

Office Address: Department of Medicine, Division of Diabetes, Endocrinology and Metabolism, Vanderbilt University Medical Center  
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Citizenship: USA

**EDUCATION:**

1982-1985 Molloy College, Rockville Centre, N.Y. B.S., Biology (May, 1985; Magna Cum Laude)

1985-1987 Adelphi University, Garden City, N.Y. M.S., Biology (May, 1988)  
Thesis title: The role of estrogen receptor in breast tumor progression in C3H mice  
Mentors: Dr. Frank Friedman and Dr. Howard S. Grob

1992 Embryology: Cell Differentiation and Gene Expression in Early Development Course, Woods Hole Marine Biology Laboratory

1990-1995 Cornell University, New York, N.Y. Ph.D., Cell Biology and Anatomy (May, 1996)  
Thesis title: Differentiation and diversification of cardiac mesoderm in the avian embryo:  
The role of anterior endoderm  
Mentor: Dr. David Bader

1995-96 Postdoctoral fellow, Cornell University Graduate School of Medical Sciences, Dept. of Pharmacology, New York, N.Y.  
Mentor: Dr. Arleen B. Rifkind

1996-01 Postdoctoral fellow, Vanderbilt University, Dept. of Cell Biology, Nashville, TN.  
Mentor: Dr. Christopher V.E. Wright

**LEADERSHIP TRAINING:**

2011 AAMC Mid-Career Women Faculty Professional Development Seminar, December 3-6, Austin, TX.

2013-14 Vanderbilt University School of Medicine Academic Leadership Development Program

2018-19 Executive Leadership in Academic Medicine (ELAM), Drexel University

**ACADEMIC APPOINTMENTS:**

2001-2008 Assistant Professor, Departments of Medicine (Division of Diabetes, Endocrinology, and Metabolism) and Molecular Physiology and Biophysics, Vanderbilt University

2007-2008 Assistant Professor, Department of Cell and Developmental Biology, Vanderbilt University

2008-2016 Associate Professor, Departments of Medicine (Division of Diabetes, Endocrinology, and Metabolism), Molecular Physiology and Biophysics, and Cell and Developmental Biology, Vanderbilt University

2011-present Basic Scientist, Veterans Administration, Tennessee Valley Healthcare System, Research Service

2010-2012 Beta Cell Biology Consortium Coordinating Center

2011-2019 Vice Chair for Faculty Development, Department of Medicine

2016-present Professor, Departments of Medicine (Division of Diabetes, Endocrinology, and Metabolism), Molecular Physiology and Biophysics, and Cell and Developmental Biology, Vanderbilt University

2019-present Associate Dean for Faculty Development, Vanderbilt University Medical Center

**EMPLOYMENT:**

1988-90      Laboratory Technician, Cornell University Medical College, Dept. of Pharmacology  
Mentor: Dr. Arleen B. Rifkind

**PROFESSIONAL ORGANIZATIONS:**

American Association for the Advancement of Science (AAAS fellow since 2015)  
American Diabetes Association  
American Physiological Society  
Crohn's and Colitis Foundation  
Endocrine Society  
Society for Developmental Biology

**PROFESSIONAL ACTIVITIES:****Intramural service (past):**

2003-2006	Vanderbilt University Department of Cell and Developmental Biology Curriculum Committee
2003-2006	Co-organizer, Diabetes, Endocrinology Division Grand Rounds schedule
2004	Planning Committee: Vanderbilt University Summer Conferences, Frontiers in Genome Engineering: Building a Better Mouse I
2005-2011	Graduate Education Committee, Department of Molecular Physiology and Biophysics
2005, '06, '08	Vanderbilt University DRTC Pilot and Feasibility grant review panel
2005-2007	Medical Scientist Training Program, Faculty Advisory Council
2005	Vanderbilt University Transgenic/ES Cell Core Advisory Committee
2005-2009	Vanderbilt University Department of Anesthesiology Promotions Committee
2007-2010	Vanderbilt University Program in Developmental Biology, Education Committee
2008-2009	Search Committee: Stahlman Chair in Regenerative Medicine
2008-2009	Dean's Task Force on Graduate Education
2010-2013	Vanderbilt Physician Scientist Development Program Committee
2011	MSTP Curriculum Revision Committee (VUSM Curriculum 2.0)
2007-2012	Co-leader: Islet Development, Biology and Immunology group, Diabetes Research and Training Center
2008-2016	Vanderbilt Diabetes Center Working Group
2008-2016	Co-organizer, Vanderbilt University Medical Center "Diabetes Awareness Month"
2010-2016	Division of Diabetes, Endocrinology and Metabolism Fellowship Development Committee
2012	Department of Molecular Physiology and Biophysics faculty search committee
2011, 2012	Bridge Funding faculty advisory committees
2013, '15, '16	VICTR studio panel member
2014	Program in Developmental Biology retreat planning committee
2014-2015	Department of Veterans Affairs, Nashville VA, Research and development committee
2017	Diabetes Day planning committee
2017-2020	Review committee, Trans-institutional Programs (TIPs)
2011-2019	Department of Medicine, Committee on Appointments and Promotion (COAP) <i>ex officio</i>
2018-2019	Division of Diabetes, Endocrinology and Metabolism faculty search committee
2018-2019	Department of Cell and Developmental Biology faculty search committee

**Intramural service (present):**

2009-present Vanderbilt University DDRC Pilot and Feasibility grant review panel  
2012-present Edge for Scholars Internal grant review  
2015-present Department of Veterans Affairs, Nashville VA, Safety committee

**Intramural leadership positions:**

2007-2019 Medical Scientist Training Program, Advising College Leader, Stahlman/Thomas College  
2007-2019 Associate Director, Molecular Endocrinology Training Grant  
2011-2017 Vanderbilt University DRTC, Director of Enrichment, Training and Outreach  
2011-2020 Diabetes Research and Training Center, Executive Committee  
2011-2019 Department of Medicine, Executive Committee  
2011-2019 Director of the Neilson Society (Dept. of Medicine junior faculty mentoring)  
2013-2014 Chancellor's Executive Committee for Strategic Planning  
2015, 2017 Chair, Edge for Scholars Internal grant review  
2017-present Course Director: VUMC Mid-Career Faculty Leadership Development Program  
2020-present Course Director: Academic Leadership Program

**Extramural service (past):**

2006, '08, '10 American Diabetes Association abstract review committee  
'11, '14  
2006 Planning Committee: Southeast Regional meeting: Society for Developmental Biology  
2007 Session Chair, Islet Biology and  $\beta$  Cell Growth and Differentiation, 67<sup>th</sup> Scientific Sessions, American Diabetes Association  
2008-2009 American Diabetes Association, President's Blue Ribbon Awards Panel  
2010 Endocrine Society abstract review committee  
2010 Opponent/external examiner: thesis defense of Mathurin Baquie, University of Geneva School of Medicine, Geneva, Switzerland  
2012 Planning committee, Beta Cell Biology Consortium annual Investigator Retreat  
2012 Session Chair, Stem Cell Differentiation, Beta Cell Biology Consortium Investigator Retreat  
2012 American Diabetes Association, 2013 Scientific Sessions Planning sub-committee  
2012 Session Chair, Islet Biology III, 9<sup>th</sup> International Diabetes Federation Western Pacific Region Congress/4<sup>th</sup> Scientific Meeting of the Asian Association for the Study of Diabetes, Kyoto, Japan.  
2009-2014 American Diabetes Association, Medicine, Scientific and Health Care Awards Committee  
2011 Session Chair, Beta Cell Differentiation, Regeneration and Maturation, Beta Cell Biology Consortium Investigator Retreat  
2011 Session Chair, Beta Cell Growth and Maintenance, 71st Scientific Sessions, American Diabetes Association  
2011 Guided Poster Tour, Beta Cell Development, 71st Scientific Sessions, American Diabetes Association  
2011 Session Chair, Newly funded TCPA projects, Beta Cell Biology Consortium Fall Planning Meeting  
2013 Session Chair, Midwest Islet Club annual meeting, University of Michigan

2013	Session Chair, Molecular mechanisms of pancreatic diseases, Gordon Research Conference on Pancreatic Diseases
2014	Session Chair, Keystone Symposium on Emerging Concepts and Targets in Islet Biology
2014	Midwest Islet Club, annual meeting oral presentation judge
2014	Session chair, Modes and Maladies of Gene Regulation in Islets, Midwest Islet Club annual meeting
2014	Session chair, Insulin Secretory Defects in Diabetes - New Insights Into Mechanisms and Treatment, American Diabetes Association 74 <sup>th</sup> Scientific Sessions
2014-2016	Key referee, <i>Diabetologia</i>
2015	Beta Cell Workshop, Jerusalem, Israel – poster judge
2015	Session chair, Stressing out Beta Cells, Midwest Islet Club, annual meeting
2015	Midwest Islet Club, annual meeting poster judge
2015	Session chair, Rhythm and timing in beta cell function, American Diabetes Association 75 <sup>th</sup> Scientific Sessions
2016	Session chair, Type 1 diabetes: Prevention and reversal, Midwest Islet Club, annual meeting
2016	Midwest Islet Club, oral presentations judge
2016	Session chair, Immune Cells in the Islet – Always the Bad Guys?, American Diabetes Association 76 <sup>th</sup> Scientific Sessions
2013-2018	American Diabetes Association, Scientific Sessions Planning Committee
2018	Session chair, Emerging areas of islet biology, American Diabetes Association 78 <sup>th</sup> Scientific Sessions
2018	Session chair, Overcoming gender gaps in science, American Diabetes Association 78 <sup>th</sup> Scientific Sessions
2012-2018	Midwest Islet Club, annual meeting abstract review committee
2018	Session chair, Islet Development and Maturation. The Islet Biology Workshop at Vanderbilt
2019	Session chair, The beta cell in non-immune diabetes. EASD Joint meeting of the Islet Study Group and Beta Cell Workshop. Oxford, UK.
2019	Session chair: Gordon Research Conference on Pancreatic Diseases
2020	Session chair: Keystone conference on Islet Biology: From gene to cell to micro-organ

#### **Leadership positions (Past Extramural):**

2003-2004	Co-chair, planning committee: 2004 Southeast Regional meeting: Society for Developmental Biology
2006-2007	Co-organizer: Frontiers in Genome Engineering: Building a Better Mouse II
2012-2014	Chair, American Diabetes Association, Medicine, Scientific and Health Care Awards Committee
2012-2016	Associate Editor, <i>American Journal of Physiology-Endocrinology and Metabolism</i>
2012-2013	Chair, planning committee: 2013 Southeast Regional meeting: Society for Developmental Biology
2016-2018	Chair, American Diabetes Association, Scientific Sessions Planning Committee
2017-2018	Co-chair, Islet Society meeting planning committee

2017-2018	Advisory Board, Women's Interprofessional Network of the American Diabetes Association (WIN ADA)
2018-2019	Chair, Islet Biology Interest Group, American Diabetes Association

