CURRICULUM VITAE
ROBERT GEORGE GOURDIE

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2 Riverside Circle
Roanoke, VA, 24016

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Citizenship US/British/New Zealand **Birthdate**: 12-06-59

Education

University of Auckland, NZ	1978-1981	BSc	Cell/Molecule Biology
University of Auckland, NZ	1981-1982	MSc *(1st class honors)*	Cell/Molecule Biology
University of Canterbury, NZ	1983-1990	PhD	Biophysics

Post-Doctoral Training

1990-1992 British Heart Foundation Fellowship Department Development Biology and Anatomy, University College London (UCL), United Kingdom

Faculty/Professional Appointments

1983-1990 MAF/Tech, NZ Pre-Doctoral Fellow, WRONZ, Canterbury, New Zealand
1992-1995 British Heart Fellow (Research Asst. Prof), Dev. Biol. & Anat., UCL, UK
1995-1999 Assistant Professor, Cell Biology & Anatomy, Medical University of South Carolina (MUSC) Charleston, SC
1999-2012 Associate Professor, Cell Biology & Anatomy, MUSC, Charleston, SC
2002 Tenure, Cell Biology & Anatomy, MUSC, Charleston, SC
2003 Adjunct Associate Professor, Clemson Univ., Dept. Bio-Eng., Clemson, SC
2004-2012 Professor, Regen Medicine and CBA, MUSC, Charleston, SC
2008-2012 Co-Director, Cardiovascular Develop. Biology Center, MUSC, Charleston, SC
2008-2012 MUSC Board of Trustees' Eminent Scholar of Regen Medicine, Charleston, SC
2004-pres Adjunct Professor, Clemson Univ., Dept. Bio-Engineering, Charleston, SC
2012-pres Adjunct Professor, Cell Biology & Anatomy, MUSC, Charleston, SC
2012-pres Professor and Commonwealth Commercialization Eminent Scholar, Fralin Biomedical Research Institute at VTC (FBRI), Virginia Tech, Roanoke, VA
2012-pres Director of Center for Heart and Reparative Medicine Research, Fralin Biomedical Research Institute at Virginia Tech Carilion (FBRI), Roanoke, VA
2012-pres Director of Emergency Medicine Research, Carilion Clinic, Roanoke, VA
2012-pres Professor, Virginia Tech-Wake Forest Regenerative Medicine Institute, School of Biomedical Engineering and Sciences, Virginia Tech, Blacksburg, VA

Administrative Appointments

1992-1995 Director, Confocal-Digital Imaging Core, Department Development Biology and Anatomy, UCL, UK
2008-2012 Co-Director Pharmacology Fellowship Training Prog. CBA/Pharmacology, MUSC, Charleston, SC
2008-2012 Program Director, NIH/NICHD Program Project Grant (HD39946), MUSC, Charleston, SC
2003 Chair, URC Rodent and Transgenic Committee, MUSC, Charleston, SC
2008-2012 Co-Director, Cardiovascular Developmental Biology Center, MUSC, Charleston, SC
2008-2012 Chair, MUSC Intellectual Property Committee, Charleston, SC
2012-pres Director, Center for Heart and Reparative Medicine Research, Fralin Biomedical Research Institute at Virginia Tech Carilion (FBRI), Roanoke, VA
2012-pres Director of Emergency Medicine Research, Carilion Clinic, Roanoke, VA
2012-pres Member, FBRI Strategic Planning Advisory Committee
2012-pres Member, FBRI Advisory Board
2012-pres Member Virginia Bioinformatics Core Advisory Committee

2013-pres Member of Executive Planning Committee Virginia Tech Translational Biology Medicine and Health Graduate Program (TBMH), FBRI, Roanoke, VA
2013-pres Member, VT School of Health Sciences TBMH Advisory Board, FBRI, Roanoke, VA
2013-2019 Chair and Director, Development Aging and Repair track of VT TBMH, FBRI, Roanoke, VA
2020 Chair and Director, Tissue Engineering Reparative Medicine track of VT TBMH, FBRI, Roanoke, VA
2015-pres Block Director – Translational Science and Entrepreneurialism, TBMH, FBRI, Roanoke, VA
2012-pres Member Wake Forest Virginia Tech School of Biomedical Engineering and Sciences Promotion and Tenure committee
2012-pres Member, VT Biomedical Engineering and Mechanics (BEAM) Honorifics Committee
2019-2020 Member, Virginia Tech Conflict of Interest Task Force

Other Professional Experience

1999 National Institute of Health Special Review Panel
1998-1999 National Science Foundation Developmental Mechanisms Review Panel
1998 Ad Hoc Grant Reviewer for the Austrian Science Foundation
1999 Ad Hoc Grant Reviewer for the Swiss Medical Research Council
2000 Organizer and Chair. AAA session on “Gap Junctions and Development” EXP-2000/FASEB. Mini-Symposium Organizer & Session Chair, San Diego, CA
2000- Ad Hoc Grant Reviewer for British Medical Research Council
2000 Ad Hoc Grant Reviewer for New Zealand Lottery Health Research Te Puna Tahua
2001 Chair, Developmental Biology AHA Abstract Peer Review Committee
2000-2004 Member, National AHA Developmental Mechanisms Review Panel
2001-2011 American Heart Association Abstract Peer Review Committee
2001-2002 Ad Hoc grant reviewer NIH Study Section CDF-4
2001 Chair, Session on "Connexin Interacting Proteins", International Gap Junction Conference, Honolulu, HI
2008-2012 Full Member, Hollings Cancer Center, MUSC, Charleston, SC
2008-2012 Faculty, MUSC MCBP Program (Cardiovascular, Genes and Development, and Cell Signaling tracks), Charleston, SC
2001 Proposer, Novartis Meeting on "Conduction System Development", London, UK
2003 Chair, Session on "Conduction System Development", Weinstein Cardiovascular Development Conference, Boston, MA, May
2003 Chair, Session on "Connexin Interacting Proteins", International Gap Junction Conference, Cambridge, UK, August
2004 Chair, Session on "Conduction System Development", Weinstein Cardiovascular Development Conference, Leiden, Netherlands
2004 Co-Organizer (with Michiko Watanabe), ExpBio 2004 two-day Symposium "The Cardiac Pacemaking and Conduction System", Washington, DC, April
2004 Reviewer British National Institute of Medical Research, Developmental Biology Division, Mill Hill, UK.
2004 Special Emphasis Panel Member, NIH Myocardial Electrophysiology
2004 Special Emphasis Panel Member, NIH, Cardiac Gap Junctions
2004 Special Emphasis Panel Member, NIH, Cardiac Stem Cells
2004-pres Reviewer USA-Israel Science Foundation
2004-2008 Full and Charter Member, NIH ESTA Study Section
2005 National Institute of Health Study Section, ZRG1-CVS-K BRP Review Panel
2005-pres Ad-Hoc member of the NIH Board of Scientific Counselors
2005 Co-Founder (with Dr. Gautam Ghatnekar) FirstString Research, Inc.
2005 Chief Scientific Officer, FirstString Research, Inc.

2006	Chair, National Institute of Health Study Section, ZRG1-CVS-K Bioengineering Research Partnership Panel
2006	Chair, Session on "Conduction System/Coronary Vessels/Epicardium", Weinstein Cardiovascular Development Conference, Tampa, FL
2006-2009	Board of Directors, FirstString Research, Inc.
2007	Chair, Session on "Connexins & Heart Disease", Heart Rhythm Soc. Denver, CO
2009	Chair, Session on "AV Node Development", Heart Rhythm Society, Boston, MA
2009	Chair, Session on "Connexins and Wound Healing", International Gap Junction Conference, Sedona, AZ
2007-2010	Member National AHA Developmental Mechanisms Review Panel
2010-pres	Medical/Scientific Advisory Board, FirstString Research, Inc.
2010-pres	Ad Hoc, NIH ICI Study Section
2010-2011	NIH ZRG1 CVRS-F (03) Towbin PPG Study Section
2010	NIH ZRG1 CVRS Ideker PPG Study Section
2010-pres	Charter member of the CSR College Reviewers, appointed by Tony Scarpa (Chief, NIH Center for Scientific Review)
2011	Session Moderator, Keystone Symposium "Extracellular Matrix and Cardiovascular remodeling, Granlibaken Resort, Lake Tahoe, NV, January
2011-pres	Ad Hoc Member, NIH Small Business Grant ZRG1 MOSS-D12 Study Section
2011	NIH ZRG1 VH-C (02) M - Vascular Biology Study Section
2010-2013	Co-Organizer International Gap Junction Conference, Charleston, SC, July 2013
2012-2013	Member, NIH Special Emphasis Panel: Delmar Program Project Grant, August 2012
2012-pres	Expert Panelist, FWO-Belgian Medical Cell Biology Grant Review Panel, April 2012
2012	Session Chair, American Heart Assoc., Scientific Sessions, Los Angeles, CA, Nov
2012	Established Center for Heart and Reparative Medicine Research (CHRMR) at Fralin Biomedical Research Institute at VTC, Roanoke, VA
2011-pres	Chair, NIH/CSR Cardiovascular & Respiratory Science Integrated Study Section
2013	Session Chair, American Heart Assoc., Scientific Sessions, Dallas, TX, Nov
2014	Session Chair, Heart Rhythm, Scientific Sessions, San Francisco, CA, May
2013-2015	Co-Organizer (with Drs. Peter Kohl-Imperial College and Stefanie Dimmeler, University of Bonn), Keystone Meeting, Myocyte-Fibroblast Interactions Copper Mountain Resort, SC, USA, March, 2015
2009-pres	Emeritus Ad Hoc Member NIH ESTA Study Section
2010-2016	Chair, National AHA Basic Cell - Regenerative Cell Biology review panel
2015	K01 Study Section / BEST Study Section / P41 Study Section
2016	F31 Study Section
2016	NIH ZRG1 F10A Fellowship Reviewer November, Arlington, VA
2016	NIH ZRG1 BCMB-S (40) Study Section December, Champaign, IL
2016	Grant Reviewer for Dr. Hawden Foundation, United Kingdom
2016	Grant Reviewer for Wellcome Trust, United Kingdom
2016	Co-Founder (with Dr. Samy Lamouille) Acomhal Research, Inc. and Chief Scientific Officer
2017	Session Chair "Translational & Therapeutics" International Gap Junction Conf. Glasgow, UK
2017	NIH Study Section CCHF Review, Arlington, VA
2018	NIH Review ZRG1 F10A Pathobiology of Cardiovascular & Respiratory Systems, Arlington, VA
2018	Moderator, AsiaPacific Heart Rhythm Society Taipei, Taiwan, October 19, 2018 "Gap Junction and Arrhythmogenesis and Gap Junction in Heart Rhythm Disorder".
2018	Moderator, AHA Scientific Session, Chicago, IL, "Revelation of Unprecedented Molecular Mechanisms of Endothelial Dysfunction: November 12, 2018
2018	Founder, The Tiny Cargo Company
2019	Moderator, Ephaptic Coupling Conference (EpC), Roanoke, VA, May 6, 2019, "Experimental Approaches to EpC".

