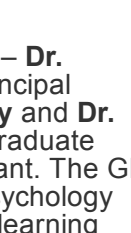




September 11, 2019

## RESEARCH



### University of Memphis Receives \$1.89 Million to Combat Opioid Crisis

Faculty across campus will lead the two grants

The University received two grants from the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services to train future behavioral health services providers in substance abuse and opioid treatment.

Three professors in psychology – **Dr. Meghan McDevitt-Murphy** (principal investigator), **Dr. James Murphy** and **Dr. Frank Andrasik** – received a Graduate Psychology Education (GPE) grant. The GPE will provide support to clinical psychology doctoral students who focus on learning therapeutic techniques for substance use disorders with an emphasis on opioid addiction. Partners for this grant include the UT Health Science Center for Addiction Science and Opioid Health. The total award is \$991,446.

The second grant, an interdisciplinary team received an Opioid Treatment Expansion Program (OWEP) Paraprofessionals award from HRSA to establish the Memphis Opioid Workforce Paraprofessional Expansion Program (MOWP-PEP). The grant will provide training and stipends to undergraduate students from counseling, criminal justice, human services, psychology and social work who complete a certificate in substance abuse with an emphasis on opioid addiction. **Dr. Melissa Hirschi** (principal investigator) of the School of Social Work is leading this grant in collaboration with **Dr. Michelle Brasfield** and **Dr. Stephen Zankas**, Department of Counseling, Educational Psychology, and Research; **Dr. Deranda Lester**, Department of Psychology; **Dr. James McCutcheon**, Department of Criminology and Criminal Justice; and **Dr. Susan Neely-Barnes**, School of Social Work. Partners for this grant include Church Health, Case Management, Inc., the Memphis Area Prevention Coalition, the Hospitality Hub, the Wellness & Stress Clinic and Quince Community Mental Health Center Inc. The total award is \$897,342. Read full press release [here](#).

### UofM partnering with UTHSC on Adverse Childhood Experiences Research

Call for Proposals

**Purpose:** To stimulate innovative, interdisciplinary, team-based adverse childhood experiences research (inclusive of T0 to T4), that involves investigators from University of Tennessee Health Science Center (UTHSC) and University of Memphis. The Award is designed to promote new lines of research and provide seed money to give rise to future external funding. It is not intended as bridging funds or a mechanism to extend ongoing funded research.

**Timeline:** Submissions are due by Monday, Sept. 16, 2019. For more information about applying, visit our website.

**Review:** Submitted proposals will be reviewed by a committee chosen by the UTHSC/UofM leadership.

A year-end progress report will be due at the close of the grant.

For questions, contact:

Lisa Youngentob, director - Research Development, [lyoungentob@uthsc.edu](mailto:lyoungentob@uthsc.edu)

Cody Behles, associate director - Innovation and Research Support, [cbehles@memphis.edu](mailto:cbehles@memphis.edu)

To view the guidelines or to apply, visit the Research and Innovation website.

### Benjamin L. Hooks Director Speaks on Political Activist Legacy

Shedding light on Ida B. Wells

**Daphne R. McFerren**, executive director of the Benjamin L. Hooks Institute for Social Change, was recently featured in an August 2019 article by Politifact, a Pulitzer winning website at the Poynter Institute, which fact-checks websites for their accuracy. Relying on interviews with McFerren, a *New York Times* reporter, and a noted historian, Politifact analyzed the historical context that ignored Wells's contributions were being ignored because she was a Republican. McFerren is an executive producer of a documentary on the life of Ida B. Wells produced by the Hooks Institute. The film is expected to be completed this fall. To read the full article in Politifact, [click here](#) to learn more about the Hooks Institute, visit their website.

### UofM Professor Lands Grant with National Geographic

Global impact of UofM research

**Dr. Keri Brondo**, Department of Anthropology Chair and Professor, has been awarded a \$31,800 grant from the National Geographic Society's Committee for Research and Exploration. The project, "Our Voices: Bridging the Gap between Conservation and Cultural Heritage on Utiia, Honduras," is a community-led documentary about Utiia that aims to unite conservation efforts and local cultural history. With this funding, the project will increase international awareness to Utiia's cause and educate future generations on its culture.

