BioVentures

# Annual Report 2026

# ANNUAL REPORT 2026

BioVentures

BioVentures

**BIOVENTURES**
**UAMS' Technology Transfer Office**

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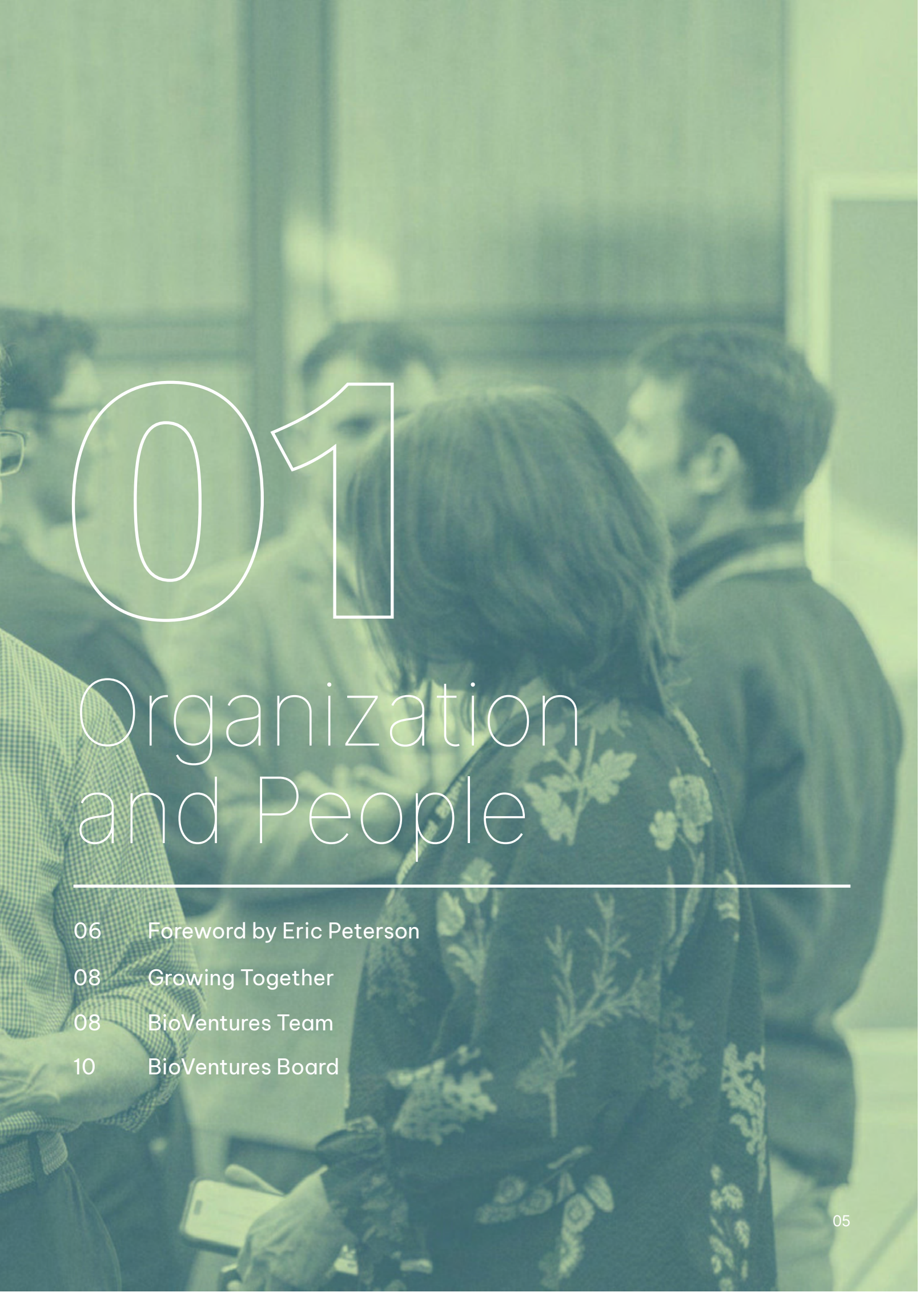

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# BUILDING THE PATH FROM DISCOVERY TO IMPACT

Innovation at UAMS begins with people: researchers asking difficult questions, clinicians recognizing unmet needs, and students imagining new ways to improve care. In FY2026, BioVentures helped more of those ideas take their next steps toward development and commercialization while strengthening the support available to the people behind them.

During the year, BioVentures received 60 invention disclosures, filed 41 patent applications, and celebrated 10 issued patents. We executed seven option agreements and two license agreements, and generated more than $980,000 in royalties and licensing fees. Seven new companies formed around UAMS intellectual property, bringing the total number of UAMS spin-offs established since 1996 to 61. These results reflect the depth and breadth of discovery across our institution and the commitment of our innovators to moving their work beyond the laboratory.

The technologies featured in this report illustrate that range. A realistic nerve block simulation model offers a new approach to preparing clinicians for patient care, while emerging T-cell receptor technologies hold promise for difficult-to-treat cancers. Our newest companies are pursuing opportunities across therapeutics, medical devices, and digital health. Each innovation represents a different development challenge, but all share the need for scientific rigor, resources, and partnerships.

This year also marked an important step in preparing the next generation of innovators. The inaugural Cancer and Developing Entrepreneurial Technologies, or CADET, cohort brought together eight trainees to explore the scientific, clinical, and commercial potential of cancer research. Alongside the Medical Innovation & Entrepreneurship Honors Track, CADET is helping PhD and medical students and researchers develop the skills to recognize

Eric Peterson, President of BioVentures, delivers opening remarks at Innovation Day 2026.

opportunities and understand what it takes to advance them.

For our founders, the launch of Founder's Forum created a place to exchange experience, connect with experts, and work through the practical challenges of building a company. Our incubator continued to provide space and infrastructure for emerging businesses. Through the AR Health Ventures Accelerator, $300,000 in project funding has helped participating teams secure $649,415 in subsequent external support across FY2025–FY2026, demonstrating the value of targeted investment in early development.

Behind these efforts is a dedicated BioVentures team whose work connects discovery, intellectual property, education, business development, and funding. We welcomed Allison Thompson as Program Manager this year, adding capacity to coordinate and strengthen our educational and entrepreneurial programs.

I am grateful to our Board of Directors, UAMS leadership, campus and statewide partners, and the inventors and founders who entrust us with their ideas. Their support makes this all possible. As we look ahead, our mission is unwavering: to help promising discoveries advance toward solutions that improve health and create opportunity for Arkansas and beyond.

**Eric C. Peterson**
President of BioVentures

# GROWING TOGETHER

Allison Thompson

**Program Manager** | Member since January 2026

Allison Thompson, M.Ed., joined BioVentures as Program Manager in January 2026. She brings more than 15 years of experience in program management, instructional design, and learning strategy, with a focus on developing systems that support effective program implementation and growth. At BioVentures, she coordinates educational and entrepreneurial programs that connect UAMS innovators with resources, training, and opportunities to advance their ideas. Her work supports initiatives including the CADET program, Medical Innovation and Entrepreneurship Honors Track, and AR Health Ventures Accelerator, Founder's Forum, as well as broader efforts to strengthen engagement across the UAMS innovation community.

