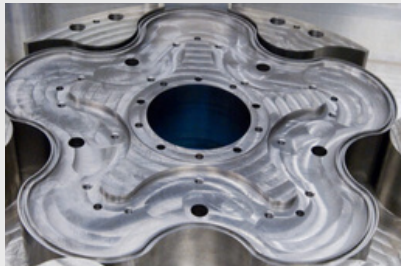


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SAVE THE DATE

Networking Event for Entrepreneurs

September 21
5 p.m.
College Station

More Details Coming Soon

Activate Fellowship



[Activate](#) is a nonprofit organization that partners with U.S.-based funding and research institutions to develop a new generation of entrepreneurs through its unique two-year fellowship program. The organization aims to address climate change and other global challenges by training scientists and engineers from a variety of backgrounds and regions to translate their research breakthroughs into new products and services that will have a widespread impact on society.

The opportunity is ideal for early-stage science entrepreneurs who are committed to full-time commercial development of new technology innovations. The two-year Activate Fellowship will provide funding, technical resources, and unparalleled support from a network of scientists, engineers, technologists, and fellow entrepreneurs. Participants emerge from the program with the skills and resources to bring their research quickly and effectively to market.

Recruitment for Activate Houston's first cohort of Fellows is now underway, with applications accepted September 19th – October 17th. The Activate Fellowship begins June 2024.

"The Texas A&M University System is excited to partner with Activate Houston," said Dr. Joe Elabd, Vice Chancellor for Research at The Texas A&M University System. "Some of the brightest scholars in the world are here engaging in groundbreaking research that could improve the lives of many. We want to connect our community with this amazing opportunity for entrepreneurship support, to translate research breakthroughs into real world impacts."

The Texas A&M community is invited to learn more about the Activate Houston Fellowship and hear from a Texas A&M University Ph.D. graduate who currently participates as an Activate Fellow in the 2023 Cohort at a webinar on August 15, 2023, at 11am CT, hosted by Texas A&M Innovation.

Register for the upcoming webinar at tx.ag/hOFuJbH.

Read more about Activate Houston [here](#).

Featured Inventor

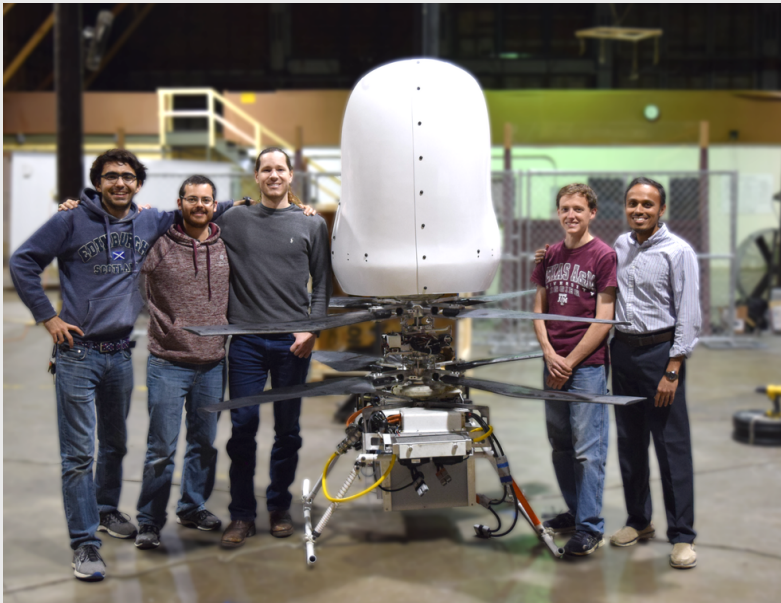
Moble Benedict, Ph.D.

Dr. Moble Benedict is an associate professor of aerospace engineering in the College of Engineering at Texas A&M University. He completed both his Bachelor of Science and Master of Science degrees from the Indian Institute of Technology Bombay, and in 2010 received his Ph.D. from the University of Maryland. Prior to joining Texas A&M he worked for the University of Maryland's Rotorcraft Center of Excellence as an assistant research scientist. He has served as a faculty member with the College of Engineering since 2014 and is founder and director of the [Advanced Vertical Flight Laboratory \(AVFL\)](#).



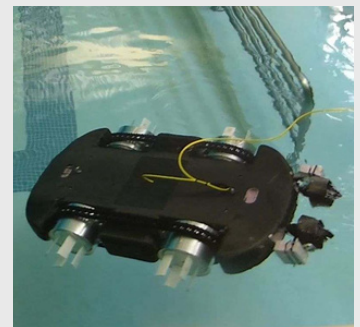
Dr. Benedict conducts research in the areas of design, development, and autonomous control of high performance next-generation vertical take-off and landing (VTOL) capable aircraft, autonomous rotorcraft for planetary exploration, green aviation, high efficiency wind/tidal turbines, and uncrewed underwater vehicles (UUVs). He has carried out cutting-edge pioneering research in these topics, impacting disciplines such as rotorcraft, microsystems, wind energy, and underwater propulsion.