### UofM School of Health Studies Receives \$300,000 Grant

Research focus on treating atherosclerosis

**Dr. Brandt Pence**, associate professor in the Department of Health Studies, received a Transformational Project Award from the American Heart Association. The three-year, \$300,000 grant will allow Pence to examine how the regulation of mitochondrial function in macrophages can be used to treat atherosclerosis, a leading cause of cardiovascular disease. Co-investigators and consultants on the project include Dr. Liza Makowski (University of Tennessee Health Science Center), Dr. Daniel Raftery (University of Memphis) and **Dr. Thomas Sutter** (University of Memphis).

**Dr. Brandt Pence**, assistant professor in the School of Health Studies, was awarded \$300,000 from the Memphis Education Fund for his project "Mdivi-1 as an immuno metabolic regulator to treat atherosclerosis."

**Dr. Loretta Rudd**, clinical associate professor in Child Development and Family Studies, was awarded \$263,512 from The Urban Child Institute for her project "Continuation of Coordinated Effort to Enhance Development (CEED): Childcare Directors, Childcare Teachers, Parents, and Young Children."

**Dr. Laura Casey**, professor in the Department of Instruction and Curriculum Leadership (ICL), was awarded \$260,000 from the U.S. Department of Education (U.S. DoEd) in collaboration with the Tennessee Department of Education (TDOEd) for her project "TEIS vendor service intervention of statewide early intervention services to eligible infants & toddlers with disabilities birth through two years of age."

**Dr. Sabya Mishra**, associate professor in the Department of Civil Engineering, was awarded \$247,470 from the U.S. Department of Education (U.S. DoEd) in collaboration with the Tennessee Department of Education (TDOEd) for his project "Land Use."

**Dr. Gregory Washington**, professor in the School of Social Work, was awarded \$232,935 from the Utiia Child Institute for his project "Initiative for Family Empowerment."

**Dr. Kathryn Ramsey**, assistant professor in the Cecil C. Humphreys School of Law, was awarded \$229,273 from The Urban Child Institute for her project "Memphis Legal Partnership."

**Dr. Michail Gkolias**, associate professor in the Department of Civil Engineering, was awarded \$200,000 from the Tennessee Department of Education (U.S. DoEd) in collaboration with the Tennessee Department of Education (TDOEd) for his project "Investigating the Role of Prevention Technologies and Systems."

**Dr. Katie Howell**, associate professor in the Department of Psychology, was awarded \$193,259 from The Urban Child Institute (UCI) for her project "Promoting Resilience in Memphis: An Ongoing Initiative to Enhance the UCIIMPACT Services for the Health and Well-being of Urban Children."

**Dr. Katie Howell**, associate professor in the Department of Psychology, was awarded \$190,923 from The Urban Child Institute (UCI) for her project "Promoting Health and Well-being in the Urban Child Institute for a Prenatal Intervention Program."

**Dr. Genae Strong**, associate professor in the Lovenberg College of Nursing, was awarded \$148,000 from the Tennessee Department of Health (TDOH) for her project "Lowenberg College of Nursing - Lactation Support Program."

**Dr. Shahram Pezeshk**, chair and professor in the Department of Civil Engineering, was awarded \$134,400 from the Tennessee Department of Education (U.S. DoEd) in collaboration with the Tennessee Department of Education (TDOEd) for his project "Development of the West Tennessee Model for West Tennessee."

**Samuel Acuff**, Dr. James Murphy's student, in the Department of Psychology, was awarded \$107,265 for a pre-doctoral fellowship from the National Institutes of Health (NIH) for his project "Integration of Electrophysiological and Behavioral Economic Models of Reward Among Heavy Drinking Emerging Adults."

**Dr. Maryam Salehi**, assistant professor in the Department of Civil Engineering, was awarded \$75,358 from Tennessee Water Resources Research Center for her project "Investigating the Role of Water Quality and SWPPP Performance."

**Dr. Angela Madden**, associate professor in the Department of Criminal Justice, was awarded \$50,423 from the U.S. Department of Justice (U.S. DOJ) in collaboration with the City of Memphis Police Department (CMPD) for her project "Memphis Crime Gun Intelligence Center."

**Dr. Aaron Robinson**, associate professor in the Department of Electrical and Computer Engineering (ECE), was awarded \$50,000 from Sivananthan Laboratories for his project "Novel Image and Signal Processing Embedded System Design."