# BIOVENTURES TEAM

## LEADERSHIP

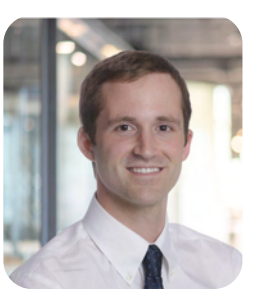
**Eric Peterson**
President of BioVentures

## LICENSING & TECHNOLOGY TRANSFER

**Megan Reed**
Senior Licensing Associate

**Britney Bobo**
Technology Licensing Manager

**Michael Geranen**
Technology Manager



**Thomas Forcum**
Internship Coordinator

## PROGRAMS & OUTREACH

**Allison Thompson**
Program Manager

**Joe Shcaffner**
Outreach Coordinator

**Julia Massana**
Marketing & Design

## ENGINEERING

**Morten Jensen**
VP Engineering

**Anthony Gunderman**
Associate VP Engineering

## ECONOMIC DEVELOPMENT

**John Imig**
VP Technology Acceleration

**Jay Gandy**
Entrepreneur in Residence

**Robert Griffin**
VP of Small Business Concerns

**Amy Hopper Swan**
Strategy Consultant

## OPERATIONS

**Alex Escobar**
VP Operations

**Brenda Tennison**
Contracts

**Sarah Heinz**
Assistant Director, Business Operations

**Tracie Seidl**
Admin Services

## GRANTS TEAM

**Rachel Ott**
Director Grant Writing

**Rebecca Todd**
Grant Writer

**Nichole Smith**
Grant Writer

# BIOVENTURES BOARD

## STEVE ABELL

Steve Abell spent 25 years with Arkansas Blue Cross and Blue Shield, as Vice President of Strategic Innovations and Investments. He served as Executive Vice President of USAble Corporation and represented Arkansas Blue Cross in healthcare-focused venture and private equity investments. Abell holds a bachelor's degree from Bowling Green State University and completed Wharton's Advanced Management Program.

## STEPHANIE GARDNER | PHARM.D., ED.D.

Stephanie Gardner is Senior Vice Chancellor for Academic Affairs, Provost and Chief Strategy Officer at UAMS. She joined UAMS in 1991, served as dean of the College of Pharmacy from 2004 to 2015, and was interim chancellor from 2017 to 2018. Gardner earned pharmacy degrees from the University of North Carolina and an Ed.D. from the University of Arkansas at Little Rock.

## AMANDA GEORGE | MHSA, CPA

Amanda George is Vice Chancellor for Finance and Administration and Chief Financial Officer at UAMS. She joined UAMS in 2013 and previously served as administrator for the Department of Internal Medicine, administrator for the Medical Specialties service line, and CFO of the Integrated Clinical Enterprise. George earned a bachelor's degree in accounting and finance from the University of Central Arkansas and an MHSA from UAMS.

## MICHELLE WHITTIER KRAUSE | M.D., MPH

Michelle Whittier Krause is Senior Vice Chancellor for UAMS Health and Chief Executive Officer of UAMS Medical Center. A UAMS faculty member since 2002, she previously served as Chief Clinical Officer and led the Integrated Medicine Service Line. Krause earned her M.D. from the University of Cincinnati and completed residency, nephrology fellowships, and an MPH in epidemiology at UNC-Chapel Hill.

## ARTHUR ORDUÑA

Arthur Orduña is Executive Director of The Venture Center and Chief Innovation Officer at Circumference Group. He also co-founded the Venture Center Arkansas Fund. Previously, he served as Chief Innovation Officer at Avis Budget Group and ADT and was a founder of Canoe Ventures, where he held CTO and Chief Product Officer roles. Orduña holds a B.A. from Cornell University and attended NYU Tisch School of the Arts.

## NANCY RUSCH | PH.D.

Nancy Rusch is Distinguished Professor and Chair of Pharmacology and Toxicology at UAMS. She has led NIH-funded cardiovascular research for three decades and previously served as Executive Associate Dean for Research in the College of Medicine. Rusch co-founded BioVentures startup PinPoint Testing LLC and received the 2026 BioVentures Lifetime Impact Award.

## BOBBY W. SANDAGE | PH.D.

Bobby W. Sandage is Managing Director of the Paula and Rodger Riney Foundation, General Partner at Cultivation Capital Life Sciences Fund II, and President and CEO of Euclises Pharmaceuticals. He previously led Coronado BioSciences through its 2011 IPO and held senior R&D roles at Covidien and Indevus Pharmaceuticals. Sandage holds a B.S. in Pharmacy from the University of Arkansas and a Ph.D. from Purdue University.

## DANIEL E. VOTH | PH.D.

Daniel E. Voth, Ph.D., is Vice Chancellor for Research and Innovation at UAMS. He joined UAMS in 2009 and previously served as Chair of the Department of Microbiology and Immunology. His NIH-funded research focuses on bacterial pathogens and host-pathogen interactions. Voth holds a B.S. in Biology from Northwestern Oklahoma State University and a Ph.D. from the University of Oklahoma.

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# LICENSING OVERVIEW

FY2026 was an active year for technology transfer at UAMS, with continued activity across invention disclosure, intellectual property, licensing, and startup development. During the year, BioVentures received 60 invention disclosures and filed 41 patent applications, including 20 provisional applications, 13 PCT applications, seven U.S. utility applications, and one non-U.S. filing. These disclosures represented innovations emerging from research and clinical activity across UAMS.

An additional 10 patents were issued during the fiscal year, expanding UAMS' portfolio of protected technologies across therapeutics, medical devices, diagnostics, research tools, and other areas of biomedical innovation. The portfolio continued to advance technologies at different stages of development, from early intellectual property protection through evaluation for licensing and commercialization opportunities.

Commercialization activity generated $980,433.30 in licensing royalties during FY2026. The team also executed seven option agreements and two license agreements, moving UAMS technologies forward through commercial evaluation and development with external partners. BioVentures continued to work with companies and other organizations interested in evaluating, licensing, and advancing technologies developed by UAMS researchers and clinicians.

Startup formation remained an important part of the commercialization portfolio, with seven new companies formed around UAMS intellectual property during the fiscal year. These companies provide a pathway for technologies requiring additional validation, investment, product development, or market preparation. Startup activity during FY2026 also contributed to the continued growth of UAMS' broader commercialization ecosystem and the development of new opportunities around university innovation.

Overall, FY2026 reflected continued activity across the full technology transfer pipeline, from invention disclosure and patent protection to licensing, startup formation, and commercial development. Through this work, BioVentures continued to support UAMS innovators, manage and advance the institution's intellectual property portfolio, develop relationships with commercial partners, and create pathways for UAMS technologies to progress toward broader use and impact.