A prolific inventor, Dr. Benedict has filed 10 patents during his career (three of them granted) and three of these technologies are now licensed to startup companies for commercialization. A few examples of his patents include a robotic hummingbird, gun-launched drone, air/ground transformer aircraft, cyclocopter, amphibious underwater vehicle, air-bearing levitation system, etc.



In 2018, Dr. Benedict (first from right), along with his Ph.D. graduate students David Coleman (second from right), Carl Runco (third from right), Hunter Denton (fourth from right), Farid Saemi (fifth from right), Atanu Halder, and Bochan Lee founded [Harmony Aeronautics](#), an early-stage startup that seeks to commercialize dual-use quiet propulsion technology developed at Texas A&M in the AVFL. Dr. Coleman graduated in 2021 and is currently the CTO of Harmony. Harmony was [awarded a \\$150,000 Phase-I STTR contract](#) in 2020 to conduct a feasibility study on designing quiet rotor technology for the Air Force, and in 2022 they were awarded a \$750,000 Phase-2 STTR contract to further develop the technology including fabrication and testing of a full-scale prototype. So far, Harmony has raised \$1.3M in total funding.

In addition to the work on quiet propulsion systems, Harmony seeks to commercialize other types of novel multi-modal aircraft developed at the AVFL. One such vehicle is the Gun-Launched UAS, which is a small tubular rotorcraft which is loaded into and fired from a 40mm grenade launcher to a targeted surveillance area. Another aircraft is the quad-cyclocopter, an aircraft with specialized rotary-wing devices which provide a safe and efficient alternative to conventional rotors. Finally, the multi-modal amphibious unmanned underwater vehicle, which features ground-crawling tracks for traversing multiple terrain types as well as four deployable cyclorotors for propulsion as an underwater submersible.



New Ventures Highlight

StarRotor hires veteran energy executive to lead advancement of high efficiency energy conversion technology

StarRotor Corporation was founded with a vision of bringing breakthrough technologies to market so they can provide widespread benefits in support of the global transition to clean energy. StarRotor is based on technology first developed at Texas A&M University by professor Dr. Mark Holtzapple, an expert in sustainable technologies, including water desalination, electricity storage, [biomass conversion to chemicals and fuels](#), and [cryogenic capture of carbon dioxide](#). Dr. Holtzapple is one of the most prolific inventors in The Texas A&M University System.

Even with decades of experience in developing innovative technologies, Dr. Holtzapple and the team at StarRotor realized that they needed experienced leadership and business expertise from a proven energy entrepreneur to make their vision a reality.

To fill this role, StarRotor recently hired global energy executive Leo Pirela as Chief Executive Officer. Pirela brings over 30 years of experience in the energy industry and has previously held senior leadership positions at Shell, Baker Hughes, Denbury, VPlus Energy, and Worley. Throughout his career, he has served on the Board of Directors and Executive Teams for startups, middle market companies, and large corporations.



According to Chief Innovation Officer Peter O'Neill, Pirela's hiring is an exciting step for both the company and for Texas A&M. "Leo Pirela is an example of the kind of talent and expertise we want leading Texas A&M spinout companies," said O'Neill. "Recognized as a leader in the oil, gas, and energy sectors, he brings the perfect combination of skills to StarRotor. His prior experience implementing cutting-edge technology will allow him to recognize and execute the best deployment of StarRotor's many potential business models and bring this breakthrough technology to market for the benefit of society."

StarRotor is commercializing novel technologies dedicated to highly efficient energy conversion. Using technology licensed from The Texas A&M University System, the company has refined its high-efficiency compressors and expanders based on their innovative gerotor design.

With an experienced entrepreneur on board, StarRotor's next steps are to seek partners who share the company's vision to accelerate the global energy transition. "I look at StarRotor as a Technology Platform, not just as a startup with cool machines," said Pirela. "Our company has the potential to be the next CleanTech Unicorn. We have therefore started our transformation journey, where we will focus on attracting strategic investors and customers who want to be part of meeting the needs of a world that demands more energy but expects it to be generated in a sustainable and environmentally friendly manner."

StarRotor's innovative technology has the potential to enable fundamental improvements in a wide range of markets and applications related to energy conversion. Initial focus has been on applying the technology to compressor and expander machines, with long-term goals to create highly efficient engines.

Read the full story at [this link](#). For more information on StarRotor Corporation, visit their [website](#).

New Ventures Highlight

Sano Chemicals announces first human trials in treatment for drug-resistant infections

Texas A&M startup Sano Chemicals has announced a major milestone for the first of its innovative drug products, OCF001, which has been approved by the U.S. Food and Drug Administration (FDA) for testing in humans in a Phase 1 clinical trial.

OCF001 is a formulated drug product containing occidiofungin, and is being studied as an effective treatment for recurrent vulvovaginal candidiasis (RVVC). Occidiofungin is a potent broad spectrum fungicidal compound that Sano Chemicals is developing into a new treatment for drug-resistant fungal infections, of which there are no effective treatments currently available.