**Dr. Eunseo Choi**, associate professor in the Center for Earthquake Research and Information (CECRI), was awarded \$49,983 from the National Science Foundation (NSF) for his project "Workshop Proposal: Analog Modeling of Tectonic Processes 2019."

**Dr. Michail Gkolias**, associate professor in the Department of Civil Engineering, was awarded \$38,800 from the U.S. Department of Education (U.S. DoEd) in collaboration with the Tennessee Department of Education (TDOEd) for his project "SHRP-II WISE."

**Dr. Carolyn Kaldon**, research associate professor in the Center for Research in Education Policy (CREP), was awarded \$26,940 from the Utiia Child Institute for her project "Closing the Gap in Literacy with Leveled Literacy Intervention LLI at Promise Academy Hollywood."

**Dr. Todd Zoblotzky**, research associate professor in the Department of Criminal Justice, was awarded \$24,588 from Resync, LLC for his project "Blood nitrate/nitrite concentrations following acute ingestion of Resync."

**Dr. Dale Bowman**, associate professor in the Department of Mathematical Sciences, was awarded \$19,000 from the Tennessee Board of Regents (TBR) for her project "Course Revitalization for Math 1530: Teaching Statistics with Social Justice."

**Dr. Susan Elswick**, associate professor in the School of Social Work, was awarded \$17,347 from the State of Tennessee in collaboration with the Utiia Child Institute for her project "ACES Building Stronger Brains Tennessee."

**Dr. Brian Waldron**, associate professor in the Department of Engineering, and director of the Center for Applied Earth Science and Engineering (CAESEER), was awarded \$16,100 from the Utiia Child Institute for his project "Bartlett GW Support."

**Samuel Peter**, Dr. James Whelan's student, in the Department of Psychology, was awarded \$800 from the Whelan Center for Responsible Gaming for his project "Engage At-Risk Gamblers in an Online Assessment."

**Rory Pfund**, Dr. James Whelan's student, in the Department of Psychology, was awarded \$395 from the Utiia Child Institute for his project "Descriptive Gaming for his project 'Is More Better? A Meta-Analysis of Dose and Efficacy in Face to Face Psychological Treatments for Gambling Disorder'."

\* Data is reported on the 18th of each month. Any awards finalized after the 18th of each month will be reported in the following month's report.

## RESEARCH CLUSTERS



- ADDITIVE MANUFACTURING
- AGRICULTURE & FOOD TECHNOLOGIES
- BIOLOGISTICS
- CAST
- DATA SCIENCE
- DRONES
- SMART CITIES

### Research Division Honoring Retirees

Sept. 9 | 4 PM | FIT Fishbowl (203/205)

Researchers are invited to join us for a retirement reception and to bring:

- **Dr. Art Graesser**, professor of Psychology & Institute for Intelligent Systems
- **Dr. Andrew Meyers**, professor of Psychology and former VP of Research
- **Deborah Hernandez**, A/P for Research and Sponsored Programs

The event will take place at the FedEx Institute of Technology (FIT) Fishbowl (203/205), located on floor 2.

### New Teams for Research Development & Sponsored Programs

Location: Admin Bldg., 215 & 315

Faculty are reminded that the following are our new leaders at the Offices of Research Development and Sponsored Programs.

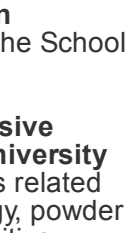
- Research Development (*Life Sciences*):
  - Françoise Mireles, x5327 | [fmireles1@memphis.edu](mailto:fmireles1@memphis.edu)
- Research Development (*Social Sciences / Health / Education*):
  - Teresa Franklin, x4911 | [tf Franklin@memphis.edu](mailto:tf Franklin@memphis.edu)
- Research Development (*all other areas*):
  - Cody Behles, x2470 | [cbehles@memphis.edu](mailto:cbehles@memphis.edu)
- Sponsored Programs (*Pre-Awards*):
  - Stephanie Thompson, x4146 | [st Thompson24@memphis.edu](mailto:st Thompson24@memphis.edu)
- Sponsored Programs (*Contracts/Awards*):
  - Ty Flores, x5071 | [tflores@memphis.edu](mailto:tflores@memphis.edu)

### NEWS TO FEATURE IN THE RESEARCH + INNOVATION NEWSLETTER?

We welcome the opportunity to highlight the research infrastructure and innovation capabilities at the University of Memphis. Email major award notifications, conference presentations to be held at the UofM, major publications, research impact stories, initiatives, etc., for inclusion in an upcoming issue of the newsletter. We look forward to sharing the world-class accomplishments taking place at the University of Memphis.

