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# 2018 SPOTLIGHT

FOSTERING THE ENTREPRENEURIAL SPIRIT

# ABOUT PCI VENTURES

## OUR MISSION

PCI VENTURES' MISSION IS TO MAXIMIZE THE POTENTIAL OF PENN'S PIONEERING RESEARCH TO THE BENEFIT OF THE UNIVERSITY, THE INVESTIGATIVE TEAM, AND SOCIETY IN GENERAL THROUGH THE CREATION AND STIMULUS OF ENTREPRENEURIAL ENDEAVORS.

We provide a suite of products and services to incubate the development of early-stage technology-based businesses as they make their way towards commercial success.

PCI Ventures actively seeks entrepreneurs to lead our companies and investors to provide funding for our portfolio of new ventures in development.

## OVERVIEW OF OUR SERVICES



Addressable Market Analysis



Educational Programs



Board-level Support



Entrepreneur Coaching



Mentors in Residence



Commercialization Grant Support



Executive-level Recruitment



Preferred Vendor Relations



Company Registration



Fundraising



Strategic Partner Outreach



Conflict of Interest Guidance



IP Strategy Development



Weekly Office Hours



Marketing Material Development

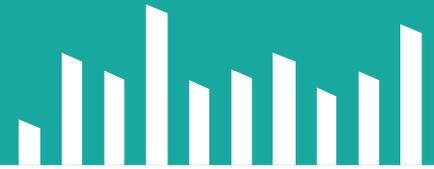


Legal Agreement Templates

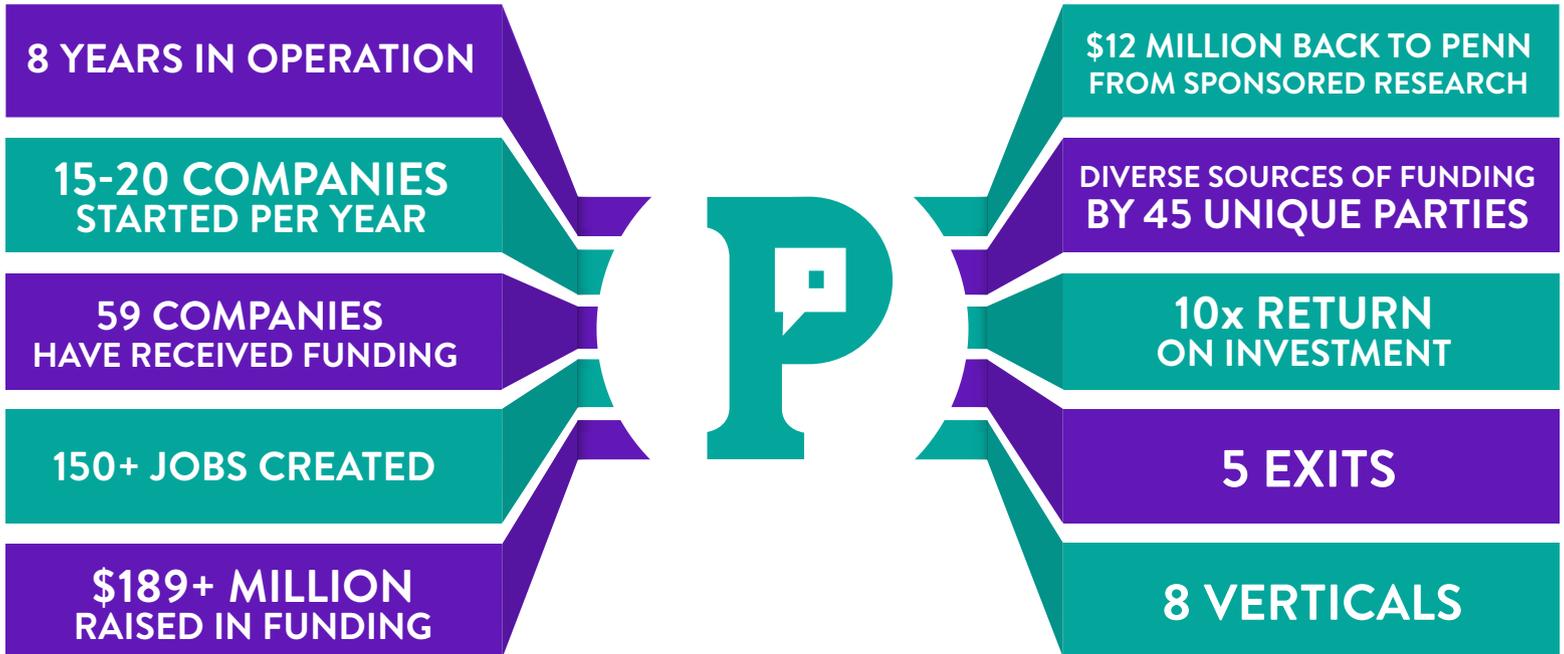


Workshops

# PCI VENTURES STATISTICS



## OVERALL PROGRAM STATISTICS



## 2018 STATISTICS





**CARISMA THERAPEUTICS** (formerly CARMA Therapeutics) closed on a \$53 million Series A financing round. The investment will further the clinical development of their innovative technology which is the first to combine antigen recognition and CAR macrophages to treat cancer. The financing round was led by AbbVie Ventures and HealthCap and included existing seed investors IP Group, Penn Medicine and Grazia Equity. New investors include Wellington Partners, TPG Biotech, MRL Ventures Fund and Agent Capital. “We are thrilled about the composition of our financing syndicate, which brings varied and deep experience in cell and gene therapy to further support our research and development efforts,” says CEO Steve Kelly, who joined the company in March. The team also includes Dora Mitchell, PhD as Head of Operations and Daniel Cushing, PhD heading development. Carisma will continue to expand their team with plans to bring on a CSO and a CMO in 2019.

**EPIVARIO** is developing therapeutics to target memory-related psychiatric disorders, including PTSD, Alzheimer’s, and alcohol and drug addiction. The company’s novel approach targets memory formation at the source of the disease, preventing the creation and reconsolidation of traumatic memories. EpiVario recently raised \$445K in seed funding to help develop its lead therapeutic to treat post-traumatic stress disorder (PTSD) at the source of the disease. The company will continue developing other therapeutics to treat memory-related psychiatric disorders by targeting a non-essential gene - acetyl CoA synthetase (ACSS2), including drug and alcohol addiction.



E P I V A R I O