**Megan Reed**
Senior Licensing Associate

FY 2026

BioVentures

Linking research minds to global markets

# FACT SHEET

**41**

Patents Filed

Provisional: 20 · PCT: 13
US National: 7 · Non-US National: 1

**10**

Patents Issued

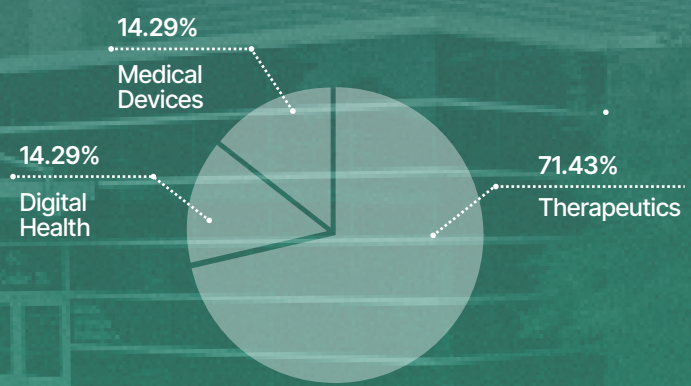
**282**

Total Active Patents

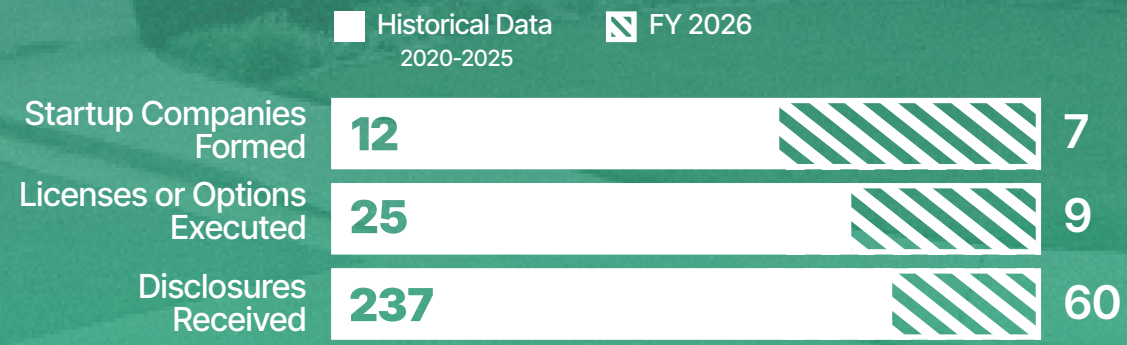
**$980,433**

Total Licensing & Equity Revenue

## Impact Area of Startup Companies

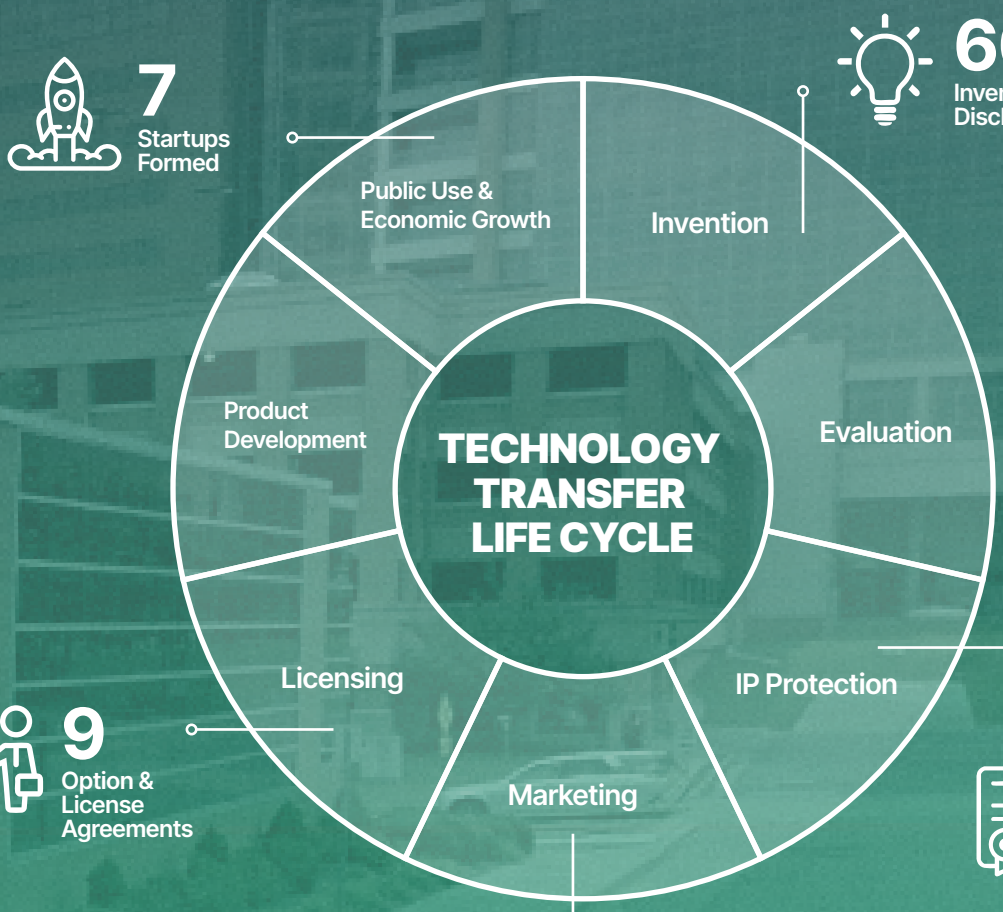



## GROWTH THROUGH FY2026



FY 2026

# TECHNOLOGY TRANSFER LIFE CYCLE




**7** Startups Formed

**60** Invention Disclosures

**41** Patents Filed

**10** Patents Issued

**9** Option & License Agreements

**34** Total Technologies on the Website

# TECHNOLOGY SPOTLIGHT

Medical Device

## High Fidelity Nerve Block Simulation Model

BV 2026-002 | Erica Malone, Ph.D., Blakely Coppock

Erica Malone, Ph.D., far right, receives the 2026 Lead Woman Inventor of the Year Award at BioVentures Innovation Day, recognizing her broader contributions to innovation and technology development.

Developed by Erica Malone, Ph.D., and doctoral nursing student Blakely Coppock, the High Fidelity Nerve Block Simulation Model addresses a longstanding challenge in clinical training: how to give learners realistic, repeatable practice before performing ultrasound-guided procedures on patients.

