

THE **TRIBUNE**

MARCH 2021

Delivering the Goods Entrepreneurship Program Aims to Strengthen Research



Nancy Rusch, Ph.D. (left), and Nancy Gray, Ph.D., have long been driving forces behind TRI's efforts to expand entrepreneurship training at UAMS and for undergraduate students across Arkansas. Kevin Sexton, M.D. (photo, page 2), joined them last year as a co-director of the HSIE Postdoctoral Training Program. (pre-COVID-19 photo)

Few programs can claim to make researchers more successful, strengthen a research institution, and ultimately improve health outcomes. Could such a program exist in TRI's Health Sciences Innovation and Entrepreneurship (HSIE) Training Program for postdoctoral fellows?

While too early to say, leaders of the two-year-old program are enthusiastic about its prospects. Offered in partnership with the Sam M. Walton College of Business at the University of Arkansas, Fayetteville, the program is unique even outside Arkansas. TRI's External Advisory Committee, which includes CTSA institution leaders from across the United States, recently praised the program as innovative.

The first two HSIE cohorts of postdoctoral scholars are loaded with talent and represent diverse disciplines, said Nancy Rusch, Ph.D., co-director of the TRI TL1 Training Program, which funds the scholars program.

"What excites me is that most of our postdocs will take faculty positions here, so we are embedding entrepreneurship in departments across UAMS and at Arkansas Children's Research Institute," said Rusch, also chair of the Department of Pharmacology and Toxicology and executive associate dean for Research in the College of Medicine.

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A Bright Future for Entrepreneurship Scholars

Dear Colleagues,

Our knowledge of the human body grows exponentially, with groundbreaking new discoveries every day. If only we could match this pace in our translation of discoveries into everyday practice and improved health.

We're fortunate at UAMS to be a Clinical and Translational Science Award (CTSA) institution, which has provided us the wherewithal to do something about it.

So how do we get our research discoveries and innovations to the bedside? TRI has deployed a number of strategies, and one of the most significant is the Health Sciences Innovation and Entrepreneurship (HSIE) Program. This intensive two-year program for postdoctoral fellows is innovative and unique in its partnership with the University of Arkansas Sam M. Walton College of Business in Fayetteville.

While starting a business or becoming an entrepreneur may not be a career goal, the skills we are teaching will have long-term benefits for researchers and human health.

As Dr. Nancy Gray, president of BioVentures and a program co-director, says in our story above, if the research we are conducting is intended to benefit patients, then we "have to think about its commercial path, because that's the No. 1 way to deliver to patients."

I commend Dr. Gray and program co-directors Dr. Nancy Rusch and Dr. Kevin Sexton. Their exceptional knowledge and commitment to this program ensures its success.

Sincerely,

Laura James, M.D.
Director, TRI
Associate Vice Chancellor for Clinical
and Translational Research, UAMS

Delivering the Goods

(continued from page 1)

The other co-directors of the HSIE program are UAMS' Nancy Gray, Ph.D., president of BioVentures, and Kevin Sexton, M.D., a UAMS surgeon, entrepreneur, and associate director of the UAMS Institute for Digital Health and Innovation.

HSIE trainees receive stipend support for two years; tuition and fees for a 15-credit graduate certificate; non-stipend support; and a travel allowance to attend a national meeting or symposium.



Kevin Sexton, M.D.
(pre-COVID-19 photo)

Four scholars are wrapping up their two-year stints, while four others are finishing their first year of the program. Another four scholars will be selected later this month to enter the program in July.

Some may choose to start their own businesses, but the true value of the program, Gray said, is helping researchers understand how their work can translate into a meaningful product that helps patients.

"If you're doing research to benefit patients, you have to think about the commercial path because that's the No. 1 way to deliver to patients," said Gray, also a professor in the Department of Pharmacology and Toxicology.

The trainees' entrepreneurial knowledge will translate to a major long-term impact on their careers and UAMS as a whole, the co-directors believe.

"They are going to learn in two years what it took me 20 years to learn, and not because I'm a slow learner," Gray said. "They are going to be a lot more successful in securing grants because they know what questions to ask and they can explain how their projects are relevant to patients."

Three of the four recently announced UAMS Provost Innovator Awards are supporting projects initiated by HSIE scholars Samir Jenkins, Ph.D., Astha Malhotra, Ph.D., and John Sherrill, Ph.D.

Sexton sees program graduates using their new communication skills not only to pitch their research, but to succeed as they pursue many other goals, such as negotiating more effectively to secure resources for their teams.

"What we can do with entrepreneurship that we can't do with traditional science is really talk about your funding organization or whoever you're working with as a customer," he said. "And you flip the mindset from 'how do I deliver the best science?' to 'how do I communicate this most effectively with who would be buying it?' It's really helping you refine your communication strategy so that it's tied to operational goals."

The program also directly addresses funding agencies' push for better returns on their grant investments.

"It's more important than ever that research funding translates into products that benefit mankind," Gray said.

HSIE Scholar Pursuing Vascular Graft Start-up



Astha Malhotra,
Ph.D.

Astha Malhotra, Ph.D., a postdoctoral fellow in the College of Pharmacy Department of Pharmaceutical Sciences and College of Medicine Department of Internal Medicine, joined the inaugural HSIE class with a vascular graft invention that could potentially reduce vascular surgery-associated risks and health care costs.

