costs less than $0.50 and can be used in low-resource settings with limited access to healthcare resources. Licensed the technology to a medical device firm which is actively pursuing FDA clearance.

Publications

"A Straightofrward Low-Cost Test for Sickle Cell Disease". *PLOS ONE* Under Review
Cyr, K.J, Jolly, A.S., Colby, J.M, Marasco, C.C.

"Circadian hormone control in a human-on-a-chip". *Experimental Biology and Medicine* 2017
Cyr, K.J., Avaldi, O.M., Wikswo, J.P.

Presentations

Biomedical Engineering Society Annual Conference | *Outstanding Graduate Student Poster Award* 2017
"A Straightforward Low-Cost Test for Sickle Cell Disease"

Southeastern Medical Device Association Annual Conference 2017
"A Straightforward Low-Cost Test for Sickle Cell Disease"

Biomedical Engineering Society Annual Conference | *Outstanding Undergraduate Research Award* 2016
"Rheological Flow Assay for Simplified Diagnosis of Sickle Cell Disease"

Education

Stanford University School of Medicine 2017 – Present
M.D. | Concentration in Bioengineering

- **Relevant Courses:** Clinical Anatomy, Operative Anatomy, Value in Healthcare Delivery, Clinical Skills

Vanderbilt University School of Engineering 2013 – 2017
B.S. in Bioengineering | Minor in Engineering Management

Leadership

President | Vanderbilt Biomedical Engineering Society 2014 – 2015

Technical Experience

Projects:

- Designed a pediatric walker with the Vanderbilt Children's Hospital for post-operative spinal surgery patients. Interviewed key opinion leaders, created value proposition, conducted needs assessment and designed first prototype.