2019 NIH F10A Study Section Physiology & Pathobiology Cardiovascular and Respiratory Systems

Editorial Positions: Reviewer

American Journal of Pathology
American Journal of Physiology
Anatomical Record
Brain Research
Cardiovascular Research
Cell Adhesion and Communication
Cell Biology International
Circulation
Circulation Research
Circulation: Arrhythmia and Electrophysiology Circulation
Development
Developmental Biology
Developmental Cell
Developmental Dynamics
Developmental Genetics
Experimental Cell Research
Glia
International Journal of Cardiology
Journal American College of Cardiologists
Journal Cell Science
Journal of Biological Chemistry
Journal of Cell Biology
Journal of Comparative Neurology
Journal of Histochemistry and Cytochemistry Anatomy and Embryology
Journal of Molecular and Cellular Cardiology
Journal of Neuroscience
Microscopy Research and Technique
Molecular Biology of the Cell
Nature
Nature Medicine
Nature Reviews
New England Journal of Medicine
Science
Science Translational Medicine
The Lancet
Trends in Cardiovascular Medicine
Trends in Neuroscience

1. 1996 Guest Editor. Microscopy Research and Technique. Special Issue - Microscopy of Intercellular Communicating Junctions in Volume 31, pp337-468, number 5
2. 2001 & 2003 Guest Editor. Cell Adhesion and Communication. Special Section - Connexin Interacting Proteins
3. 2010-pres Editorial Board: Frontiers in Cardiac Electrophysiology
4. 2010-pres Editorial Board: Frontiers in Integrative and Regenerative Pharmacology
5. 2013-pres Editorial Board: Journal of Cardiovascular Development and Disease

6. 2014 Book Editor. Regenerative Wound Healing. Molecular Biology Protocols: Methods and Protocols, 2nd Edition, 2 Volume, 40-chapter book from top scientists in Regenerative Medicine
7. 2014 Guest Editor- FEBS Letters – Connexins, Pannexins and Innexins
8. 2015-pres Associate Editor-Challenges in Regenerative Medicine
9. 2018-pres Editorial Board: International Journal of Molecular Sciences

HISTORY as Principal Investigator

1993-1995 50% effort British Heart Foundation (UK) £116,797. Angiogenesis and the Development of Heart Conduction Tissues. FS92005.

1996-1998 50% effort. March of Dimes, Basil O'Connor Starter Scholarship, $80,000. Vasculogenesis and the Development of Cardiac Conduction Tissues.

1996-1997 50% effort. American Heart Association, Grant-in-Aid, $50,000. Developmental Patterning of Cardiac Electromechanical Coupling.

1997-2018 30% effort NIH/NHLI Project Grant (RO1), $250,000. Developmental Patterning of Cardiac Gap Junctions (retitled 2009 - Gap Junctional Patterning in Arrhythmic Heart).

1997-2023 NIH-NHLBI R01HL56728-18, $2,372,119 Gap Junctional Patterning in the Arrhythmic Heart

1998-2003 5% effort. National Science Foundation Early Career Award, $362,066. NSF 9734406. Origins of Organized Activation in the Chordate Heart.

1999-2000 % effort. National Science Foundation Equipment Grant, $75,000. Dynamic Imaging Instrument.

2000 20% effort. SC Commission of Higher Education, $70,000 Development and Tissue Engineering of Cardiac Conduction Tissues.

2001-2006 20% effort. NIH/NICHD P01-HD39946, $664,694 "Patterning by Invasive Mesenchyme". Project 2 – Induction and Pattern Formation during Conduction System Development. No cost extension 2006-2007.

2001-2006 5% effort. NIH/NICHD P01-HD39946, $192,736 "Patterning by Invasive Mesenchyme". Core A – Administrative. No cost extension 2006-2007.

2001-2006 20% effort. NIH/NICHD P01-HL36059, $224,000 "Project 3– Cx43 Gap Junctions and Neural Crest".

2003 March of Dimes Conference Grant, $5,000. Choreography of the Heart Beat: The Cardiac Pacemaking and Conduction System.

2003 NIH R13 Conference Grant, $15,000. Choreography of the Heart Beat: The Cardiac Pacemaking and Conduction System.

2005-2010 20% effort. NIH RO1, $250, 000, Function of Cx43-Interacting Proteins in Neural Crest Migration.

2006-2009 5% effort NIH R41, $100,000 Restoration of Skin Structure and Function Post-Wounding Phase I ($100,000 DC – Gourdie PI) and Phase II ($750, 000 DC Gourdie Co-PI).

2009-2011 10% effort. American Heart Association, Grant-in-Aid, $70,000. Cx43: A Novel Factor in Cardiac Injury Severity in the Diabetic.

2006-2011 NIH/NIAMS R41 STTR (Ghatnekar PI, Gourdie Co-PI), 5% effort, $750,000 DC Restoration of Skin Structure and Function Post-Wounding.

2006-2011 NIH NCRR, 5P20RR016434-07, (Markwald, PI, Harris, Project Leader, Gourdie, Faculty Mentor for Dr Harris). 5% effort NIH NCRR SC COBRE for developmentally based cardiac diseases. Project 3: Molecular Development and Pathophysiology of the Atrio-Ventricular Conduction System.

2009-2013 NIH/NHBLI, F30 HL095320-01, (Gourdie mentor for Dr. Palatinus), 5% effort, Connexin 43 Gap Junction Dynamics in the Diabetic Heart. 5 year pre-doctoral Ruth Kirschstein Pre-Doc Fellowship for Dr. Palatinus.

2012-2017 NIH/NIDCR, F31 DE022224 (Gourdie mentor for Ms. Emily Ongstad) 0.5 calendar months, $42,225 pa Tissue Engineered Repair of Cranial Facial Muscle. 5 yr. pre-doc Ruth Kirschstein Fellowship

2013 NIH/NHBLI R13 HL8529886, 0.5 calendar months, $20,000, International Gap Junction Conference 2013.

2013-2014 Heart Rhythm Society, Heart Rhythm Society Fellowship (Gourdie mentor for Dr. Veeraraghavan), 0.5 calendar months, $42,225 PA, The Role of the Perinexus in Ephaptic Coupling between Cardiac Myocytes.

2013-2015 AHA Post-Doc Fellowship (Gourdie mentor for Dr. Veeraraghavan) 07/01/2013-06/30/2014, $42,225 PA, The Role of the Perinexus in Ephaptic Coupling between Cardiac Myocytes.

2013 AHA Cardiovascular Disease Scholarship (Gourdie mentor for Ms. Post), $2000, Cardiac Regenerative Repair Mechanisms.

2014-2016 VBHRC, $200,000 04/01/14-11/30/16, Novel Wound Healing Drugs.

2013 AHA Cardiovascular Disease Scholarship (Gourdie mentor for Ms. Post), $2000, Cardiac Regenerative Repair Mechanisms.

2013-2016 Carilion Clinic Research Acceleration Program (RAP) Funding (Moyer & Gourdie Co-PIs), $50,000, Implant Capsular Contracture after Breast Reconstruction.

2013 NIH/NHBLI R13 HL8529886, 0.5 calendar months, $20,000, International Gap Junction Conference 2013.

2015-2016 Center for Innovative Technology Grant, $200,000, 04/01/14-12/31/15, Advanced Manufacture and Testing of a Brain Cancer Treatment.

2015-2018 Virginia Biosciences Health Research Corp. AT-23576 (Gourdie, Rossmeisl, Sheng, MPIs), "Clinical Trial of New Drug in Dogs to Treat Brain Cancer in Humans," $290,000.

2018-2019 American Heart Association Student Fellowship, $2,000 "Effect of Myocardial Nfarction on Sodium Channel Distribution".

2019-2020 Center for Innovative Technology Grant, $100,000, 06/17/2019-12/16/2020, MF19-027-LS Precision Medicine Exosomal Drug Delivery Medtech for Heart Attack.

HISTORY as Co-Investigator

1993-1997 20% effort. NIH Project Grant (RO1) $741,282. Myocyte Proliferation in the Embryonic Chick Heart. R01-HL50582-01. Dr. RP Thompson PI, 1993-1997.

1993 % effort NA. Wellcome Trust £(UK)1000. The relationship between the expression of ACAM and Connexin43 during Cardiac Development. Supervising investigator for Dr. Laeeq Kahn Summer Scholarship.