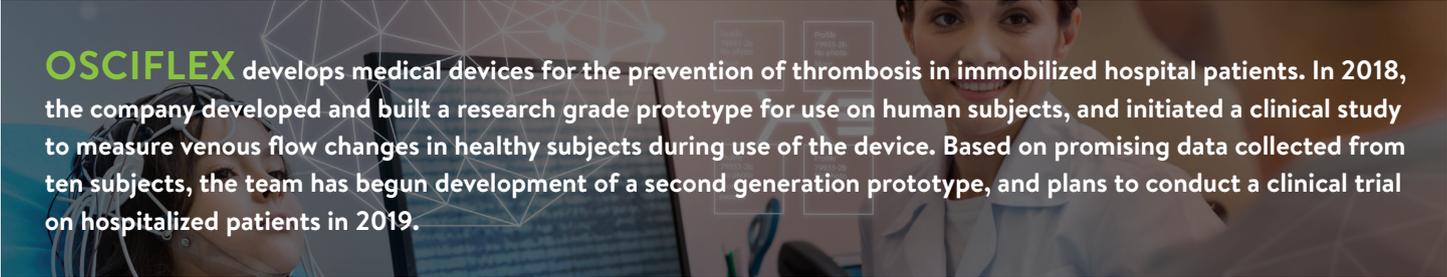


**EXYN TECHNOLOGIES** made significant progress in the development of their artificial intelligence software which allows aerial robotics (or drones) to have full autonomy. This technology enables the robots to operate in complex and GPS-denied commercial environments, navigating these spaces without outside guidance, thanks to onboard accelerometers, gravitometers, cameras and MiDAR technology. After successfully deploying their systems in mines around the globe, the company has cultivated customer relationships that will drive significant revenue growth in 2019.

**LIGNAMED** continues to develop its compound, LGM 2605, as a therapeutic for Idiopathic Pulmonary Fibrosis, Asthma and Radiation Poisoning and as a device to improve organ storage and rehabilitate donor lungs before transplantation. In 2018, the company presented positive results to NASA from its Phase I SBIR contract to mitigate damage from space radiation. As a result, NASA awarded LignaMed a \$750,000 Phase II SBIR contract to conduct space radiation animal studies at Brookhaven National Labs. The company held meetings with BARDA to review positive results from their three year \$6M contract with NIH-NIAID and discuss next steps and studies for 2019. LignaMed was also awarded two grants from NIH-NHLBI, in support of their device program: one Fast Track SBIR grant for \$2.3M to continue developing a device to rehabilitate donor lungs in advance of transplants and a Phase I STTR grant for \$300,000 to develop LGM2605 as a device to protect donor lungs during storage and transportation for lung transplantation. The company has attracted interest by both pharma and device companies for potential collaboration, licensing and acquisition.



**LINNAEUS THERAPEUTICS** closed a financing round with support from Kairos Ventures and Penn Medicine. The investment will further the development of its small molecule compounds targeting novel signaling pathways that inhibit melanoma, pancreatic and other forms of cancer and synergize with immunotherapies and other targeted therapies. “We are excited to close this critical financing with Kairos and Penn Medicine,” commented Patrick T. Mooney, M.D., Linnaeus’s CEO. “This funding will allow us to complete our preclinical IND-enabling work, so we can begin our first-in-human studies next year.”