**Leadership positions (Present Extramural):**

2016-present	Senior Associate Editor, <i>Diabetes</i>
2017-present	Associate Editor, <i>Endocrinology</i>
2018-present	Scientific Advisory Board, Thomas J. Beatson Jr. Foundation
2019-present	Vice Chair, Gordon Research Conference on Pancreatic Diseases
2020-present	External advisory board, University of Colorado, Denver Diabetes Research Center
2020-present	Executive Leadership in Academic Medicine (ELAM) Learning Community Advisor
2021	External advisory board, University of Kentucky, Barnstable Brown Diabetes Center

**Grant review:**

2003-2007	American Diabetes Association
2003, 2007-09	Juvenile Diabetes Research Foundation
2005	National Health and Medical Research Council (Australia)
2006	NIDDK CADO study section Special Emphasis Panel
2007	Juvenile Diabetes Research Foundation, Review panel for RFA LOI
2008	NIH Study Section, Council ZRG F06-E20 L
2009-2011	NIH Study Section, Council ZRG1 EMNR-E 10
2009	NIH Special Emphasis Panel, Council ZRG1 DKUS-G 03
2009	NIH Special Emphasis Panel/Scientific Review Group ZRG1 EMNR-C (58) R
2010	National Science Foundation, ad hoc
2010	University of Pennsylvania, DERC P&F
2010-2018	Diabetes UK, ad hoc
2011	Swiss National Foundation, ad hoc
2011-2014	Department of Veterans Affairs END-A
2012	University of Washington, DERC P&F
	2012 JDRF/IMIDIA
2012	JDRF Medical Scientific Review Community for Beta Cell Therapies
	Replacement and Regeneration Training & Innovative Awards
2013	JDRF ad hoc
2013-2016	UAB DRTC Pilot and Feasibility
2013-2019	Diabetes Research Connection
2013	Kentucky Science and Engineering Foundation R&D Excellence award
2014	JDRF Medical Scientific Review Community for Beta Cell Therapies
	Replacement and Regeneration Training & Innovative Awards
2014-present	JDRF Replacement and Regeneration Training
2014	Warren and Clara Cole Advisory Board
2014, 2015	NIH Special Emphasis Panel, Council ZRG1 EMNR-R02
2014	NIH Special Emphasis Panel, Council ZRG1 EMNR-K03
2014	Washington University DRC Pilot and Feasibility
2015	NIH Human Islet Research Network, ZDK1 GRB-S
2015	University of Michigan, Pilot and Feasibility
2016	National Science and Engineering Research Council of Canada

2016	NIH Special Emphasis Panel, Council ZRG1 BCMB-A (51)
2016	Co-chair, NIH Special Emphasis Panel, Council ZRG1 EMNR-P (02) M
2017	JDRF Strategic Research Agreement
2017	Boston area DRC Pilot and Feasibility
2017	University of Washington DRC Fellowship Award
2017, '18	Israel Science Foundation
2017, '18	Indiana University DRC Pilot and Feasibility
2017	JDRF IDDP
2017	Willy Gepts Research Foundation of the University Hospital Brussels
2019	NIH Special Emphasis Panel, Council ZRG1 BDCN-W (92)S
2019-present	Thomas J. Beatson, Jr. Foundation for Type 1 diabetes
2020	NIH Special Emphasis Panel, Council ZRG1 EMNR-F (50)R
2020	NIH Special Emphasis Panel, Council ZRG1 EMNR-V (02)M
2020	NIH Special Emphasis Panel, Council ZDK1 GRB-S O4 R

#### **Editorial Boards:**

2000-2004	Mouse Knockout and Mutation Database
2004-2015	<i>Developmental Dynamics</i>
2008-2016	<i>The Open Endocrinology Journal</i>
2009-2011	Guest Editor, <i>The Open Endocrinology Journal</i> , Special issue: “Regulation of Postnatal Beta Cell Mass”
2014-2016	<i>Diabetes</i>
2015-present	<i>Endocrinology</i>
2017-2019	<i>Young Scientist</i>

#### **Peer review:**

*American Journal of Physiology, Cell Metabolism, Cell Reports, Current Biology, Development, Developmental Biology, Developmental Cell, Diabetes, Diabetologia, eLife, Endocrinology, Experimental and Clinical Endocrinology and Diabetes, Gastroenterology, Genes and Development, Journal of Clinical Investigation, Journal of Endocrinology, Journal of Molecular Cell Biology, Journal of Molecular Endocrinology, Molecular and Cellular Endocrinology, Molecular Metabolism, Nature Communications, Nature Genetics, Nature Medicine, Nature Metabolism, New England Journal of Medicine, Physiological Genomics, PNAS, Stem Cells, Trends in Endocrinology and Metabolism*

#### **Honors and Awards:**

1978-82	Full tuition scholarship to The Mary Louis Academy, Jamaica Estates, NY
1982-85	Full tuition scholarship to Molloy College (BS completed in 3 years)
1985-87	Full tuition assistantship to Adelphi University
1996-97	Molecular Endocrinology Training Grant fellowship recipient
1997-99	Juvenile Diabetes Foundation International postdoctoral fellowship
1997	NRSA postdoctoral fellowship (declined by candidate)
1999-00	Molecular Endocrinology Training Grant fellowship recipient
2000	Young Investigator Travel Award (NIDDK)
2005-06	Outstanding Mentor Award, Siemens Westinghouse National Competition
2007	American Diabetes Association Research Award (declined by candidate)
2007	William D. Salmon Teaching Award in Diabetes, Endocrinology and Metabolism
2010	Jeffrey E. Kudlow Memorial Lecture and Endocrine Society Visiting Professor in Endocrine Pancreas Preservation, University of Alabama Diabetes Center.

2011	Molloy College Alumni of the Month
2013	The Mary Louis Academy Alumni of the Month
2014	Juvenile Diabetes Research Foundation, Middle Tennessee Chapter, Focus on the Cure Award
2015	APS Select for distinction in scholarship for article Mosser et al, AJP Endo 308:E573-582
2015	Elected as a fellow of the American Association for the Advancement of Science (AAAS)
2018	Visiting Professor, University of Valladolid, Valladolid, Castille and Leon, Spain
2019	Thomas A. Hazinski Award for effectiveness in mentoring and professional development of faculty, Vanderbilt University
2020	Visiting Professor, Larry Hillblom Islet Research Center, University of California at Los Angeles

### **VOLUNTEER ACTIVITIES:**

St. Ann Church and School: (Past: liturgy music group, room parent, School Advisory Committee, Home and School committee, Webelos cub scout den leader, Strategic Planning focus group)  
 Pope John Paul II high school: Innov8 mentor  
 Community: Troop 1914 merit badge counselor  
 Vanderbilt: Diabetes Month glucose screenings, Aspirnaut program, Vanderbilt Summer Science Academy

**Hobbies:** Irish step dancing, singing, guitar, drawing/painting, camping

### **TEACHING:**

#### **Medical School Courses:**

2008-'09. '11	Lecturer, Diabetes Intersession, VMS1, "Pancreas Development, Stem Cells, and Islet Replacement Therapy"
2010-2018	Lecturer, NIH-sponsored T35 Summer Medical Student Diabetes Course

#### **Graduate School Courses:**

1996, 1998	Discussion leader, Interdisciplinary Graduate Program core course
2000-2005	Discussion leader, Interdisciplinary Graduate Program core course
2001-2007	Lecturer, Molecular Developmental Biology Graduate Course
2001-2003	Course Director: Tutorials in Physiology
2002	Lecture on mouse genetics, Interdisciplinary Graduate Program core course
2003-2006	Course Director: Molecular Developmental Biology
2003-2005	Lecture on Mouse models of diabetes, Interdisciplinary Graduate Program core course
2003	Moderator: Current Topics in Developmental Biology
2005	Moderator: Current Topics in Developmental Biology
2007	Discussion leader, Interdisciplinary Graduate Program core course
2008-present	Lecturer, Molecular Endocrinology of Obesity and Diabetes
2008, '09, '11, 2014	Lecturer, Introduction to Developmental Biology, Mouse module
2009, 2011	Lecturer, Cancer and Embryonic Development
2010	Co-director, Module on Reprogramming, Molecular Developmental Biology Graduate Course
2011, 12	Discussion leader, Responsible Conduct in Research workshop

2014	Molecular Physiology and Biophysics workshop: Aligning Expectations
2018	Molecular Physiology and Biophysics student invited speaker, “One scientist’s journey: Following my heart and listening to my gut”

#### **Endocrine Fellows:**

2001-‘08, ‘12 ‘14, ‘15	Lecturer, Endocrinology Grand Rounds “Preparing for your mentoring committee meetings”
2010-2015	“Developing a research career”
2015-present	Pathophysiology of Type 1 and Type 2 Diabetes

#### **Undergraduate Teaching:**

2005-2006	Lecturer, Vanderbilt Summer Science Academy
2013, 14, 17, 19	Lecturer, Aspirnaut Summer research program Vanderbilt University. “How did I get here? One scientist’s journey”
2013	Lecturer, Vanderbilt Summer Science Academy. “Beyond Insulin: The Future of Cell-based Therapies to Treat Diabetes”
2018	Lecturer, Vanderbilt Summer Science Academy. “Beyond Insulin: Changing how we think about and treat diabetes”
2020	Diabetes Virtual Summer Camp (University of Massachusetts). “One scientist’s journey: Following my heart and listening to my gut”

#### **Vanderbilt Program in Research Administration Development (VPRAD)**

2012-2017	Annual Lecture on the Sponsor Review Process: The PI Perspective
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#### **High School Teaching:**

2007-2010	Lecturer, Center for Scientific Outreach High School summer program
2008-2010	Lecturer, School for Science and Math at Vanderbilt, “Diabetes and Stem Cells”
2011-2015	Lecturer, School for Science and Math at Vanderbilt, “Women in Science”
2012-2015, ‘17	Lecturer, Aspirnaut Summer research program Vanderbilt University. “How did I get here? One scientist’s journey”
2017	Panel discussion, Program for Talented Youth, “Women in Science”
2018	School for Science and Math at Vanderbilt, “One scientist’s journey: Following my heart and listening to my gut”
2018	Vanderbilt Summer Academy/Program for Talented Youth, “Beyond insulin: The future of cell-based therapies to treat diabetes”
2019	Pope John Paul II high school, Hendersonville, TN. Science Symposium Keynote Speaker: My scientific journey toward a cure for diabetes
2020	School of Science and Math at Vanderbilt, “My journey in a career in diabetes research”

#### **Elementary School Teaching: (volunteer)**

2012	4 <sup>th</sup> grade science class on the digestive system and diabetes, St. Ann School Nashville, TN
2013	Aspirnaut Program. Poyen Elementary School, Arkansas. Lecture on Geological Timescale and Fossils to 7 <sup>th</sup> and 8 <sup>th</sup> grade students.
2013	Aspirnaut Program. Poyen Elementary School, Arkansas. Lecture on DNA to 3 <sup>rd</sup> -6 <sup>th</sup> grade students.
2014	2 <sup>nd</sup> grade science class, St. Ann School, discussion on faith and science

2014	2 <sup>nd</sup> grade science class, St. Ann School, extinction, fossils and paleontology
2015	Aspirnaut Program, Lincoln Elementary, Lincoln, TN. Lecture on Geological Timescale and Fossils to 5 <sup>th</sup> and 6 <sup>th</sup> grade students.
2016	Aspirnaut Program, Lincoln Elementary, Lincoln, TN and Poyen Elementary School, Arkansas. Lecture on Natural Selection to 5 <sup>th</sup> through 8th grade students.

