OHIO STATE STARTUPS

NEW Ventures
AT THE OHIO STATE UNIVERSITY
Innovation at The Ohio State University

The Ohio State University supports creativity, innovation, commercialization, and entrepreneurship as essential components of an academic research institution and crucial factors needed to accomplish the mission of a land-grant university.

Ohio State’s research and academic programs exhibit a tremendous breadth and depth. Recognized for academic performance, research collaborations, a top-rated medical center, a premier cancer hospital, and a state-of-the-art heart hospital, the university is a leader among institutions of higher education.

Ohio State ranks 3rd nationally among all research universities in industry-sponsored research, according to statistics compiled by the National Science Foundation. The scope and excellence of research programs make Ohio State a leading force of innovation and change — locally, nationally, and globally.

Licensing to Startups

One path to commercializing a technology is licensing it to a newly formed company. Startups provide essential development flexibility to early-stage technologies needing refinement prior to entering the marketplace.

Ohio State’s startup portfolio continues to grow as more entrepreneurs connect with the university’s high-potential innovations. Many resources exist to provide support for companies formed around Ohio State technologies within both the university as well as the central Ohio community.

Ohio State Innovation Foundation

The Ohio State Innovation Foundation (OSIF) is a not-for-profit Ohio corporation formed in 2013 to hold, manage, and facilitate commercialization of the university’s intellectual property.

Startups by the Numbers

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<th>49</th>
<th>38</th>
<th>$33+ MILLION</th>
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<tr>
<td>PORTFOLIO COMPANIES</td>
<td>49</td>
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<td>CREATED IN 2012 - 2015</td>
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<td>FUNDING RAISED</td>
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Startup Company Support Services

Rev1 Ventures
Ohio State works with Rev1 to help entrepreneurs in the region build great companies. Rev1’s team of experts leads an ongoing, data-driven process that ensures entrepreneurs develop products that people want and companies that people need.

Validation
Rev1’s Concept Academy
Concept Academy is designed to help entrepreneurs validate their concepts and focus on features that are of greatest interest to end users, before spending time and money on manufacturing and marketing.

Customer Aligned Startup Training (CAST)
Technologies chosen by the TCO for CAST (Customer Aligned Startup Training) undergo considerable customer validation. Over the course of fifteen weeks, students conduct market research on a particular technology of their choosing. At the end of the semester, CAST students present their findings and recommendations.

Networking
First Connect Network
First Connect helps startups secure expertise in four critical areas to mitigate risk and accelerate milestones, especially during companies’ critical first six months.

- Connecting entrepreneurs with their first strategic advisors.
- Linking entrepreneurs to their first group of industry experts.
- Helping entrepreneurs find their first customers.
- Being a catalyst for talent.

Ohio State Startup Leader Dinner
Established for all of Ohio State’s licensees, this network of startup leaders provides the chance to share best practices, create a community, and foster growth of university startups.

Startup Snapshot
Startup Snapshot is a chance for entrepreneurs, investors, and inventors to interact, connect, and preview Ohio State’s startup portfolio. Inventors and entrepreneurs present brief overviews of their technologies, followed by a networking session.

For more information, contact TCO at 614-292-1315 or newventures@osu.edu
Health and Wellness

The Difference USA, LLC
The Difference USA was formed by former Ohio State University Strength and Conditioning Coach, Anthony Schlegel, for the purpose of commercializing “The Difference.” The Difference is a pad and attachable unit that can be further attached to stationary inanimate objects for the purpose of optimizing hand placement and strike force for athletic, recreational, and entertainment performance applications.

Athletics
Licensed: FY16
Inventor: Anthony Schlegel

Games That Move You, PBC
Games That Move You created and validated a new stroke recovery therapy tool, Recovery Rapids. Facilitated as a software and hardware service, Recovery Rapids helps stroke victims regain and improve motor control through physical simulation therapy. The tool is clinically proven to increase patient therapy engagement and outcomes.

College of Medicine
Licensed: FY15
Inventor: Lynne Gauthier
CEO: Roger Crawfis

Rekovo, LLC
Rekovo uses movement and art to engage patients in a more enjoyable physical therapy experience. Rekovo’s product, Agile Arts, has been clinically demonstrated to improve therapy outcomes and increase patient engagement and satisfaction. The new therapy tool is covered by multiple existing medical billing codes, allowing it to apply to a wide range of therapies, from stroke recovery to spinal rehab and the growing need for balance therapy in the elderly.

