

CURRICULUM VITAE

Christopher B. Brown, Ph.D.

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Academic Appointments:

2017-present Assistant Professor, Department of Pharmaceutical Social and Administrative Sciences, College of Pharmacy and Health Sciences, Belmont University (Tenure track)
2017-2019 Adjunct Faculty, Department of Pharmacology, Vanderbilt University
2009-2016 Assistant Professor of Pediatrics and Pharmacology, Vanderbilt University (Research track)
2003-2009 Assistant Professor of Pediatrics and Pharmacology, Vanderbilt University (Tenure track)

Postgraduate Training:

1999-2003 Postdoctoral fellow. Division of Cardiology. University of Pennsylvania, Philadelphia, Pennsylvania. Laboratory of Jonathan A. Epstein M.D.
1997-1998 Postdoctoral fellow. Division of Cardiology. Vanderbilt University Medical Center, Nashville, Tennessee. Laboratory of Joey V. Barnett PhD.

Education:

1992-1997 Ph.D., Vanderbilt University, Nashville, Tennessee (Pharmacology).
1990-1992 M.S. student, Auburn University, Auburn Alabama (Zoology).
Transferred after acceptance to PhD program At Vanderbilt University
1986-1990 B.S., Auburn University, Auburn, Alabama (Microbiology).

Research Experience:

1999-2003 Postdoctoral fellow in the Division of Cardiology. University of Pennsylvania, Philadelphia, Pennsylvania. Laboratory of Jonathan A. Epstein M.D. Studied transcriptional regulation and signalling systems governing cardiac neural crest cell mediated septation of the outflow tract during heart development in mouse transgenic model systems.

1998-1999	Postdoctoral fellow in the Division of Cardiology. Vanderbilt University, Nashville, Tennessee. Laboratory of Joey V. Barnett Ph.D. Studied the role of TGFβ receptors in regulating and localizing endothelial to mesenchymal transformation (EMT) during cardiac valve formation in the chicken model system.
1992-1997	Graduate Student, Department of Pharmacology. Vanderbilt University, Nashville, Tennessee. Research Project, "The role of the Type II and Type III TGFβ receptors in atrioventricular cushion transformation" (Preceptor: Joey V. Barnett Ph.D.).
1990-1992	Graduate Student in M.S. program, Department of Zoology and Wildlife Science. Auburn University, Auburn, Alabama. Research Project: "Effects of alcohol on HL-60 cell differentiation." Degree not completed in favor of Ph.D. program at Vanderbilt.
1990	Graduate Student in M.S. program, Department of Animal and Dairy Science. Auburn University, Auburn, Alabama. "Microbial and nutritional properties of broiler litter as an alternate bovine food source". Switched to M.S. Program in Zoology and Wildlife science to pursue interests and learn techniques in molecular biology.
1989-1990	Undergraduate Research Assistant, Department of Animal and Dairy Science. Auburn University, Auburn, Alabama. "Microbial and nutritional properties of broiler litter as an alternate bovine food source"

Teaching Experience:

Belmont University

2025(summer)	<u>PHM 6106 Integrated Pharmaceutical Sciences 3</u> -Lecturer
2025-present	<u>PHM 6125 Immunology and Infectious Diseases</u> -Course coordinator and lecturer. new curriculum, new lecture preparations
2024-present	<u>PHM 6106 Integrated Pharmaceutical Sciences 3</u> -Lecturer, new curriculum, new lecture preparations
2024-present	<u>PHM 6105 Integrated Pharmaceutical Sciences 2</u> -Lecturer, new curriculum, new lecture preparations
2022, 2025	<u>PHM 6240 Pharmacodynamics IV</u> -Lecturer
2020-2024	<u>PHM 6360 PHM Seminar</u> -2020-2022 Instructor, 2 sections -Course coordinator 2023 -Reviewer 2024
2020-2024	<u>PHM 6210 Pharmacodynamics 3</u> -Lecturer 2020-2021