### **Research Supervision:**

#### Thesis students:

Laura Wilding Crawford	(Ph.D., MPB, Aug. 2007)
Elizabeth Tweedie Ables	(Ph.D., MPB, May 2007)
Peter O. Wiebe	(Ph.D., MPB, Aug. 2007)
Amanda Ackermann (MSTP)	(Ph.D., MPB, Dec. 2008)
Michelle Guney	(Ph.D., MPB. May 2011)
Jia Zhang	(Ph.D., CDB, May 2010)
Kathryn Henley	(Ph.D., CDB, Aug. 2013)
Kimberly Gooding Riley	(Ph.D., CDB, May 2015)
Peter Kropp	(Ph.D., MPB, Dec. 2017)
Bethany Carboneau	(Ph.D., MPB, Aug. 2017)
Joseph Elsakr (MSTP)	(Ph.D., MPB, Feb. 2020)
Shannon Townsend	
Ashley Christensen	
Eric Donahue (MSTP)	(Aug. 2018-June 2020)
Darian Thomas	
Julian Burkett	

#### Thesis committees:

Lori Hornbuckle	(M.S., MPB, Aug. 2003)
Mark Gustavson	(Ph.D., Cancer Biol, Feb. 2004)
Cyrus Martin	(Ph.D., MPB, May 2004)
John LeLay	(Ph.D., MPB, Aug.2004)
Jenny VanVelkinburgh	(Ph.D., MPB, Dec. 2005)
Bonnie Cooper	(M.S., CDB, Dec. 2005)
Michelle Jacobs	(Ph.D., Neuroscience, Dec. 2008)
Ryan Pooley	(Ph.D., CDB, Dec 2006)
Jared Burlison	(Ph.D., MPB, Aug. 2007)
Amaranath Govindan	(Ph.D., CDB, Dec 2007)
Kelly Chandler	(Ph.D., MPB, May 2008)
Kelly Posey	(Ph.D., MPB, Aug. 2009)
Sui Wang	(Ph.D., CDB, Dec. 2009)
Pierre Hunt	(M.S., CI, May 2010)
Yan Hang (chair)	(Ph.D., MPB, Aug. 2010)
Sheila Kusnoor	(Ph.D., Neuroscience, May 2010)
Jami Day	(M.S., CDB, May 2007)
Jeannelle Kantz	(M.S., MPB, Dec. 2009)
Kt Moynihan	(Ph.D., CDB, Dec. 2009)
Leah Potter (chair)	(Ph.D., MPB, Dec. 2011)
Qing Cai (chair)	(Ph.D., MPB, May 2012)
Andrea Frump	(Ph.D., CDB, Dec. 2013)
Bill Nobis	(Ph.D. Neuroscience, Dec. 2009)

Jennifer Plank	(Ph.D., CDB, Dec. 2011)
Albert Powers	(Ph.D., Neuroscience, May 2010)
Sarah Kurley	(Ph.D., Cancer Biology, May 2012)
Rachel Reinert (chair)	(Ph.D., MPB, Aug. 2012)
Amy Dickey	(M.S., CDB, May 2009)
Victoria Weiss	(Ph.D., CDB, Aug. 2013)
Eric Armour	(Ph.D., CDB, Dec. 2013)
Devin Baerenwald (chair)	(M.S., MPB, Dec. 2011)
David Scoville (chair)	(Ph.D., MPB, Aug. 2015)
Brian McKenna (chair)	(Ph.D., MPB, May 2015)
Elizabeth Conrad (chair)	(Ph.D., MPB, Aug. 2015)
Jon Williams	(Ph.D., Immunology, Dec. 2015)
Jason Metcalf	(Ph.D., Biological Sciences, Dec. 2014)
Melissa Musser (chair)	(Ph.D., Human Genetics, Dec. 2014)
Ryan Ceddia	(Ph.D., Pharmacology, Dec. 2015)
Ashley Williams (chair)	(Ph.D., MPB, May 2015)
Rubin Baskir (chair)	(Jan 2014-June 2015)
Chen Huang	(Ph.D., CDB, May 2017)
Kristen Syring	(Ph.D., MPB, Aug. 2017)
Christopher Reissaus	(Ph.D., MPB, May 2017)
Amy Creecy	(Ph.D., Biomedical Engineering, Aug. 2018)
Erin Aho	(Ph.D., CDB, May 2019)
Karin Bosma	(Ph.D., MPB, March 2020)
Anne Meyer	(Ph.D., CDB, Aug. 2020)
Jack Walker	(Ph.D., MPB, Aug. 2021)
Bryan Dollinger	
Lorena Harvey	
Nate Klopfenstein	
Kai Bracey	
Matthew Cottam	
Andi Wojciechowski	
Verda Agan	

#### Medical Students

Andre Boustani	(VUSM; Emphasis mentor 2008-09)
Amanda Harris	(VUSM; Emphasis mentor 2010-11)
Brian Wright	(VUSM; Emphasis mentor 2011-12)
Arasi Kavin Arasar	(Univ. of Illinois, Chicago; SRTP mentor 2012, 1 <sup>st</sup> place AMA Research Symposium, Honolulu, HI)
Jack Allen	(Virginia Commonwealth University School of Medicine; SRTP mentor 2016)
Supriya Juneja	(University of South Carolina School of Medicine; SRTP mentor 2019)

#### Postdoctoral Fellows:

Hongjie Zhang, M.D., Ph.D.	(2002-2007; Present: Assistant Professor of Medicine, Endocrinology, Baylor College of Medicine, Houston, TX)
Renuka Menon, Ph.D.	(2007-2009; Present: Staff scientist, Baylor College of Medicine, Houston, TX)

Uma Gunasekaran, M.D.	(2009-2012; Present: Assistant Professor of Medicine, Endocrinology, UT Southwestern)
Maria Golson, Ph.D.	(2009-2014; Present: Assistant Professor, Johns Hopkins University)
Rockann Mosser, Ph.D.	(2011-2014; Present: Scientist III, PMI BioPharma Solutions, Nashville, TN)
Raymond Pasek, Ph.D.	(2013-2017; Present: Senior Data Research Analyst, Axial Healthcare, Nashville, TN)
Spencer Andrei, Ph.D.	(2017-2020; Present: Manager, Biobank tissue resource, Crohn's and Colitis Foundation)
Karin Bosma, Ph.D.	(2020-present)

Staff Scientists:

Xiaodong Zhu, PhD (2018-present)

Undergraduates:

Karla Van Zee (Vanderbilt)  
 Gift Kopsombut (Vanderbilt)  
 David Boyd (University of Virginia)  
 Paige Cooper (Spellman College)  
 Kelly Pekala (Vanderbilt)  
 Amit Chakraborty (Vanderbilt)  
 Grace Solomon (Vanderbilt)  
 Sing-Young Chen (Australia)  
 Avi Prajapati (Vanderbilt)  
 Katherine McDonald (University of Chicago)  
 Anveetha Matta (UAB)  
 Valerie Ricciardi (Vanderbilt)  
 William Aidan Pace (Vanderbilt)  
 Karly Kroeten (University of Minnesota)  
 Angelica Morales Cuerva (Molloy College)

High School:

Vamsi Reddy (summer RA)  
 Gift Kopsombut (MLK student laboratory research course)  
 Xue Feng (MLK student laboratory research course; National Finalist, Siemens Westinghouse Competition)  
 Hairan Zhu (MLK student laboratory research course)  
 Shalini Valabaneni (summer RA)  
 Arvin Harbehband (summer RA)  
 Hana Erkou (summer RA)  
 Xidi Ma (VSSM; State Semifinalist, Siemens Westinghouse Competition)  
 Brandon McClure (summer RA)  
 Ria Jagasia (summer RA)  
 Jennifer Peek (VSSM)  
 Mounika Aramandla (summer RA)  
 Anveetha Matta (VSSM)  
 Sarah Gould (Pope John Paul II Innov8 Program)  
 Connor McCain Brown (Pope John Paul II Innov8 Program)

Jake Shaver (Pope John Paul II Innov8 Program)  
Kushi Patel (Pope John Paul II Innov8 Program)  
Matthew Shipley (Pope John Paul II Innov8 Program)

#### **MENTORING COMMITTEES:**

##### **Fellows:**

2008-2009 Dr. David Degraff, postdoctoral fellow, Dr. Bob Matusik's laboratory  
2009-2011 Dr. Richard Benninger, postdoctoral fellow, Dr. David Piston's laboratory  
2010-2017 Dr. Matthew Bechard, postdoctoral fellow, Dr. Chris Wright's laboratory  
2011-2014 Dr. Fong C. Pan, postdoctoral fellow, Dr. Chris Wright's laboratory  
2011-2013 Dr. Danielle Dean, postdoctoral fellow, Dr. Al Powers's laboratory  
2014-2015 Dr. Holly Cyphert, postdoctoral fellow, Dr. Roland Stein's laboratory  
2015-2019 Dr. Emily Walker, postdoctoral fellow, Dr. Roland Stein's laboratory  
2016-2018 Dr. Molly Altman, postdoctoral fellow, Dr. David Jacobson's laboratory  
2016-2018 Dr. Kate Clouse, Assistant Professor of Medicine  
2017-2018 Dr. Jason Spaeth, postdoctoral fellow, Dr. Roland Stein's laboratory

##### **Junior faculty:**

2009-2011 Dr. Steve McElroy, Assistant Professor of Pediatrics, Neonatology  
2010-2020 Dr. Aron Parekh, Assistant Professor, Otolaryngology  
2011-2020 Dr. Fiona Harrison, Assistant Professor of Medicine  
2014-2018 Dr. Julie Sterling, Assistant Professor of Medicine  
2014-2015 Dr. Maria Golson, Research Instructor of Medicine  
2107-2019 Dr. Danielle Dean, Research Instructor in Medicine  
2019-present Dr. Irina De la Huerta, Assistant Professor of Ophthalmology and Visual Sciences  
2020-present Dr. Ayush Giri, Assistant Professor of Obstetrics and Gynecology

##### **MSTP advisees:**

**Past:** Katherine Gurba  
Michael Saita  
Magda Bolkiej  
Catherine Meador  
Albert Powers  
Marguerite Indriati Hood  
Fyza Shaikh  
Kristen Eckstrand  
John Erickson  
Michael C. Burns  
Troy Hutchens  
Matthew Surdel  
Lillian Johnson Juttakonda  
Courtney Edwards  
Thao Le  
Mobolanle Adebessin  
Matthew O'Neill  
Jennifer Peek  
Candace Grisham  
Nicholas Harris  
Andrew Hale