1994 % effort. Wellcome Trust Equipment Grant. £(UK)225,000. A Confocal Microscopy Facility Specialized for Multi-Labelling.

1994 % effort NA. Eotvos Hungarian State Fellowship. Supervising investigator – Dr. Robert Sepp.

1995 % effort NA. Wellcome Trust Traveling Fellowship. Supervising investigator – Dr. Brigitt Angst.

1996 % effort NA. Wellcome Trust Traveling Fellowship. Supervising investigator - Stephen Coppen.

1996-1998 Wellcome Trust Project Grant. £(UK)45,214. Parturition and the Expression of Gap Junctions in Human Myometrium. Dr. Nick Severs, PI.

1997 % effort NA. British Biochemistry Society Traveling Fellowship. Supervising investigator for Dr. S Coppen.

1997-1998 5% effort. NIH/NHLBI $ (US) NRSA Fellowship for Dr. Wanda Litchenberg.

1997-2000 % effort NA. British Heart Foundation Project Grant. Connexins in the Developing Heart. UKP 140, 000. Dr. Nick Severs, PI.

1998 5% effort. Grant-in-Aid, American Heart Association (SC-Affiliate). $25,000. Approaches to the Compact Atrioventricular Node. Dr. K Hewett PI, 1996.

2000-2002 5% effort. AHA Post-Doctoral Fellowship for Dr. Jacqui Bond.

2001 5% effort - Fellowship declined. AHA $ (US) Post-Doctoral Fellowship for Dr. Angela Edmondson (co-mentor with Dr. Terrence X. O'Brien).

2001 Not paid, no effort. NIH/NHBLI Pharmocology Training Grant re-submission. Served as Co-Director of the training grant a Contributing Committee Member.

2001 No effort. NIH Instrumentation award, Judson Chandler PI, Two Photon Confocal Microscope-RGG Major User.

2002 No effort. NIH Instrumentation award, Shailesh Patel PI, Genetic Analysis Core Major User
2004 2% effort - AHA Post-Doctoral Fellowship for Dr. Brett Harris.
2004 2% effort - NIH NRSA Post-Doctoral Fellowship for Dr. Andrew Hunter.
2005 2% effort - NIH NRSA Pre-Doctoral Fellowship for Mr. Matthew Rhett.
2005 2% effort - AHA Pre-Doctoral Fellowship for Mr. Michael O'Quinn.
2006-2012 5% effort NIH NCRR SC COBRE for developmentally based cardiac diseases. Project 3: Molecular Development and Pathophysiology of the Atrio-ventricular Conduction System (Dr Brett Harris, Project Leader. Dr. Gourdie, Faculty Mentor for Dr. Harris).
2008-2010 2% effort NIGMS MUSC-Claflin Institutional Research and Academic Career Development Award. Support for Dr. Andrew W. Hunter, post-doc fellow in Gourdie Lab.
2008-2010 2% effort. NASA Pre-Doctoral Fellowship for Mr. Matthew Rhett.
2009-2011 2% effort NHLBI Connexin 43 Gap Junction Dynamics in the Diabetic Heart. 5-year pre-doctoral NIH F30 fellowship for Mr. Palatinus.
2010-2014 20% effort (Yost - PI, Gourdie -Sub Contract Project Leader), $250,000, Sub-Contract $100,000. Enabling Technologies for Tissue Engineering and Regenerative Medicine
2011-2020 NIH/NHLBI 2R01HL102298 (S. Poelzing, PI, Gourdie Co-I), *"Role of the Extracellular Space as a Modulator of the Cardiac Gap Junction-Conduction Velocity Relationship,"* $2,098,010
2013 AHA Cardiovascular Disease Scholarship (Gourdie mentor for Ms. Post), $2000, Cardiac Regenerative Repair Mechanisms.
2013-2014 4.17% effort Heart Rhythm Society, Heart Rhythm Society Fellowship (Gourdie mentor Dr. Veeraraghavan), 0.5 calendar months, $42,225 PA, The Role of the Perinexus in Ephaptic Coupling Between Cardiac Myocytes.
2013-2015 AHA Post-Doc Fellowship (Gourdie mentor for Dr. Veeraraghavan) 07/01/2013-06/30/2014, $42,225 PA, The Role of the Perinexus in Ephaptic Coupling between Cardiac Myocytes.
2016-2017 NIH/NHLBI 1R56HL133826-01 (Chappell, PI, Gourdie Co-I), Pericyte Investment Defects in Diabetic Retinopathy
2016-2019 AHA Scientist Development Grant (Gourdie mentor for Dr. Veeraraghavan) 07/01/16-06/30/19 $77,000 PA, Modulation of Cardiomyocyte Ultrastructure by Vascular Barrier Function – a Novel Mechanism for Atrial Arrhythmias.
2017-2018 NIH/NCI 1R41CA217503 (Acomhal Research, Inc.; Lamouille, PI; Gourdie, Co-I, Sub PI) "Therapeutic Disruption of Connexin43-Mediated Microtubule Regulation to Target Glioblastoma Cancer Stem Cells," $85,000 (sub only).
2017-2019 Acomhal Research, Inc. NIH-NCI 1R41CA217503 (Lamouille, PI; Gourdie, Co-I, Sub PI), *"Therapeutic Disruption of Connexin43-Mediated Microtubule Regulation to Target Glioblastoma Cancer Stem Cells,"* $110,000 (sub only)

Extramural Grants - *Active Grants*

1997-2023 NIH/NHBLI R01HL56728 (Gourdie, PI), ***"Gap Junctional Patterning in Arrhythmic Heart,"*** $2,372,119
2011-2020 NIH/NHLBI 2R01HL102298 (S. Poelzing, PI, Gourdie Co-I), ***"Role of the Extracellular Space as a Modulator of the Cardiac Gap Junction-Conduction Velocity Relationship,"*** $2,098,010
2013-2020 NIH/OD 5DP7OD018428-05 (Friedlander, Van Wart, MPIs; Gourdie, Program Faculty) ***"Mentorship and Development Program for Biomedical Trainees – BEST,"*** $1,823,751
2015-2020 NIH SBIR R44CA195937 FirstString Research, Inc. (Grek, PI; Gourdie, Co-I, sub PI), ***"Novel Therapeutic Approach in Treatment of Glioblastoma using Sustained Delivery of Connexin43 Carboxy-terminal Peptide Encapsulated in Biodegradable Nanoparticles in Combination with Temozolomide,"*** $718,639
2017-2022 NIH/NHLBI 1R01HL132236 (J. Smyth, PI, R. Gourdie Co-I), ***"Translation Initiation in Cardiac Intercellular Communication and Stress-Induced Remodeling,"*** $1,973,324

2018-2020 NIH-NINDS 1R21NS107941 (MPI: Lamouille, Robel, Co-I Gourdie**)** ***"Targeting Connexin43 in Post-Traumatic Epilepsy,"*** $402,500

2018-2022 NIH/NHLBI R01HL138003 (S. Poelzing PI, Gourdie, Co-PI), ***"Signaling in Inherited and Acquired Sodium Channel Gain of Function,"*** $2,565,922 (scored 6th percentile)

2018-2021 NRSA 1F31HL145982-01 Ruth Kirschstein Pre-Doc Fellowship Randy Strauss (Gourdie mentor for Mr. Strauss) **"The Role of Cx43 Carboxyl-Terminus in the Regulation of Endothelial Barrier Function"** GRANT12607499

2018-2022 NIH/NHLBI 1R01HL141855 (Gourdie, Poelzing, Co-PIs) ***"The Role of the Sodium Channel Beta Subunit in Cardiac Conduction,"*** $1,756,768

2018-2023 NIH/NCI 1R01CA227261 (Kelly, PI; Gourdie, Collaborator), ***"Hot Spot Analysis of the Breast Cancer Susceptibility Protein,"*** $1,960,535

2018-2023 NIH-NCI 1R01CA219700 (Kelly, PI: Gourdie, Collaborator) ***"Multi-scale imaging of breast cancer proteins during DNA repair,"*** $436, 258 (scored 5th percentile)

2019-2020 Center for Innovative Technology (CIT) MF19-027-LS "***Precision Medicine Exosomal Drug Delivery Medtech for Heart Attack."*** $100,000

2019-2023 NIH/NHLBI R01HL146596-01A1(PI: Chappell, Gourdie, Co-I) ***"Vascular Basement Membrane Composition Regulates Pericyte Investment in Developing Blood Vessels,"*** $250,000

Sponsor/co-sponsor/mentor on the following training grants

- Pharmacology NIH Training Grant (Program Director Dr. Don Menick)
- NIH Minority Research Training Grant (PI, B Ledford)
- Pediatric Cardiology NIH Training Grant (PI, P Saul)
- MUSC MSTP Training Grant (PI, P Halushka)
- NIH Cardiovascular Biology COBRE (PI R. Markwald)
- NIH F30 (mentor for J. Palatinus)
- NIH F30 (mentor for E. Ongstad)
- NIH K12 (mentor for AW Hunter)
- NIH Best Award (MPIs, Drs. M. Friedlander, Audra Van Wart)
- NIH Pre-doctoral Fellowship (mentor for Tristan Raisch)
- NIH Pre-doctoral Fellowship (mentor for Carissa James)
- NIH Pre-doctoral Fellowship (mentor for Rachel Padget)
- NIH F31 Pre-doctoral Fellowship (sponsor for Randy Strauss)