She hopes to use her proprietary technology to offer surgeons an easily storable, ready-to-use, conformable, and infection-resistant graft with better mechanical properties than current market options. The technology could also lead to other surgical product opportunities. She is preparing a patent application with Nancy Gray, Ph.D., president of BioVentures and co-director of the scholars program.

Malhotra and her UAF student team, ReGen Technologies, won a seed funding competition in January that provided \$2,000. She was also selected as one of three 2021 Science Venture Studio fellows by the UAF Office of Entrepreneurship and Innovation.

In Their Words: HSIE Scholars Speak to Program's Benefits

The inaugural class of Health Sciences Innovation and Entrepreneurship Scholars Program is wrapping up its final year. Three class members briefly share their thoughts about the program below:



Melody Greer, Ph.D.

Assistant Professor, Department of Biomedical Informatics.

"The HSIE program has given me a thorough understanding of small business development. This background has helped build a business partnership and accelerated multiple commercial and academic grant submissions."

Research interests: Algorithms to predict adverse events in health care. Using electronic health data to detect and develop interventions that prevent adverse events for patients.



Samir Jenkins, Ph.D.

Postdoctoral Fellow, Department of Radiation Oncology

"The HSIE program has helped me learn to communicate to a variety of technical and non-technical audiences as well as providing a window into small business development and the challenges associated with moving research from the bench to the clinic."

Research interests: Nanomaterials and stem cell differentiation; optimizing new therapeutics to more effectively treat primary and recurrent disease.

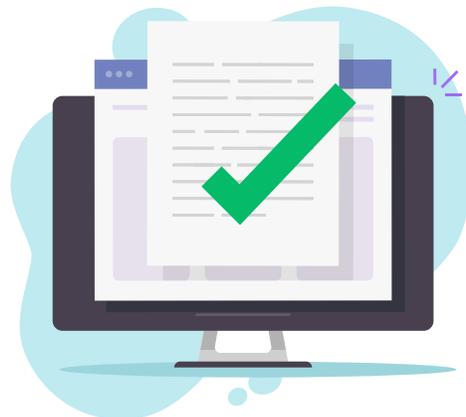


Aaron Storey, Ph.D.

Research Assistant Professor, Department of Biochemistry and Molecular Biology

"The HSIE program has given me a skillset that complements my Ph.D. studies. It has helped me see that business and science are very interconnected."

Research interests: Proteomics and mass spectrometry; developing innovations that help scientists more efficiently acquire and analyze molecular data.



TRI Re-Issues RFA for Pilot Grants to Benefit Rural Populations

All UAMS-affiliated researchers are invited to apply for pilot awards for research benefitting rural populations. One-year awards of up to \$50,000 are available.

- Letters of Intent are due April 12, 2021.
- Full applications are due May 28, 2021.

TRI seeks proposals that employ novel approaches to health care issues that particularly affect rural populations and/or that directly examine or impact rural health. Topics of interest include projects that utilize technology or that test specialized approaches that facilitate the evaluation and/or monitoring of health parameters among rural populations. In addition, projects that address health challenges of rural populations, such as access to medical care, are also of high interest.

Visit TRI.uams.edu to learn more.

Questions? Contact
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Did You Know?

TRI offers a range of services to help researchers get their projects up and running. We have an excellent team dedicated to assisting with all aspects of non-cancer clinical trials, including investigator-initiated and industry sponsored studies. TRI also offers support with biostatistics, informatics, participant recruitment, mock study sections, and more!

Check out our resources and services at TRI.uams.edu.

TRI Study of the Month



Research team members include (back row, from left) Mary Kemp, RN, Tamara Perry, M.D., Stacie Jones, M.D., Joshua Kennedy, M.D., Suzanne House, Amy Scurlock, M.D., Jeri Wolven, RN, Lily Cheak; (front row, from left) TRI lead clinical research coordinator Vallon Williams, D.N.P., APRN, Akilah Jefferson, M.D., Renee Shaide, APRN, Gina Hawkins, Pharm.D., Danielle Whiteside, Emily Seminara, Jill Hernandez, Pharm.D., M.S., HSA.

- **UAMS Study Leaders:** Stacie Jones, M.D., Professor/Principal Investigator, and Akilah Jefferson, M.D., M.Sc., Assistant Professor/Lead Site Investigator; both in Division of Allergy and Immunology, Department of Pediatrics, College of Medicine.
- **Summary:** A phase 2 placebo-controlled clinical trial to estimate the proportion of systemic allergic reactions to mRNA SARS-CoV-2 vaccines (Pfizer and Moderna) among highly allergic and non-allergic adults, ages 18-45 years (recruiting soon).
- **Significance:** Involves 30 research sites across the United States, including a collaboration between TRI and Arkansas Children's Research Institute. The study will determine the risk of systemic allergic reactions to mRNA SARS-CoV-2 vaccines. Findings will inform which populations may be at higher risk for allergic reaction related to the vaccine and will help patients and providers take appropriate precautions to ensure safety.
- **TRI Services:** Clinical research coordination and regulatory support.
- **Sponsor:** NIH National Institute of Allergy and Infectious Diseases.

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