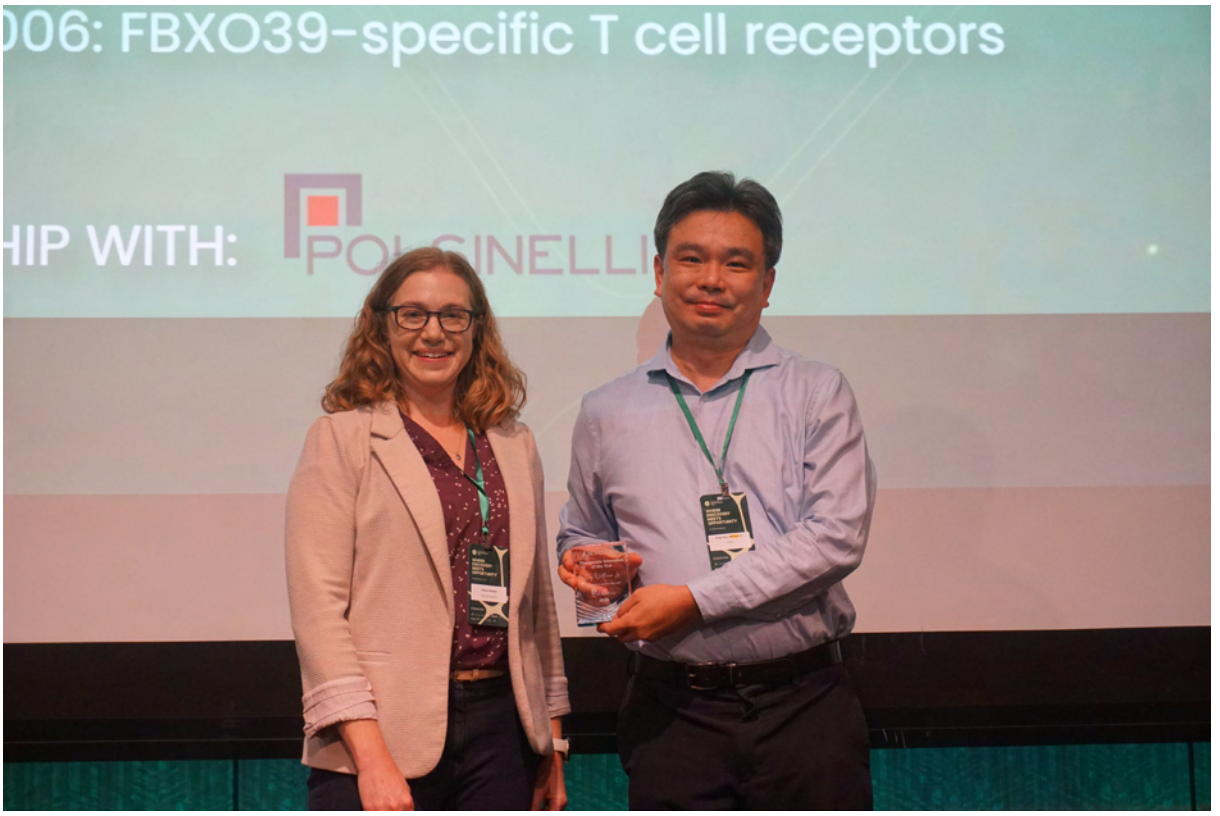
The team developed a 3D-printed, ultrasound-compatible arm designed to bridge the gap between low-fidelity simulation models and real patient care. Trainees can practice ultrasound visualization and needle placement while receiving immediate visual feedback when a nerve block is performed correctly, creating a more interactive and realistic learning experience.

The technology began with early prototypes developed by the inventors and progressed through iterative design and patent protection with BioVentures. Its combination of high-fidelity simulation, practical design and lower-cost construction could make advanced nerve block training more accessible while helping clinicians build procedural confidence before transitioning those skills to patient care.

Therapeutic

# FBXO39-SPECIFIC T-CELL RECEPTORS

BV 2026-006 | Yong-Chen William Lu, Ph.D.




William Lu, Ph.D., receives the 2026 Therapeutic Innovation of the Year Award for his work developing FBXO39-specific T-cell receptors for difficult-to-treat solid cancers.

Developed by Yong-Chen William Lu, Ph.D., FBXO39-specific T-cell receptors are being developed as a new adoptive T-cell immunotherapy approach for solid tumors, including breast cancer and glioblastoma.

The technology is designed to equip a patient's T cells with receptors capable of recognizing FBXO39, a tumor-associated antigen with limited expression in normal tissues. Once engineered with an FBXO39-specific receptor, the T cells are intended to identify and attack cancer cells carrying the target, providing a potential strategy for directing an immune response more selectively toward the tumor. BioVentures' description identifies difficult-to-treat solid cancers as a primary opportunity for the approach.

The scientific rationale is supported by research identifying FBXO39 as a cancer-testis antigen expressed across several tumor types, including breast cancer, and studies associating elevated FBXO39 expression with aggressive glioma. Lu is currently leading a 2025–2027 Arkansas Breast Cancer Research Program project specifically focused on developing FBXO39-targeted T-cell immunotherapy, providing a pathway for further validation and development of the technology.

# STARTUPS

In FY2026, seven new spin-off companies were formed based on intellectual property developed at UAMS. By the close of the fiscal year, a total of 61 spin-off companies had been established since 1996, reflecting the sustained growth and entrepreneurial impact of UAMS innovation.

## AR THERAPEUTICS

AR Therapeutics is a biotechnology startup co-founded by Srinivas Ayyadevara, Ph.D., and Meenakshisundaram Balasubramaniam, Ph.D. They are working to develop novel small molecules that bind specifically to a unique pocket on the Alzheimer's-linked protein ApoE4, blocking its harmful interaction with DNA and restoring the cell's cleaning system, with the hope of reducing harmful protein aggregation that results in age-related diseases such as Alzheimer's disease.

## ARONUS THERAPEUTICS

Aronus Therapeutics is a startup founded by Yong Zhu, Ph.D., that is developing a new liver cancer treatment using a natural molecule called piR-37213. This molecule is low in cancer patients, and restoring it helps stop tumor growth and spread. Delivered via nanoparticles, this precise therapy offers a promising new way to fight liver cancer. The company is participating in the 2026 Lab2Launch program to advance its technology toward NIH funding.

## CELYRA THERAPEUTICS

Celyra Therapeutics is a biotechnology startup founded by Amit Tiwari, Ph.D., that is working on developing small-molecule systems that improve intracellular delivery of molecules that are traditionally either too large to be transported into a cell. By increasing cellular uptake, helping therapeutic cargo escape degradation, and promising pre-clinical intracellular release data, this platform technology has multiple applications across the transport of large molecules, gene therapies, proteins, antibodies, oligonucleotides and nanoparticles.

## ONCOROCK LLC

OncoRock is a biotechnology startup co-founded by Alan Tackett, Ph.D. and Brian Koss, Ph.D., that is working to advance two first-in-class cancer therapies, including a small molecule designed to improve response to immune checkpoint inhibitors and engineered drug-resistant CAR T cells for use in lymphoma, melanoma and glioblastoma. These technologies are ultimately trying to develop improved immunotherapy approaches for cancer patients who do not respond to treatment.

## PHENORYX SCIENCES LLC

Phenoryx Sciences is a startup founded by Jin-Ran Chen, Ph.D., focused improving bone health through the development of a novel functional food approach as well as development of novel therapeutics which prevent bone loss and stimulate bone regrowth for the treatment of osteoporosis. Phenoryx is participating in the 2026 Lab2Launch program.

## SAFE HAVEN

Safe Haven is a startup founded by Gresham Richter, M.D., that is focused on developing the Smart Tracheal Collar, a reusable sensor-enabled device that secures a tracheostomy tube while continuously monitoring vital signs and transmitting data to caregivers through a companion app. This Smart Tracheal Collar will enable patient specific monitoring processes to enhance patient care.

## TRIO CONNECT

Trio Connect is a startup Digital health platform company founded by Susan Emmett, M.D., developed to connect medical devices with secure communication between healthcare and education systems, supporting coordinated hearing screening and follow-up care for children. This novel integrated approach is hoping to reshape access to preventive healthcare in rural settings.