College of Medicine
Licensed: FY15
Inventor: Lise Worthen-Chaudhari
CEO: Todd Whittington

Sight4All, Inc.
Sight4All is creating a software application that converts an electronic tablet into a device capable of performing the measurements required to determine an accurate prescription for eyeglasses, as well as a quantifiable measure of eye alignment.

College of Optometry
Licensed: FY15
Inventor: Melissa Bailey
CEO: Stephen Wallace
CancerBridge, LLC
CancerBridge’s platform provides employers with the ability to offer their employees a telephonic navigation line for access to both a cancer-certified nurse and a cancer super-specialist physician for cancer related inquiries. Built and spun out of the James Cancer Center, CancerBridge is a fusion of cancer inquiry, care navigation workflow, and a sophisticated call center routing technology linking patients and super-specialty cancer physicians for specific inquiries in minutes versus days or weeks.

College of Medicine
Licensed: FY15
Inventor: Michael Caligiuri
CEO: Kent Bowen

ENTvantage Diagnostics, Inc.
ENTvantage Diagnostics provides a test invented by researchers from The Ohio State University and Nationwide Children’s Hospital that rapidly determines if a sinus infection is caused by a virus or bacteria. The cause of the sinus infection is information that could be essential in curbing overuse of antibiotics and the evolution of antibiotic-resistant bugs.

College of Medicine
Licensed: FY14
Inventor: Subinoy Das
CEO: Joseph Skraba

Sirona Therapeutics, Inc.
Sirona Therapeutics is commercializing an oral patch that directly delivers drugs to combat pre-cancerous lesions and prevent these lesions from developing into disfigurement and potentially fatal oral cancer.

College of Dentistry
Licensed: FY14
Inventor: Susan Mallery
CEO: Peter Stoelzle

Spirometrix, Inc.
Spirometrix provides cost effective, non-invasive products for the management of many chronic respiratory diseases, such as asthma, COPD, and pulmonary hypertension. Spirometrix’s first commercial product is a device that facilitates the diagnosis and management of airway inflammation (i.e. asthma) in the physician’s office.

College of Arts and Sciences
Licensed: FY14
Inventor: Prabir Dutta
CEO: Dean Zikria
**Adaptive Sensory Technologies, LLC**
Adaptive Sensory Technologies (AST) provides novel cross-platform assessments of eye disease. AST implements rapid and reliable eye tests on medical and mobile devices to conveniently deliver sensory system biomarkers that improve clinical evaluation and enable smaller, shorter clinical trials.

College of Arts and Sciences  
Licensed: FY14  
Inventor: Zhong-lin Lu  
CEO: Luis Lesmes

**Microlin Bio, Inc.**
Microlin Bio focuses on microRNA and its role in oncology, which could lead to entirely new, more effective and more targeted ways to diagnose and treat prostate, ovarian, colon and lung cancers. The molecular oncology tests offered by Microlin are designed for early diagnosis of cancer patients and allow for better clinical decisions. Additionally, Microlin Bio has licensed a novel nucleic acid delivery technology to deliver these transformational therapies to cancer cells.

College of Medicine  
Licensed: FY14  
Inventor: Carlo Croce  
CEO: Joe Hernandez

**Columbus Nutraceutical Formulations, LLC**
Columbus Nutraceutical Formulations is a faculty start-up company with the intent to commercialize nutritional supplements developed at The Ohio State University. These products include an eye health nutritional supplement, a women’s aerobic performance-enhancing supplement, and a coffee formulation with enhanced supplements.

College of Education and Human Ecology  
Licensed: FY13  
Inventor: Bob DiSilvestro  
CEO: Bob DiSilvestro

**Core Quantum Technologies, Inc.**
Core Quantum Technologies (CQT) specializes in a type of nano-particle that emits different colors and is used to tag molecules in biomedical tests. CQT’s primary product, the MultiDot, is a group of semi-conductor nanoparticle quantum dots encapsulated in polymer-based micelles that allow researchers to continuously track tagged molecules with greater brightness, longevity and stability than currently available technologies. In biomedical applications, researchers can attach the MultiDot to specific cell structures and better identify and understand disease progression. An additional product, the MagDot, adds magnetic particles to enable separation and manipulation of cellular biomarkers.

