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the Sobrado Lab

News from Fralin 107



Greetings from Fralin 107!

I have been meaning to write a newsletter to keep everyone informed of the activities in the lab. I hope to summarize the achievements of the group over the year and to communicate the successes of former lab members in their new jobs. The idea is to keep in touch and to build a network.

Happy 2015!!

This year was another positive and productive year for the lab. Several people left the group and a few others joined. Our work is getting recognition at VT and beyond. Thank you for your scientific contributions and for making the lab a fun place to work. Best wishes for 2015!!!!



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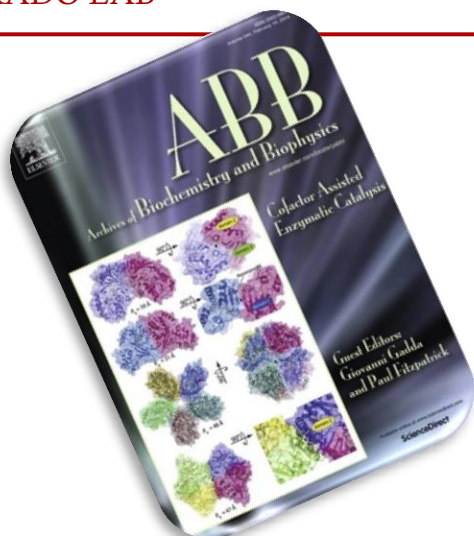
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Highlights

....some highlights of 2014

Cover of Archives of Biochemistry and Biophysics

The year started on a great note as our review article "Structure, Mechanism, and Dynamics of UDP-Galactopyranose Mutases" was highlighted on the cover of a special issue on Cofactor Assisted Enzymatic Catalysis in January.

College of Agriculture and Life Science "Excellence in Basics Research" Award

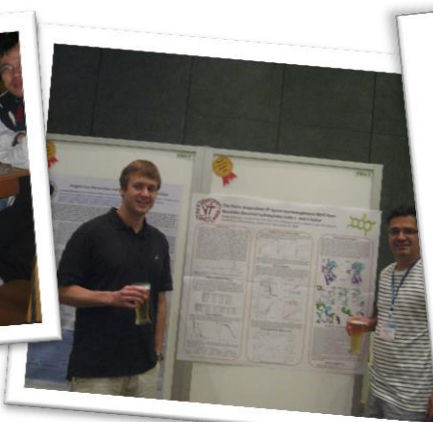
Our efforts on drug discovery were recognized by the College. This is the result of the hard work of many talented individuals over the past 7 years. Thank you all!!!!



Vince Massey Award

Reeder Robinson was the recipient of the 2014 Vince Massey Award. The award is given to young scientists that have made a significant contribution to the area of flavin enzymology. In addition to a monetary compensation the award included the opportunity to give an oral presentation at the 18th International Symposium on Flavins and Flavoproteins. Reeder gave a fantastic talk!!!!. Congratulations Reeder!!!





From current members of the Lab:



Pablo Sobrado. Pablo was able to participate in several excellent conferences. He was fortunate to attend the 36th Steenbock symposium in honor of Prof. Cleland at the University of Wisconsin (photo with Prof. Brian Fox and Paul Fitzpatrick)



Isabel Da Fonseca, postdoc. Isabel starting double duties- working with us and Dennis Dean. She continues being very productive and takes care of training undergraduate and graduate students. Isabel was the main author on a very nice paper published in *Biochemistry*.



Yumin Dai, postdoc. Yumin continues working on 2-haloacrylate hydratase and the synthesis of substrates and small molecule inhibitors. He gave an oral presentation at the VAS meeting in the summer.



Julia S. Martin Del Campo, postdoc. Julia continues her work on HTS assays with Sida. She presented her work at the VTCDD poster session. She was able to secure funding for one more year from the Mexican Scientific Council!!!!



Heba Abdelwahab, graduate student. Heba joined the lab in the fall of 2014. She is a student from Damietta University in Egypt. She will be doing her PhD thesis in our lab focusing on flavin-dependent monooxygenases.



Mynor Medrano, graduate student. Mynor joined the group from the Microbiology program in the Fall of 2014. His project focuses on flavin-monooxygenase function and inhibition.



Catherine Klancher, undergraduate. Catherine starting her thesis project on NADP(H) binding domain mutants of Sida. She presented her data at the Biophysical symposium held at VT. She is applying to several graduate schools- she will be interviewing in the spring of



Thailand

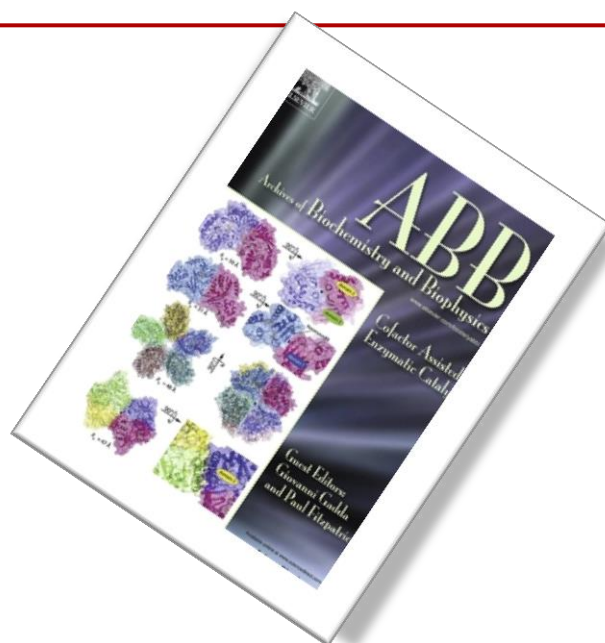
Reeder Robinson participated at the 18th International Symposium on Flavin and Flavoproteins

Reeder gave a fantastic oral presentation. He also presented a poster of his work on the lysine monooxygenase, NbtG. He spent time meeting other scientists at the conference. He also visited Bangkok with members of the Mattevi group.