# BIOVENTURES INCUBATOR

BioVentures continues to support Arkansas-based startups by providing office and laboratory space, shared infrastructure, and access to the UAMS innovation ecosystem. During FY2026, seven companies maintained tenancy in the BioVentures incubator, while three additional startups utilized BioVentures through virtual address agreements.

### Incubator Tenants

- Acetaminophen Toxicity Diagnostics, LLC
- Datafy, LLC
- NephSmart, LLC
- PinPoint Testing, LLC
- Tocol Pharmaceuticals, LLC
- TZERMA, LLC
- Vanguard Biofilm, LLC

### Virtual Adress Agreements

- OncoRock Therapeutics, Inc.
- ProteoRock, LLC
- Safe Haven, LLC

# 03 Programs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# CADET BUILDS A PATHWAY FROM CANCER RESEARCH TO COMMERCIALIZATION

CADET Leadership, from left: Robert Griffin, PhD, Eric Peterson, PhD, and Samantha Kendrick, PhD.

BioVentures completed the inaugural cohort of the Cancer and Developing Entrepreneurial Technologies (CADET) program in 2026, launching a new effort to equip cancer researchers with the entrepreneurial skills, mentorship and experience needed to move promising discoveries toward real-world impact.

Supported by a $1.5 million, multiyear R25 training award from the National Cancer Institute (NCI)*, CADET is led by principal investigators Robert Griffin, Ph.D., and Eric Peterson, Ph.D., with Samantha Kendrick, Ph.D., serving as co-investigator. The program brings together cancer research and entrepreneurship education to help trainees better understand what it takes to translate scientific discoveries beyond the laboratory.

"CADET bridges the critical gap between breakthrough research and real-world solutions," Peterson said. "By equipping students with entrepreneurial skills and an understanding of regulatory pathways, we're accelerating the path

*CADET is supported by the National Cancer Institute of the National Institutes of Health under Award Number R25CA302439.*

from lab to patient and positioning Arkansas as a leader in biomedical innovation."

The inaugural 2025–26 cohort included eight participants, representing graduate students, medical students and postdoctoral researchers at UAMS. Because the award was received shortly before the academic year began, the first cohort participated in a condensed spring program that served as an initial implementation of the CADET curriculum and provided valuable experience for development of the program's full-year model.

Participants explored topics including customer discovery, intellectual property, regulatory pathways, commercialization strategy and business model development. An important component of the program was mentorship, connecting trainees with academic and industry mentors who could provide perspectives beyond their individual areas of research.

CADET also created opportunities for participants to apply what they were learning outside the classroom. Members of the inaugural cohort presented research at UAMS and the 2026 American Association for Cancer Research

## The CADET Journey

Lokesh Akana and Jose Ochoa present during the final pitch competition for the inaugural CADET cohort.

CADET
Cancer and Developing Entrepreneurial Technologies

*"The experience of building, refining, and presenting our idea was both challenging and incredibly rewarding. I am excited to carry these lessons forward as I continue working at the intersection of science and innovation."*

**Lokesh Akana**
CADET Inaugural Cohort Participant

(AACR) Annual Meeting, gaining exposure to the broader cancer research and innovation ecosystem. One participant also drew on skills developed through CADET while advancing a separate project through the Arkansas Governor's Cup Collegiate Business Plan Competition, gaining firsthand experience developing and communicating the commercial potential of an emerging technology.

The cohort culminated in a final pitch competition, where participants presented the scientific, clinical and commercial opportunity behind their projects to a panel of judges. Following completion of the program,

CADETs at the ACC Capital Governor's Cup Collegiate Business Plan Competition, from left: Pritam Saha Podder, PhD, Danny Baxter, MPH, Fatima Abbas, MS

Members of the CADET cohort at the 2026 American Association for Cancer Research (AACR) Annual Meeting. From left: Eric Peterson, PhD; Tianjiao Shen, MPH; Saaimatul Huq, PhD; Lokesh Akana, MS; Jose Ochoa, ChE; Pritam Saha Podder, PhD; Danny Baxter, MPH; Fatima Abbas, MS; and Robert Griffin, PhD.

participants were also eligible to pursue funding to continue advancing their work, extending CADET's impact beyond the formal training experience.

The inaugural cohort laid the groundwork for CADET's next phase. Beginning in fall 2026, BioVentures will pilot the program as a full academic-year certificate experience, expanding the curriculum across two semesters and providing participants with more time for mentor engagement, technology evaluation, commercialization planning and experiential learning.

"The CADET program reflects UAMS' commitment to preparing our researchers as scientists and innovators," Griffin said. "This program helps ensure that the discoveries being made in cancer research and treatment advances at UAMS have a clear pathway to be developed by industry and actually reach patients and improve health outcomes."

Over the five-year NCI award period, CADET is designed to build a sustainable pipeline of researchers who understand not only how to make discoveries, but how to evaluate their potential and navigate the path toward technologies, products and solutions that can ultimately benefit cancer patients.