College of Engineering  
Licensed: FY13  
Inventor: Jessica Winter  
CEO: Open
MediNutra, LLC
MediNutra is a nutraceutical company commercializing meal replacement strategies for specific medical procedures, such as bariatric surgery, and conditions that lead to unwanted weight loss.

College of Education and Human Ecology
Licensed: FY13
Inventor: Bob DiSilvestro
CEO: Bob DiSilvestro

Mindful Management, LLC
Mindful Management specializes in mindfulness-based interventions specifically designed for the workplace. The company's premier intervention, Mindfulness in Motion: Stress Reduction for Busy Adults, is a research-based, eight-week program that offers pragmatic resiliency tools that can be easily implemented in the workplace. The program enhances employees' well-being and functionality while mitigating the effects of chronic stress.

College of Medicine
Licensed: FY13
Inventor: Maryanna Klatt
CEO: Anna Klatt

Perfect Practice, Inc.
Perfect Practice, Inc. was founded by a physical therapist and a mechanical engineer to bring real-time core stability biofeedback training to clinics, athletes, and home users everywhere. The company's core Execution line of products delivers customized cloud-based mobile solutions to the Equestrian (CoreXEquine.com), Elite Sports (CoreXSports.com), and Physical Therapy (CoreXTherapy.com) markets for building the core stability needed to maximize performance and minimize injury.

College of Education and Human Ecology
Licensed: FY13
Inventor: Ajit Chaudhari
CEO: Ajit Chaudhari

TheraVasc Veterinary, Inc.
TheraVasc, Inc. is a privately-held, Ohio-based pharmaceutical company which is developing treatments for various chronic medical diseases using an oral formulation of sodium nitrite. Sodium nitrite promotes wound healing and prevents tissue necrosis in diabetic animals.

College of Veterinary Medicine
Licensed: FY13
CEO: Tony Giordano
Discovery Themes:

Health and Wellness  Data Analytics  Energy and Environment  Humanities and Arts  Food and Safety

**Allostatix, LLC**
Allostatix provides wellness assessment tools with the mission of keeping people healthy, preventing the onset of lifestyle-induced chronic disease, and empowering individuals to manage their own health. The four tools are: Obstructive Sleep Apnea Decision tool, Metabolic Syndrome/Type II Diabetes tool, Total Body Wellness tool, and Cardiovascular Disease Decision tool.

College of Medicine  Licensed: FY12  Inventor: Ulysses Magalang  CEO: Gordon Horwitz

**ExCMR, Inc.**
ExCMR's MRI-compatible treadmill enables superior cardiovascular exercise stress testing. The stress test is an important detection diagnostic for cardiovascular disease, but has not been available for use in the magnetic MRI environment, despite MRI being the superior modality for such tests. EXCMR has scanned over 600 patients in a multicenter hospital trial utilizing four beta units.

College of Medicine  Licensed: FY09  Inventor: Lon Simmonetti  CEO: Ernie Knight

**Nano Medical Systems, Inc.**
NanoMedical Systems is an innovation company focused on the commercialization of revolutionary silicon-based medical nanotechnology products that address unmet clinical needs for personalized drug delivery systems. Nanomedical Systems' technology platforms embody semiconductor, biotechnology, nano-materials, and medical sciences. The company has nanofabrication, medical device, and drug delivery expertise and works with technology and medical research partners for fast, agile, and capital-efficient research and development.

College of Medicine  Licensed: FY08  Inventor: Mauro Ferrari  CEO: Randy Goodall

**Child and Family Psychological Services, Inc.**
Child and Family Psychological Services (CFPS) provides educational materials to help therapists treat children with bipolar disorder.

College of Medicine  Licensed: FY07  Inventor: Mary Fristad  CEO: Mary Fristad
OncoImmune, Inc.
OncoImmune specializes in therapeutics for autoimmune and infectious diseases, such as multiple sclerosis, rheumatoid arthritis and sepsis, as well as for certain cancers, including tuberous sclerosis, acute myeloid leukemia, and diabetic nephropathy. The technologies include protein therapeutics, monoclonal antibodies, and small molecular drugs.