	-Course Coordinator 2022-2024
2019	Independent study: Kirstin Stork
2018-present	PHM 6991 Special Topics in Pharmacotherapy: <u>End of Life Issues and Care</u> -Course Coordinator
2018	BEL 1015 <u>First Year Seminar</u>
2017	GND 1015 <u>First Year Seminar</u> , 2 sections per semester
2017-2023	PHM 6120 <u>Human Anatomy & Physiology for Pharmacy</u> -Course Coordinator 2018-2021 -Instructor 2022-2023
2017-2022	PHM 6260 <u>Professional and Technical Writing</u> -Course Coordinator 2018-2021.
2017-2024	PHM 6150 <u>Microbiology and Immunology</u> -Course Coordinator and sole instructor 2017-2024

Pharmacy Student Preceptor, Advanced Pharmacy Practice Experience (APPE)

6/2025	<u>Summer research APPE- 1 student</u> (Jacob Kaufman)
6/2024	<u>Summer research APPE- 1 student</u> (Akram Mohammad)
6/2023	<u>Summer research APPE- 1 student</u> (April Pepper)
2/2021	<u>Academic APPE- 1 student</u> (Maureen Davies)
7/2020	<u>Summer research APPE- 1 student</u> (Kyle Coutinho)

Other Teaching Experience

2016	Biochemistry I, Fisk University. "Serine/threonine receptor kinase signaling" Guest lecturer
2016	Targets, systems and Drug Action PHAR 8320. "Smooth muscle" lecturer
2013-2017	9th floor research group journal club Faculty Mentor
2007	"Neural Crest" lecture in Cell Bio 320 (Cancer and Embryonic Development)
2005-2006	Pharmacology student seminar Faculty mentor
2004-2005	Pharmacology student seminar Faculty mentor
1990-1992	Genetics Laboratory Teaching Assistant (graduate)
1990	Food Microbiology Laboratory Teaching Assistant (graduate)
1990	Animal Physiology Laboratory Teaching Assistant (undergraduate)
1989	Animal Biology Laboratory Teaching Assistant (undergraduate)
1989	General Biology Laboratory Teaching Assistant (undergraduate)

Teaching and Professional Development:

Belmont Activities

2023 AACP National meeting in Denver. Attended 16 lectures covering topics from improved teaching skills to curricular revision.

National

Nov. 3-6, 2019 AAPS Meeting "PharmSci 360" San Antonio Texas

June 4-8, 2018 Scholar at the 14th annual Teaching Scholars Summer Institute. West Virginia University Health Science Center

Actively participated in a skills based activities designed to assess and improve upon teaching skills and techniques. The institute experience is specifically designed for those teaching in the fields of medicine and was cross-disciplinary with Ph.D., M.D., PharmD and nursing professional educators.

Professional Societies:

American Association of Colleges of Pharmacy
American Association of Pharmaceutical Scientists
American Association of Colleges of Pharmacy
American Heart Association
Society for Developmental Biology

Professional Activities:

2023 AACP Biological sciences Early investigator grant reviewer
2023 AACP Biological sciences section Awards committee
2005-2009 American Heart Association Board member (Nashville affiliate)

Journal Reviewership:

Ad hoc reviewer for:
Developmental Biology
Developmental Dynamics
Genesis
Pediatric Research

Awards and Honors:

2000 Individual National Research Service Award, "Somite specific expression of Pax3 in transgenic mice."
1996 Attended summer course, "Embryology: cell differentiation and gene expression in early development," at Marine Biological Laboratories, Woods Hole, Massachusetts.
1996 Ph.D. Dissertation Enhancement Award, Vanderbilt University Graduate School.
1996 Dan May Summer Fellowship, Department of Medicine, Vanderbilt University.

Service and Other Professional Duties

National

2023-Present AACP Biological sciences section. Membership committee

2018-2021 AACP Research and Graduate Education Committee 2 member

Belmont University

2022-present University Student Life Committee

Belmont University College of Pharmacy and Health Sciences

2023-present College of Pharmacy: Curriculum revision task force
 2023-present College of Pharmacy: Admissions Committee
 2021-2025 Faculty class advisor for class of 2025
 2022-2023 College of Pharmacy: Faculty Affairs Committee (Chair elect). Committee dissolved with Pharmacy merger into college of Pharmacy and health sciences
 2021-2023 College of Pharmacy: Student affairs committee
 2021-2022 Faculty Search Committee for Pharmaceutical Social and Administrative Science Department, Faculty Search
 2020-2022 College of Pharmacy: Awards Committee
 2017-2022 College of Pharmacy: Admissions Committee
 2017-2020 College of Pharmacy: Assessment Committee. Chair 2019-2020