## Meet the Inaugural CADET Cohort

**Fatima Abbas, MS**
UALR

**Lokesh Akana, MS**
UAMS

**Danny Baxter, MPH**
UAMS

**Saaimatul Huq, PhD**
UAMS

**Jose Ochoa, ChE**
UAMS

**Jack Parker, MD Candidate**
UAMS

**Pritam Saha Podder, PhD**
UAMS

**Tianjiao Shen, MPH**
UAMS

## CADET Mentors

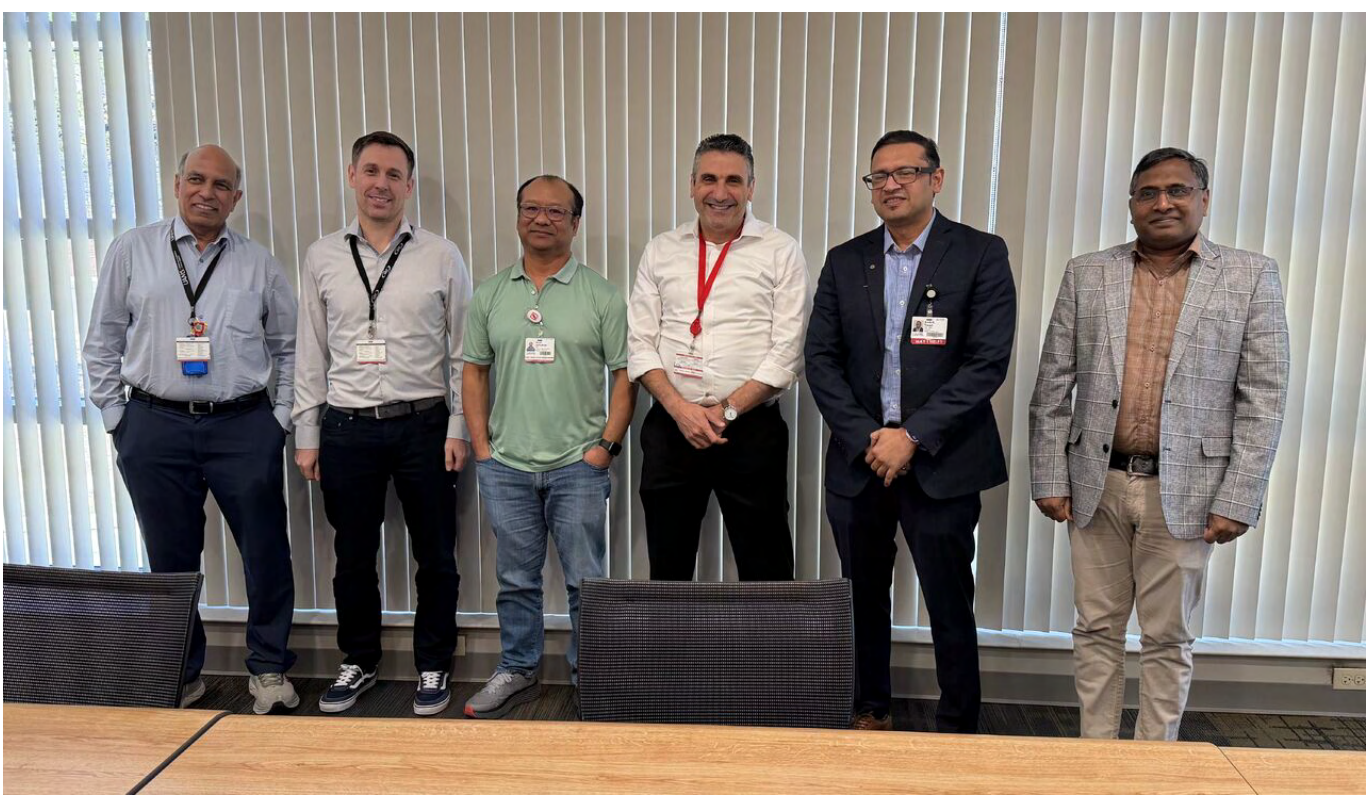
**Jay Gandy, PhD**

**Melody Greer, PhD**

# FOUNDER'S FORUM

Launched in 2026 in partnership with ARise, Founder's Forum creates a dedicated space for UAMS-affiliated startup founders to connect, learn and work through the challenges of building a company. The ongoing series brings founders together with experienced entrepreneurs and subject-matter experts for practical conversations on topics such as fundraising, regulatory strategy and business development, while building a stronger peer network for innovators at every stage of the startup journey.

| Startup | Founders |
|---|---|
| Vanguard BioFilm | Mo Elasri, PhD & Gyan Sahukhal, PhD |
| AR Therapeutics | Srinivas Ayyadevara, PhD & Sundaram Balasubramaniam, PhD |
| OncoRock | Brian Koss, PhD & Alan Tackett, PhD |
| Celyra Therapeutics | Amit Tiwari, PhD & Karthik Chandrabose, PhD |
| ARonus Therapeutics | Yong Zhu, PhD |
| Phenoryx Sciences | Jin-Ran Chen, PhD |
| Trio Connect | Susan D. Emmett, MD |
| NephSmart | John Arthur, PhD & Christian Herzog, PhD |



Members of the Founder's Forum at their first meeting in March 2026.

# MIEHT

## Medical Innovation & Entrepreneurship Honors Track

Megan Reed, center, represents BioVentures at the UAMS Chancellor's Circle Grant Awards, where MIEHT received additional funding to support program expansion.

The Medical Innovation & Entrepreneurship Honors Track (MIEHT) is building a growing community of future physicians who see innovation as part of their role in improving health care. The four-year honors track helps medical students develop the mindset and skills to identify health care challenges, engage stakeholders, develop solutions and contribute to meaningful improvements in medicine and patient care.

MIEHT is facilitated by Anthony Gunderman, PhD, Assistant Professor of Mechanical Engineering at the University of Arkansas, and Megan Reed, PhD, MBA, Senior Licensing Associate at BioVentures. Gunderman brings expertise in robotics, medical systems and device development, while Reed brings a background in biomedical research, technology transfer, entrepreneurship and commercialization. Together, they provide students with complementary perspectives on developing and translating health care innovations.

# ARHVA

## AR Health Ventures Accelerator

ARHVA

**6**
Projects Funded

**$300k**
ARHVA Funding Deployed

**$649k**
Follow-On Funding

**2.2x**
Return on ARHVA Investment

**2**
Technologies Optioned

**2**
New Companies Formed

**2**
Patent Applications Filed

The AR Health Ventures Accelerator (ARHVA) continued to help UAMS researchers move promising discoveries toward commercialization by providing milestone-based funding and hands-on translational support. Through the program, project teams worked to address critical development needs, generate evidence and position their technologies for the next stage of funding, partnership or commercialization.

ARHVA's impact extends beyond the initial investment. To date, $300,000 in ARHVA project funding has helped participating teams secure $649,415 in subsequent external funding—a 2.2x return in leveraged funding. The program also strengthened connections between researchers, commercialization experts and external partners, helping create clearer pathways from promising research to real-world application.

A comprehensive overview of ARHVA-supported projects, outcomes and program impact is included in the ARHVA Impact Report in the appendix.

**De-Risking the Path to Commercialization**

# STUDENT RESEARCH DAY INNOVATION AWARDS

BioVentures presented its Innovation Awards during the 2026 UAMS Student Research Day, recognizing student researchers whose work demonstrated innovative thinking and potential for future translational impact. The annual event brings together graduate and professional students, postdoctoral fellows, and medical house staff and fellows to showcase research from across UAMS and connect with faculty, researchers and peers.

Through the Innovation Awards, BioVentures recognizes promising research with the potential to move beyond discovery toward new approaches, technologies or solutions that improve health and medicine.

This year's award recipients were:

- **Ric Anloague:** Osteocyte-Derived FGF23 is a Novel Target to Treat Multiple Myeloma
- **Md Rafikul Islam:** Antisense Oligonucleotide–Mediated Correction of Oncogenic Splicing in Cancer
- **Eva Palmer:** Design and Synthesis of Novel LSD1/EZH2 Dual Inhibitors for Synergistic Anticancer Activity
- **Madison Allen:** Development and Testing of a Novel Point-of-Care Ultrasound-Based Tool for Quantifying Local Lung Tissue Strain
- **Nicole Hooten:** Investigating the Use of DNA-PKcs Inhibitors for Melanoma Therapy
- **Russell Rainwater:** Novel therapy for prevention of delayed graft function in kidney transplantation

*Eric Peterson presents a BioVentures Innovation Award to Pooja Ghai.*

- **Daniel Armstrong:** Discovery of DNA-PKcs Inhibitors as Immunosuppressants for Graft Rejection
- **Emmanuela Beliard:** Non-Invasive Hypoxia Detection in Circulating Exosomes
- **Pooja Ghai:** Exploring the G-quadruplex Probe, BG4, as a Flow Cytometry Diagnostic Tool in Cancer
- **Luke Enemark:** Discovery of novel 1H-pyrazolo[3,4-d]pyrimidine derivatives as BRK/PTK6 inhibitors

# Other Events

## UAMS Showcase of Medical Discoveries

On October 22, 2025, BioVentures was featured at the UAMS Showcase of Medical Discoveries at the Jackson T. Stephens Spine & Neurosciences Institute. UAMS investigators presented BioVentures-supported technologies and research projects through posters and one-on-one conversations with attendees, including faculty, researchers and entrepreneurs. The showcase featured projects ranging from cancer immunotherapies and diagnostic assays to medical devices, AI-based tools and new drug candidates.