**Present:**

Brynna Paulukaitis

**COMPLETED GRANT SUPPORT:**

2001-03 NIDDK, "Generating mouse mutants with diabetic nephropathy", Co-investigator, Dr. Matthew Bryer, PI

2002-04 NIDDK R21, "Molecular determinants of vascularization in islets", Co-investigator, Dr. Alvin C. Powers, PI

2002-07 Juvenile Diabetes Research Foundation Career Development Award, "The role of *pdx1* and *HNF6* in proliferation and differentiation of endocrine precursors", Principal Investigator  
\$83,000/yr

2002-04 NIDDK Beta Cell Biology Consortium Pilot and Feasibility Program, "HNF6 regulation of islet differentiation and morphology", Principal Investigator  
\$50,000/yr

2003-2008 NIDDK RO1, "HNF6 function in the pancreatic endocrine lineage", Principal Investigator  
\$306,932/yr

2003-2006 Juvenile Diabetes Research Foundation, "Noninvasive assessment of pancreatic islet cell mass", Co-investigator, Dr. Alvin C. Powers, PI

2005-2007 NIDDK R56, "Foxm1b in endocrine pancreas growth and regeneration", Principal Investigator (terminated when RO1 funding started)  
\$75,000/yr

2005-2009 NIDDK RO1, "VEGF and islet vascularization", Co-investigator, Dr. Alvin C. Powers, PI

2006-2010 NIDDK RO1, "Foxm1b in endocrine pancreas growth and regeneration", Principal Investigator  
\$260,623/yr

2007-2010 Juvenile Diabetes Research Foundation, "Function of CTGF in islet development and beta cell proliferation", Principal Investigator  
\$165,000/yr

2010-2011 NIDDK R56, "Foxm1b in Endocrine Pancreas Growth and Regeneration", Principal Investigator  
\$150,000

2010-2012 NIH/NIDDK BCBC, Coordinating Center for Beta Cell Biology Consortium, Co-Investigator  
10% salary support

2010-2012 NIH/NIDDK/Vanderbilt Digestive Disease Research Center, "HNF6 expression and human pancreatic cancer" (Pilot and Feasibility Translational Research Project)  
\$20,000/yr

2011-2012 American Diabetes Association, ADA-Takeda Pharmaceuticals Beta Cell Award Mentor-based postdoctoral award, "Regulation and stimulation of beta cell proliferation by FoxM1", Principal Investigator  
\$45,000/yr

2012-2013 Vanderbilt Institute for Clinical and Translational Research (VICTR), "Effects of prostaglandin EP3 receptor signaling on insulin secretion in human islets"  
Total funding: \$6, 971

2011-2015 Juvenile Diabetes Research Foundation, "Effect of CTGF on adult beta cell proliferation and regeneration", Principal Investigator

	\$165,000/year
2012-2014	Juvenile Diabetes Research Foundation, "Linking insulin resistance and $\beta$ -cell proliferation via the FoxM1 pathway", Principal Investigator \$250,000/year
2014-2015	Juvenile Diabetes Research Foundation, "Immune cell mediated potentiation of beta cell regeneration", Principal Investigator \$110,000/year
2010-2015	NIH/NIDDK BCBC, U01, "Formation of endocrine pancreas progenitors", Consortium PI \$75,000/year
2011-2015	Veterans Administration, Merit review, "Regulation of adult pancreatic beta cell proliferation", Principal Investigator \$298,894/year
2016-2018	American Diabetes Association– Innovative basic science award, "Using CTGF to enhance functional beta cell mass", Principal Investigator \$104,545/Year
2015-2019	NIH/NIDDK R01, "Formation and maturation of endocrine pancreas progenitors", Co-Principal Investigator \$158,000/Year Direct
2015-2020	NIH/NIDDK R24, "Interrupting the Vicious Cycle of Obesity and Metabolic Syndrome" Co-Investigator \$150,000/year direct
2016-2020	Veterans Administration, Merit review, "Pathways regulating adult pancreatic beta cell replication", Principal Investigator \$150,000/year direct, plus 40% salary

### ONGOING GRANT SUPPORT:

NIH/NIDDK R01

Start and end dates: October 1, 2019 – September 30, 2023

Project Title: Manipulating islet GPCR activity to promote beta cell proliferation and survival

Total funding: \$238,819/year direct

Principal Investigator

Percent effort: 20%

### PUBLICATIONS AND PRESENTATIONS:

#### Peer reviewed research articles: (\*corresponding author)

1. Rifkind, A.B., **M. Gannon** and S.S. Gross. (1990). Arachidonic acid metabolism by dioxin-induced cytochrome P-450: a new hypothesis on the role of P-450 in dioxin toxicity. *Biochem. and Biophys. Res. Comm.* **172**, 1180-1188. PMID: 2123101
2. Nakai, K., A.M. Ward, **M. Gannon** and A.B. Rifkind. (1992).  $\beta$ -Naphthoflavone induction of a cytochrome P-450 arachidonic acid epoxygenase in chick embryo liver distinct from phenobarbital-induced arachidonic acid epoxygenase. *J. Biol. Chem.* **267**, 19503-19512. PMID: 1527070
3. Wang, G., P.J. Higgins, **M. Gannon** and L. Staiano-Coico. (1992). Transforming growth factor- $\beta$ 1 acts cooperatively with sodium n-butyrate to induce differentiation of normal human keratinocytes. *Experimental Cell Res.* **198**, 27-30. PMID: 1727055
4. Yutzey, K.E., **M. Gannon** and D. Bader. (1995). Diversification of cardiomyogenic cell lineages in vitro. *Dev. Biol.* **170**, 531-541. PMID: 7649381
5. **Gannon, M.** and D. Bader. (1995). Initiation of cardiac gene expression occurs in the absence of anterior endoderm. *Development* **121**, 2439-2450. PMID: 7671808

6. Gilday, D., **M. Gannon**, K.E. Yutzey, D. Bader and A.B. Rifkind. (1996). Molecular cloning and expression of two novel avian cytochrome P4501A enzymes induced by 2,3,7,8-tetrachlorodibenzo-p-dioxin. *J. Biol. Chem.* **271**, 33054-33059. PMID: 8955152
7. Wu, K-L., **M. Gannon**, M. Peshavaria, M.F. Offield, E. Henderson, M. Ray, A. Marks, L.W. Gamer, C.V.E. Wright and R. Stein. (1997). HNF3 $\beta$  is involved in pancreatic b cell-specific transcription of the *pdx-1* gene. *Mol. Cell. Biol.* **17**, 6002-6013. PMID: 9315659
8. Song, S. Y., **M. Gannon**, M.K. Washington, C.R. Scoggins, I.M. Meszoely, J.R. Goldenring, C.R. Marino, E.P. Sandgren, R.J. Coffey, Jr., C.V.E. Wright and S.D. Leach. (1999). TGF $\alpha$  overexpression induces Pdx1 gene activation and islet cell neogenesis in premalignant pancreatic ductal epithelium. *Gastroenterology* **117**, 1416-1428. PMID: 10579983
9. Gerrish, K., **M. Gannon**, D. Shih, E. Henderson, M. Stoffel, C.V.E. Wright and R. Stein. (2000). Pancreatic  $\beta$  cell-specific transcription of the *pdx-1* gene: The role of conserved upstream control regions and their hepatic nuclear factor 3 $\beta$  sites. *J. Biol. Chem.* **275**, 3485-3492. PMID: 10652343
10. **Gannon, M.**, P.-L. Herrera and C.V.E. Wright. (2000). Mosaic Cre-mediated recombination in pancreas using the *pdx-1* enhancer/promoter. *genesis* **26**, 143-144. PMID: 10686611
11. **Gannon, M.**, C. Shiota, C. Postic, C.V.E. Wright and M.A. Magnuson. (2000). Analysis of the Cre-mediated recombination driven by rat insulin promoter in embryonic and adult mouse pancreas. *genesis* **26**, 139-142. PMID: 10686610
12. **Gannon, M.**, D. Gilday and A.B. Rifkind. (2000). Organ and cell specific localization of dioxin-induced chick CYP1A4 and CYP1A5: endothelial cell induction of an aryl hydrocarbon hydroxylase and not of an arachidonic acid epoxidase. *Toxicol. Appl. Pharmacol.* **164**, 24-37. PMID: 10739741
13. **Gannon, M.**, M. Ray, K. Van Zee, F. Rausa, R.H. Costa and C.V.E. Wright. (2000). Persistent expression of HNF6 in islet endocrine cells causes disrupted islet architecture and loss of beta cell function. *Development* **127**, 2883-2895. PMID: 10851133
14. Dutta, S., **M. Gannon**, B. Peers, C.V.E. Wright, S. Bonner-Weir and M. Montminy. (2001). PDX:PBX complexes are required for normal proliferation of pancreatic cells during development. *Proc. Natl. Acad. Sci, USA* **98**, 1065-1070. PMID: 11158595
15. **Gannon, M.**, L.W. Gamer, and C.V.E. Wright. (2001). Regulatory regions driving developmental and tissue-specific expression of the essential pancreatic gene *pdx1*. *Dev. Biol.* **238**, 185-201. PMID: 11784003
16. Zhang, P., B. McGrath, J. Reinert, S. Li, A. Frank, **M. Gannon**, K. Ma, K. Naughton, and D.R. Cavener. (2001). The PERK eIF2 $\alpha$ kinase is required for the development of the skeletal system, postnatal growth, and the physiological function of the pancreas. *Mol. Cell. Biol.* **22**, 3864-3874. PMID: 11997520
17. Brissova, M., M. Shiota, W. Nicholson, **M. Gannon**, S.M. Knobel, D.W. Piston, C.V.E. Wright, and A.C. Powers. (2002). Reduction in pancreatic transcription factor PDX-1 impairs glucose-stimulated insulin secretion in vivo. *J. Biol. Chem.* **277**, 11225-11232. PMID: 11781323
18. Samaras, S.E., M.A. Cissell, K. Gerrish, C.V.E. Wright, **M. Gannon**, and R. Stein. (2002). Conserved sequences in a tissue-specific regulatory region of the *pdx1* gene mediate transcription in pancreatic  $\beta$  cells: Role for Hepatic Nuclear Factor 3 $\beta$  and Pax6. *Mol. Cell. Biol.* **22**, 4702-4713. PMID: 12052878
19. Kawaguchi, Y., B. Cooper, **M. Gannon**, M. Ray, R.J. MacDonald, and C.V.E. Wright. (2002). The role of the transcriptional regulator PTF1 $^{P48}$  in converting intestinal to pancreatic progenitors. *Nature Genetics*. **32**, 128-134. PMID: 12185368
20. Brissova, M., M. Fowler, P. Wiebe, A. Shostak, M. Shiota, A. Radhika, P.C. Lin, **M. Gannon**, and A.C. Powers. (2004). Intraislet endothelial cells contribute to revascularization of transplanted pancreatic islets. *Diabetes*. **53**, 1318-1325. PMID: 15111502
21. Frigeri, C., C.C. Martin, C.A. Svitek, J.K. Oeser, J.C. Hutton, **M. Gannon**, and R.M. O'Brien. (2004). The proximal promoter for islet-specific glucose-6-phosphatase catalytic subunit related

protein (IGRP) autoantigen is sufficient to initiate but not maintain transgene expression in mouse islets *in vivo*. *Diabetes*. **53**, 1754-1764. PMID: 15220199