College of Medicine
Licensed: FY05
Inventor: Yang Liu
CEO: Xincheng Zheng

Enlyton, Ltd
Enlyton improves all modalities of cancer imaging by providing cancer-specific images that more accurately reflect the extent of disease. Improved cancer imaging enables healthcare workers to provide more definitive interpretations, diagnoses, and treatment plans specific to patients’ needs.

College of College of Engineering
Licensed: FY04
CEO: Edward W. Martin Jr.

InGex, LLC
InGex provides genetic marking for cancer detection by using RNA sequencing kits to provide analysis that aids in the detection and potential diagnosis of certain cancers. The company licenses proprietary technology from The Ohio State University and University of Texas – Austin.

College of Arts and Sciences
Licensed: FY00
Inventor: Alan Lambowitz
CEO: Paul Gold
MassMatrix
MassMatrix addresses the challenge of converting raw experimental mass spectrometry data into usable information about proteins. The technology uses algorithms to score proteins based on probabilistic models.

College of Medicine
Licensed: FY16
Inventor: Michael Freitas
CEO: G. Hall Johnson

SpineDynx, LLC
SpineDynx was created to commercialize the clinical Lumbar Motion Monitor (LLM), a technology that documents spine kinematics and interprets risk to an individual’s low spine resulting from the work environment. The end goal is to assess and reduce occupational risk and impairment of individuals.

College of Engineering
Licensed: FY16
Inventor: Bill Marras
CEO: Curtis Crocker

Greater Fool, LLC
Greater Fool is a platform for mouse lab research organizations for use on the Apple iPad. Its tool, Mouseville, is used by researchers to meet their critical needs in organizing research efforts in mouse labs for cancer research studies. The technology encompasses both cloud-based data storage and an iPad application for researchers to facilitate and organize mouse breeding and research activities.

College of Health Sciences
Licensed: FY15
Inventor: David Taffany
CEO: David Taffany

Delphic DB
Delphic DB has licensed technology and software that enables rapid large dataset querying. The company’s initial targets are the insurance and banking industries.

College of Engineering
Licensed: FY15
Inventor: Arnab Nandi
CEO: Victor Thorne
**Signet Accel, LLC**
Signet Accel provides next-generation health care information exchange and analytics. The Company's Accelematics-TR® Software Suite enables advanced data management, integration, and analysis to support population health, personalized medicine, and drug discovery.

College of Medicine  
Licensed: FY14  
Inventors: Philip Payne, Peter Embi  
CEO: John Raden

**Readiness Analytics, LLC**
Readiness Analytics offers the Readiness Test, a disaster planning readiness measurement software. Using a model of organizational recoverability, families and organizations can use this tool to measure their preparedness for disaster. This straightforward assessment tool uses a series of questions to create a measurement of readiness and estimate recoverability.

Office of Academic Affairs  
Licensed: FY14  
Inventor: David Lindstedt  
CEO: David Lindstedt

**Ambassador Software Group, Ltd**
Ambassador offers proprietary algorithms that identify the source of low consumer satisfaction scores in hospitals, allowing the hospital to take corrective action. These scores are increasingly important as the government—as part of the Affordable Care Act—and insurers now tie reimbursements to these metrics.

College of Medicine  
Licensed: FY13  
Inventor: Justin Pestrue  
CEO: Tim Newcome

**inmobly, Inc**
inmobly solves the bandwidth-crunch problem by using sophisticated prediction and scheduling algorithms to shift network usage to frequencies with lower utilization. The technology works by preloading high-bandwidth content on Wi-Fi or low-network-traffic intervals, reducing network congestion and eliminating buffering delays.

College of Engineering  
Licensed: FY13  
Inventor: Hesham El Gamal  
CEO: Hesham El Gamal
Amber Intellectual, LLC
Ohio State-developed Amber Intellectual adapts code for its customers for use in a particular application and topographic file format. The primary source of company income is royalty payments for the customers’ use of the customized code. Amber itself does not engage in research and development or manufacturing, nor does it pursue regulatory approval for its customized code.