CONTACT US

## INNOVATION



### UofM Licenses Four New Research Technologies

Expanding Commercialization

The Office of Technology Transfer, through the FedEx Institute of Technology, has signed agreements to license four new technologies. These technologies include **Ultrasonic Dispersion of Cohesive Powders**, invented and developed by **Dr. Ranga Gopalakrishnan**, assistant professor in Mechanical Engineering, and **Engage: Green Living and Caregivers Support**, developed by **Dr. Susan Elswick**, associate professor in the School of Social Work.

**Ultrasonic Dispersion of Cohesive Powders**, was licensed to the **University of Memphis**. The technology, related to aerosol science and technology, powder technology and spray-based additive manufacturing.

**Engage** Technology is a cloud-based data collection system that offers real-time data collection capabilities and dynamic reporting opportunities for the user. The Engage system is a data collection tool that allows pedagogical practitioners to gather live data on any student in the classroom for up to three behaviors per student.

**Green Living Technology** is an app that allows individuals to plot their green living activities and community concerns on a map so they will be geotagged. This allows for better planning and support of green living along with demonstrating to UofM students, faculty and the surrounding area how to have sustainable green living practices.

**Caregivers Support Technology** is a parenting app that answers the many questions parents have about common behaviors such as sleeping, eating and emotional regulation, all provided from a developmental and function-based lens. This app is designed to assist caregivers in improving child behavior, developing healthy social/emotional literacy and enhancing the parent-child bond.

Engage, Green Living and Caregivers Support were licensed to **Engage Data System LLC** based in Cordova, Tenn. Engage Data Systems is a cutting-edge data collection and reporting company. Read the full press release [here](#).

### UMRF Ventures Funds Four New Professorships

Honors faculty with achievements in sponsored research

UMRF Ventures, a wholly-owned subsidiary of the University of Memphis Research Foundation (UMRF), has awarded four UMRF Ventures Professorships to the University of Memphis. These awards represent UMRF's first dividend investment.

The inaugural recipients: **Dr. Anita Boykins**, associate professor in the Lovenberg College of Nursing; **Dr. Brian Waldron**, associate professor in Civil Engineering; **Dr. Nate DeYoung**, assistant professor in Chemistry; and **Dr. Susan Neely-Barnes**, professor and chair in Social Work, will hold the UMRF Ventures Professorships for two years and will support their research and sponsored programs activities. The honorees were recently awarded these during the fall general faculty meeting held in August.

For more information on UMRF Ventures, visit their website.

### FedEx SameDay Bot "Roxo" hit the streets of the UofM

Memphis one of four initial cities selected for pilot testing

The FedEx Institute of Technology (FIT) is working with FedEx to bring autonomous last-mile delivery to the University of Memphis. Roxo, an autonomous delivery robot, along with the development teams from FedEx and DEKA Research and Development Corp., have been parked at the FedEx Institute of Technology and are performing initial testing on the latest in emerging technology at the company. The bot test started the last week of August at the FedEx Institute of Technology and traversed a route to the FedEx Office on Poplar Avenue utilizing primarily sidewalks. Testing will continue the first week of September at a downtown Memphis route. Roxo is an autonomous device and utilizes software and sensors to steer and navigate various environments.

Memphis, along with Manchester, N.H., and Plano and Frisco, Texas, were selected for initial testing of the delivery program. Retailers plan to use the FedEx SameDay Bot to make nearby customer deliveries.

### Three UofM Colleges Bring First Cohort of Urban STEM Scholars to Campus

UofM leads collaboration of three universities across the U.S. collaborating on NSF Grant

The University of Memphis was one of three urban universities to receive a portion of a \$5 million grant last year from the National Science Foundation's (NSF) Scholarships in Science, Technology, Engineering and Mathematics (S-STEM) program. The funding supports the Urban S-STEM Collaboratory project, which brings together engineering and mathematical science departments at the UofM, the University of Colorado-Denver and Indiana University-Purdue University Indianapolis to provide academic, social, professional and peer networking, career preparation; and scholarship support for approximately 150 engineering and mathematical sciences majors across the three institutions.