22. Zhang, H., Y. Fujitani, C.V.E. Wright, and **M. Gannon**. (2005). Efficient recombination in pancreatic islets by a tamoxifen-inducible Cre-recombinase. *Genesis*. **42**, 210-217. PMID: 15986486
23. Fujitani, Y., S. Fujitani, D. Boyer, **M. Gannon**, Y. Kawaguchi, M.K. Ray, M. Shiota, R.W. Stein, M.A. Magnuson, and C.V.E. Wright. (2006). Targeted deletion of *cis*-regulatory region for *pdx1* reveals dosage responses of foregut differentiation, pancreas organogenesis, and function. *Genes and Dev.* **20**, 253-266. PMID: 16418487
24. Zhang, H., A.M. Ackermann, G.A. Gasarova, D. Lowe, X. Feng, U.G. Kopsombut, R.H. Costa, and **M. Gannon**. (2006). The Foxm1 transcription factor is required to maintain pancreatic beta cell mass. *Mol. Endocrinology*. **20**, 1853-66. PMID: 16556734
25. Kanetsuna, Y., K. Hirano, M. Nagata, **M. Gannon**, R.C. Harris, M.D. Breyer, and T. Takahashi. (2006). Characterization of diabetic nephropathy in a transgenic model of hypoinsulinemic diabetes. *American J of Phys: Renal Physiology*. **291**, F1315-22.
26. Boyer, D., Y. Fujitani, **M. Gannon**, A.C. Powers, R.W. Stein, and C.V.E. Wright. (2006). Complementation rescue of *Pdx1* null phenotype demonstrates distinct roles of proximal and distal *cis*-regulatory sequences in pancreatic and duodenal expression. *Dev. Biol.* **298**, 616-631. PMID: 16962573
27. Brissova, M., A. Shostak, M. Shiota, P.O. Wiebe, G. Poffenberger, J. Kantz, Z. Chen, C. Carr, W.G. Jerome, J. Chen, H.S. Baldwin, W. Nicholson, D.M. Bader, T. Jetton, **M. Gannon**, and A.C. Powers. (2006). Pancreatic islet production of vascular endothelial growth factor-a is essential for islet vascularization, revascularization, and function. *Diabetes* **55**, 2974-2985. PMID: 17065333
28. Tweedie, E.P., I. Artner, L. Crawford, G. Poffenberger, B. Thorens, R.W. Stein, A.C. Powers, and **M. Gannon**. (2006). Maintenance of Hnf6 in postnatal islets impairs terminal differentiation and function of beta cells. *Diabetes*. **55**, 3264-70. PMID: 17130469
29. Wiebe, P.O., J.D. Kormish, V.T. Roper, Y. Fujitani, N.I. Alston, K.S. Zaret, C.V.E. Wright, R.W. Stein, and **M. Gannon**. (2007). Ptf1a binds to and activates area III, a highly conserved region of the *Pdx1* promoter that mediates early pancreas-wide *Pdx1* expression. *Mol. Cell. Biol* **27**, 4093-4104. PMID: 17403901
30. Kanetsuna, Y., K. Takahashi, M. Nagata, **M. Gannon**, M.D. Breyer, R.C. Harris, and T. Takahashi. (2007). Deficiency of endothelial nitric-oxide synthase confers susceptibility to diabetic nephropathy in nephropathy-resistant inbred mice. *American J. of Pathology* **170**, 1473-1484.
31. \***Gannon, M.**, E.T. Ables, L. Crawford, D. Lowe, M.F. Offield, M.A. Magnuson, and C.V.E. Wright. (2008). *pdx-1* function is specifically required in islet  $\beta$  cells to generate appropriate numbers of endocrine cell types and maintain glucose homeostasis. *Dev. Biol.* **314**, 406-417. PMID: 18155690
32. Wilding Crawford, L., E.T. Ables, Y.A. Oh, B. Boone, S. Levy, and **M. Gannon**. (2008). Gene expression profiling of a mouse model of pancreatic islet dysmorphogenesis. *PLoS One* **3(2)**, e1611 doi:10.1371/journal.pone.0001611. PMID: 18297134
33. Ackermann Misfeldt, A., R.H. Costa, and **M. Gannon**. (2008).  $\beta$ -cell proliferation, but not neogenesis, following 60% partial pancreatectomy is impaired in the absence of Foxm1. *Diabetes* **57**, 3069-3077. PMID: 18728229
34. Elghazi, L., A.J. Weiss, D.J. Barker, J. Callaghan, L. Staloch, E.P. Sandgren, **M. Gannon**, V.N. Adsay, and E. Bernal-Mizrachi. (2009). Regulation of pancreas plasticity and malignant transformation by Akt signaling. *Gastroenterology*. **136(3)**, 1091-1103. PMID: 19121634
35. Crawford, L., M.A. Guney, Y.A. Oh, R.A. DeYoung, D.M. Valenzuela, A.J. Murphy, G.D. Yancopoulos, K.M. Lyons, D.R. Brigstock, A. Economides, and **M. Gannon**. (2009). Connective tissue growth factor (CTGF) inactivation leads to defects in islet cell lineage allocation and  $\beta$  cell proliferation during embryogenesis. *Mol. Endo.* **23(3)**, 324-336. PMID: 19131512
36. Zhang, H., E.T. Ables, C.F. Pope, M.K. Washington, S. Hipkens, A.L. Means, G. Path, J. Seufert,

R.H. Costa, A.B. Leiter, M.A. Magnuson, and **M. Gannon**. (2009). Multiple, temporal-specific roles for HNF6 in pancreatic endocrine and ductal differentiation. *Mechanisms of Development* **126**, 958-973. PMID: 19766716

37. Virostko, J., A. Radhika, G. Poffenburger, Z. Chen, M. Brissova, J. Gilchrist, B. Coleman, **M. Gannon**, E.D. Jansen, and A.C. Powers. (2010). Bioluminescence imaging in mouse models quantifies  $\beta$  cell mass in the pancreas and after islet transplantation. *Mol. Imaging and Biol.* **12**, 42-53. PMID: 19548035

38. Zhang, H., J. Zhang, C.F. Pope, L. Crawford, R. Vasavada, S.M. Jagasia, and **M. Gannon**. (2010). Gestational diabetes mellitus resulting from impaired  $\beta$  cell compensation in the absence of FoxM1, a novel downstream effector of placental lactogen. *Diabetes* **59**, 143-152. PMID: 19833884

39. Blaine, S.A., K.C. Ray, R. Anunobi, **M. Gannon**, M.K. Washington, and A.L. Means. (2010). Adult pancreatic acinar cells give rise to ducts but not endocrine cells in response to growth factor signaling. *Development* **137**, 2289-2296. PMID: 20534672

40. Vellanki, R.N., L. Zhang, M.A. Guney, **M. Gannon**, J. Rocheleau, and A. Volchuk. (2010). OASIS/CREB3L1 induces expression of genes involved in extracellular matrix production, but not classical endoplasmic reticulum stress response genes in pancreatic  $\beta$ -cells. *Endocrinology* **151**, 4146-4157. PMID: 20668028

41. Wicksteed, B., M. Brissova, W. Yan, D.M. Opland, J.L. Plank, R.L. Reinert, L.M. Dickson, N.A. Tamarina, L.H. Philipson, A. Shostak, E. Bernal-Mizrachi, L. Elghazi, M.W. Roe, P.A. Labosky, M.G. Myers, Jr., **M. Gannon**, A.C. Powers, and P. J. Dempsey. (2010). Conditional gene targeting in mouse pancreatic  $\beta$ -cells: Analysis of ectopic Cre transgene expression in the brain. *Diabetes* **59**, 3090-3098. PMID: 20802254

42. Golson, M.L., A.A. Misfeldt, U.G. Kopsombut, **M. Gannon**. (2010). High fat diet regulation of  $\beta$  cell proliferation and  $\beta$  cell mass. *The Open Endocrinology Journal* **4**, 66-77. PMID: 24339840

43. Moore, M.C., K.C. Coate, R.T. Menon, **M. Gannon**, M.S. Smith, B. Farmer, and P.E. Williams. (2010). Diet-induced gestational diabetes in the dog. *American Journal of Physiology* **110**, 458-467. PMID: 21088210

44. Guney, M.A., C.P. Petersen, A. Boustani, M.R. Duncan, U. Gunasekaran, R. Menon, C. Warfield, G.R. Grotendorst, A.L. Means, A.N. Economides, and **M. Gannon**. (2011). Connective tissue growth factor acts within both endothelial cells and  $\beta$  cells to promote proliferation of developing  $\beta$  cells. *Proc. Natl. Acad. Sci., USA* **108**(37), 15242-15247. PMID: 21876171.

45. Vanderpool, C., E.E. Sparks, K.A. Huppert, **M. Gannon**, and S.S. Huppert. (2012). Genetic interactions between Hepatocyte Nuclear Factor-6 and Notch signaling regulate mouse intrahepatic bile duct development in vivo. *Hepatology* **55**(1), 233-243. PMID: 21898486

46. Reinert, R.B., J. Kantz, A. Ackermann-Misfeldt, G. Poffenberger, **M. Gannon**, M. Brissova, and A.C. Powers. (2012). Tamoxifen-induced Cre-loxP recombination is prolonged in pancreatic islets of adult mice. *PLoS One* **7**(3), e33529. PMID: 22470452

47. Henley, K.D., K.A. Gooding, A.N. Economides, and **M. Gannon**. (2012). Inactivation of the dual Bmp/Wnt inhibitor, Sostdc1, enhances pancreatic islet function. *Am. J. Physiol. Endocrinol. Metab.* **303**, E752-E761. PMID: 22829579

48. Alfaro, M.P., D.L. Deskins, M. Wallus, Y. Dasgupta, J.J. Davidson, L. Nanney, M.A. Guney, **M. Gannon**, and P.P. Young. (2012). Connective Tissue Growth Factor (CTGF) has a positive role in early wound repair. *Laboratory Investigation* **93**(1), 81-95. PMID: 23212098

49. Lambi, A.G., T.L. Pankratz, C. Mundy, **M. Gannon**, M.F. Marbe, J.T. Richtsmeier, and S.N. Popoff. (2012). The context-dependent role of Connective Tissue Growth Factor in prenatal osteogenesis. *Developmental Dynamics* **241**(12), 1944-1959. PMID: 23073844

50. Wu, F., R. Li, Y. Umino, T.J. Kaczynski, D. Sapkota, S. Li, M. Xiang, S.J. Fliesler, D.M. Sherry, **M. Gannon**, E. Solessio, and X. Mu. (2013). Onecut1 is essential for horizontal cell genesis and retinal integrity. *J. Neurosci.* **33**(32), 13053-13065. PMID: 23926259