**OSCIFLEX** develops medical devices for the prevention of thrombosis in immobilized hospital patients. In 2018, the company developed and built a research grade prototype for use on human subjects, and initiated a clinical study to measure venous flow changes in healthy subjects during use of the device. Based on promising data collected from ten subjects, the team has begun development of a second generation prototype, and plans to conduct a clinical trial on hospitalized patients in 2019.

**QUANTITATIVE RADIOLOGY SOLUTIONS** reduces side effects experienced by cancer patients undergoing radiation therapy by leveraging population-based models and artificial intelligence to provide accurate delineation of healthy tissues, thus decreasing the amount of unnecessary radiation exposure they experience. In the last year, the company was awarded a Phase 2 STTR grant from the NIH National Cancer Institute to continue enhancing the algorithm with deep learning capabilities, develop a cloud based software product offering, and conduct a multi-center clinical evaluation to study the accuracy, effectiveness, and acceptability of its solution in the clinical workflow. The company continues to expand its team which now includes a Chief Technology & Chief Operating Officer, and senior software development staff.




**RIGHTAIR** is revolutionizing COPD care with an ambulatory, respiratory assist device, which helps COPD patients breathe easy again. In 2018, the company completed a successful pilot clinical trial of their AIR-AD technology and attracted industry recognition from Philips Respironics and CHEST. The company also participated in customer discovery and business development training through the national NSF I-Corps program. RightAir is establishing a clinical ecosystem to bring together physicians, engineers, and patients to tackle COPD through technology innovation. A collaboration with Drexel's CONQUER Initiative has led to the development of a COPD neuro-marker research program, which has the potential to transform COPD diagnostic procedures. In parallel, the company is planning to submit for FDA approval in 2019.

# UPSTART LUMINARIES



*“I have worked on a lot of research projects and some fascinating chemical problems, but this is the closest that I have ever come to being involved in a project that could have an impact on human health. That possibility is incredibly exciting and rewarding.”*

## JEFFREY WINKLER, CO-FOUNDER OF PINPOINT THERAPEUTICS

Professor Jeffrey Winkler is a world renowned academic medicinal chemist. On Penn’s campus, he is known as the go-to researcher for faculty members looking to develop novel molecules to treat newly discovered targets. This year, Professor Winkler co-founded Pinpoint Therapeutics with Dr. Ravi Amaravadi. The company is developing new anticancer drugs that are designed to target autophagy, which is both an important recyclic mechanism in cells and an integral stress response that cancer cells can use to escape standard chemotherapy. The motivation to move from scientific discovery to a clinical treatment embodies the PCI Ventures mission. When asked what he finds most rewarding about founding Pinpoint Therapeutics, Jeffrey Winkler responds, “I have worked on a lot of research projects and some fascinating chemical problems, but this is the closest that I have ever come to being involved in a project that could have an impact on human health. That possibility is incredibly exciting and rewarding.”

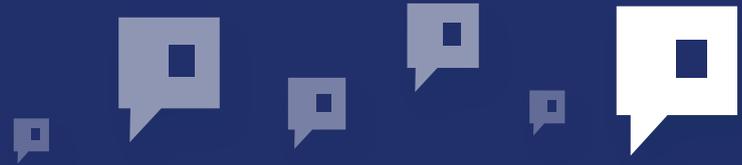


*“Our Vision is to transform healthcare through innovation, and we are committed to developing steerable technologies that will improve the diagnosis and treatment for cancer patients, while adding value to the healthcare system.”*

## SASHA SCHRODE, CEO OF GREPPO TECHNOLOGIES

Sasha Schrode has spent the past 12 years in the medical device industry, working with interventional radiologists and surgeons. It was this professional experience, as well as her personal experience, that inspired Sasha to become CEO of Greppo Technologies. Greppo is developing a unique, high-performance, actively steerable platform technology that will enable enhanced diagnosis and targeted delivery of minimally invasive cancer treatments. As a cancer survivor, Sasha immediately understood how revolutionary this steerable technology would be for cancer treatment. Her passion to innovate healthcare has driven Greppo forward. The company successfully completed right angle turning in ex-vivo porcine liver and is working to complete testing for its National Science Foundation small business grant. In 2018, Sasha was recognized as Female Entrepreneur of the Year at The Philadelphia Inquirer’s Stellar Startups Award Gala. “Our Vision,” Sasha explained, “is to transform healthcare through innovation, and we are committed to developing steerable technologies that will improve the diagnosis and treatment for cancer patients, while adding value to the healthcare system.” Sasha and the Greppo Technologies team hope to inspire others to support the successful development of this life saving technology.