## TRI Research Expo

On September 10, 2025, BioVentures participated in the TRI Research Expo, connecting UAMS researchers with resources to advance discoveries toward commercialization. The event brought together research support programs from across UAMS to foster collaboration and help investigators move their work forward.

## BIO on the BAYOU

On October 28–29, 2025, BioVentures participated in BIO on the BAYOU in New Orleans, a regional life sciences conference bringing together researchers, startups, investors and industry leaders. The event featured technology and startup pitches, panel discussions, partnering meetings and networking focused on biotechnology, medtech and healthcare innovation.

## AUTM Annual Meeting 2026

On February 8–11, 2026, the BioVentures team attended the AUTM Annual Meeting in Seattle, joining technology transfer professionals, researchers and industry leaders from around the world. The team connected with peers, explored trends in licensing and commercialization, and shared technologies developed at UAMS.

## Arkansas Governor's Cup

BioVentures sponsored the 2026 Arkansas Governor's Cup Collegiate Business Plan Competition, supporting an important platform for student entrepreneurship and innovation across the state. Members of the BioVentures team and three CADET participants also attended the competition, gaining firsthand exposure to venture development and pitching while connecting with student entrepreneurs, mentors and business leaders from across Arkansas.

# UA Little Rock AI Hackathon

BioVentures sponsored the UA Little Rock AI Hackathon and HealthTech Startup Week, a weeklong experience that brought together students from across Arkansas to explore how artificial intelligence could address real-world health care challenges.

Working in teams, participants identified problems, developed solutions, built prototypes and prepared business pitches, ultimately producing six fully functioning AI applications, along with physical prototypes focused on needs identified by health care organizations. BioVentures supported prizes for the winning teams, and Eric Peterson, PhD, President of BioVentures, served as a pitch competition judge alongside leaders from Arkansas' health care, technology and entrepreneurial communities.

## Grand Prize: *Resonate*

Expanding Access to Music Therapy for Patients with Dementia and Alzheimer's Disease

UAMS served as a contributing research partner, providing the health care challenge that inspired the team's solution.

UA LITTLE ROCK | AI HACKATHON & HealthTech Startup Week

## BioVentures Summer Internship

During summer 2026, Rasikh Imam gained hands-on experience across the technology transfer lifecycle, supporting the BioVentures team with inventor correspondence, technology and data management, and preparations for Innovation Day. The internship provided exposure to the many steps involved in moving research and ideas toward real-world impact while building practical skills in communication, project coordination, and professional collaboration. He concluded the summer ready to carry those transferable skills into his freshman year at the University of Tulsa.

# GRANT AWARDS AND FUNDING

### Funded

BioVentures' application to the Small Business Administration (SBA) Growth Accelerator Fund Competition was selected for funding in the fall of 2025, with planning commencing in January of 2026.

This project, "Accelerating Biomedical Innovation From Lab to Market," will allow for expanded innovation and entrepreneurship (I&E) programs to connect researchers across the state with project partners, mentors and investors to provide more comprehensive, individualized commercialization support.

By participating in the SBA Growth Accelerator, BioVentures will be better equipped to develop and implement programming that reaches not only faculty at UAMS, but also trainees, staff, and early-stage health entrepreneurs across the state. This will allow for more opportunities to reach a relatively untapped population of biomedical and healthtech innovators who have strong potential to become the next generation of health entrepreneurs.

### In Progress

BioVentures is planning a project proposal for fall of 2026 in response to the National Institute of General Medical Sciences' forecasted opportunity, "NIH Research Evaluation and Commercialization Hubs (REACH)". If funded, the proposed hub would support researchers by providing early-stage funding, technical and business resources, and mentorship in product development and commercialization.

Additionally, BioVentures is exploring a funding opportunity with VentureWell that would offer additional support for growing the statewide innovation and entrepreneurship ecosystem for biotechnology-focused entrepreneurs.

### Pending Applications

**Arkansas Economic Development Commission Business and Technology Accelerator Grant –** This pending application proposes a streamlined, one-year version of the former, statewide Arkansas Collaborative for Technological and Innovative Venture Equality (ACTIVE) program funded

by the Department of Commerce's Minority Business Development Agency. This project will involve a collaboration with The Venture Center to help up to 15 Arkansas entrepreneurs start or grow sustainable, investable companies developing healthcare and health technology products and services. Funding of $250,000 was requested for this project.

**National Science Foundation Improving Undergraduate STEM Education: Directorate for STEM Education (IUSE: EDU) -** This pending application, "BRIDGE: Building Regional InterDisciplinary Grounded Education," proposes an expansion of the current Medical Innovation and Entrepreneurship Honors Track (MIEHT) program that will develop and study an engaged student learning model that connects undergraduate engineering students from the University of Arkansas with UAMS medical students through the development and use of a shared Makerspace Cart, a portable prototyping program that serves as a boundary object across institutions and disciplines. The UAMS subaward budget request is $221,763.

## Formalized Collaborations

**ARise –** BioVentures renewed its contract with Startup Junkie Consulting, LLC to continue lending Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) subject matter consulting and proposal writing expertise to this statewide program aimed at helping tech and tech-enabled startups grow their businesses and rise to success.

Rebecca Todd, BioVentures' grant writer and ARise subject-matter expert on SBIR/STTR funding, participated in the "ARise and Friends SBIR Workshop" lunch-and-learn event on May 12, 2026, along with representatives from Science Venture Studio and the Arkansas Small Business and Technology Development Center.

**Arkansas Small Business and Technology Development Center (ASBTDC)** – BioVentures sponsored the summer 2026 cohort of ASBTDC's National Institutes of Health Lab2Launch SBIR/STTR Accelerator.

Rebecca Todd, BioVentures' grant writer, co-led the six-week program alongside ASBTDC Innovation Specialist Karen Bergh. The program included 17 participants, including four UAMS spin-off companies and one UAMS subaward project partner.

Todd provided extensive proposal reviews, participated in one-on-one meetings with participants, and coordinated with Bergh to develop the weekly curriculum.

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# 04

# Future Outlook

40 Looking Ahead: Advancing Innovation in FY2027

# LOOKING AHEAD: ADVANCING INNOVATION IN FY2027

FY2026 strengthened the foundation for innovation at UAMS through new discoveries, seven new companies, and programs that connect researchers, trainees, and founders with resources to advance their ideas. In FY2027, our focus is to help promising technologies reach their next development milestone through validation, intellectual property protection, funding, and commercial partnerships.

Education remains central to this work. CADET will build on its inaugural cohort with a full academic-year certificate experience, allowing more time for mentorship and commercialization planning. Alongside the Medical Innovation & Entrepreneurship Honors Track, it will help prepare researchers and future physicians to translate unmet health care needs into practical solutions.

We will continue supporting founders through Founder's Forum, grant-writing assistance, and statewide partnerships. The funded SBA Growth Accelerator project will help extend commercialization support across Arkansas, while additional funding proposals offer opportunities to expand our reach.

With the continued support of our Board, UAMS leadership, and partners, BioVentures will build on this year's progress to advance discoveries toward lasting health and economic benefit.