As a result, the PI team from the UofM Herff College of Engineering, College of Arts & Sciences and College of Communications and Fine Arts recently welcomed the first group of **Urban STEM Scholars** to campus. The collaboratory will generate new knowledge in STEM education by investigating the variety of mechanisms for supporting a diverse set of students in their pursuit of a STEM identity—the lack of which is a fundamental reason for student attrition out of STEM majors and careers.

For more information on the grant, read the full press release [here](#).

### UofM's Ali Presents Research to Google Logistics Team

Event yields robust discussion of CAST's work

**Dr. Hasan Ali**, associate professor in the Herff College of Engineering, is doing exciting research with the **CAST – Cluster to Advance Cyber Security & Testing**. Earlier this month, Ali had the opportunity to present his work to a visiting Google Logistics Team. His presentation entitled "Smart Grid Cybersecurity and Mitigation Strategy" focused on current cybersecurity issues as they relate to the power grid infrastructure. His presentation pointed out the ways in which an intruder could infiltrate a smart grid system and then put that system at risk, ultimately causing it to weaken and fail. Ali emphasized the need for innovative solutions for cyber-attacks on power grids. This led to a dynamic discussion among the audience members and the Google Logistics Team. The discussion that rounded out the event was very much in the spirit of CAST – bringing people together to collaborate and innovate.

To learn more about Ali's research, view his publication [here](#).

### College of Education Welcomes Guest Speaker, Dr. Odis Johnson

Friday, Sept. 13 | 9:30 AM | FIT Methodist Presentation Theatre (103)

Please join the College of Education as we welcome Dr. Odis Johnson for "Broadening Participation in Research Isn't Done In a Vacuum" on Friday, Sept. 13, 9:30 a.m. in the Methodist Presentation Theatre, located on the first floor of the FedEx Institute of Technology.

Johnson is a professor in the Departments of Sociology and Education, director of the NSF-funded Institute in Health, Behavior, Computational, and Mixed Methodologies, and associate director of the Center for the Study of Race, Ethnicity and Equity at the University of Memphis. Prior to his appointments at the University of Memphis, Johnson chaired the African American Studies Department at the University of Maryland. RSVP to this event [here](#).

### UofM's NIH Receives NTR Grant to Purchase Equipment

Offers precision measurements

**Dr. Amy Abell**, assistant professor in the Department of Biological Sciences, was awarded \$87,490 from the National Institutes of Health (NIH) for her purchase of a Bio-rad QX200 Droplet Digital PCR machine. This equipment enables the precise quantitation of transcripts and rare alleles from small tissue samples. The UofM has been installed in the Life Sciences Building. Abell is committed to sharing this equipment with interested faculty at the University of Memphis.

For further information, please contact Abell at [anabell@memphis.edu](mailto:anabell@memphis.edu).

## PATENT SPOTLIGHT



### New Patent Received:

**U.S. Patent No. 10,388,178**  
**Issued:** August 20, 2019

**Title:** Affect-Sensitive Intelligent Tutoring System

**Inventors:** Dr. Arthur Graesser and Dr. Sidney Keith D'Mello

**Abstract:** The invention is an Intelligent Tutoring System (ITS) system that is able to identify and respond adaptively to the learning or students' affective states (i.e., emotional states such as confusion, frustration, boredom, and flow / engagement) during a typical learning experience by investigating the variety of the learner's cognitive states. The system comprises a new signal processing model and algorithm, as well as several non-intrusive, non-sensing devices, and identifies and assesses affective states through dialog assessment techniques, video capture and analysis of the student's face, detection of time for review of example, student, pressure on a pressure sensitive device, and pressure on a pressure sensitive keyboard.

For more information on UofM technologies available for commercialization, visit the tech transfer website or contact Dr. Hai Trieu [htrieu@memphis.edu](mailto:htrieu@memphis.edu).

## COMPLIANCE



### Research Compliance Numbers

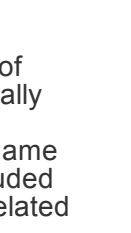
A testament to increased research activity at the UofM

As reported by **Beverly Jacobik**, sr. associate director of Research Compliance, Institutional Review Board (IRB) protocol review numbers climbed from Cayuse IRB reporting shows a dramatic 25% increase in protocol reviews between FY2018 and FY2019. These reviews reflect a 26% increase in unique protocol submissions with 571 protocols in FY2018 and 722 in FY2019. For FY2019, the average time for review of example, expedited and full board reviews as well as determination reviews was 8.12 days.