Office of Academic Affairs
Licensed: FY06
Inventor: Cynthia Roberts
CEO: Cynthia Roberts

Transchart, LLC
TransChart’s mission is to help healthcare professionals who serve transplant candidates and recipients. TransChart provides software tools that, coupled with specialized services, facilitate improved management of every facet of the transplant continuum of care.

College of Medicine
Licensed: FY06
Inventor: Ron Ferguson
CEO: John Townsend

Tech4Imaging, LLC
Tech4Imaging produces an electrical capacitance volume tomography (ECVT) imaging system. ECVT is a recently-developed technology capable of providing 3-D volume images by reconstructing electrical signals acquired from a capacitance sensor. The company’s ECTV technology enables non-invasive, three dimensional, visualization of various industrial processes in such areas as energy, aerospace, automotive, and pharmaceuticals.

College of Engineering
Licensed: FY08
Inventor: Liang-Shih Fan
CEO: Qussai Marashdeh

Health Care DataWorks, Inc - Health Catalyst
Health Care DataWorks provides business intelligence solutions that enable healthcare organizations to improve their quality of care and reduce costs. Through its pioneering KnowledgeEdge™ product suite, Health Care Dataworks delivers an enterprise data warehouse necessary for hospitals and health systems to effectively and efficiently gain deeper insights into their operations.

College of Medicine
Licensed: FY09
Inventor: Jyoti Kamal

Acquired by Health Catalyst on July 31st, 2015.
Energy and Environment

Circular Wave Drive, Inc.
Circular Wave Drive was created to commercialize a speed-reducing gear invented by Dr. Yuan Zheng. Compared to the current gold standard speed reducers, such as the harmonic wave drive, Dr. Zheng’s novel technology is less expensive to produce, theoretically can achieve a much broader range of reduction ratios (2:1 to 1500:1), and can operate in much harsher environments. These benefits would allow the gear to displace older drive systems, particularly in robotics, and open new market applications.

College of Engineering
Licensed: FY15
Inventor: Yuan Zheng
CEO: Rodolfo Bellesi

Durable Poly Solutions, LLC
Durable Poly Solutions has licensed a patented methodology to produce polyol foam from lignocellulosic biomass (plant dry matter) using a solvent containing crude glycerin. Durable Poly Solutions will be developing and selling polyol-based foam products for pipeline support, spray foam insulation, board stock insulation and packaging foam.

College of Food, Agricultural, and Environmental Sciences
Licensed: FY15
Inventor: Yebo Li
CEO: Ernie Malas

Nikola Labs, Inc.
Nikola Labs is developing an energy harvesting technology for electronic devices that captures cellular and Wi-Fi signals and uses the captured energy to extend battery life. Potential products that leverage this technology include: cell phones, wireless battery packs, “internet of things” sensor systems, and rechargeable medical devices.

College of Engineering
Licensed: FY15
Inventor: Chi-Chih Chen
CEO: Will Zell

TeraProbes, Inc.
TeraProbes was formed to develop and commercialize non-contact testing technology for high frequency devices such as microchips, semi-conductors and next generation electronics. This new technology is superior to conventional contact-based probes because it enables automated, industrial-scale electronic testing, reducing potential damage to both chips and probes. This technology also enables unattended inspection of every chip, thus reducing capital equipment and labor costs from testing cycles.

College of Engineering
Licensed: FY15
Inventor: Kubilay Sertel
CEO: Kubilay Sertel
**Simple-Fill, Inc.**

Natural gas is a safe, clean fuel alternative to gasoline. In order to be used in the automotive market, natural gas must be compressed for delivery and fueling. Simple-Fill's innovation is a technology that creates a smaller, more efficient natural gas compressor that requires little maintenance and is half the expense of small-scale reciprocating compressors.

College of Engineering  
Licensed: FY14  
Inventors: CG Cantemir, Jim Durand, Fabio Chiara, Marcello Canova, Jerry Fly, Rob Underhill, Matteo Triberti  
CEO: Rob Underhill

**QuTel, Inc.**

Quantum tunneling electronics opens a new paradigm for the manufacture of semiconductor microchips. The current technology, complementary metal oxide semiconductor (CMOS), uses positive and negative charge carriers (transistors) to induce electrical conductivity in the semiconductor materials. However, the flow of positive and negative charges creates resistance that manifests as heat, and thereby limits the speed at which the microprocessors can operate. QuTel’s technology reduces the resistance and allows for ultra-low voltage and ultra-low power operation for semiconductor devices, enabling a dramatically faster, more efficient means of microchip manufacturing.