**Eric C. Peterson**
President of BioVentures

# APPENDIX

## AR HEALTH VENTURES ACCELERATOR: FY25-FY26 IMPACT REPORT

**6**
Projects Funded

**$300k**
ARHVA Funding Deployed

**$649k**
Follow-On Funding

**2.2x**
Return on ARHVA Investment

**2**
Technologies Optioned

**2**
New Companies Formed

**2**
Patent Applications Filed

| PROJECT | ARHVA-SUPPORTED PROGRESS | COMMERCIALIZATION PROGRESS |
|---|---|---|
| McGill | Biomarker/ELISA development | Biomarker/ELISA development |
| Sahukhal | Formulation + in vivo development | Company formation + PCT + SBIR/STTR application |
| Waldrip | Antibody candidates generated | Critical technical risk identified |
| Arthur | Lateral-flow assay development | $274,415 Phase I STTR |
| Burdine | Large-animal validation | Licensing potential |
| Jenkins | Liposome formulation development | IP + licensing / startup pathway |

**De-Risking the Path to Commercialization**

# Appendix A: Project Updates

## Liver Injury Biomarkers

Developing biomarker-based tools to improve detection of liver injury

*Investigator:*
*Dr. Mitch McGill, PhD.*

### Progress

Immunogens were completed and transferred for custom antibody development, enabling the next stage of ELISA assay development.

### Commercialization

A second provisional patent application was filed along with a PCT conversion, building the project's IP position. Licensing interest has also been identified.

### Next

Complete antibody development and finalize the ELISA.

## VB917 Antibiofilm Therapeutic

Advancing a small-molecule therapeutic targeting chronic S. aureus biofilm infections

*Investigator:*
*Dr. Gyan Sahukhal, PhD.*

### Progress

VB917 progressed through target validation, in vitro efficacy, formulation development, and in vivo evaluation, with encouraging results supporting continued development.

### Commercialization

Vanguard Biofilm LLC was formed, a PCT application patent was filed, and the team applied for SBIR/STTR funding to support future development.

### Next

Continue formulation, efficacy, and safety development while pursuing external funding and strategic partnerships.

## Yeast Biotherapeutic for Shiga Toxin

Developing an engineered probiotic yeast capable of expressing antibodies that neutralize Shiga toxin

*Investigator:*
*Dr. Zachary Waldrip, PhD.*

### Progress

Six antibody candidates were generated and expressed in the yeast platform. Testing identified antibody performance as a critical remaining technical barrier.

### Commercialization

ARHVA-supported work generated candidate antibodies while identifying a key development risk before further investment in animal studies.

### Next

Identify a functional, efficiently expressing antibody candidate before advancing to additional in vivo testing.

## Kidney Sentinel

Developing a multi-biomarker point-of-care assay to improve prediction of severe acute kidney injury

*Investigator:*
*Dr. John Arthur, PhD.*

### Progress

Working antibody combinations were identified for multiple biomarkers, with lateral-flow prototypes developed for several targets. Additional assay components remain in development.

### Commercialization

The technology received a 2024 NIH Phase I STTR Award (1R41DK138646-01A1): "A Device for Detection of Acute Kidney Injury." The $274,415 award to NephSmart LLC supports continued device development.

### Next

Complete remaining assay development and evaluate biomarker combinations in patient samples to establish predictive performance.

## Therapeutic for Kidney Transplantation

Evaluating DA-143 as a potential therapy to reduce delayed graft dysfunction following kidney transplantation.

*Investigator:*
*Dr. Marie Burdine, PhD.*

### Progress

In an initial reported comparison, the treated kidney returned to normalized function in 3 days versus 6 days in the comparison kidney, with lower peak creatinine and BUN. Additional studies are needed to establish reproducability.

### Early Evidence

A patent application was filed, and potential licensing interest has been identified. The project also received $300,000 from Mid-America Transplant, and an R01 application to NIDDK is in development.

### Commercialization

A provisional license was filed, and potential licensing interest has been identified.

### Next

Continue animal studies to determine whether the observed treatment effect is reproducible.

An R01 application to NIDDK is in development.

## Radiation-Responsive Liposomes

Developing a drug-delivery platform designed to use radiation to trigger localized chemotherapy release

*Investigator:*
*Dr. Samir Jenkins, PhD*
**Progress update provided by:*
*Dr. Robert J. Griffin, PhD*

### Progress*

The research builds on an established radiation-triggered liposome platform. A newer formulation has been developed, with cisplatin loading and radiation-triggered release.

### Commercialization

The platform has an existing IP foundation and potential pathways through pharmaceutical licensing or startup development.

### Next

Strengthen validation data, optimize and scale the formulation, improve payload efficiency, and evaluate additional chemotherapeutics.

# Appendix B: Invention Disclosures & Commercialization Activity

### Invention Disclosures

Two invention disclosures were made to BioVentures.

- BV 2026-014: Use of DNA-PKcs inhibitors in organ preservation solution (Dr. Marie Burdine) Status: Patent application filed
- BV 2024-014: A highly specific assay for drug-induced liver injury (Dr. Mitch McGill) Status: Patent Filed.

### Company Formation

Two companies were formed:

- Vanguard BioFilm, LLC: Formed by Gyan Sahukhal & Mohamed O. Elasri.
- NephSmart, LLC: Formed by John Arthur & Christian Herzog.

### Licensing Interest

Confidential discussions are underway with a national diagnostics company regarding an ARHVA-supported technology.

### Option Agreements

Two ARHVA-supported technologies have been optioned for further commercial development.

# Appendix C: Additional Awards & Publications

## Additional Funding

| PI | Sponsor | Grant Number | Amount Awarded |
|---|---|---|---|
| Dr. Marie Burdine, PhD | Mid-America Transplant | -- | $300,000 |
| Dr. John Arthur, PhD | NIH Phase I STTR | 1R41DK138646-01A1 | $274,415 |
| Gyan Sahukhal | Arkansas Research Alliance | -- | $75,000 |
| | | **TOTAL:** | **$649,415** |

## Related Publications


- Waldrip ZJ, Burdine L, Peterson EC, Rainwater RR, Min Y, Burdine MS. A functional surface display system in Saccharomyces boulardii for protein absorption in simulated intestinal fluids. iScience. 2025;28(9):113303. doi:10.1016/j.isci.2025.113303.
- Waldrip ZJ, Acharya B, Armstrong D, et al. Discovery of the DNA-PKcs inhibitor DA-143 which exhibits enhanced solubility relative to NU7441. Sci Rep. 2024;14(1):19999. doi:10.1038/s41598-024-70858-w.
- Holthoff JH, Karakala N, Basnakian AG, et al. The role of IGFBP-1 in the clinical prognosis and pathophysiology of acute kidney injury. Am J Physiol Renal Physiol. 2025;328(5):F647-F661. doi:10.1152/ajprenal.00173.2024.


# Appendix D: Advisory Committee

## ARHVA Advisory Committee

- Amy Hopper Swan, Swan Impact Strategies
- Dr. Bobby Sandage, Riney Family Foundation & Cultivation Capital Life Sciences Fund
- Dr. Analiz Rodriguez, UAMS
- Blake Glasgow, Wright Lindsey Jennings
- Dr. Eric Peterson, BioVentures
- Dr. John Imig, UAMS