Faculty staff and students are required to submit to the IRB for review of human subjects research, followed by submitting modifications when your research changes, submitting for renewal if your approval expires and submitting for closure when your work with human subjects is complete. Thank you for increasing your research and your compliance!

To contact the Research Compliance office, email [researchcompliance@memphis.edu](mailto:researchcompliance@memphis.edu).

## CALENDAR



**DevMemphis Meetup**  
Sept 3 | 6-7:30 PM | FIT 227

Retirement Reception honoring Dr. Art Graesser, Dr. Andrew Meyers, Deborah Hernandez  
Sept 9 | 4-6 PM | FIT Fishbowl

**SAS Programming 1: Essentials**  
Sept 9-11 | 8 AM-5 PM | FIT 225

**Memphis Web Workers User Group Meetup**  
Sept 11 | 6-8 PM | FIT 225

**MemPASS/Power BI Meetup**  
Sept 12 | 5:30-7:30 PM | FIT 225

**College of Ed Speaker Series: Dr. Odis Johnson**  
Sept 13 | 9:30 AM-12 PM | FIT Zone

**Memphis Python User Group Meetup**  
Sept 16 | 6:30-8:30 PM | FIT 225

**APLU Talk with Shalin Jyotishi**  
Sept 23 | 12-2 PM | FIT Fishbowl (203/205)

**Memphis PHP User Group Meetup**  
Sept 24 | 6:30-8 PM | FIT 225

**Memphis Agile Meetup-Open Space**  
Sept 26 | 6-7:30 PM | FIT 225

**Organizational Change Management**  
Sept 26 | 6-7:30 PM | FIT 225

### University Schools Research Consortium Launch Party and Reception

Tuesday, Oct. 1 | 5-7 PM

Do you have a current or potential research project, or outreach activities that involve children or teachers? The University Schools are laboratory schools that provide opportunities for research partnerships and activities for children and teachers pre-K-8th grade.

At the University Schools Research Consortium (USRC) Launch, you will learn how to get a project or research activity approved at a University School, hear about our new 2019 grant writing incentives, find out what educational research priorities the schools have, and form networking contacts with senior researchers at the University of Memphis, as well as University schools and community partners. The evening will include opening remarks by President M. David Rudd, information on how to get involved with the USRC and a reception where interested partners can meet and talk with current USRC scholars.

Contact Dr. Carolyn Kaldon ([carolyn.kaldon@memphis.edu](mailto:carolyn.kaldon@memphis.edu)), chair of the University Schools Research Consortium, for more details or to be added to the email invitation list.

## TRAINING



### SAS Programming 1: Essentials

Sept 9-11  
FIT 225

### Society of Research Administrators International (SRAI)

2-Day Training

The University of Memphis will host the Society of Research Administrators International (SRAI) for a two-day training session Nov. 14-15. The training will cover topics related to grants and research administration.

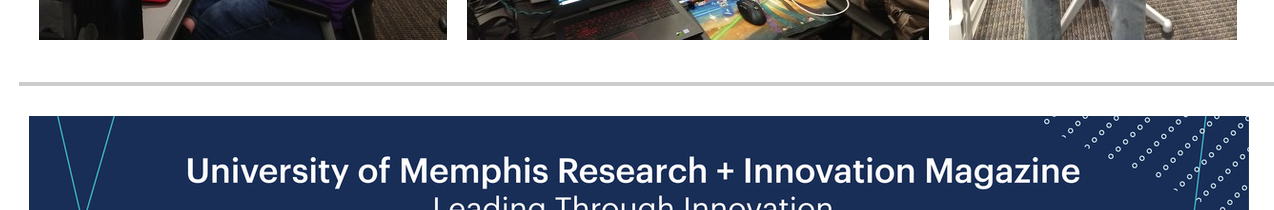
For more information regarding the training or to register, contact Latica Jones at [ljones10@memphis.edu](mailto:ljones10@memphis.edu) by Sept. 10.

## ENTREPRENEURIAL DEEP SCIENCE POST DOCS WANTED

Science-based patents often require more research for commercialization. The University of Memphis is shifting the innovation paradigm with a new program that enables post doc fellows to start their own companies using patented intellectual property.

► Salary and benefits for two years  
► Funds for initial startup costs  
► And more...

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