51. Mosser, R.E. and **M. Gannon**. (2013). An assay for small scale screening of  $\beta$  cell proliferative factors using intact islets. *Biotechniques* **55**(6), 310-312. PMID: 24344680

52. Mundy, C., **M. Gannon**, and S.N. Popoff. (2014). Connective Tissue Growth Factor (CTGF/CCN2) negatively regulates BMP-2 induced osteoblast differentiation and signaling. *J. Cell. Physiol.* **229**(5), 672-681. PMID: 24127409

53. Pekala, K.R., X. Ma, P.A. Kropp, C.P. Petersen, C.W. Hudgens, C.H. Chung, C. Shi, N. Merchant, A. Maitra, A.L. Means and **M. Gannon**. (2014). Loss of HNF6 expression correlates with human pancreatic cancer progression. *Laboratory Investigation* **94**(5), 517-527. PMID: 24638272

54. Golson, M.L., M.F. Maulis, J.C. Dunn, G. Poffenberger, J. Schug, K.H. Kaestner, and **M. Gannon**. (2014). Activated FoxM1 attenuates streptozotocin-mediated  $\beta$ -cell death. *Molecular Endocrinology* **28**(9), 1435-1447. PMID: 25073103

55. Riley, K.G., R.C. Pasek, M.F. Maulis, J. Peek, F. Thorel, D.R. Brigstock, P.L. Herrera, and **M. Gannon**. (2015). CTGF modulates adult  $\beta$  cell maturity and proliferation to promote  $\beta$  cell regeneration in mice. *Diabetes* **64**(4), 1284-1298. PMID: 25392241

56. Mosser, R.E., M.F. Maulis, V.S. Moulle, J.C. Dunn, B.A. Carboneau, K. Arasi, V. Poitout, and **M. Gannon**. (2015). High fat diet-induced beta cell proliferation occurs prior to insulin resistance in C57Bl/6J male mice. *Am. J. Physiol. Endocrinol. Metab.* **308**, E573-582. PMID: 25628421  
\*Chosen for APS Select

57. Matsuoka, T., H. Kaneto, S. Kawashima, T. Miyatsuka, Y. Tochino, A. Yoshikawa, J. Miyazaki, **M. Gannon**, R.W. Stein and I. Shimomura. (2015). Preserving MafA expression in diabetic islet  $\beta$ -cells improves glycemic control in vivo. *J. Biol. Chem.* **290**(12), 7547-7557. PMID: 25645923

58. Riley, K.G., R.C. Pasek, M.F. Maulis, J.C. Dunn, W.R. Bolus, P.L. Kendall, A.H. Hasty, and **M. Gannon**. (2015). CTGF promotes  $\beta$ -cell regeneration via immune cell modulation. *Molecular Metabolism* **4**, 584-591. PMID: 26266091

59. Golson, M.L., J.C. Dunn, M.F. Maulis, P.K. Dadi, Anna B. Osipovich, M.A. Magnuson, D. A. Jacobson, and **M. Gannon**. (2015). Activation of FoxM1 revitalizes the replicative potential of aged  $\beta$ -cells in male mice and enhances insulin secretion. *Diabetes* **64**(11), 3829-3838. PMID: 26251404

60. Ceddia, R.P., D. Lee, M.F. Maulis, B.A. Carboneau, D.W. Threadgill, G. Poffenberger, G. Milne, K.L. Boyd, A.C. Powers, O.P. McGuinness, **M. Gannon**, and R. M. Breyer. (2016). The PGE2 EP3 receptor regulates diet-induced adiposity in male mice. *Endocrinology* **157**(1), 220-232. PMID: 26485614

61. Kodama, S., Y. Nakano, K. Hirata, K. Furuyama, M. Horiguchi, T. Kuhara, T. Masui, M. Kawaguchi, **M. Gannon**, C.V.E. Wright, S. Uemoto, and Y Kawaguchi. (2016). Diabetes caused by elastase-Cre-mediated *Pdx1* inactivation in mice. *Scientific Reports* **6**, 21211. PMID: 26887806

62. Kubo, F., T. Miyatsuka, S. Sasaki, M. Takahara, Y. Yamamoto, N. Shimo, H. Watada, H. Kaneto, **M. Gannon**, T. Matsuoka, I. Shimomura. (2016). Sustained expression of GLP-1 receptor differentially modulates beta-cell function in diabetic and non-diabetic mice. *Biochem. and Biophys. Res. Comm.* **471**(1), 68-74. PMID: 26854076

63. Henley, K.D., D.E. Stanescu, P.A. Kropp, C.V.E. Wright, K-J Won, D.A. Stoffers, and **M. Gannon**. (2016). Threshold-dependent cooperativity of *Pdx1* and *Oc1* in pancreatic progenitors establishes competency for endocrine differentiation and  $\beta$ -cell function. *Cell Reports* **15**, 1-14. PMID: 27292642. PMCID: PMC4917419

63. Villa, S.R., M. Priyadarshini, M.H. Fuller, T. Bhardwaj, M.R. Brodsky, A.R. Angueira, R.E. Mosser, B.A. Carboneau, S.A. Tersey, H. Mancebo, A. Gilchrist, R.G. Mirmira, **M. Gannon**, and B.T. Layden. (2016). Loss of free fatty acid receptor 2 leads to impaired islet mass and beta cell survival. *Scientific Reports* **6**, 28159. PMID: 27324831

65. Zhang, Y., B. Fang, M. Damle, D. Guan, Z. Li, Y.H. Kim, **M. Gannon**, and M.A. Lazar. (2016). HNF6 and Rev-erba integrate hepatic lipid metabolism by overlapping and distinct transcriptional mechanisms. *Genes and Development* **30**(14), 1636-1644. PMID: 27445394.

66. Carboneau, B.A., T.D.V. Le, J.C. Dunn, and **M. Gannon**. (2016). Unexpected effects of the MIP-CreER transgene and tamoxifen on  $\beta$ -cell growth in C57Bl6/J male mice. *Phys. Reports* **4**(18), e12863. PMID: 27670405. PMCID: PMC5037909

67. Pasek, R.C., T.E. Kavanaugh, C.L. Duvall, **M.A. Gannon**. (2016). Sustained administration of  $\beta$ -cell mitogens to intact islets ex vivo using biodegradable poly(lactic-co-glycolic acid) microspheres. *J of Vis. Exp.* **117**; doi:10.3791/54664. PMID: 27842374

68. Wang, K., M. Wang, **M. Gannon**, and A.X. Holterman. (2016). Growth hormone mediates its protective effect in hepatic apoptosis through Hnf6. *PLoS One* **11**(12), e0167085. PMID: 27936029. PMCID: PMC5147851

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14. Crawford, L., M.A. Guney, Y.A. Oh, A.R. DeYoung, K.M. Lyons, D.R. Brigstock, A. Economides, **M. Gannon**. (2007). Function of CTGF in islet development and beta cell proliferation. *Diabetes* **56** (S1), A424.
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32. Elsakr, J., R.C. Pasek, D. Takahashi, K.L. Grove, A.C. Powers, **M.A. Gannon**. (2017). The effects of in utero high fat diet exposure on the endocrine pancreas of the offspring. *Diabetes* **66 (S1)**, A574.

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36. Andrei, S.R., J.C. Dunn, A.A. Christensen, V.F. Ricciardi, W.A. Pace, R.M. Breyer and **M. Gannon**. (2019). Pharmacological modulation of prostaglandin E2 receptor activity enhances b-cell mass in a mouse model of Type 2 diabetes and human islets. *Diabetes* **68 (S1)**, 196-OR \*

37. Christensen, A.A., S.A. Andrei, J.C. Dunn, V.F. Ricciardi, W.A. Pace, R.M. Breyer, and **M. Gannon**. (2020). Pharmacological modulation of prostaglandin E2 receptor activity enhances b-cell mass and maintains b-cell identity in a mouse model of Type 2 diabetes. *Diabetes* **69 (S1)** 2064P.  
<https://doi.org/10.2337/db20-2064-P>

38. Pineros, A. A. Kulkarni, M. Hernandez-Perez, K. Orr, L. Glenn, C.A. Reissaus, **M. Gannon**, M.J. McDuffie, J. Nadler, M.A. Morris, R. Mirmira, and S.A. Tersey. (2020). Islet-autonomouse inflammatory signaling propagates autoimmunity and promotes diabetes in Non-obese Diabetic mice. *Diabetes* **69 (S1)**, 85-OR.\*

### Online spotlights:

2010            TEDxNashville, Art + Science: The future of health. Seminar title: Beyond insulin: the future of cell-based therapies to treat diabetes:  
<http://www.youtube.com/watch?v=2esk6ogqrEE&feature=related>

2016            Vanderbilt University Medical Center MedTalks:  
<https://vanderbilt.box.com/s/w543f96wvz54h03mmz1lu6bkklwix883>

2016            *Physiological Reports* podcast: "Unexpected Effects of the MIP-CreER Transgene and Tamoxifen on  $\beta$ -Cell Growth in C57Bl6/J Male Mice"  
<https://www.youtube.com/watch?v=2UnVQ3ZxdZU&feature=youtu.be>

2016            NIH Women in Biomedical Careers:  
[https://womeninscience.nih.gov/women\\_scientists/gannon.asp](https://womeninscience.nih.gov/women_scientists/gannon.asp)

2016            Blog: "You've got this! Overcoming Imposter Syndrome"  
<https://vanderbiltbiomedg.com/2016/11/16/youve-got-this-overcoming-impostersyndrome/>

2017            "Hello PhD" Blog: Practical Advice for Overcoming Imposter Syndrome  
<http://hellogphd.com/2017/04/071-practical-advice-overcoming-impostersyndrome-dr->

[maureen-gannon/](http://maureen-gannon/)

2017 ADA Scientific Sessions 2017 welcome and highlights:  
<https://www.youtube.com/watch?v=TCbGYP1q6xc>  
<https://www.youtube.com/watch?v=XgyerPwq0Vg>

2018 ADA Scientific Sessions 2018 welcome and highlights:  
<http://www.adahighlights2018.com/ada-leadership-interviews>

2019 VUMC Reporter: <http://news.vumc.org/2019/08/15/gannon-named-to-new-faculty-development-role/>

2020 WSMV 4YourCommunity Spotlight:  
[https://www.wsmv.com/4\\_your\\_community/vanderbilt-researcher-trains-next-generation-of-scientists/article\\_03a680c6-398f-11ea-a950-afd917b216ed.html](https://www.wsmv.com/4_your_community/vanderbilt-researcher-trains-next-generation-of-scientists/article_03a680c6-398f-11ea-a950-afd917b216ed.html)

2020 VUMC Discover: Recognizing and Overcoming Imposter Syndrome  
[https://discover.vumc.org/2020/08/recognizing-and-overcoming-imposter-syndrome/?utm\\_campaign=discover-newsletter-27-08-2020&utm\\_source=marketo&utm\\_medium=email](https://discover.vumc.org/2020/08/recognizing-and-overcoming-imposter-syndrome/?utm_campaign=discover-newsletter-27-08-2020&utm_source=marketo&utm_medium=email)

2020 Vanderbilt Health DNA: Discoveries in Action episode 5: “Shadow of Influence: Imposter Syndrome” <https://definingpersonalizedcare.vanderbilthealth.com/episode-5>

**Invited scientific lectures (Internal/Local):**

2002-05 Medicine Grand Rounds. Seminar title: Using mouse models to dissect the role of HNF6 in islet endocrine differentiation and morphogenesis

2005 Renal Research Conference. Seminar title: Temporal regulation of the HNF6 transcription factor is essential for beta cell maturation and function

2006 DRTC Symposium. Seminar title: What factors regulate the formation and maintenance of insulin-producing cells?

2007 Department of Cell and Developmental Biology. Seminar title: Regulation of embryonic and postnatal pancreatic beta cell mass

2007 DDRC retreat. Seminar title: Factors regulating the genesis and maintenance of pancreatic beta cell mass

2007 Division of Pediatric Endocrinology, Fellows Research Conference. Seminar title: Pancreatic beta cells: generation and regeneration.

