OAK RIDGE NATIONAL LABORATORY

Innovation Crossroads

Starting new energy-related technology companies can be challenging, and that’s one reason the number of energy startups has declined significantly over the past decade. Innovation Crossroads is a program supported by the U.S. Department of Energy’s (DOE) Advanced Materials and Manufacturing Technologies Office (AMMTO), Building Technologies Office (BTO), and the Tennessee Valley Authority (TVA) that leverages Oak Ridge National Laboratory’s (ORNL) unique scientific resources and capabilities and connects the nation’s top innovators with experts, mentors, and networks in technology-related fields to take world-changing ideas from research and development (R&D) to the marketplace.

Empowering Aspiring Entrepreneurs

Through an annual national call, top entrepreneurial-minded innovators are selected to join this 2-year program. Participants receive a fellowship that covers living costs and benefits, a travel stipend, a substantial grant for collaborative R&D work at ORNL, and comprehensive assistance to build a sustainable business model.

By embedding the next generation of top technical talent within ORNL, Innovation Crossroads positions entrepreneurial researchers to address fundamental energy, manufacturing, and grid challenges identified by industry.

National lab expertise—ORNL is DOE’s largest science and energy laboratory and is home to some of the nation’s most significant user facilities. Because Innovation Crossroads entrepreneurs work within ORNL, they have immediate access to essential tools and resources. This access reduces cost, risk, and R&D time, allowing researchers to focus on creating the next generation of game-changing technologies.

Multidisciplinary collaboration—Innovation Crossroads participants work with ORNL’s renowned scientists and engineers across many disciplines, including biological and environmental sciences, advanced materials, neutron sciences, nuclear science and engineering, and high-performance computing, providing a platform for accelerating innovation.

Business mentoring assistance—Innovation Crossroads has a growing network of partners who offer a unique entrepreneurial and business mentoring experience. The program facilitates connections with industry executives, investors, entrepreneurs, and other experts from academia, government, and finance who can serve as advisors and mentors to help develop priorities, mature skills, provide guidance, and make connections to their broader networks.

“Innovation Crossroads gives science-minded entrepreneurs access to cutting-edge tools and expertise needed to forge the way. The program fuels a young company’s product and business development with resources, researchers, and business professionals at the Laboratory, TVA, and other businesses in East Tennessee. In turn, this support accelerates our path from lab to market.”

—Quantal Security Founder and CEO Erica Grant

Up to a 2-year stipend with health and travel benefits
Comprehensive business mentoring
Substantial R&D funding provided by ORNL, DOE, and TVA
Our innovators have raised more than $170 million in follow-on funding
Cohort 7 starts in Summer 2023

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—Quantal Security Founder and CEO Erica Grant
Empowering Leaders, Igniting Innovation, Launching Businesses

Innovation Crossroads’ impact is far reaching as it enters its sixth year of embedding entrepreneurs at ORNL. The program has supported 31 start-ups that have raised $69 million in grants and awards, created over 140 jobs, raised $101.7 million in venture funding, and have more than $6.2 million in sales revenue.

Cohort 6
Bianca Bailey
Agriwater
Rajan Kumar
Ateios Systems
Alex Stiles
Vitriform3D
Anca Timofte
Holocene Climate
Kim Tutin
Captis Aire

Cohort 5
Caleb Alexander
DayLyte Batteries
Sam Evans
Unbound Water Technologies
Tommy Gibbons
Hemipiterture
Shuchi "SK" Khurana
Addiguru
Forrest Shriver
Sentinel Devices
Philip Stuckey
FC Renew

Alumni (Cohort 4)
Renee Carder
PixelEXX Systems
Danielle Castley
Becq
Joe Fortenbaugh
Actinic
Thomas Foulkes
AquaQuant Laboratories
Erica Grant
Quantal Security

Alumni (Cohort 3)
Jesse Claypoole
MantaPoole Technologies
William Fitzugh
American Nanotechnologies
Hicham Ghossein
Endeavor Composites
Alex Lewis
Electro-Active Technologies
Trevor McQueen
Neptune Fluid Flow Systems
Leila Safavi
Purist
Jesse Thornburg
Grid Fruit

Alumni (Cohort 2)
Donald DeRose
Eonix
Shane McMahon
Lux Semiconductors
Justin Nussbaum
Ascend Manufacturing
Megan O’Connor
Nth Cycle
Matthew Smith
TCPoly

Alumni (Cohort 1)
Anna Douglas
SkyNano Technologies
Matthew Ellis
and Samuel Shaner
Yellowstone Energy
Mitchell Ishmael
Shift Thermal

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