May 18, 2016  http://teesresearch.tamu.edu/  researchnews@tees.tamus.edu

Funding Opportunities
For previous funding opportunities, see
http://teesresearch.tamu.edu/funding-opportunities/

LIMITED SUBMISSIONS
If you would like to receive all notices of limited submission opportunities, please email shelly.martin@tamu.edu. Note that if you are on this list, you will receive any and all announcements, whether or not they apply to you. All limited submission opportunities are also posted on the VPR’s site.

**Limited Submission** NIH BD2K Predoctoral Training in Biomedical Big Data Science (T32) – Email of Intent Due May 18, 2016; Internal Proposal Due June 1, 2016

**Limited Submission** NIH Director’s Early Independence Awards (DP5) – Email of Intent Due June 15, 2016; Internal Proposal Due June 21, 2016

**Limited Submission** Department of State A Program on International Water Cooperation – Contact Dr. John Tracy at john.tracy@ag.tamu.edu

**DOD**
Department of Defense Science, Technology, Engineering & Mathematics Outreach (link) – White Papers due June 16, 2016 – Total Award Amount $9,900,000

**NIH**
Bioengineering Research Grants (BRG) (R01) (link) – Standard Due Dates: June 5, October 5, February 5 – Application budgets are not limited but need to reflect the actual needs of the proposed project.

**NSF**
Computer and Information Science and Engineering (CISE) Research Initiation Initiative (CRII) (link) – Due August 10, 2016 – Total Award Amount $10,000,000
Research Experiences for Undergraduates (REU) (link) – Due August 24, 2016

**USDA**
Agriculture and Food Research Initiative Sustainable Bioenergy and Bioproducts (SBEBP) Challenge Area (link) – Letter of Intent due July 14, 2016 – Total Award Amount $21,000,000
Agriculture and Food Research Initiative: Foundational Program (link) – A Letter of Intent (LOI) must be received by 5:00 p.m. Eastern Time on the deadline date indicated in the
Program Area Descriptions section beginning in Part I, C (see Part IV, A, for LOI instructions) – Total Award Amount $130,000,000

Notifications of Intent/Requests for Information
Notice of Intent to Issue Funding Opportunity Announcement, Clean Energy Manufacturing Innovation Institute for Reducing EMBodied-energy And Decreasing Emissions (REMADE) in Materials Manufacturing (link)

Awards/Fellowships
DoD Psychological Health/Traumatic Brain Injury Cognitive Resilience and Readiness Research Award (link) – Pre-application due June 27, 2016 – The anticipated total costs budgeted for the entire period of performance will not exceed $2.5 million (M).

Proposer Days/Webcasts
Enabling Extreme Real-Time Grid Integration of Solar Energy (ENERGISE) Webinar
May 19, 2016
Registration

Informational Webinar on National Security Science and Engineering Faculty Fellowship Competition (NSSEFF) Program
May 24, 2016 – 3 p.m.
May 31, 2016 – 3 p.m.
Registration

Webinar: Understanding SBIR & STTR Phase I Application Process
May 24, 2016
Information and Registration

NSF CAREER Program Webinar
May 26, 2016
Information and Registration

Upcoming Events
See also http://teesresearch.tamu.edu/events/ for a complete listing and links to handouts/presentations

TEES Research Development
We will post upcoming events as they are announced
Other Opportunities

Grand Networks for Grand Challenges Mini-Symposia
May 18-19, 2016
The Agrilife Center
Information and Registration

Intensive Course in Research Writing
June 27-July 15, 2016
College of Veterinary Medicine & Biomedical Sciences, Texas A&M University
Information and Registration

Bioenergy 2016: Mobilizing the Bioeconomy through Innovation
July 12-14, 2016
Washington, DC
Information

Fall 2016 NIH Regional Seminar
October 26-28, 2016
Chicago, IL
Palmer House Hilton Hotel
Registration and Information

Research News

Lele's Flagella Motor Research Develops Novel Insights in Cellular Mechanics

Dr. Pushkar Lele, assistant professor in the Artie McFerrin Department of Chemical Engineering at Texas A&M University, is developing novel insights in cellular mechanics with bacteria to aid in the design of superior biomedical implants capable of resisting colonization by infectious bugs. Lele’s group also focuses on unraveling the fundamental principles underlying interactions in biological soft-matter to build bio-nanotechnology-based molecular machines. Lele’s lab currently focuses on a unique electric rotary device found in bacteria — the flagellar motor.

According to Lele, it is well established how motile bacteria employ flagellar motors to swim and respond to chemical stimulation. This allows bacteria to search for nutrients and evade harmful chemicals. However, in his recent work, Lele has now demonstrated that the motor is also sensitive to mechanical stimulation and identified the protein components responsible for the response. Sensing initiates a sensitive control of the assemblies of numerous proteins that combine to form the motor. Control over motor assemblies facilitates fine-tuning of cellular behavior and promotes chances of survival in a variety of environments.

To view the complete story, please visit the [website](#).
Team to Study Birds in Hopes of Creating Shapeshifting Aircraft Wings

Dr. Darren Hartl, TEES Research Assistant Professor at Texas A&M University, and a team of researchers is using extensive data on avian biological systems in the hopes of creating unmanned aircraft with wings that morph and change during flight, much like a bird.

A five-year, $6 million grant sponsored by the Air Force Office of Scientific Research teams, Hartl with engineering researchers from the University of Michigan, Stanford, and UCLA in hopes of dramatically transforming aerodynamic performance. Dr. Daniel Inman, chair of the Department of Aerospace Engineering at the University of Michigan, will serve as the Principal Investigator for the project.

By delving deeper into avian neurology and musculature, the team hopes to create unprecedented efficiency and flight longevity in small aircraft and UAVs. To this end, the team will work closely with bird biologists from the United Kingdom’s Royal Veterinary College, the University of British Columbia and Stanford to closely examine the complex systems birds use to alter their wings for flight control. Research will delve into multiple aspects of bird flight: control, aerodynamics, structure and adaptive structures, looking at the muscular-skeletal structures and how bird wings move and adapt in flight.

To view the complete story, please visit the website.

Prepared by TEES Research Development under the auspices of the Associate Agency Director for Strategic Initiatives and Centers. For questions, email researchnews@tees.tamus.edu.