Vanderbilt University Medical Center 2003-2017

July 2005 Department of Pharmacology strategic planning group
 July 2006 Pharmacology preliminary-examination committee

Trainee Committee Membership:

2015-2017 Cami Johnson, PhD Candidate (Biomedical Engineering), Vanderbilt University
 2010-2017 Jeffrey Bylund, PhD Candidate (Committee Chair)(Pharmacology), Vanderbilt University
 2010-2014 Bryan Fioret, PhD (committee chair)(Pharmacology), Vanderbilt University
 2010-2015 Joe Chen, PhD (Biomedical Engineering)Vanderbilt University
 2009-2014 Mary-Katherine Sewell-Lofton, PhD (Biomedical Engineering), Vanderbilt University
 2007-2011 Nora Sanchez, PhD (Pharmacology), Vanderbilt University
 2007-2011 Josh Barnett, PhD (Pharmacology), Vanderbilt University
 2007-2010 Erin McArdle, PhD (Pharmacology), Vanderbilt University
 2006-2007 Brian Culbreath, MS (Pharmacology), Meharry University
 2006-2012 Cyndi (Hill) Clark, PhD (Pharmacology), Vanderbilt University
 2006-2008 Todd Townsend, PhD (Pharmacology), Vanderbilt University
 2006-2007 Patrick O'Mara MD, Clinical Fellow (Neonatology), S.O.C.

Trainees:

2006-2009 **Cynthia (Hill) Clark, PhD.** Pharmacology.
 2005-2007 **Diego Porras Ingouville, MD, FAAP.** Postdoctoral Fellow. Currently: Chief of the Division of Invasive Cardiology, Boston Children's Hospital
 2005-2007 **Nathan Mundell, PhD.** Pharmacology

- 2005-2006 **Qing Cai PhD.** Molecular Physiology and Biophysics.
- 2004-2005 **Kennita Ferguson PharmD.** David Lipscomb University. Was a PhD candidate from Meharry Medical College before pursuing Pharmacy degree.

University Outreach:

- June 2025 BCPHS Pathways to Health Care Practice Camp. Belmont University.
- May 15, 2015 Cardiovascular development and disease presentation for Vanderbilt "Aspironaut" program
- June 6, 2014 Cardiovascular development and disease presentation for Vanderbilt "Aspironaut" program
- June 1, 2012 Cardiovascular development and disease presentation for Vanderbilt "Aspironaut" program

Research Program

Publications:

Noha Mourad, Marina Galvez Peralta, **Christopher B Brown** Ahmad Hanif, Amy Ham (Narrative Review.) A Call for Clarity: A Proposed Toolkit to Integrate Foundational Sciences Into Pharmacy Curricula. Am J Pharm Educ. 2025 Jan;89(1):101340.PMID:39653171

Agrawal V, Trykall DZ, West JD, **Brown CB**, Barnett JV. Mitochondrial Metabolism is regulated by the Type III Transforming Growth Factor Beta Receptor. **In revision 2025**

Brown, CB, Soslow, JH, Love, JD, Townsend, TA, and Barnett, JV. Loss of the Type III Transforming Growth Factor-B Receptor is associated with enlarged atrioventricular cushions. **In revision. 2025**

Chen J, Ryzhova LM, Sewell-Loftin MK, Brown CB, Huppert SS, Baldwin HS, Merryman WD. Notch1 mutation leads to valvular calcification through enhanced myofibroblast mechanotransduction. Arterioscler Thromb Vasc Biol. 2015 May 28

Hill CR, Jacobs BH, Brown CB, Barnett JV, Goudy SL. Type III transforming growth factor beta receptor regulates vascular and osteoblast development during palatogenesis. Dev. Dyn. 2015 Feb;244(2): 122-123.

Sewell-Lofton MK, Delaughter DM, Peacock JR, Brown CB, Baldwin HS, Barnett, JV, Merryman WD. Myocardial contraction and hyaluronic acid mechanotransduction in epithelial-to-mesenchymal transformation of endocardial cells. Biomaterials. 2014 Mar; 35(9) 2809-15.