Awards/Honors

1983 MAFTech (NZ) Pre-doctoral Research Fellowship
1993 British Heart Foundation (UK) Research Fellowship
1994 British Young Medical Investigator of the Year-British Medical Research Soc.
1994 GLAXO Young Medical Investigator Medal-Runner-up, Glaxo UK Ltd.
1996 Basil O'Connor Scholar, March of Dimes Birth Defects Foundation
1997 MUSC Health Sciences Foundation, Developing Scholar Award
1998 National Science Foundation Early Career Scholar
1998 Nomination National Science Foundation Presidential Early Career Award
1999 & 2000 Markwald Award, Runner-up – NIH Weinstein Heart Dev. Conference
2000-2010 Full Member, AHA Developmental Mechanisms review panel
2004 Nomination for Howard Hughes Investigatorship
2004 Charter Member, NIH ESTA study section (2004-2008)
2006 Prizewinner Charleston Business Journal Innovator of 2006
2008-2012 MUSC Board of Trustees' Eminent Scholar
2009 First Place Podium Award - Wake Forest Regenerative Medicine Conference
2010-pres NIH CSR College of Reviewers

2010-2016 Chair, AHA Regenerative Cell Biology, review panel
2012-pres Commonwealth Research Commercialization Fund Scholar
2017 Virginia Tech Inventor of the Month (January)
2017 FirstString Research, Inc. won the prestigious Tibbets Small Business Administration prize in 2017 and presented in a ceremony at the White House in Jan 2018.
2018 Best Paper Award April 2018 Volume 314 Issue 4. Review Article American Journal of Physiology – Heart and Circulatory Physiology "Guidelines for Experimental Models of Myocardial Ischemia and Infarction"
2019 Nomination for Roanoke Blacksburg Technology Council Innovator of the Year

Academic Committees - *University*

1997-2000 URC Research Grant Committee
1998 HSF Developing Scholars Committee
2001-2012 MUSC Graduate Council
2001 MUSC Post-Doctoral Policy Committee
2002 MUSC Faculty Mentoring Committee
2003-2004 MUSC University Research Council
2003-2004 URC Rodent and Transgenic Animal Committee (Chair)
2004-2012 MUSC Intellectual Property Committee
2008-2012 MUSC College of Medicine Promotion and Tenure Committee
2010-2012 Chair, MUSC Intellectual Property Committee
2010-2012 MUSC Strategic Plan Implementation Committee
2010-2012 Provost's Working Group on Conflict of Interest and Intellectual Property
2012-pres Virginia Tech School of Health Sciences Advisory Board
2012-pres VT School of Health Sciences Translation Biology Medicine and Health Advisory Board
2012-pres Virginia Bioinformatics Institute Core Advisory Board
2012-pres VT BEAM Tenure Committee
2019-pres VT Conflict of Interest Task Force Committee Member

Departmental

1995-2012 Member, Dept. Cell Biology, MUSC, Molecular Imaging Core Advisory Committee
1998-2012 Member, Dept. Cell Biology, MUSC, Space Committee
1999 Member, Dept. Cell Biology, MUSC, Business Manager Selection Committee
1999-2012 Member, Dept. Cell Biology, MUSC, Promotion and Tenure Committee
1999 Dept. Cell Biology Business Manager Search Committee
2001-2006 Program Project P01-H39946 Executive Committee (Chair)
2011 Chair, Dept. Cell Biology, MUSC, Promotion and Tenure Committee
2012-pres Member, Wake Forest Virginia Tech School of Biomedical Engineering and Sciences Promotion and Tenure Committee
2015-pres Chair, Virginia Tech, BEAM, Honorifics Committee
2012-pres Member, FBRI TBMH Executive Planning Committee

Major Teaching Responsibilities

Medical Student Lectures

Medical Histology and Embryology CEL-609 2001-2010 (R Ogilivie course organizer)
#lectures/year 1 #students/year 250 medical students

Undergraduate/Graduate Student Lectures

Foundations in Molecular and Cell Biology -MCBP 721 1995-2000 (B. Ledford course organizer)
#lectures/year 3-5 x 1-2 hr. lectures on viruses, membranes and signal transduction

#students/year 20-30 MCPB and MSTP graduates per year
Developmental Mechanisms - Cel-726 1995-2001 (R. Gourdie co-course organizer)
#lectures/year 15-20 tutorial presentations per year
#students/year 5-10 MCPB and MSTP graduates, medical students, post-docs and residents

Cell biology Lecture series-Cel-760 1998-1999 (R. Gourdie course organizer)
#lectures/year 15-20 seminar presentations
#students/year 10-15 MCPB and MSTP graduates, medical students, post-docs and residents

Essential Scientific Practices II: CGS 712 Scientific Writing 2002-12 (E.L. Krug, course organizer)
#students/year 5 MCPB and MSTP students - Supervision of grant write-up

Developmental Mechanisms: 2002-2012 (L. M. Eisenberg, course organizer)
#lectures/year 2x1 hr. lectures /biannually #students/year 10-15 MCPB and MSTP graduate students

The Molecular Basis of Cardiovascular Disease: 2002-2012 MCBP 937
(Don Menick, course organizer)
#lectures/year 1 hr. lecture /biannually #students/year 10-15 MCPB and MSTP graduate students

(vii) Integrative Biology of the Cardiovascular System, 2003-2012
(George Lindenmayer, course director),
#lectures/year 2x2 hr. lecture /biannually
#students/year 5-10 MCPB and MSTP graduate students and post-docs

Advanced Cell Biology: 2006-2012 MCBP (Ed Krug, course organizer)
#lectures/year 6 hr. lectures /annually #students/year 4-5 2nd year MCPB & MSTP graduate students

Essential Scientific Practices I – Intellectual Property, Propriety Information and Biotech Startups 2006-2012
CGS710 (Ed Krug, course organizer)
#lectures/year 1 hr. lecture /annually #students/year 30 1st year MCPB and MSTP graduate students

Biomaterials/Tissue Engineering, Virginia Tech SBES, Cardiac Regeneration, 2014-pres
(Scott Verbridge, course organizer)
#lectures/year 1 hr. lecture /annually #students/year ~70 undergraduate students

Polymers in Medicine and Biology, Virginia Tech, SBES, Novel Wound Healing Drugs, 2014-pres (Abby Whittington/Judy Riffle course organizers)
#lectures/year 1 hr. lecture /annually #students/year ~40 graduate students

Global Health for Engineering Students, Virginia Tech, SBES Heart Disease, 2014
(Lissett Bickford course organizer)
#lectures/year 1 hr. lecture /annually #students/year ~12 undergraduate/grad students

Development, Aging and Repair Track, Virginia Tech, TBMH, 2014-2019
(Rob Gourdie, Mark Van Dyke course organizers)
#lectures/year 15 weeks Spring 4 x 2 hour blocks per week #students/year ~6 graduate students

Professional Development and Ethics, TBMH, 2016
(Rob Gourdie/Mark Van Dyke course organizers)
#lectures/year Spring 1 lecture annually #students/year 16 graduate students

Intellectual Property, Translation, and Clinical Trials, VT, TBMH, BEAM, 2015-2016
(Rob Gourdie course organizer with Mark Van Dyke)
#lectures/year 8 x 2 hour blocks over 2 weeks #students/year ~54 graduate students

Intellectual Property and Commercialization 1st year TBMH graduate program, TBMH 2017-pres
(Rob Gourdie, course organizer)
#lecture/year 8 x 2 hour blocks over fall semester # students/year ~ 20 graduate students

Tissue Engineering and Reparative Medicine Track, Virginia Tech, TBMH, 2020
(Rob Gourdie, Mark Van Dyke course organizers)
#lectures/year 15 weeks Spring 4 x 2 hour blocks per week #students/year ~10 graduate students

Research Mentoring

High School, Undergraduate and Medical School Research Students

1995 Thomas Palmatier, junior summer research project.
Project: Effect of Monosodium Glutamate on Heart Muscle Cell Contractility.
2nd place winner in Academic Magnet High School Science competition.

1996-1997 Mikkel Johannsen, Academic Magnet School, senior thesis project. Primary mentor.
Graduate Honors.
Project: Effect of Neural Crest Ablation on Differentiation on Coronary Vasculogenesis and Cardiac Conduction Tissue Differentiation.

1997 Kerry Wilson, (MUSC summer undergraduate program).
Project: Cx45 Expression in the Developing Mouse Heart.

1997-1998 Shimon Frances, Academic Magnet School, senior thesis project. Primary mentor.
Grad. Honors.
Project: Computer Modeling of Gap Junctional Coupling in the Developing Heart.
Grad PhD MUSC 2011

1998 Shantae James, (MUSC Minority summer undergraduate program).
Project: Induction of Cardiac Conduction Cells in Vitro.
Grad MUSC Med School MD PhD 2008

1999-2000 Adria K. Holwell, summer research project
Project: Connexins in the Rabbit Terminal Crest.
Grad Med College Georgia 2005

2000-2001 Will Bigelow, Academic Magnet School, senior thesis project. Primary mentor.
Grad. Honors.
Project: Cx43 Expression in the HF1b KO Mouse.
Grad MUSC Med School 2009

2002-2003 Ursula Kelly, College of Charleston, summer undergraduate project.
Project: Cx43 and ZO-1 Interactions in Cultured Cells. Graduate MUSC Med School 2008

2003-2006 Ching Zhu, Academic Magnet School, summer research program and senior thesis project. Primary mentor. Graduate. Honors.
Project: Cx43 and ZO-1 interactions and gap junction size.
Honors: Won 2nd grand prize in INTEL International High School Science Competition, Seattle, WA. Prize included NASA naming an asteroid for MsX Zhu! Harvard College, Boston (Full Scholarship). Entered Stanford University Medical School 2011.

2008 Minella Capelli, (MUSC Minority summer undergraduate program). Entered medical school 2010.
Project: Molecular Induction of Cx43 ZO-1 Interaction.

2011 Hina Siddiqui, (MUSC Minority summer undergraduate program). Entered medical school 2013.
Project: 3D culture model of the cardiac infarct border zone.

