The Future Celebrated: Research Day in the School of Science and Engineering

April 10th, 2016
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On any given day of the year, innovation and experimentation characterize the research conducted in the School of Science and Engineering at Tulane. New publications, insights, and applications arise from researchers in the School on a regular basis, advancing their fields and shaping our world. Yet on one special day each spring, those advances are singled out for special recognition: at the annual SSE Research Day, held this year on April 8.

An annual highlight, the Research Day features a number of activities, showcasing the wide range of topics currently under investigation in the School, and giving students and faculty the chance to share their work, receive expert feedback, and explore new directions for research. The day's events include an awards ceremony honoring the most outstanding faculty research work of the year, and poster sessions by SSE undergraduate and graduate students.

Since 2007, the School has bestowed its annual Outstanding Researcher Award to the faculty member whose work represents exceptional impact in their field, the ability to attract research funding, and recognized quality of mentoring and training students. This year, the award went to YiPing Chen, the John L. and Mary Wright Ebaugh Chair in Science and Engineering, and currently Professor and Chair of the Department of Molecular and Cell Biology.

Approaching his twentieth year at Tulane, Chen received the award for his work on the regeneration of teeth. Like most skeletal structures, lost teeth—the bane of both

patients and dentists alike—must typically be replaced with replicas or implants, not original tissue. Yet using mice as models, Chen and his collaborators have envisioned different methods by which teeth could regrow.

One involves triggering an intricate cellular mechanism, called a genetic cascade, that controls the development of new teeth. The other involves conferring stem cells with odontogenic potential, or the genetic information necessary to produce a new tooth, and implanting them in locations in the subject's dental area.

In the undergraduate poster session category, two students tied for first place. Briley Bourgeois, a sophomore in Engineering Physics, who exhibited scalar methods of printing solar films, an emerging area in photovoltaic technology and Katy Robison, a senior in Biomedical Engineering, presented new ways of understanding degeneration in female reproductive tissue. Baraka Lwoya, Ph.D. student in Chemical and Biomolecular Engineering, was the winner of the graduate category with his poster that presented the exploration of the properties of a unique group of compounds called star block copolymers.

In addition to presenting at the SSE Research Day poster session, science and engineering students compete in the Health Sciences Research Day on the Tulane downtown campus. The School recognized award recipients Angela Crist (Cell and Molecular Biology), who received the Health Sciences Dean of the School of Science and Engineering Award for Excellence in Research and Presentation by a Graduate Student, and Alex Youngblood (Neuroscience) received the Dean of the School of Science and Engineering Award for Excellence in Research and Presentation by an Undergraduate Student. Annie Bowles (Cell and Molecular Biology) received the Award for Research in Stem Cell Research and Regenerative Medicine sponsored by the Tulane Center for Stem Cell Research and Regenerative Medicine, and Katelyn Black (Neuroscience) received the Award for Research in Aging Sponsored by the Tulane Center for Aging.

With so many remarkable projects on hand during the day, innovations in every field always abound, yielding new possibilities and new ideas at every turn. More efficient solar panels, and new materials in nanotechnology? Injections not to numb rotten teeth being extracted, but to spark the growth of new ones in their place? Only time will tell, but one thing is certain: at the annual SSE Research Day, the future is always on display.