College of Engineering  
Licensed: FY14  
Inventor: Paul Berger  
CEO: Paul Berger

**CGC Ultramarin, LLC**

CGC Ultramarin specializes in high-performance naval propulsion systems. The Marine Jet Propulsion System (MJPS) technology offered by CGC Ultramarin is designed to perform as a high power inboard and outboard engine, with a power output in the 500-10,000 Hp range and a focus on units above 1000 Hp.

College of Engineering  
Licensed: FY15  
Inventor: CG Cantemir  
CEO: CG Cantemir

**EnergyEne, Inc.**

EnergyEne is developing and commercializing high-performance/ non-immunogenic biomaterials for the medical and consumer healthcare arenas. The company utilizes atypical rubber-producing feedstocks (e.g. guayule), combined with proprietary processing methodologies, to enable specialty latex-derived materials. A byproduct of this process is an energy-rich residual biomass that can be used in biofuel hydrocarbon production.

College of Food, Agricultural, and Environmental Sciences  
Licensed: FY14  
Inventor: Katrina Cornish  
CEO: Katrina Cornish
Ohio State Startup Companies

Discovery Themes:

Health and Wellness  |  Data Analytics  |  Energy and Environment  |  Humanities and Arts  |  Food and Safety

Humanities and Arts

**Global Reach**
Global Reach is a software services company that helps colleges evaluate non-US applicants’ English language skills prior to admittance.

College of Arts and Sciences
Licensed: FY15
Inventor: Galal Walker
CEO: Keith Johanns

Food and Safety

**ProteoSense, LLC**
ProteoSense is developing the first handheld device that detects fundamental protein markers of pathogens such as salmonella, e.coli, and listeria. Using an enrichment-free, diagnostic sensor technology, the company is able to detect specific proteins in a small, liquified sample in minutes. Initially, ProteoSense is focusing on detecting serious threats to food safety in fresh produce throughout the supply chain.

College of Engineering
Licensed: FY14
Inventor: Stephen Lee, Wu Lu, Paul Berger, Leonard Brillson, Gregg Hadley, Ronald Pelletier, the late Professor Charles Orosz, John Shapiro, Samit Gupta, Patrick Adams, Andrew Theiss, Patricia Casal
CEO: Mark Byrne

**3BAR Biologics, Inc.**
3Bar Biologics has packaged specific biological agents with an on-site bioreactor to deliver “live” biologicals to the field. Without 3Bar’s disruptive technology, biologicals must be activated at a manufacturing facility, and 99% do not survive the trip through the supply chain to the farm. 3Bar’s innovative line of crop defense is free of chemicals, has an efficient application process, and creates greater yields in production agriculture.

College of Food, Agricultural, and Environmental Sciences
Licensed: FY14
Inventor: Bruce Caldwell, Brian McSpadden-Gardener
CEO: Bruce Caldwell
LARAD, Inc.
LARAD specializes in new vaccines and diagnostic reagents for food-animal diseases. LARAD’s initial focus is developing virus-like particle vaccines and diagnostics using molecular technology for an immunosuppressive disease in poultry caused by the infectious bursal disease virus.

College of Food, Agricultural, and Environmental Sciences
Licensed: FY14
Inventor: Daral Jackwood
CEO: Daral Jackwood

Three Family Farms
Three Family Farms pasteurizes eggs in the shell using a breakthrough process that utilizes heat and ozone to improve egg quality and shorten pasteurizing time.

College of Medicine
Licensed: FY14
Inventor: Ahmed Yousef
CEO: Jack Heavenridge

Saber Biotics
The goal of Saber Biotics is to monetize its SSM™-selective Salmonella Enrichment Media. This tool is a valuable diagnostic that may be applied to food safety, water safety, food production, animal health and human health.

College of Medicine
Licensed: FY15
Inventor: Anice Sabag-Daigle
CEO: Brian Ahmer