Sewell-Loftin, M.K., Brown, C.B., Baldwin, H.S., Merryman, D.W. Novel technique for quantifying mouse heart valve leaflet stiffness with atomic force microscopy. J. Valv. Dis. 2012 Jul;21(4):513-20.

Hill CR, Sanchez NS, Love JD, Arieta JH, Hong CC, Brown CB, Austin AF, Barnett JV. BMP2 signals loss of epithelial character in epicardial cells but requires the Type III TgfB receptor to promote invasion. Cell Signal. 2012 May;24(5):1012-22.

Humphreys R, Zheng W, Prince LS, Qu X, Brown C, Loomes K, Huppert S, Baldwin HS, Goudy S. Cranial neural crest ablation of Jagged1 recapitulates the craniofacial phenotype of Alagille syndrome patients. Hum. Mol. Genetics. 2011 21(6), 1374-1383.

- Sánchez NS, Hill CR, Love JD, Soslow JH, Craig E, Austin AF, Brown CB, Czirok A, Camenisch TD, Barnett JV. The cytoplasmic domain of TGF β R3 through its interaction with the scaffolding protein, GIPC, directs epicardial cell behavior. *Dev Biol.* 2011 Oct 15;358(2):331-343.
- Angel PM, Nusinow D, Brown CB, Violette K, Barnett JV, Zhang B, Baldwin HS, Caprioli RM. Networked-based characterization of extracellular matrix proteins from adult mouse pulmonary and aortic valves. *J Proteome Res.* 10(2):812-23. 2011
- Nie X, Brown CB, Wang Q, Jiao K. Inactivation of Bmp4 from the Tbx1 expression domain causes abnormal pharyngeal arch artery and cardiac outflow tract remodeling. *Cells Tissues Organs.* 193(6):393-403. 2011.
- Goudy, S., Law, A. Sanchez, G, Baldwin HS. and Brown, C.B. Tbx1 is Necessary for Palatal Elongation and Elevation. *Mech Dev.*127(5-6):292-300. 2010
- Levin, M.D., Lu, M-M, Petrenko, N.B., Hawkins, B.J., Gupta, T.H., Lang, D., Buckley, P.T., Jochems, J.J., Liu, F., Spurney, C.F., Yuan, I.J., Jacobson, J.T., Brown, C.B., Huang, L., Beermann, F., Margulies, K.B., Muniswamy, M., Eberwine, J.H., Epstein, J.A., Patel, V.V. Melanocyte-like cells in the heart and pulmonary veins contribute to atrial arrhythmia triggers. *JCI*, 119(11) 3420-3436. 2009
- Austin, A.F., Compton, L.A., Love, J.D., Brown, C.B. and Barnett, J.V. Primary and Immortalized Mouse Epicardial Cells Undergo Differentiation in Response to Tgf β . *Dev. Dyn.* 237:366-376 , 2008.
- Porras, D., Brown, C.B. Temporal-Spatial Ablation of Neural Crest in the Mouse Results in Cardiovascular Defects. *Developmental Dynamics.* 237:153-162, 2008
- Compton, L.A., Potash, D.A., Brown, C.B., Barnett, J.V. Coronary Vessel Development is Dependent on the Type III Transforming Growth Factor Beta Receptor. *Circ. Res*; 101, 784-791. 2007.
- Jiao, K., Langworthy, M., Batts, L., Brown, C.B., Moses, H.L., Baldwin, H.S. TGFB signaling is required for atrioventricular cushion mesenchyme remodeling during in vivo cardiac development. *Development.* 133, 4585-4593, 2006.
- Brown, C.B., Engleka, K.A., Wenning, J.M., Lu, M-M., and Epstein, J.A. Identification of an hypaxial somite enhancer element regulating Pax3 expression in migrating myoblasts and characterization of hypaxial muscle Cre transgenic mice. *Genesis.* 41, 202-9. 2005
- Brown, C.B., Wenning, J.M., Lu, M-M., Epstein, D.J., Meyers, E.N., and Epstein, J.A. Cre mediated excision of *Fgf8* in the *Tbx1* expression domain reveals a critical role for Fgf8 in cardiovascular development in the mouse. *Developmental Biology* 267, 190-202. 2004
- Milewski, R., Chi, N., Brown, C.B., Lu, M-M, and Epstein J. Identification of minimal enhancer elements sufficient for Pax3 expression in neural crest and implication of TEAD-2 as a regulator of Pax3. *Development* 131, 829-837. 2004
- Lang, D., Brown, C.B., Milewski, R., Jiang, Y-Q, Lu, M-M, and Epstein J. Distinct enhancers regulate neural expression of *Pax 7*. *Genomics.* 82(5): 553-560.2003
- Marlow, M.S., Brown, C.B., Barnett, J.V. and Krezel, A.M. Solution structure of the Chick Type II Receptor Ligand-binding domain. *J. Mol. Biol.* 326, 989-997. 2003.
- Feiner, L., Webber, A.L., Brown, C.B., Lu, M.M., Jia, L., Feinstein, P., Mombaerts, P., Epstein, J.A., and Raper, J.A. Targeted disruption of Semaphorin 3C leads to persistent truncus arteriosus and aortic arch interruption. *Development* 128, 3061-3070,2001.