# TESTIMONIALS



“Having worked as a CEO in the industry for 15 years, I understand the importance of having a strong support network in order to get startups off the ground. Working with PCI Ventures has been tremendously helpful. PCI Ventures’ experienced team, its deep network of business relationships, and its knowledge of smoothing the transition from academia to startup has been invaluable. We greatly appreciate all of their support—we could not have done it without them! I highly recommend to any inventor to collaborate with PCI to get their ideas off the ground and funded.”



**PATRICK MOONEY,**  
CEO OF LINNAEUS THERAPEUTICS



**MICHAEL PLATT & ARJUN RAMAKRISHNAN,**  
CO-FOUNDERS OF COGWEAR

“Our partnership with PCIV has been incredibly helpful to launching our business and getting our technology to the people who could use it the most. PCIV provides expert business advice, of course, but also keen insights into the technology development and commercialization process, and crafting a pitch. We developed a strong relationship with our PCIV manager, who is an absolute delight to work with. Three cheers for PCIV!”

“We have been a proud supporter and resource for PCI Ventures for the past 7 years and counting! It is exciting to be a part of a start-up community where you have a front row seat for the innovative ideas coming out of UPenn and finding their way into industry. PCI Ventures is a reliable incubator to the network of participating companies whether it be through the support they provide with funding strategies and mentoring or the physical Penovation community they are constantly immersed in. PCI Ventures is an invaluable resource for these start-ups to have by providing a solid support system to rely on as they endure all of the challenges of starting and funding a new business.”



**MIKE STEPHANO,**  
MANAGING PARTNER OF STEPHANO SLACK

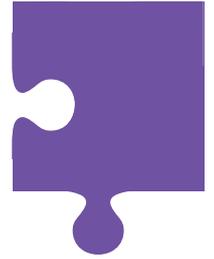
# PCI VENTURES PARTNERS



**Morgan Lewis**



# PCI VENTURES PROGRAMS



**UPstart:** OFFERS PENN FACULTY AND STAFF MEMBERS HANDS-ON SUPPORT TO LAUNCH AND GROW COMPANIES BASED ON PROMISING TECHNOLOGIES.

**UPadvisors:** PROVIDES PENN ENTREPRENEURS WITH GUIDANCE AND A COMPREHENSIVE ROADMAP AS THEY PURSUE THEIR COMMERCIALIZATION GOALS.

**UPtheOdds:** IS A SERVICE THAT GIVES COMPANIES PRACTICAL SUPPORT IN THE SBIR/STTR GRANT PROCESS FROM PROJECT INCEPTION THROUGH SUBMISSION.

**Principles of Confident Pitching:** A FOUR-PART COURSE THAT PROVIDES COMPANY FOUNDERS AND CEOs WITH THE SKILLS THEY NEED TO DELIVER A CONFIDENT AND POLISHED PITCH.

**Mentors-in-Residence:** PAIRS COMPANIES WITH ACCOMPLISHED ENTREPRENEURS AND INDUSTRY LEADERS WHO SERVE INFORMAL ADVISORY ROLES, PROVIDING THE STARTUPS WITH ADVICE ON BUSINESS STRATEGY, MARKET PENETRATION, AND FUNDRAISING.

**Spotlight Sponsorship:** AWARDS UPSTART COMPANIES MICRO-GRANTS TO PRESENT AT SELECT INVESTOR CONFERENCES.

## NEW COMPANIES



**JT-Mesh Diagnostics** - Novel point of care diagnostics to evaluate radiation exposure.

**Prolifagen** - microRNA therapies to treat myocardial infarction, prevent remodeling, and regenerate tissue.

**Trexome** - Non-invasive diagnostic to identify and manage early organ rejection by measuring exosome profile.

**Perch Therapeutics** - Gene therapy for rare ocular diseases and hemophilia A.

**PeachPal** - Women's wellness products to promote pelvic floor health.

**Nia Therapeutics** - Responsive neurostimulation therapies for patients with traumatic brain injury and other memory disorders.

**Recupero Robotics** - Improved health through mobile physical therapy.

**Pinpoint Therapeutics** - Novel autophagy inhibitor molecules for cancer treatment.

**Innervace** - Implantable tissue engineered brain pathways for neurodegenerative disorders.

**DoacLevel** - Graphene nanosensors to measure the concentration of direct oral anticoagulants in a patient's blood.

**Hydropore** - Creating nanoporous metallic structures for hydrogen generation.

**NewBreathz** - Respiratory-based diagnostics for metabolic disorders.

**Daimroc Imaging** - Using Argentavue, a silver nanoparticle contrast agent for breast cancer imaging.

**Cogwear** - Wireless, dry, comfortable EEG devices with a specialized neuroanalytics platform.



**MIKE DISHOWITZ, MICHAEL POISEL**



**JAIME SWEET, JORDANA BARMISH, RAQUEL GIRON**



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