

BY JOSEPH P. TIANO



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Turning the light on cytochrome P450

Lionel Cheruzel, an assistant professor at San Jose State University, won a Journal of

Biological Chemistry/Herbert Tabor Young Investigator Award for his work on the light-driven hybrid cytochrome P450 BM3 biocatalyst.

Cheruzel received the award at the 18th International Conference on Cytochrome P450: Biochemistry, Biophysics and Structure in Seattle from JBC Associate Editor F. Peter Guengerich of Vanderbilt University.

Cheruzel's research interests are developing hybrid P450 enzymes and photocatalytic chemistry. The cytochrome P450 superfamily is a large and diverse group of enzymes that catalyze the oxidation of organic substances. They are found in all organisms, from bacteria to humans, and Cheruzel works with the bacterial cytochrome P450 BM3. His laboratory is focused on creating hybrid cytochrome P450 BM3 that catalyzes oxidation reactions using visible light as its energy source by combining the photochemical properties of photosensitizers with the oxidation powers of cytochrome P450s.



CHERUZEL

Cheruzel grew up in the south of France before moving to the U.S. in 1999 to obtain his Ph.D. from the University of Louisville in Kentucky. He then spent three years doing a postdoc at the California Institute of Technology

before joining San José State University.

X-linked synaptophysin marks the spot

Sarah Gordon, a postdoctoral researcher at the University of Edinburgh, won a Journal of Biological Chemistry/Herbert Tabor Young Investigator Award for her work investigating the effect of mutations identified in individuals with X-linked intellectual disability on the function of the protein synaptophysin.

Gordon was named the winner of the award at the 5th Conference on Advances in Molecular Mechanisms Underlying Neurological Disorders in Bath, U.K., where JBC Associate Editor F. Anne Stephenson was in attendance.



Gordon is from Australia, where she obtained her bachelor's and Ph.D. degrees from the University of Newcastle. She moved ` to the University of Edinburgh to work in the laboratory of Michael Cousin and investigate the func-

GORDON

tional and pathological roles of synaptophysin. Synaptophysin is a synaptic vesicle glycoprotein expressed in all neurons in the brain and spinal cord; however, very little is known about its function. It is implicated in X-linked intellectual disability.

"We are only just now beginning to understand the importance of synaptophysin in maintaining synaptic health," she said. "In the future, we hope to further characterize the mechanisms underlying the presynaptic functions of synaptophysin and further delineate how this impacts on neurological disease."



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