Reeder will complete his PhD in the spring of 2015. He will be the second PhD student graduating from the lab.

Publications

1. Tanner, J., Boechi, L., McCammon, J.A., Sobrado, P. (2014) Structure, Mechanism, and Dynamics of UDP-Galactopyranose Mutase. *Arch. Biochem. Biophys.* 544. 128-141. Review. *Selected for the Cover*



2. Robinson, R., Franceschini, S., Fedkenheuer, M., Rodriguez, P., Ellerbrock, P., Romero, E., Echandi, M.P., Martin del Campo, J., Sobrado, P. (2014) Arg279 is the key regulator of coenzyme selectivity in the flavin-dependent ornithine monooxygenase SidA. *Biochim. Biophys. Acta.* 1844. 778-784.

3. Robinson, R., Rodriguez, P., Sobrado, P. (2014) Mechanistic studies on the flavin-dependent N^6 -lysine monooxygenase MbsG reveal an unusual control for catalysis. *Arch. Biochem. Biophys.* 550-551, 58-66.



4. Da Fonseca, I., Qureshi, I.A., Mehra-Chaudharay, R., Kizjakina, K., Tanner, J.J., Sobrado, P. (2014) Contributions of Unique Active Site Residues of Eukaryotic UDP-Galactopyranose Mutases to Substrate Recognition and Active Site Dynamics. *Biochemistry.* 53, 7794-7804.

(four more manuscripts are currently under review)

In the news:

The research from our group was highlighted in the following magazine and website:

- CALS Annual report: http://news.cals.vt.edu/229-report/files/2014/11/Agency-229_2014_online.pdf
- ASBMB: <http://www.asbmb.org/Page.aspx?id=58217>

From the Alumni

Wyatt Chocklett. Wyatt obtained his MS in 2010 and moved to NC to study an MBA at Wake Forest. Wyatt is the first graduate from the lab. His work paved the way to securing an NSF grant and to become leaders in the field of flavin monooxygenases. His paper is the most cited paper from our group. For his work, Wyatt was awarded the Outstanding master from the College of Agriculture and life Sciences.



Wyatt has been very successful in his career in healthcare management. He is currently Assistant Administrator at TriStar Horizon Medical Center. Wyatt lives in Nashville, TN with his wife Pia.



Karina Kizjakina. Karina was postdoc in the lab (2011-2013). She worked with UDP-

galactopyranose mutase and 2-chloroacrylate hydratase. Karina was very productive, publishing 7 papers (with more in preparation). She is currently a Research Scientist at Breonics Inc, Albany, NY.

Michelle (Oppenheimer) Briggs. Michelle obtained her PhD degree in 2011. She is the first PhD from the group. Her dissertation resulted in more than 10 publications and many awards, including an American Heart Association predoctoral fellowship. Michelle is currently a Research Biochemist at Joint Research and Development (JRAD). She lives in King George, VA with her husband Rob.

Jun Qi. Jun was a postdoc in the lab (2009-2011). He was the first postdoc in the lab and worked with UDP-galactopyranose mutases. He published 4 papers while in our group. He is currently a Senior Chemist at Dow Chemicals. Jun lives in Spring House, PA with his wife Congwen and daughters, Summer and Mili (we need a picture with Mili for next year ☺).



Carolyn Shirey. Carolyn obtained her BS in 2013 from VT. She worked in our lab for ~ 2 years. She published a lab first given author paper in *JBC* and was several awards for her research activities in the lab. She is currently an NSF graduate student fellow in the Department of Chemistry and Biochemistry at the University of Notre Dame. See the fellowship announcement here: <http://science.nd.edu/news/47801-notre-dame-students-receive-nsf-graduate-research-fellowships/>

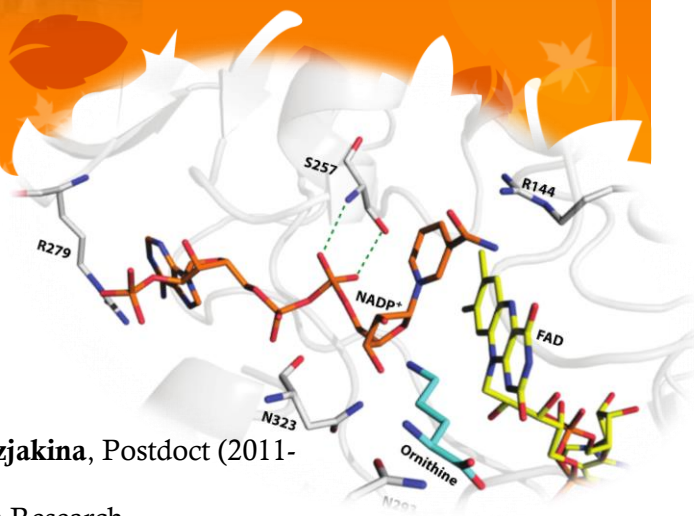


lab
first
given

ALUMNI CONTACT INFORMATION



FLAVINS!!!!



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Keep in touch!

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