2013 Allison Post, (AHA Medical Scholarship).
Project: Cardiac Regeneration in Neonates

2014-2016 Frances Bustos, Virginia Tech Carilion School of Medicine
Project: aCT1 effects on cutaneous scarring

2014-2016 Kendall Hancock, Virginia Tech Carilion School of Medicine
Project: Cell sorter based assay of intercellular communication

2016-2020 Tom Liu, Virginia Tech Carilion School of Medicine
Project: Effect of myocardial infarction on sodium channel distribution

2017 Josh Feazell, (FBRI Summer Undergraduate Research Fellowship Program)
Project: Does Cx40 dosage in a Cx40/43 GJ determine levels of assoc. Nav1.5

2018-2019 Haley McAden, (summer/fall high school) Roanoke Valley Governor's School
Project: Human clinical trials, dermal wound healing

2018 Michael "Jake" Barker (November 2018) Episcopal School of Jacksonville, Florida,
Project: The Effects of Cell Phone Radiation on the Regeneration of Cells

2018 Jacob Bond, Virginia Tech
Project: aCT11 peptide optimization for exosomal uptake

2019 Cameron Jamison, CalPoly
Project: Connexin43 fusion protein purification

2019-pres Rocco DiSanto, Virginia Tech Carilion School of Medicine
Project: Individuals vs. Institutions: Which Plays the Predominant Role in Research Translation Efficiency?

2019-pres Anna Buhle, Virginia Tech Carilion Medical School
Project: Characterization of Milk Exosome Uptake in the Gastrointestinal Tract

Graduate Students

1996-1999 Cheng Gang, MCBP graduate program- Grad, 1999.
Project: Apoptosis and the Developing Heart. Winner NIH Weinstein Travel Award

1997-2000 Lisa Norman, MCBP graduate school program. Grad 2000.
Gap junctional Cx45 in the Developing Heart. Winner: 1st prize MUSC student research day oral presentation and AAA Langman award at FASEB 2000 for best presentation by a student.
Funded: NSF grant to RGG.

1997-2003 Ralph Barker, MSTP MD PhD graduate/medical school program. Successfully defended PhD thesis July 2003, Grad 2004.
Gap Junctional Patterning in the Developing Heart.
Funded: NIH MSTP training grant and Gourdie NIH RO1

2003-2009 Michael O'Quinn, MSTP MD PhD graduate/medical school program, MUSC primary mentor. Wnt11 Expression in Animal Models of Cardiac Disease. Overall Winner MUSC Student Research Day.
Funded: AHA Pre-Doc Fellowship

2004-2012 Matthew Rhett, MUSC PhD graduate school program, MUSC primary mentor. ZO-1 Regulation of Cx43 Connexin Aggregation. Sigma Psi MUSC Winner Student Research Day.
Funded: NIH T32 training grant and NASA pre-doc fellowships.

2006-2010 Abhijit Gurjarpadhye, Clemson-MUSC Joint Bioengineering program (Masters of Engineering). MUSC primary mentor. Neural Crest effect on Conduction System Development.
Funded: Clemson University Stipend.

2006-2013 Joseph Palatinus, MSTP MD PhD graduate/medical school program, MUSC primary mentor. Mass Spectroscopic Analysis of Naturally Occurring Alpha Carboxy-Terminal Connexin Peptides. Keystone conference travel award. Student Research Day Oral Prizewinner.
Funded: Ruth Kirschstein F30 pre-doc fellowship

2010-2012 Erik Strungs, MSTP MD PhD graduate/medical school program, MUSC rotation mentor. Cx43 Expression in the ACE2 Knockout Mouse Heart.

Funded: NIH MSTP training grant.

2012-2016 Emily Ongstad, Clemson-MUSC Joint Bioengineering program (PhD), MUSC primary mentor. Targeting Cx43 and Skeletal Muscle Regeneration
Funded: NIH F31 Ruth Kirschstein Award

2013-2018 Katherine E. Degen, School of Biomedical Eng. graduate program (PhD), Virginia Tech, primary mentor. Development of Novel Drugs for Tissue Engineered Repair
Funded: FBRI PhD Scholarship

2014-2019 Jade Montgomery, School of Biomedical Eng. graduate program (PhD), Virginia Tech, primary mentor. Building a Better Scar: Reengineering Extracellular Matrix Structure in Dermal Scars
Funded: FBRI PhD Scholarship

2014-2018 Jingbo Jiang, MD/PhD Guangdong Cardiovascular Institute, Guangdong, China, Virginia Tech, primary research mentor. aCT1 Mediated S368 Phosphorylation of Cx43
Funded: Gourdie Lab/ Chinese Academy of Science Fellowship

2016-pres Randy Strauss, Translational Biology, Medicine and Health graduate program (PhD), Virginia Tech, primary mentor. Cx43 modulation of barrier function.
Funded: NIH F31 Kirschstein-NRSA Fellowship Award

2019-pres Zachary Williams, Translational Biology, Medicine and Health graduate program (PhD), Virginia Tech primary mentor.
Funded: Gourdie Lab

Post-doctoral Fellows

1995 Robert Sepp, M.D.
Project: Intercellular Junction Distributions in Patients with Hypertrophic Cardiomyopathy. Dr Sepp received the Hungarian Young Cardiologist of the Year from his work in Gourdie's lab.
Funded Eotvos State Fellowship.

1996-1997 Jocelyn Lee M.D.
Project: Connexin43 in Heart Failure.
Funded by NIH Training Fellowship in Pediatric Cardiology.

1997 Brigitt D. Angst Ph.D.
Project: Cell Adhesion Molecules and Cardiac Intercalated Disk Differentiation
Funded: Fellowship from the Wellcome Trust.

1997-1998 Steven R. Coppen Ph.D.
Project: Cx45 Expression in the Conduction System
Funded: Fellowships from the Wellcome Trust and Biochemical Society.

1998-2002 Jacqueline Bond Ph.D.
Project: Developmental Origins of Ventricular Myocyte Phenotypic Heterogeneity.
1st prizewinner MUSC student research day – Post-Doc poster competition.
Funded: AHA Post-Doc Fellowship.

2001-2006 Brett S. Harris, Ph.D.
Project: Nkx-2.5 and Conduction System Development.
Funded: AHA Post-Doctoral Fellowship grant.

2003-2009 Andrew W. Hunter, Ph.D.
Project: Connexin Interacting Proteins in Regulation of Gap Junction Size.
His paper from lab in 2005 nominated as Molecular Biology Cell paper of the year.
Post-Doc oral presentation winner at MUSC student research day.
Funded by NIH/NHLBI grant to RGG.

2004-2006 Gautam Ghatnekar, DVM, PhD
Project: Cx43 GJ and Neural Crest Migration.
Funded: NIH/NHLBI grant to RGG; Present: President and CEO, FirstString Research Inc.

2010-2012 Alix Myers, Ph.D.

Project: Epithelial Mesenchymal Transition Priming of Stem Cells
Funded: NIH/NHLBI T32 training grant to MUSC

2011-2012 Matthew Rhett Ph.D.
Project: ZO-1 Regulation of Cx43 Connexin Aggregation.
Funded: NASA

2012-2017 Sai Veeraraghavan Ph.D.
Project: Ephaptic Coupling in the Heart
Funded: AHA Post-Doc Fellowship and Scientist Development Grant
August 2017 Palade George award
May 2017 Young Investigator Electrophysiological Society
Present: Ohio State University, Associate Professor

2016-pres Daniel Hoagland, Ph.D.
Project: Synthesis of Novel and Testing Beta1 Targeting Compounds
Funded Gourdie R01

2019-pres Kevin Pridham, Ph.D.
Project: Precision Medicine Exosomal Drug Delivery Medtech for Heart Attack
Funded: Gourdie R01

2020-pres Spencer Marsh, Ph.D.
Project: Process Development for Exosome Drug Delivery
Funded: Gourdie R01

Graduate Thesis Committees

1998-2004 Laura Columbo, MCBP graduate student
2000-2004 Brian Giles, MCBP graduate student
2001-2008 Shantae James, MCBP graduate student
2002-2008 Christopher Crosby, MCBP graduate student
2002-2007 Kristie Lindsay, MCBP graduate student
2003-2005 Jessica Paulik, MCBP graduate student
2003-2006 Xinkui Hao, Clemson/MUSCMCBP graduate student
2009-2012 Daniel Grass, graduate student
2012-2016 Sharon George, Virginia Tech Bioengineering graduate student
2012-2016 Amara Greer-Short, Virginia Tech Bioengineering graduate student
2013-2017 Aboozar Monavarfeshani, Virginia Tech Biology graduate student
2013-2017 Kevin Pridham, Virginia Tech TBMH graduate student
2013-2017 Michael Entz, Virginia Tech BEAM graduate student
2014-2019 Jordan Darden, Virginia Tech TBMH graduate student
2014-2019 Carissa James, Virginia Tech TBMH graduate student
2014-2019 Rose Roberts, Virginia Tech Material Science & Engineering graduate student
2015-2020 Patrick Calhoun, Virginia Tech Biological Sciences graduate student
2016-pres David Ryan King, Virginia Tech TBMH graduate student
2018-pres Maruf Hoque, Virginia Tech TMBH graduate student
2018-pres Kijana George, Virginia Tech, TBMH graduate student
2017-2019 Marc Thompson, Virginia Tech, Biomedical Engineering, graduate student
2015-2020 Sydney Vaughan, Virginia Tech, TBMH graduate student
2018-2020 Catherine Barron, Virginia Tech, BMVS graduate student
2018-pres Katrina Colucci-Chang, Virginia Tech, Biomedical Engineering graduate student
2018-pres Xiaobo Wu, Virginia Tech TBMH graduate student
2019-pres Youjing Zheng, Virginia Tech, BMVS graduate student
2019-pres Grace Blair, Virginia Tech TBMH graduate student
2019-pres Yagmur Tasdemiroglu, Virginia Tech, Biomedical and Veterinary Sciences graduate student