Brown, C.B., Feiner, L., Lu, M.M., Li, J., Ma, X., Webber, A.L., Jia, L., Raper, J.A., and Epstein, J.A. PlexinA2 and semaphorin signaling during cardiac neural crest development. *Development* 128, 3071-3080, 2001.

Epstein, J.A., Li, J., Lang, D., Chen, F., Brown, C.B., Jin, F., Lu, M.M., Thomas, M., Liu, E-C.J., Wessels, A., Lo, C.W. Migration of cardiac neural crest cells in *Spotch* embryos. *Development* 127 (9), 1869-78, 2000.

Marlow, M.S., Chim, N., Brown, C.B., Barnett, J.V., and Krezel, A. ^1H , ^{13}C , and ^{15}N backbone assignments of the ligand binding domain of TGF β type II receptor. *Journal of Biomolecular NMR* 17: 349-350, 2000.

Lai, Y-T., Beason, K.B., Brames, G.P., Desgrosellier, J.S., Shaw, M.V., Brown, C.B., Barnett, J.V. Activin receptor like kinase 2 (ALK2) is required for atrioventricular cushion transformation. *Developmental Biology* 222: 1-11, 2000.

Brown, C.B., Drake, C.J., Barnett, J.V. Antibodies directed against the chicken Type II TGF β receptor identify endothelial cells in the developing chicken and quail. *Developmental Dynamics*, 215:79-85, 1999.

Brown, C.B., Boyer, A., Runyan, R.B., Barnett, J.V., Requirement of the Type III TGF β Receptor for Endocardial Cell Transformation in the Heart. *Science*, 283:2080-2082, 1999.

Brown, C.B., Boyer, A., Runyan, R.B., Barnett, J.V., Antibodies to the Type II TGF β receptor block cell activation and migration. *Developmental Biology* 174:248-257, 1996.

Book Chapters:

Lang, D., Brown, C.B., Epstein, J.A. *Neural Crest Formation and Craniofacial Development* in Molecular Basis of Inborn Errors of Development, Charles Epstein, Robert Erickson and Anthony Wynshaw-Boris eds. Oxford University Press, San Francisco, CA., 2004.

Review Articles:

Brown CB, Baldwin HS. Neural Crest Contribution to the Cardiovascular System. *Adv. Exp Med. Biol.* 589, 134-154, 2006.

Gitler, A., Brown, C.B., Kochilas, L., Li, J and Epstein, J.A. Neural Crest Migration and Mouse Models of Congenital Heart Disease. *Cold Spring Harbor Symposia on Quantitative Biology*. 67. 2002.

Published Abstracts:

Lai, Y-T., Beason, K.B., Brames, G.P., Brown, C.B., Barnett, J.V. An atypical Type I transforming growth factor beta receptor signals atrioventricular cushion transformation. *Circulation* 98 (Supp. 1): I-58, 1998.

Brown, C. B., Boyer, A., Runyan, R.B., Barnett, J.V., Type III TGF β receptor antibodies block cell activation and migration during cardiogenesis. *Circulation* 94 (Supp. 1): I-11, 1996.

Brown, C.B., Boyer, A., Runyan, R.B., Barnett, J.V., Type II TGF β receptor antibodies block cell activation and migration during cardiogenesis. *Circulation* 92 (Supp. 1): I-118, 1995.