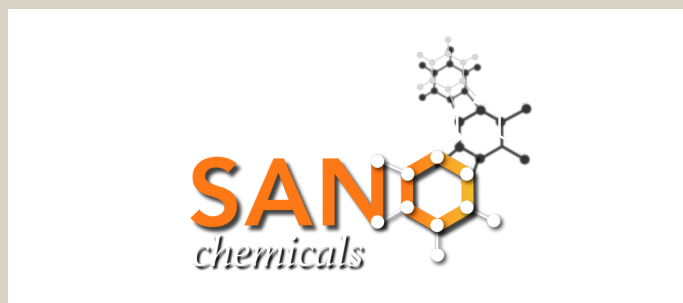


"OCF001 has the potential to improve the quality of life for millions of women with RVVC. The impact of RVVC on the physical and emotional quality of life is overlooked and has serious debilitating effects on the health of those with the medical condition," said Smith.

According to Smith, the FDA has also granted Sano Chemicals the Qualified Infectious Disease Product (QIDP) and Fast Track designations, which are only given to antimicrobial products that have potential to treat serious unmet medical conditions.

Occidiofungin shows great promise in treating the millions of people each year who are affected by severe fungal infections caused by drug resistant fungi. Sano Chemicals says it will continue to develop new drug products using occidiofungin for the treatment of dermal, oral, and invasive fungal infections.

For more information about Sano Chemicals, visit their [website](#) or read more [here](#).



[Dr. James Smith](#) is a Texas A&M University biology professor whose work on occidiofungin began almost 15 years ago. Smith discovered occidiofungin in collaboration with Dr. Shien Lu and Dr. Frank Austin, professors at Mississippi State University, which led to the formation of Sano Chemicals.

"There are only a handful of new antifungal drug products in clinical trials and many of these belong to an existing class of antifungals," said Smith. "Occidiofungin is a first-in-class antifungal and is effective against antimicrobial resistant fungi. FDA approval for Phase 1 clinical studies is very exciting and would not be possible without all the hard work from those at Sano Chemicals or the cooperation of The Texas A&M University System."

RVVC, or chronic yeast infection, is defined as three or more confirmed infections over a 1-year period and occurs in up to 10% of women. A successful new drug could lead to widespread impacts.



Did You Know ?

Texas A&M researchers create multiple types of intellectual property. Visit our website to access the latest disclosure forms.



Invention



Software



Plant Variety

NEW



Tangible
Research
Material

Partnerships and Patents

Patents Issued in June and July

- [Chemically modified shape memory polymer embolic foams with increased x-ray visualization](#)
 - European Patent No. 3 548 531
 - Inventors: Landon Nash, Kendal Ezell
- [In situ fabrication of metal-organic framework films and mixed-matrix membranes](#)
 - U.S. Patent No. 11,684,894
 - Inventors: Hae-Kwon Jeong, Mohamad Rezi Abdul Hamid
- [Multi-modal vehicle](#)
 - U.S. Patent No. 11,673,663
 - Inventors: Moble Benedict, Hunter Denton, Vikram Hrishikeshavan
- [Angelman syndrome antisense treatment](#)
 - U.S. Patent No. 11,685,920
 - Inventor: Scott Dindot
- [Method for estimation of fluid storage capacity of rock samples and other porous materials under effective stress](#)
 - U.S. Patent No. 11,674,876
 - Inventors: Ibrahim Akkutlu, Ivan Aldana
- [Self-cleaning membrane for medical devices](#)
 - United States Patent No. 11,701,455
 - Inventors: Melissa Grunlan, Gerard Cote, Alexander Abraham, Ruochong Fei, Andrea Locke
- [Endolysosomal targeting conjugates for improved delivery of cargo molecules to the endolysosomal compartment of target cells](#)
 - United States Patent No. 11,690,919
 - Inventors: Sally Ward Ober, Raimund Ober, Wei Sun, Ran Li
- [Cartilage mimetic gels](#)
 - United States Patent No. 11,707,554
 - Inventors: Melissa Grunlan, Anna Means



Bienne Technology, Inc.

Texas A&M Innovation recently completed an exclusive license agreement with Texas A&M spinout Bienne Technology, Inc., a startup company based in College Station, TX specializing in nanoparticle science. Bienne is commercializing a next-generation ion mass spectrometry instrument.

The technology was developed by a team of researchers in the lab of Dr. Emile Schweikert, professor of chemistry at Texas A&M University, who pioneered a novel mode of detecting molecules within dimensions ten thousand times smaller than the diameter of a single hair. To achieve the unprecedented detection capability, the Texas A&M team developed their own instrumentation and data analysis software.

Bienne Technology, Inc. was founded by Schweikert to further develop and commercialize the hardware, software, training, and maintenance for the innovative mass spectrometry instrument. Delivery of the first-of-its-kind “Nano-Atto Tool” is expected in July 2024 to a major global technology company for use in advancing design of its semiconductor devices. The tool also opens new possibilities related to medical research and diagnostics, holding promise for advancements in early disease detection.

Texas A&M Innovation’s new ventures team works with Texas A&M startup companies like Bienne Technology, Inc. to provide services like mentorship and strategic industry connections that are integral to the success of a new company.