Other Teaching

(i) Co-organizer of the MUSC/MCG Heart Development Symposium 1996
(ii) Organizer of the Cell Biology External Seminar Series 1997-1998
(iii) Presenter at the MCBP Orientation Seminar Series (Barry Ledford - convener) 1997-1999
(iv) Presenter at Summer Undergraduate Seminar Series (Hank Martin-convener) 1997-1998
(v) Judge student MUSC Student Research Day 1995-2012

External Lectures and Presentations

1. Invited Speaker. Fifth International Symposium on the Etiology and Morphogenesis of Congenital Heart Disease. Tokyo, Japan, Dec 1999.
2. Abstract invited for Oral Presentation. Cellular and Molecular Mechanisms of Cardiac Conduction System Development. Weinstein Cardiovascular Development Conference. University of Arizona, Tucson, AZ, 1999.
3. Invited Seminar Speaker. Developmental Biology Program. Case Western Reserve University, School of Medicine, Cleveland, OH, 2000.
4. Invited Seminar Speaker. Insitut de Biologie du Developpement de Marseille External Speaker Series. Marseille, France, 2000.
5. Abstract selected for Oral Platform Presentation by Dr Gourdie. Remodeling of Cx43 Gap Junction Pattern in HF1b ko Transgenic Model of Ventricular Arrhythmia. Weinstein Cardiovascular Dev. Conference. St Louis, MO, 2000.
6. Invited Speaker. UCSD Cardiovascular Science Seminar Conference, San Diego, CA, 2000.
7. Invited Seminar Speaker. Dept. Physiol. Seminar Series. University of Calgary, Calgary, Canada, 2000.
8. Invited Seminar Speaker. Dept. Pharmocology. Program. UPR, San Juan, Puerto Rico, 2000.
9. Invited Speaker, Molecular Medicine Seminar, Medical College of Georgia, Augusta, GA, 2001.
10. Invited Speaker. National Institute of Child Health and Development Annual Conference. National Institute of Health, Bethesda, MD, 2001.
11. Abstract selected for oral platform presentation. Remodeling of Cx43 Gap Junction Pattern in HF1b ko Transgenic Model of Ventricular Arrhythmia. International Gap Junction Conf. Honolulu, HI, 2001.
12. Invited Speaker. Centennial Einthoven Conference, Leiden, Netherlands, 2002.
13. Invited Speaker. Inaugural Texas Heart Ins. Meeting. Coronary Artery Anomalies, Houston, TX, 2002.
14. Invited Speaker. Novartis Foundation Meeting on Development of the Cardiac Conduction System, London, UK, 2002.
15. Invited Speaker. Royal Society of Medicine, London, UK, 2002.
16. Invited speaker. Cardiovascular Biology Graduate Program Seminar Series, Baylor College of Medicine, Houston, TX, 2003.
17. Invited speaker. Cardiovascular Medicine Seminar Program, Harvard Medical School, Boston, MA, 2003.
18. Invited speaker. Div. of Cardiovascular Science Program, Children's Hospital, Columbus, OH, 2003.
19. Invited speaker. Department Pharmacology Seminar Program, Columbia College of Physicians and Surgeons, New York, NY, 2003.
20. Invited speaker. National Heart Lung and Blood Institute Lab of Developmental Biology Seminar, NIH Campus, Bethesda, MD, 2003.
21. Invited speaker. Department Anatomy and Developmental Biology Seminar Program, University of South Carolina, Columbia, SC, 2004.
22. Invited speaker. American Microscopical Society Annual Meeting Session on Imaging in Cardiac Development and Disease, Savannah, GA, February, 2004.
23. Invited Speaker. ExpBio 2004 AAA Symposium on the Cardiac Pacemaking and Conduction System Symposium, Washington, DC, April, 2004.
24. Invited Speaker. National Institute of Child Health and Development Annual Conference. Washington University Med School, St Louis, MO, June, 2004.
25. Invited speaker.14th World congress-Cardiac Electrophysiology. Cardiostim, Nice, France, June, 2004.

26. Invited speaker. Dept. of Cell Biology Seminar Program, University of Kansas, Kansas City, MO, 2004.
27. Invited speaker. Cardiovascular Research Center Seminar. Massachusetts General Hospital, Boston, MA, February, 2005.
28. Invited Speaker. Heart Rhythm Society. Advances in Connexin Biology, New Orleans, LA, May, 2005.
29. Invited Debater. Heart Rhythm Society. Controversies in Basic/Translational Science. There are Specialized Conducting Cells in the Pulmonary Veins, New Orleans, LA, 2005.
30. Abstract selected for oral platform presentation by Dr. Gourdie. Neural crest cells are necessary for conduction bundle insulation. Weinstein Cardiovascular Dev. Conf. Tucson, AZ, May, 2005.
31. Invited Speaker. Heart Rhythm Society, Advances in Connexin Biology, Boston, MA, May, 2006.
32. Invited Speaker. The 4th Larry & Horti Fairberg Workshop, Interactive and Integrative Cardiology April, 2006, Charleston, SC, 2006.
33. Invited Seminar Speaker. Dept. of Anatomy and Cell Biology Seminar Series. Indiana University School of Medicine, Indianapolis, IN, 2006.
34. Invited Seminar Speaker. Cell Biology, Neurobiology and Anatomy Seminar Series. Medical College of Wisconsin, Milwaukee, WI, 2006.
35. Invited Seminar Speaker. NHBLI Intramural Seminar Program. Bethesda, MD, 2006.
36. Invited Seminar Speaker. New York University Medical School, Grand Rounds, New York, NY, 2006.
37. Invited Seminar Speaker. Albert Einstein College of Medicine, New York, NY, 2007.
38. Invited Seminar Speaker. Medical College of Milwaukee, WI, 2007.
39. Invited Presenter at Mini-symposium on Cardiac Neural Crest. Weinstein Cardiovascular Development Conference. Indianapolis, IN, 2007.
40. Invited Speaker. Gordon Research Conference-Cardiac arrhythmias. Ventura Beach, CA, May, 2007.
41. Invited Speaker. Heart Rhythm Society, Development of AV node, Boston, MA, May, 2008.
42. Invited Speaker. American Heart Association Scientific Sessions, New Orleans, LA, 2008.
43. Invited Speaker. FASEB-EXP Bio08, Tissue Engineering Session New Orleans, LA, 2008.
44. Invited Seminar Speaker. University of Pittsburgh, PA, 2008.
45. Invited Seminar Speaker. Columbia University, NY, 2008.
46. Invited Speaker. American Heart Assoc. Scientific Sessions, Channel Trafficking. Orlando, FL, 2009.
47. Invited Speaker. International Gap Junction Conference, Cx43-ZO-1 Interactions and Arrhythmia Sedona, AZ, August, 2009.
48. Invited Seminar Speaker. University of Central Florida, Orlando, FL, 2009.
49. Invited Seminar Speaker. University of Michigan Ann Arbor, MI, 2009.
50. Invited Speaker. Heart Rhythm Society, Scientific Sessions, Denver, CO, 2010.
51. Invited Seminar Speaker. Vanderbilt University Medical School, TN, 2010.
52. Invited Speaker. American Heart Association Scientific Sessions, Chicago, IL, 2010.
53. Invited Seminar Speaker. Dept. of Medicine Seminar Series, University California San Diego, CA, 2010.
54. Keynote Speaker. Medical Sciences Congress, Queenstown, New Zealand, 2010.
55. Invited Speaker. Keystone Symposia Conference-Extracellular Matrix and Cardiovascular Remodeling. Tahoe City, CA, January, 2011.
56. Invited Seminar Speaker. Department of Molecular Physiology and Biophysics Graduate Seminar Series, University of Virginia, Charlottesville, VA, May, 2013.
57. Invited Speaker. Second "Heidelberg-Heart" Workshop on "Cell and Molecular Biology of the Adhering Junctions and Functions in Heart Tissues", Univ. of Heidleberg, Germany, 2011.
58. Invited Speaker. Morphology 2011, Charles University, Prague, Czech Republic, 2011.
59. Invited Seminar Speaker. Developmental Biology Seminar Series, University of Pittsburgh, Pittsburgh, PA, January, 2012.
60. Plenary Session Speaker., 7th Ascona International Workshop on Cardiomyocyte Biology**,** Centro Stefano Franscini, Mt. Verite, Switzerland, April, 2012.
61. Page Morton Hunter seminar speaker. Department of Bioengineering, Clemson University, Clemson, SC, August 2012.