Abstracts and Presentations at National Meetings:

May 4, 2012 Brown CB, Qu X, Violette, K, Sewell M-K, Merryman WD, Zhou B and Baldwin HS. "Tie1 is Required for Semilunar Valve Form and Function". (Platform talk) Weinstein Cardiovascular Development conference 2012

- Oct. 16, 2011 Brown CB, Baldwin HS. "Endocardium: The Ignored Cardiovascular Progenitor". Progenitor Cell Biology Consortium Meeting Boston 2011 (Platform talk representing Vanderbilt Research Hub)
- April 2, 2011 Brown CB, Baldwin HS. "The Importance of Endocardial Cell Heterogeneity in Valve Form and Function" Syscode Bi-annual meeting Boston.
- Oct. 21, 2010 Brown CB, Misfeldt A, Tompkins KL, Baldwin HS. Delineating the Role of Endocardial Cell Differentiation as a Vehicle to Enhance Myocardial Regeneration. Progenitor Cell Biology Consortium Meeting Seattle 2010 (Poster)
- May 15, 2008 Austin, AF, Compton, LA, Love, JD, Brown CB, Barnett, JV. Transforming Growth Factor -B stimulates smooth muscle differentiation in epicardial cells lacking the Type III Receptor. Weinstein Cardiovascular conference 2008. (Poster)
- May 10, 2007 Austin, AF, Compton, LA, Love, JD, Brown, CB, Barnett, JV. Immortalized mouse epicardial cells serve as a model of epicardial differentiation in vitro. Weinstein Cardiovascular conference 2007 (Poster)
- May 10, 2007 Culbreath, Brian C, Brown, CB, Barnett, JV. Tgfb β 3 null mice have increased atrioventricular cushion volume. Weinstein Cardiovascular conference 2007 (Poster)
- May 10, 2007 Hill CR, Brown CB. Semaphorin 3C regulation of cell adhesion in an *in vitro* assay of smooth muscle differentiation. Weinstein Cardiovascular conference 2007 (Poster)
- May 10, 2007 Porras D, Brown CB. Mechanisms of aortic arch interruption in the Semaphorin 3C null mouse. Weinstein Cardiovascular conference 2007 (Poster)
- May10, 2007 Porras D, Brown CB. Cardiovascular Defects in a Murine Model of Neural Crest Ablation. Weinstein Cardiovascular conference 2007 (Poster)
- May 10, 2007 Austin AF, Compton LA, Love JD, Brown CB, and Barnett JV. Immortalized mouse epicardial cells serve as a model of epicardial differentiation *in vitro*. Weinstein Cardiovascular conference 2007 (Poster)
- Nov. 4, 2006 American Heart Association Scientific Sessions 2006, Chicago, Illinois. 2006. Porras D, Brown, CB. Temporal Ablation of Neural Crest in the Mouse Results in Cardiovascular Defects. (Platform presentation)
- July 18, 2001 Society for Developmental Biology meeting, Seattle, WA. Pax3 hypaxial muscle expression is regulated by unique and separable enhancer elements.(Poster)
- May 17, 2001 Weinstein Cardiovascular Development Conference, Dallas, TX. Analysis of the murine Pax3 promoter reveals unique and separable hypaxial muscle enhancer elements.(Poster)
- May 17, 2001 Weinstein Cardiovascular Development Conference, Dallas, TX. Platform Talk Regulation of Pax3 expression and Cardiac neural crest function.
- June 8, 2000 Weinstein Cardiovascular Development Conference, St. Louis, MO. Plexin-A2 is a marker of Cardiac neural crest in the mouse (Poster).
- May 28, 1998 Weinstein Cardiovascular Development Conference, Nashville, TN. Role of the Type II and Type III TGF β receptors in atrioventricular cushion transformation (Poster).

- June 5, 1997 Weinstein Cardiovascular Development Conference, Cincinnati, OH. Antibodies directed against the chicken Type II TGF β receptor delineate cells of the endothelial lineage during early embryogenesis in quail (Poster).
- Nov. 10, 1996 American Heart Association Meeting, New Orleans, Louisiana. Type III TGF β receptor antibodies block cell activation and migration during cardiogenesis. Oral presentation at the 69th American Heart Association Meeting, New Orleans, Louisiana (1996).
- Nov. 13, 1995 American Heart Association Meeting, Anaheim, California. Type II TGF β receptor antibodies block cell activation and migration during cardiogenesis. Oral presentation at the 68th American Heart Association Meeting, Anaheim, California (1995).
- June 2, 1995 Weinstein Cardiovascular Development Conference, Rochester, New York. Type II TGF β receptor antibodies block cell activation and migration during cardiogenesis. (Poster).