2009 Department of Pathology Grand Rounds. Seminar title: Multiple, temporal-specific roles for HNF6 in pancreatic endocrine and ductal differentiation.

2009 LIFE Medical Student organization. Seminar title: “Embryonic Stem Cells” vs. “Induced Pluripotent Stem Cells” in Research and Therapeutics: the facts and the challenges

2011 Department of Cell and Developmental Biology. Seminar title: The HNF6 transcription factor regulates pancreas differentiation and homeostasis

2014 Juvenile Diabetes Research Foundation, Middle Tennessee Chapter. Seminar title: Beyond insulin: the status of cell-based therapies to treat diabetes.

2016 Department of Cell and Developmental Biology. Seminar title: Factors regulating  $\beta$  cell mass and expansion

2017 Sertoma Club Nashville Chapter. Seminar title: Beyond insulin: The status of cell-based therapies to treat diabetes

2017 DRTC seminar series. Seminar title: Strategies for expanding functional beta cell mass

2017 Vanderbilt Bone Center. Seminar title: Novel targets for expanding functional insulin-producing cells

2020 Vanderbilt University Stem Cell and Progenitor Interest Group. Seminar title: Dissecting roles of the Pdx1 C-terminal in pancreas development and  $\beta$ -cell proliferation

2020 DRTC seminar series (virtual). Seminar title: Promoting  $\beta$ -cell survival and preserving functional  $\beta$ -cell mass by targeting PGE<sub>2</sub> receptors

**Invited lectures and scientific meeting presentations (National):**

1998 Ontogeny, Inc., Boston, MA. Seminar title: Evolutionarily conserved modules regulate *pdx-1* expression in islets.

2000 University of Colorado, Denver Health Sciences Center. Seminar title: Molecular genetics of pancreas development and  $\beta$  cell function

2002 University of Pittsburgh, Department of Medicine. Seminar title: *pdx1* and *HNF6* in pancreas development and diabetes

2005 Pacific Northwest Research Institute, Seattle, WA. Seminar title: Foxm1 and the regulation of pancreatic beta cell mass

2005 NIDDK Cellular Niches Workshop, Bethesda, MD. Seminar title: Signals that foster pancreatic development

2005 University of Illinois at Chicago, Department of Biochemistry and Molecular Genetics. Seminar title: Newly identified factors involved in regulation of pancreatic islet cell mass

2006 University of Colorado, Denver Health Sciences Center. Seminar title: Dissection of *HNF6* function in the pancreatic endocrine lineage

2006 Southeast Regional meeting of the Society for Developmental Biology, Vanderbilt University, Nashville, TN. Seminar title: Foxm1 and the generation and maintenance of pancreatic beta cell mass

2006 George Washington University, Washington, DC. Seminar title: Temporal regulation of the *HNF6* transcription factor is essential for pancreatic beta cell maturation and function

2007 Medical College of Wisconsin, Milwaukee, Department of Cell Biology. Seminar title: Regulation of the critical pancreatic gene, *pdx1*, in early pancreatic bud development

2007 University of Alabama, Birmingham, Department of Cell Biology. Seminar title: Dissection of *HNF6* function in the pancreatic endocrine lineage

2007 University of Southern California, Department of Pharmacology. Seminar title: Regulation of embryonic and postnatal beta cell mass

2007 University of Michigan, Department of Cell Biology. Seminar title: Factors regulating the genesis and maintenance of pancreatic beta cell mass

2007 Albert Einstein College of Medicine, Department of Medicine, Division of Endocrinology. Seminar title: Regulation of embryonic and postnatal pancreatic beta cell mass

2007 Developmental Biology Program for Pediatric Disorders, The Children's Hospital of Philadelphia/University of Pennsylvania. Seminar title: Regulation of embryonic and postnatal pancreatic beta cell mass

2008 Pacific Northwest Research Institute, Seattle, WA. Seminar title: Connective tissue growth factor: a novel regulator of pancreatic islet development

2008 Austin Peay State University, Clarksville, TN. Seminar title: Genetic regulation of pancreatic islet formation and function

2008 Naomi Berrie Diabetes Center, Columbia University, New York, NY. Seminar title: Beta cell mass regulation: Do all pathways lead to FoxM1?

2008 Joslin Diabetes Center, Boston, MA. Seminar title: Beta cell mass regulation: Do all pathways lead to FoxM1?

2009 Presenter, TWISTER program, Adventure Science Center, Nashville, TN. Seminar title: Genes, the Environment and Human Disease

2009 Regeneron Pharmaceuticals, Tarrytown, NY. Seminar title: Regulation of pancreatic beta cell mass and function by the secreted factors, CTGF and Sostdc1

2009 SUNY Stonybrook, Stonybrook, NY. Seminar title: Multiple, temporal-specific roles for HNF6 in pancreatic endocrine and ductal differentiation.

2010 University of Pittsburgh, Department of Medicine. Seminar title: Regulation of beta cell replication by the FoxM1 transcription factor.

2010 Baylor College of Medicine, Division of Diabetes and Metabolism. Seminar title: Regulation of beta cell replication by the FoxM1 transcription factor.

2010 Adelphi University, Garden City, NY. Keynote speaker for annual student research conference. Seminar title: Beyond insulin: the future of cell-based therapies to treat diabetes.

2010 University of Alabama, Birmingham. Jeffrey E. Kudlow Memorial Lecture and Endocrine Society Visiting Professor in Endocrine Pancreas Preservation. Seminar title: Regulation of embryonic and postnatal beta cell mass.

2010 Johns Hopkins University Bloomberg School of Public Health, Department of Biochemistry and Molecular Biology. Seminar title: The HNF6 transcription factor regulates pancreas differentiation and homeostasis

2010 University of Cincinnati Children's Hospital, Endoderm Club, Cincinnati, OH. Seminar title: Factors regulating embryonic and postnatal replication of pancreatic beta cells

2011 Washington University, St. Louis, MO. Seminar title: Factors regulating embryonic and postnatal beta cell replication

2011 University of Minnesota, Minneapolis, MN. Seminar title: Factors regulating embryonic and postnatal replication of pancreatic beta cells

2011 Eli Lilly and Co., Indianapolis, IN. Seminar title: Regulation of pancreatic beta cell replication

2012 Sarah W. Stedman Nutrition and Metabolism Center, Duke University, Durham, NC. Seminar title: Factors regulating embryonic and postnatal beta cell mass

2012 Department of Anatomy and Cell Biology, Temple University School of Medicine, Philadelphia, PA. Seminar title: Factors regulating embryonic and postnatal beta cell mass

2013 University of California, San Francisco, Diabetes Center, San Francisco, CA. Seminar title: Factors promoting pancreatic beta cell replication and regeneration

2013 Feinberg School of Medicine Northwestern University, Chicago, IL. Seminar title: Factors promoting pancreatic beta cell replication and regeneration

2014 Mt. Sinai School of Medicine, New York, NY. Seminar title: Intrinsic and extrinsic factors promoting beta cell replication and regeneration.

2014 University of Michigan, Ann Arbor, MI. Seminar title: Strategies to enhance adult beta cell proliferation and regeneration

2014 Joslin Diabetes Center, Boston, MA. Seminar title: Stimulating beta cell replication and regeneration from inside and out

2015 Medical College of Wisconsin, Department of Cell Biology, Milwaukee, WI. Seminar title: Regulation of embryonic and postnatal pancreatic  $\beta$  cell mass

2016 Indiana Biosciences Research Institute, Indianapolis, IN. Seminar title: Factors regulating  $\beta$  cell mass expansion and regeneration

2016 University of Michigan, Department of Molecular and Integrative Physiology, Ann Arbor, MI. Seminar title: Strategies for expanding functional pancreatic  $\beta$ -cell mass

2017 Columbia University Naomi Berrie Diabetes Center, New York, NY. Seminar title: Strategies for expanding functional pancreatic  $\beta$ -cell mass

2017 Barbara Davis Center for Diabetes, Denver, CO. Seminar title: Strategies for expanding functional pancreatic  $\beta$ -cell mass

2018	University of Minnesota, Stem Cell Institute, Minneapolis, MN. Seminar title: Cooperation of the Pdx1 and Ocl transcription factors in pancreatic progenitors promotes $\beta$ -cell specification and function.
2018	University of Minnesota, Department of Integrative Biology and Physiology, Minneapolis, MN. Seminar title: Novel therapeutic targets for enhancing functional $\beta$ -cell mass
2018	Weill Cornell Medical College, Department of Pharmacology, New York, NY. Seminar title: Novel therapeutic targets for enhancing pancreatic $\beta$ -cell mass
2018	Human Anatomy and Physiology Society annual conference, Columbus, OH. Seminar title: Beyond insulin: Changing how we think about and treat diabetes
2019	National Institute of Environmental Health and Safety, Durham, NC. Seminar title: Molecular targets for enhancing pancreatic $\beta$ -cell regeneration and survival
2019	Molloy College, Rockville Centre, NY. Seminar title: Beyond insulin: Changing how we think about and treat diabetes
2019	Washington University Department of Cell Biology, St. Louis, MO. Seminar title: Molecular targets for enhancing $\beta$ -cell proliferation and survival
2020	University of California, Los Angeles (virtual). Seminar title: Enhancing functional beta cell mass and cardiac function by targeting prostaglandin E2 receptors
2020	University of Florida Diabetes Institute (virtual). Seminar title: Molecular targets for enhancing beta cell regeneration and survival
2020	University of Kentucky Barnstable Brown Diabetes Center Research Day keynote speaker (virtual). Seminar title: Enhancing functional beta cell mass and cardiac function by targeting prostaglandin E2 receptors
2020	University of Washington Diabetes Research Center retreat keynote speaker (virtual). Seminar title: Molecular targets for enhancing beta cell regeneration and survival
2021	Einstein-Mt. Sinai Diabetes Research Center (virtual). Seminar title: Molecular targets for enhancing beta cell regeneration and survival

**Invited lectures and scientific meeting presentations (International):**

2000	60th annual American Diabetes Association meeting, San Antonio, TX. Seminar title: Transcription factors regulating islet morphogenesis and function: PDX-1 and HNF6
2002	Annual meeting of the EASD, Keble College, Oxford, England. Seminar title: Pleiotropic transcription factors in glucose metabolism and beta cell differentiation.
2006	American Society of Gene Therapy, Baltimore, MD. Seminar title: Temporal regulation of the pancreatic transcription factor HNF6 is essential for beta cell maturation
2006	FASEB Symposium: Fetal origins of adult disease, San Francisco, CA. Seminar title: Factors regulating the genesis and maintenance of pancreatic beta cell mass
2008	68th annual American Diabetes Association meeting, San Francisco, CA. Seminar title: Transcriptional control of endocrine pancreas differentiation
2009	Mount Sinai Hospital/Banting and Best Diabetes Center City-Wide Endocrine Grand Rounds, Toronto, Ontario, Canada. Seminar title: FoxM1 and regulation of pancreatic beta cell mass.
2009	69 <sup>th</sup> annual American Diabetes Association meeting, New Orleans, LA. Seminar title: FoxM1 and beta cell replication.
2010	Annual meeting of the Endocrine Society, San Diego, CA. Seminar title: The role of FoxM1 in beta cell expansion during pregnancy.
2010	Karolinska Institute, Stockholm, Sweden. EMBO workshop on Disease, Development and Stem Cells in the Pancreas. Seminar title: Beta cell proliferation during embryogenesis.