62. Invited Seminar Speaker. Fralin Biomedical Research Institute at VTC, Roanoke, VA, August 2012.
63. Invited Seminar Speaker. Welcome Trust Center for Human Genetics, Univ. of Oxford, UK, August, 2012.
64. Invited Speaker. 5th Asia Pacific Heart Rhythm Society Scientific Session, Taipei, Taiwan, Oct, 2012.
65. Invited Seminar. Chinese Academy of Science, Guangzhou Institute of Biomedicine and Health, October, 2012.
66. Invited Seminar. Department of Medicine, MacKay Medical College, Taipei, Taiwan, October, 2012.
67. Invited Seminar. Department of Ophthalmology, University of Auckland Medical School, Auckland, New Zealand, October, 2012.
68. Invited Seminar Speaker. Drug Discovery Seminar Series, Virginia Tech, Blacksburg, VA, Sep, 2012.
69. Invited Speaker. Wake Forest Institute of Regenerative Medicine Seminar Series, Winston-Salem, NC, September, 2012.
70. Invited Speaker, American Heart Association, Scientific Sessions, Los Angeles, CA, November, 2012.
71. Invited Speaker. Gordon Conference-Cardiac Arrhythmias, February, 2013.
72. Invited Speaker. Center for Cardiovascular Developmental Biology Meeting, MUSC, Charleston, SC, March, 2013.
73. Keynote Speaker. Carilion Clinic Research Day 2013, Roanoke, VA, April, 2013.
74. Invited Speaker. Gordon Conference-Cardiac Arrhythmias, Ventura, CA, February, 2013.
75. Invited Speaker. University of Virginia Molecular Medicine Graduate Program Seminar Series, University of Virginia, Charlottesville, VA, May, 2013.
76. Invited Seminar Speaker. Burn and Shock Trauma Research Institute, Loyola University, Chicago, IL, November, 2013.
77. Invited Speaker. American Heart Association, Scientific Sessions, Dallas, TX, November ,2013.
78. Invited Speaker. Center for Cardiovascular Developmental Biology Meeting, MUSC, Charleston, SC, March, 2014.
79. Keynote Speaker. Symposium on Gap Junctions and Hemichannels, University of Ghent, Belgium, May, 2014.
80. Invited Lecturer. Czech Academy of Sciences, Institute of Physiology of the Czech Academy of Sciences 60th Anniversary Lecture.
81. Invited Speaker. American Heart Assoc., Scientific Sessions, Chicago, IL, November, 2014.
82. Invited Seminar Speaker. Department of Pharmacology, Vanderbilt University, Nashville, TN, November, 2014.
83. Invited Speaker. Keystone Meeting, Myocyte-Fibroblast Interactions, Copper Mountain Resort, CO, February, 2015.
84. Participating Speaker. Astra Zeneca-VA Brain State Initiative, Fairfax, VA, February, 2015
85. Invited Seminar Speaker. Department of Medicine, Cleveland Clinic, Cleveland, OH, March, 2015.
86. Invited Seminar Speaker. Department of Biology, Old Dominion University, Norfolk, VA, October, 2015.
87. Invited Seminar Speaker. Department of Molecular Biology, University of Nebraska Medical School, Omaha, NE, March, 2015.
88. Invited Speaker. Asia Pacific Heart Rhythm Society, Myocyte-Fibroblast Interactions, Melbourne, Australia, November, 2015.
89. Invited Seminar Speaker. University of Auckland Med. School, Auckland, New Zealand, Nov, 2015.
90. Invited Seminar Speaker: University of California Los Angeles, Los Angeles, CA, December, 2015.
91. Invited Keynote Speaker. Interface between Connexin/Pannexin Biology and Therapeutics Workshop, Paris, France, Mar 3-4, 2016. "*Therapeutic targeting of Cx43 function in Glioblastoma*".
92. Invited Seminar Speaker. Wexner Medical Center at The Ohio State University, Davis Heart & Lung Research Institute, Columbus, OH, July, 2016. "*Roll and Mechanism of the Connexin 43 Carboxyl Terminus in Cardioprotection".*
93. Invited Seminar Speaker. Department of Cardiac Medicine, National Heart and Lung Hospital & Magdi Yacoub Heart Institute, Imperial College, London, UK, September, 2016 *"Questioning a 60-year paradigm in cardiology: Does the model of connexin channel function in propagation of action potentials need revision?"*

94. Invited Seminar Speaker. Department of Biochemistry, University of Bristol, Bristol UK, Sep, 2016. *"Questioning a 60-year paradigm in cardiology: Does the model of connexin channel function in propagation of action potentials need revision?"*
95. Invited Seminar Speaker. Wake-Forest School of Medicine, SPORE Department Wake Forest, NC, Nov, 2016 "*Therapeutic targeting of Cx43 function in Glioblastoma".*
96. Invited Seminar Speaker. University of Arizona, Tucson, AZ, Dec, 2016, "*Connexin43: New Roles for a Gap Junction Protein in Cardiac Conduction, Wound Healing and Cancer".*
97. Invited Seminar Speaker. Medical College of Wisconsin, Milwaukee, WI, December, 2016, "*Connexin43: New Roles for a Gap Junction Protein in Cardiac Conduction, Wound Healing and Cancer".*
98. Invited Speaker. University of Auckland, NZ, Bioengineering and Physiology, December, 2016 "*Connexin43: New roles for a Gap Junction Protein in Cardiac Conduction, Wound Healing and Cancer*".
99. Invited Speaker. Virginia Commonwealth University, Biomedical Engineering, Richmond, VA Mar, 2017 *"Is the Heart Really a Syncytium? New Insights on the Molecular Machinery Responsible for Cardia Impulse Propagation".*
100. Invited Speaker. Virginia Commonwealth Medical University, Pauley Heart Center, Richmond, VA Mar, 2017 *"Cx43 Carboxyl Terminus: New Roles in Wound Healing and Cardiac Ischemic Injury".*
101. Invited Speaker. Heart Rhythm Society Scientific Sessions, May 10, 2017 Chicago, IL *"Sodium Channels at the Perinexus: Impact on Propagation".*
102. Invited Speaker: 21st Century Cures Conference, Jun 1, 2017, Knoxville, TN *"Precision Targeting of Gap Junction Connexins for Clinical Indications in Wound Healing, Heart Disease, and Brain Tumors".*
103. Invited Speaker. National Cancer Institute Workshop, Jun 14, 2017, Arlington, VA *"Translation of Novel Glioblastoma Drugs Targeting Connexin43".*
104. Invited Speaker: University of Göttingen International Symposium "Physics meets Medicine – the Heart of the Active Matter, Sep 5, 2017, Göttingen, Germany *"Excitation at the Gap Junction Edge. The Novel Role of the Perinexus in Cardiac Conduction"*.
105. Invited Speaker: University Herzzentrum, Sep 7, 2017, Freiburg, Germany "Excitation at the Gap Junction Edge: The Novel Role of the Perinexus in Cardiac Conduction".
106. Invited Speaker: 28th Annual Regional HeartNet of the Virginias, Carilion Hospital, Sep 15, 2017, Roanoke, VA *"The Heart is an Electric Organ".*
107. Invited Speaker: American Heart Association Scientific Sessions, November 14, 2017, Anaheim, CA *"Non-Canonical Mechanisms of Cardiac Conduction".*
108. Invited Speaker: Veteran's Hospital, February 1, 2018, Salem VA. *"Cx43, Cardiac, and Cutaneous Wound Healing".*
109. Invited Speaker: University of South Carolina School of Medicine, March 19, 2018, Columbia, SC *"The Gap Junction Protein Connexin43: New Roles in Wound Healing and Cardiac Ischemia Reperfusion Injury".*
110. Invited Speaker: Edward Via College of Osteopathic Medicine VCOM Carolinas Research Day, March 30, 2018, Spartanburg, SC *"The Gap Junction Protein Connexin43: New Roles in Wound Healing and Cardiac Ischemia Reperfusion Injury".*
111. Invited Speaker: Virginia Tech Global Entrepreneur Challenge and Annual Roundtable, August 20, 2018, Blacksburg, VA *"Integrating the US Regulatory Process Into Commercialization Plans for Global Healthcare Products".*
112. Invited Speaker: MedSci Congress, Queenstown Research Week, August 29, 2018, Queenstown, New Zealand. "*Nanodomains and Electrical Conduction at the Cardiac Gap Junction"*.
113. Invited Speaker: University of Auckland Bioengineering Institute, Auckland, New Zealand, August 31, 2018, "*Nanodomains and Electrical Conduction at the Cardiac Gap Junction"*.
114. Invited Speaker: Carilion Grand Rounds Roanoke, VA September 19, 2018, *"Nanodomains and Electrical Conduction at Cardiac Gap Junctions"*.
115. Invited Speaker: University of Maryland, College of Medicine, Baltimore, MD October 4, 2018, *"Nanodomains and Electrical Conduction at Cardiac Gap Junctions"*
116. Invited Speaker: CIT-CRCF Award Recipient, Blacksburg, VA October 11, 2018

117. Invited Speaker: AsiaPacific Heart Rhythm Society, Taipei, Taiwan, October 20, 2018, *"Interaction Between Sodium Channel Complexes and Connexin43 Gap Junction in Cardiac Conduction".*
118. Invited Speaker: Guangdong Cardiovascular Research institute, October 22, 2018, *"Interaction between Sodium Channel Complexes and Connexin43 Gap Junctions in Cardiac Conduction".*
119. Invited Speaker: Shenzhen Children's Hospital, October 23, 2018 *"Cx43 Carboxyl Terminus: Mimetic Peptides for Ameliorating Cardiac Ischemic Injury"*.
120. Invited Speaker: Guangzhou Institutes of Biomedicine and Health Chinese Academy of Science, October 24, 2018, "*Connexin43 drugs in wound healing and myocardial infarction - from lab bench to clinical trials".*
121. Invited Speaker: Virginia Biomanufacturing Symposium, Charlottesville, VA November 5, 2018, *"Non-Dilutive Funding"*.
122. Invited Speaker: Ephaptic Coupling Conference, Roanoke, VA, May 6, 2019, *"The Beta Subunit of the Voltage-Gated Sodium Channel: Roles in Cardiac Conduction and an Anti-Arrhythmic Drug Target"*.
123. Invited Speaker: Heart Rhythm Society, San Francisco, CA May 9, 2019, *"The Sodium Channel Beta Subunits: Location-Specific Functions".*
124. Keynote Speaker: International Gap Junction Conference, Victoria, BC, Canada, July 31, 2019, *"Connexin43: For Better or Worse, in Sickness and in Health…"* ".
125. Invited Speaker: Asia Pacific Society of Atherosclerosis and Vascular Diseases, Taipei, Taiwan, September 21, 2019, *"Cx43 Carboxyl-Terminus Based Therapeutics: Applications in Wound Healing, Cardioprotection and Vascular Disease"*.
126. Invited Speaker: University of California, Irvine, November 1, 2019, *"Gap Junctional Connexin 43: For Better or Worse, in Sickness and in Health…"*
127. Invited Speaker: University of Western Ontario, London, Ontario, November 12, 2019, "Therapeutic peptides based on the Cx43 carboxyl terminus: Molecular mode of action and up-date on clinical trial progress".
128. Invited Presenter: AHA Scientific Sessions November 18, 2019, *"Short Connexin43 Carboxyl Terminal-based Peptide Permeates Hemichannels and Provides Post-Infarction Cardioprotection In Vivo"*.
129. Invited Presenter: Stealth BioTherapeutics Chemistry Advisory Board meeting April 16, 2020, (via Zoom) "*Insights from Connexin-based peptide studies*".
130. Invited Presenter: University of Toronto, November 5, 2020, (via Zoom) *"Connexin 43: Novel Roles in Cardiac Conduction and injury Response".*

