2015 Vanderbilt Scholars in Diabetes

A central mission of the Vanderbilt Diabetes Center and the Vanderbilt DRTC is training the next generation of scientists and physicians who will improve the lives of patients with diabetes. Each year the Vanderbilt Diabetes Center presents the Vanderbilt Scholar in Diabetes Award to recognize a graduate student and a postdoctoral fellow based on his/her diabetes-related research at Vanderbilt.

**Keywords:** diabetes scholars, achievement, research

2015 Oscar B. Crofford Diabetes Scholars in Diabetes Awards, Daryl K. Granner Scholar in Diabetes Award, and Robert K. Hall Award

Oscar B. Crofford Scholar in Diabetes, Graduate Student

![Megan Capozzi](image)

**Megan Capozzi** received her BA in Neuroscience from Vanderbilt University in 2011 and is currently a 5th year Ph.D. student in the department of Molecular Physiology and Biophysics, working in the laboratory of Dr. John Penn. Megan’s research is aimed at understanding early mechanisms in the pathogenesis of diabetic retinopathy. Her research focuses on how diabetes can alter levels of endogenous anti-inflammatory epoxygenated lipids in the retina, and whether restoration of normal levels of these lipids has therapeutic potential. Megan’s work has benefited from a number of collaborations across campus and from the expert support of the eicosanoid core and the Vanderbilt DRTC.

Megan’s work has been presented at the International Society for Eye Research, as well as the Association for Research in Vision and Ophthalmology, where she served on the Board of Trustees as the Member-in-Training representative. She was also recognized for her work by being selected as an American Delegate to the 65th Lindau Nobel Laureate Meeting this past summer.

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Oscar B. Crofford Scholar in Diabetes, Postdoctoral Fellow M.D.

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Justin Gregory, M.D. is a pediatric endocrinologist at the Monroe Carell Jr. Children's Hospital at Vanderbilt in Nashville, Tennessee. His interest in type 1 diabetes (T1DM) research and patient care began when he developed the condition during his second year studying at the U.S. Air Force Academy. After earning a degree in mechanical engineering at the University of Tennessee, Knoxville, he travelled to Memphis for medical school and pediatrics residency at the University of Tennessee Health Sciences Center. Justin then moved to Vanderbilt University for pediatric endocrinology fellowship and joined the faculty in July 2015 as an Instructor in Pediatrics.

Dr. Gregory’s research focuses on the adverse consequences of injecting insulin into the peripheral circulation, as is currently the mainstay of T1DM therapy. Insulin treatment for T1DM contrasts with normal physiology, where insulin is secreted from the pancreas directly into the liver. He is presently investigating how novel approaches to restore normal insulin delivery can reduce hypoglycemia and other complications in T1DM. Under the mentorship of Dr. Alan Cherrington, he has presented his research findings at the American Diabetes Association’s annual Scientific Sessions and recently in the journal *Diabetes*. His research has been funded by the National Institutes of Health and the Vanderbilt University Faculty Research Scholars Program.

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Daryl K. Granner Scholar in Diabetes, Postdoctoral Fellow Ph.D.

Rachel Henry-Bonami, Ph.D., received her B.S. in Microbiology and Cell Sciences from the University of Florida with highest honors and minors in Chemistry and German. She completed her Ph.D. in Microbiology and Immunology at Vanderbilt University under the guidance of Dr. James Thomas. Her thesis work, published in *The Journal of Immunology*, demonstrated that immune tolerance for insulin is first imposed in B lymphocytes at the earliest stage of antigen-specific commitment. Developing B lymphocytes functionally differ from mature B lymphocytes in numerous ways. This observation thus widens the scope for immunomodulatory strategies to treat type 1 diabetes.

Rachel continued her postdoctoral studies at Vanderbilt, with emphasis on developing antigen-specific therapies targeting B lymphocytes in type 1 diabetes. Her work was supported by the Interdisciplinary Training in Rheumatic Diseases grant, and later by a postdoctoral fellowship awarded from the JDRF that was co-mentored by Dr. James Thomas and Dr. Al Powers. Rachel also received substantial mentoring from Dr. Peggy Kendall, Dr. Daniel Moore, and Dr. Leslie Crofford, with whom collaborations have resulted in several publications in *The Journal of Immunology, Immunogenetics*, and *Molecular Immunology*, as well as a publication that received a Faculty of 1000 recommendation in *Diabetes*. She has received invitations to present her work at Keystone Symposia, the American Association of Immunologists annual meeting, the Southeastern Immunology Symposium, and a Jackson Laboratory
Workshop focused on Humanized Mice in Translational Biomedical Research.

Rachel has provided service through teaching, including lecturing and leading small group discussions for both graduate and medical school curricula, and has also enjoyed mentoring other trainees in the laboratory.

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Robert K. Hall, Ph.D., Service Award

Jennifer Skelton, M.S. joined the Transgenic Mouse/ES Cell Shared Resource in September 1996. While initially hired to do embryonic microinjections, Jennifer’s managerial abilities soon became apparent and before long she was responsible for managing all daily activities of the resource, including both pronuclear and blastocyst microinjections, embryo and sperm cryopreservation and rederivation, as well as gene targeting in mouse embryonic stem cells. By serving as the primary contact for interactions between investigators and the Resource, Jennifer’s efforts and dedication have been essential for this Shared Resource to successfully perform complex experiments for over one hundred users. As a result, the Transgenic Mouse/ES Cell Shared Resource has been a vital component of both the Diabetes and Cancer Centers for over twenty years, and over this time has contributed to over 400 high impact publications by Vanderbilt scientists.

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