2010 University Medical Centre, Geneva, Switzerland. Seminar title: Regulation of embryonic and postnatal beta cell replication

2010 Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland. Seminar title: Regulation of embryonic and postnatal beta cell replication

2011 EMBO Workshop: Programming beta cell development, impairment, and regeneration, Helsingør, Denmark. Seminar title: Extrinsic and intrinsic regulators of beta cell mass expansion

2012 Beta Cell Biology Consortium Annual Investigator Retreat, Chantilly, VA. Seminar title: Formation of endocrine pancreas progenitors

2012 9<sup>th</sup> International Diabetes Federation Western Pacific Region Congress/4<sup>th</sup> Scientific Meeting of the Asian Association for the Study of Diabetes, Kyoto, Japan. Seminar title: Extrinsic and intrinsic modulation of beta cell replication.

2013 73rd annual American Diabetes Association meeting, Chicago, IL. Seminar title: Pregnancy-associated changes in islet cell proliferation

2013 Montreal Diabetes Research Center, Montreal, Canada. Seminar title: Factors promoting pancreatic beta cell replication and regeneration

2013 Centro Andaluz de Biología Molecular y Medicina Regenerativa (CABIMER), Sevilla, Spain. Seminar title: Factors promoting pancreatic beta cell replication and regeneration

2014 Keystone Conference on Emerging Concepts and Targets in Islet Biology, Keystone, CO. Seminar title: Connective Tissue Growth Factor-mediated  $\beta$ -cell proliferation and regeneration.

2014 Beta Cell Biology Consortium Annual Investigator Retreat, Bethesda, MD. Seminar title: Genetic and physical interactions between Pdx1 and Hnf6 in pancreas endocrine specification, differentiation and function.

2014 Beta Cell Biology Consortium Annual Investigator Retreat, Bethesda, MD. Seminar title: Connective tissue growth factor-mediated  $\beta$ -cell proliferation and regeneration.

2015 Beta Cell Workshop of the EASD, Jerusalem, Israel. Seminar title: Connective tissue growth factor modulates  $\beta$ -cell intrinsic and extrinsic characteristics to promote  $\beta$ -cell regeneration

2015 Gordon Conference on Pancreatic Diseases, Mount Holyoke College, South Hadley, MA. Seminar title: Modulation of intrinsic and extrinsic  $\beta$ -cell characteristics to promote replication and regeneration.

2015 Singapore Symposium on Metabolic Diseases. Seminar title: FoxM1 and the regulation of functional  $\beta$ -cell mass

2016 Alberta-British Columbia Islet Workshop, Kelowna, British Columbia, Canada. Seminar title: Factors regulating  $\beta$  cell mass and expansion and regeneration

2016 Keystone conference on Stem Cells and Regeneration in the Digestive Organs, Keystone, CO. Seminar title: Expansion of functional pancreatic  $\beta$  cell mass using CTGF.

2016 Danish Diabetes Academy Summer School on Diabetes and Metabolism, Helsingør, Denmark. Seminar title:  $\beta$ -cell proliferation and regeneration

2018 University of Valladolid, Spain. Seminar title: Molecular targets for enhancing pancreatic  $\beta$ -cell regeneration and survival

2019 Wellcome Trust-MRC Institute of Metabolic Science, Cambridge University, UK. Seminar title: Persistent effects of early genetic and environmental factors on pancreatic islet maturation and function.

2019 International CCN Society, Niagara, Ontario, Canada. Seminar title: Function of CCN2 in pancreatic beta cell proliferation and regeneration.

2020	Keystone conference on Islet Biology: From gene to cell to micro-organ, Santa Fe, NM. Seminar title: Promoting $\beta$ -cell survival and preserving functional $\beta$ -cell mass by targeting PGE <sub>2</sub> receptors.
2021	American Diabetes Association 81 <sup>st</sup> Scientific Sessions (virtual). Seminar title: The year in review -Basic Science
2021	American Diabetes Association 81 <sup>st</sup> Scientific Sessions (virtual). Seminar title: Cooperative function of Pdx1 and Oc1in $\beta$ -cell proliferation and compensation

#### **Mentoring/career development (Internal):**

2008	Women On Track. Checking off your tenure “to do” list
2009	Summer student Research Internship Program. What is it like to be a scientist?
2010	Office of Postdoctoral Affairs seminar series. Developing a research career
2010	Molecular Endocrinology Training Program annual retreat. How did I get here? One METP trainee’s scientific journey
2011-2014	Department of Medicine Neilson Society. Checking off your tenure “to do” list
2011	Department of Medicine Neilson Society. Getting your CV (and you!) ready for that next step
2012	Vanderbilt-Fisk MS to PhD Bridging Program, The Imposter Phenomenon or Do I Really Belong Here? Understanding and Coping with the Inability to Internalize Success
2012	Women On Track. Getting your CV (and you!) ready for that next step
2012	Women On Track. The Imposter Phenomenon or Do I Really Belong Here?
2013	Understanding and Coping with the Inability to Internalize Success
2013	Postdoctoral Association. The Imposter Phenomenon or Do I Really Belong Here?
2013	Understanding and Coping with the Inability to Internalize Success
2013	Women on Track. Establishing a national reputation
2014	Department of Medicine Neilson Society. Getting ready for tenure
2014	Vanderbilt MSTP. The Imposter Phenomenon or Do I Really Belong Here?
2014	Understanding and Coping with the Inability to Internalize Success
2015-2016	Department of Medicine Neilson Society. What is required for tenure and promotion and what does it mean?
2015	Vanderbilt University Department of Biomedical Engineering. The Imposter Phenomenon or Do I Really Belong Here? Understanding and Coping with the Inability to Internalize Success
2016	Vanderbilt MSTP. The Imposter Phenomenon or Do I Really Belong Here?
2016	Understanding and Coping with the Inability to Internalize Success
2016	Vanderbilt ASPIRE. The Imposter Phenomenon or Do I Really Belong Here?
2016	Understanding and Coping with the Inability to Internalize Success
2016	Vanderbilt Summer Student Academy. The Imposter Phenomenon or Do I Really Belong Here? Understanding and Coping with the Inability to Internalize Success
2016	Women On Track. The Imposter Phenomenon or Do I Really Belong Here?
2016	Understanding and Coping with the Inability to Internalize Success
2016	Women in the Academy. Margaret Cuninggim Women’s Center at Vanderbilt University. What to expect when starting your independent academic career
2017	Department of Medicine Neilson Society. Preparing for tenure and promotion
2017	Division of Gastroenterology, Hepatology and Nutrition Grand Rounds. The Imposter Phenomenon or Do I Really Belong Here? Understanding and Coping with the Inability to Internalize Success
2017	Division of Infectious Diseases. The Imposter Phenomenon or Do I Really Belong Here?
	Understanding and Coping with the Inability to Internalize Success

2018	Faculty Affairs Office, Early Career Faculty workshop. The Imposter Phenomenon or Do I Really Belong Here? Understanding and Coping with the Inability to Internalize Success
2018	Post-doc Café. Recognizing and Overcoming the Imposter Syndrome
2018	Vanderbilt MSTP. Conflict Resolution Styles
2018	Vanderbilt University East House freshmen: Recognizing and Overcoming the Imposter Syndrome
2019	Vanderbilt University Murray House freshmen: Recognizing and Overcoming the Imposter Syndrome
2019	Vanderbilt University Margaret Cuninggim Women's Center Women's History Month seminar: Recognizing and Overcoming the Imposter Syndrome
2019	Vanderbilt University Medical Center Epidemiology Grand Rounds: Effective mentor-mentee relationships: What does each side need to know?
2019	Vanderbilt University MSTP: Navigating academic relationships
2020	Vanderbilt University Department of Biochemistry student invited speaker: Recognizing and Overcoming the Imposter Syndrome
2020	Vanderbilt University Medical Center Institute for Medicine and Public Health staff meeting: Conflict management styles
2020	Vanderbilt University Medical Center Department of Neurology Grand Rounds (virtual): The Imposter Syndrome: Guidance for you and those you mentor
2020	Vanderbilt University Medical Center Department of Pediatrics, Katherine Dodd Scholars (virtual): The Imposter Syndrome: Guidance for you and those you mentor
2020	Quantitative and Chemical Biology student IMPACT group (virtual): Recognizing and Overcoming the Imposter Syndrome
2020	VI4 Junior Faculty Retreat, Panel Discussion (virtual): Managing People Effectively
2020	Quantitative and Chemical Biology student IMPACT group (virtual): Recognizing and Overcoming the Imposter Syndrome
2021	Edge for Scholars (virtual): Recognizing and Overcoming the Imposter Syndrome
2021	Vanderbilt MSTP: Recognizing and Overcoming the Imposter Syndrome

#### **Mentoring/career development (External):**

2016	University of Michigan, Ann Arbor, MI. Panel discussion on overcoming gender gaps in academic success.
2018	University of Valladolid, Spain: Recognizing and overcoming the Imposter Syndrome
2018	University of Valladolid, Spain: Navigating a scientific career
2018	University of Valladolid, Spain: Conflict resolution
2018	Robert Wood Johnson Harold Amos Medical Faculty Development Program, Nashville, TN: Conflict Management
2019	Molloy College, Rockville Centre, NY. Biology/Pre-med majors: Careers in the biomedical sciences
2020	Larry Hillblom Islet Research Center Pancreatic Beta Cell Group, (virtual) visiting professor for graduate student theses
2020	American College of Rheumatology Annual Conference (virtual): Communication and Conflict Management