Publications: Hirsch Index = 57; Citations = 11485 (November 2020)

Peer-Reviewed Publications

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4. Compositions and Methods for Promoting Wound Healing and Tissue Regeneration, filed 12/21/2004. (Inventors: Robert G. Gourdie, Gautam Ghatnekar, and Jane Jourdan). New Zealand patent awarded October 2010.
5. Compositions and Methods for Tissue Engineering, Tissue Regeneration and Wound Healing. U.S. Provisional Application No. filed 09/01/09 (Inventors: Robert G. Gourdie and Jay D. Potts-USC).
6. Alpha Connexin C-Terminal (Act) Peptides for Treating Age-Related Macular Degeneration. Provisional Application No. PCT/US2008/067944. Filed 06/21/2007. (Inventors: Robert G. Gourdie and Barbel Rohrer). Awarded January 2014 in Japan. Pending US. Licensed to FirstString Research, Inc. 2007.
7. Periostin inhibitory compositions for myocardial regeneration, methods of delivery, and methods of using same. USPTO Application #: 20100291188, filed 12/06/2008 (Inventors: Russell A. Norris, Robert G. Gourdie, Michael P. O'Quinn, Roger R. Markwald), granted April 2015.
8. Methods for treating corneal injury. US patent 8,859,733, (Inventors: Robert G. Gourdie, Gautam Ghatnekar, and Jane Jourdan). USPTO patent awarded 2014.
9. Methods for treating chronic wounds. US patent 8,916,515, (Inventors: Robert G. Gourdie, Gautam Ghatnekar, and Jane Jourdan). USPTO patent awarded 2014.
10. Methods for treating lung injury and disease. US patent 8,809,257, (Inventors: Robert G. Gourdie, Gautam Ghatnekar, and Jane Jourdan). USPTO patent awarded 2014.
11. Alpha connexin c-terminal (act) peptides for use in transplant. USPTO Publication number: 20170135334 (Inventors: Robert G. Gourdie, Gautam Ghatnekar, and Jane Jourdan). Amended to include RG Gourdie and LJ Jourdan as inventors May 2017.

Main Patents Pending *(from ~50 Worldwide)*

1. Alpha Connexin C-Terminal (Act) Peptides for Treating Age-Related Macular Degeneration. U.S. Provisional Application No. PCT/US2008/067944. (Inventors: Robert G. Gourdie and Barbel Rohrer). Pending in US. Licensed to FirstString Research Inc. 2007, patent filed 2009.
2. Compositions and Methods for Ameliorating Clinical Electrical Disturbances. USPTO Application #: 20100286762, (Inventors: Robert G. Gourdie Michael P. O'Quinn J. Matthew Rhett), patent filed 2009.
3. Compositions and Uses for Protein Kinase CT Mimetics. Provisional USPTO Application #: 61/436,583 (Inventors: Robert G. Gourdie, Jane Jourdan, Joseph Palatinus). Patent filed 2011.
4. Compositions and Methods for Wound Healing and Tissue Repair. USPTO Application #: 61638094, Patent filed 04/25/12, (Inventors: Robert G. Gourdie, J. Matthew Rhett, Michael S. Yost, Edie Goldsmith, Jane Jourdan).
5. Methods of Treating a Cancer through Targeted Disruption of Alpha Connexin 43-zonula occludens-1 (zo-1) Interaction. (Inventors: Zhi Sheng and Robert Gourdie), PCT International Application No.: PCT/US2014/042528, June 16, 2014, Priority Filing Date: August 02, 2013.

6. Methods for Personalized Medicine: GBM Diagnosis and Treatment. (Inventors: Zhi Sheng and Robert Gourdie), VTIP 15-082, provisional patent filed 2015.
7. Methods for cancer treatment. USPTO application # 14/542,151, (Inventors: Robert G. Gourdie, Gautam Ghatnekar, and Jane Jourdan). Patent filed 2014.
8. Novel Compositions and Methods for Heart Ischemia Reperfusion Injury. USPTO application #62419529. (Inventors: Robert Gourdie, Jane Jourdan, and Jingbo Jiang). VTIP 17-055 provisional patent filed November 9, 2016.
9. Compositions and Methods for Extracellular Vesicle Therapeutics (Inventor: Robert Gourdie) US Provisional Patent Application No. 62615751 filed January 10, 2018.
10. Novel Precision Medicine Exosomal Drug Delivery Platform, (Inventor: Robert Gourdie) US Provisional Patent Application No. USPTO 62712067 filed July, 2018.
11. Methods for Hemichannel Loading of Exosomal Drug Delivery Vehicles with Therapeutic Molecules. (Inventors: Robert Gourdie et al), USPTO No. 62/823,457, filed 03/25/2019.
12. Methods for Loading Exosomal Drug Delivery Vehicles with Therapeutic Molecules. (Inventors: Robert Gourdie et al.), USPTO No. 62/823,471, filed 03/25/2019.
13. Compositions And Methods of Treating Myocardial Infarction (Inventor: Robert Gourdie), USPTO No. 62/865,895, filed 06/24/2019.
14. Engineered Hemichannels, Engineered Vesicles, and Uses Thereof. (Inventors: Robert Gourdie et al), USPTO No. PCT/US19/44248, filed 07/31/2019.
15. Alpha connexin C-terminal (ACT) peptides and methods of use thereof - methods for treating or preventing macular degeneration. G Ghatnekar, R Gourdie, J Jourdan. US Patent 10,398,140, 2019.
16. G Ghatnekar, R Gourdie, J Jourdan. Alpha connexin c-terminal (ACT) peptides and methods of use thereof - compositions and methods for use in promoting wound healing and tissue regeneration. US Patent 10,398,757
17. RG Gourdie, EC Goldsmith, LJ Jourdan, JM Rhett, MJ Yost. Methods of treating cancers with peptide-based modulators. US Patent 10,092,624

Other Professional Activities

2006- Co-Founder FirstString Research, Inc. (with Dr. Gautam Ghatnekar DVM, PhD). A clinical stage Biotech Company based in Charleston, South Carolina, FirstString currently has six employees. Dr. Gourdie served as Chief Scientific Officer in 2006 and presently serves on the Medical/Scientific Advisory Board. Dr. Ghatnekar, a former Gourdie lab post-doc, currently serves as President and CEO. FirstString completed phase I clinical trials on alphaCT1, the lead compound invented in the Gourdie lab in 2009 and licensed by the company from MUSC. alphaCT1 was developed in the Gourdie lab and is the active ingredient Granexin™ gel. Patents for composition of matter and utility for alphaCT1 were issued by the USPTO in 2010 and 2012. FirstString has obtained Investigational New Drug status for alphaCT1/ Granexin™ gel. In 2013, FirstString completed three Phase II human clinical trials for safety and efficacy for alphaCT1/ Granexin™ gel for scar reduction of acute surgical wounds and the treatment of chronic wounds - Diabetic Foot Ulcers and Venous Leg Ulcers. Granexin™ showed significant and clinically meaningful improvements in wound healing and scar reduction in all three clinical trials. For patients undergoing laparoscopy, a highly significant 47% reduction in scar appearance on the Vancouver scale (the clinical standard for scar assessment) was observed. Papers reporting these trials were published in J Inv Derm (Nature) and Wound Regeneration and Repair in 2015. The FDA approved ACT1 for Phase III clinical trials in 2015 and these trials are now underway. FirstString won the prestigious Tibbets small business prize in 2017 and presented their award at ceremony in White House in January 2018. Submitted a Phase II SBIR as PI with FirstString in January 2018.

2016- FirstString Research, Inc. agreed to a term sheet for acquisition in a $150m stock deal with Relief Therapeutics AG a pharmaceutical company listed on the Swiss stock exchange SIX. The combined company has a total valuation of CHF354m (USD $366m).

2016- Co-Founder Acomhal Inc. (with Dr. Samy Lamouille PhD). Acomhal is an early stage biotech startup undertaking preclinical development of JM2, an exciting new drug invented in Gourdie's lab with activity against cancer stem cells. The company has one employee and was funded in 2017 by SBIR and currently seeking other funding and investments to support its work. Drs. Lamouille and Gourdie currently serve as Chief Executive Officer and Chief Scientific Officer respectively.

2018 – Founder, The Tiny Cargo Company. Newly formed Virginia-incorporated spin-off from Virginia Tech. The company will enable an approach that will both protect therapeutic peptides from breakdown in body fluids, such as the blood, as well as shielding these potentially immunogenic peptides from the immune system.

Section D Statement:
No life break events in positions, publications, or support that require explanation.