

May 31, 2013 | By Catherine Hockmuth

## Bioengineer Christian Metallo Selected as 2013 Searle Scholar and Hellman Faculty Fellow

University of California, San Diego bioengineering professor Christian Metallo has been named a 2013 Searle Scholar. He will receive \$300,000 over the next three years to pursue his research on the role of oxygen availability in dictating how fat is produced and metabolized in the body. This work will provide therapeutic insights into metabolic diseases such as obesity.

Metallo is one of just 15 young investigators across the United States selected from 176 applications submitted by 125 universities.



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Metallo is the first Searle Scholar representing the UC San Diego Jacobs School of Engineering and the most recent of 17 UC San Diego faculty members who have received the award since its inception in 1981. The Searle Scholars program is awarded to recently appointed assistant professors in the chemical or biological sciences who have already demonstrated innovative research and show potential to make significant contributions to their field.

Metallo joined the Jacobs School of Engineering in 2011 after completing a postdoctoral fellowship on the metabolism of cancer cells at the Massachusetts Institute of Technology. His research there changed our understanding of how cells convert carbohydrates and protein (amino acids) to fatty acids, a process which was thought to have been settled science for more than 50 years. The [study](#), which was published January 2012, in the journal *Nature*, means doctors could have new targets for therapeutic drugs designed to stop cancer cell growth. In

recognition of this work, Metallo was named the Rita Schaffer Young Investigator in 2012, which is awarded each year by the Biomedical Engineering Society to stimulate the research career of a young bioengineer.

Since joining UC San Diego, Metallo has expanded his research focus to address how metabolic dysfunction contributes to other diseases. As a Searle Scholar, Metallo plans to study how fat is made and metabolized in adipose tissue, which plays an important role in storing, burning and producing fat in our bodies. His group will apply isotope tracing and mass spectrometry to determine how cells and the body regulate the conversion of different nutrients to fat. This project will help determine why conditions like sleep apnea and a lung condition known as chronic obstructive pulmonary disease (COPD) are linked to diabetes and obesity.

Metallo also is one of 10 junior faculty members to be named a Hellman Faculty Fellow at UC San Diego for 2013-14. The award supports faculty research and scholarly work as they strive for tenure. The Hellman Fellowship Program was established at UC San Diego in 1995 with an initial gift of \$2.5 million from Chris and Warren Hellman. The program is designed to provide financial support and encouragement to young faculty who show capacity for great distinction in their research and creative activities. Since its inception, more than \$3.9 million has been awarded to 252 Hellman Faculty Fellows at UC San Diego.

Metallo will use the award to study heart metabolism, as well as for efforts to educate the public on the relationship between nutrition and heart disease.

“The Hellman Faculty Fellowship is providing me with essential resources to initiate studies in this area as I build my laboratory,” said Metallo. “These funds will have a lasting impact on my work given the early stage of my career, so I am grateful for the support and honored by the selection.”

Funding for the Searle Scholars program comes from trusts established under the wills of John G. and Frances C. Searle. Mr. Searle was President of G.D. Searle & Co., a Skokie, Ill.-based pharmaceutical company. The Searle Scholars program is administered by the Kinship Foundation in Chicago.

The Searle Scholars award exemplifies the success of the UC San Diego Young Investigator Program, an effort to propel the research of young faculty. The program was developed by the Office of Corporate and Foundation Relations in collaboration with the Division of Academic Affairs and other campus partners, to connect research faculty at the start of their academic careers with the community and sources of private funding.

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