Professors Jenn Prescher, Albert Siryaporn and Steven Gross win Beall Innovation Awards

The awards go to scientists who are also inventors, and who are poised to commercialize their inventions.
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The awards will help advance health research that draws inspiration from the natural world, including the ability of some organisms to glow via bioluminescence.

Picture Credit:
Tiffany Kuo

Each year, with support from the Beall Family Foundation, the School of Physical Sciences identifies two innovation leaders from amongst its faculty for Beall Innovation Awards, which recognize faculty members who have made exciting inventions that have the potential for commercialization. This year, Professor Jenn Prescher of the UCI Department of Chemistry and Professors Albert Siryaporn UCI Department of Physics & Astronomy — alongside Professor Steven Gross of the Department of Developmental and Cell Biology — received innovation awards, which come with $60,000 that is intended to advance the commercialization of these inventions.

The work in Siryaporn's lab that the award will support involves antibiotics, and how antibiotic-resistant bacteria are becoming more and more commonplace — a growing public health crisis that stands to make previously-treatable bacterial infections much more lethal. "New approaches to eradicating bacteria must be developed to combat the rise of antibiotic resistance," said Siryaporn. "The Siryaporn and Gross labs have discovered a novel mechanism that the human immune system uses to eradicate bacteria — the project that we propose seeks to leverage this mechanism to develop a new class of antibiotics."

Prescher's research also involves diseases. "We are trying to develop easy-to-use sensors that can detect multiple parameters at once, to improve the accuracy of disease diagnoses," Prescher said. This includes work she and her lab are leading to use a natural phenomenon called bioluminescence — a chemical reaction that allows the abdomens of animals like fireflies to glow — to help treat conditions like cancer. "The Beall funds will support our work to develop a smartphone system for multiplexed bioluminescence sensing," Prescher said. "The multi-parameter readout will be easy to perform at home and enable improved disease diagnosis."

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