Active Support

None

Completed Research Support

1R01 HL118386-01 Baldwin (PI) 6/01/2013- 12/31/2016

NIH / NHLBI

"TIE TEK Modulation of Cardiac Development"

The goal of this project is to understand how the receptor tyrosine kinases Tie and Tek regulate endocardial growth and cardiovascular development.

Role: Co-Investigator

1R01 HL-115103-01A1 Merryman (PI) 07/01/2013-12/31/2016

NIH/ NHLBI

"Serotonergic Receptor Targeted Therapy for Degenerative Aortic Valve Disease"

The goal of this project is to understand how serotonergic signaling through the 5HT-2B receptor mediates the dysmorphology and calcification of the aortic valve during development and disease.

Role: Co-Investigator

1U01 HL100398-01 Hatzopoulos (PI) 9/30/2009 – 6/30/2016

NIH / NHLBI

"Optimizing Cardiovascular Stem Cells for Cardiac Repair and Regeneration"

Role: Co-Investigator

NIH P30 ES000267 04/01/2012 - 03/31/2013

Center in Molecular Toxicology Pilot Project

" NFATc1, a Potential Mediator of TCDD Induced Developmental Vascular Defects"

Role: Co-Investigator

U54 RR 024358 Maas (PI) 09/30/2007-06/30/2012

NIH [1RL1 HL092551]

"Syscode:Systems based Consortium of Organ Design and Engineering"

Multi-institutional (Harvard, MIT, Vanderbilt) program for organ design

Project 3 "Heart Valve Design and Engineering"

Role: Collaborator

R01 HL085708 Barnett, (PI) 02/01/2008-01/31/2012
NIH/NHLBI

"Type III transforming growth factor beta receptor in coronary vessel development"

Role of growth factor signaling in coronary development

Role: Co-Investigator

5P30 DK079341-02 Harris (PI) 09/01/2008 - 08/30/2013
NIH / NIDDK

Vanderbilt O'Brien Mouse Kidney Physiology and Disease Center

"Modulation of renal ischemia reperfusion injury by NFATc1"

Role: Co-Investigator

5R01 HL086964-02 Baldwin (PI) 07/01/2008 - 5/31/2012
NIH / NHLBI

"The Role of NDRG4 in Myocardial Development"

Role: Co-Investigator

Predoctoral fellowship Mundell 07/01/2006-6/30/2008
American Heart Association

"Semaphorin Regulation of Cardiac Neural Crest Development"

"To determine the mechanism of Semaphorin 3C Regulation of Cardiac Neural Crest Cell Function."

Role: Pre-doctoral sponsor

F32 HL082101 Diego Porras MD 07/19/2005-7/18/2007
NIH/NHLBI (NRSA)

"The Secondary Heart Field in Outflow Tract Remodeling"

To determine the contribution of Tbx1 expressing cells to outflow tract development and remodeling.

Role: Post-doctoral sponsor

Scientist Development Grant(0430085N) 1/01/2004-12/31/2007
American Heart Association

"Tbx1 Regulation of Cardiovascular Development and Morphogenesis"

To determine the cell-autonomous and cell non-autonomous functions of Tbx1 in patterning and morphogenesis of the cardiovascular system.

Role: PI

Basil O'Connor Starter Scholar Research Award 02/01/2005-12/31/07
March of Dimes Birth Defects Foundation

"Semaphorin 3C Signaling in Cardiac Neural Crest Development"

"To determine the role of Semaphorin 3C signaling in the cardiac neural crest during pharyngeal arch and conotruncal patterning in the mouse."

Role:PI

F32 AR08584-03 Brown (PI) 02/01/2000-1/31/2003
NIH/NIAMS NRSA

"Somite specific expression of Pax3 in transgenic mice."

"To determine the molecular regulation of Pax3 expression in the somite and muscle precursors."

Role: PI

