Curriculum Vitae

Name: Nadia Alicia Rosenthal

Office Addresses:

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H index: 85

Date, place of birth: February 21 1953, USA

Education:

1971-1973 University of North Wales (UK)
1973-1975 B.A., Harvard University
1975-1981 Ph.D., Harvard Medical School (Biochemistry)

Postdoctoral Training:

1981-1983 Postdoctoral Fellow (molecular virology) NCI, NIH
1983-1984 Staff Fellow, (molecular virology) Laboratory of Molecular Virology, NCI, NIH

Academic Appointments:

1984-1988 Instructor in Pediatrics, Harvard Medical School
1985-1988 Faculty, Cell and Developmental Biology, Harvard Medical School
1986-1988 Senior Associate, Howard Hughes Medical Institute
1988-1991 Assistant Professor Biochemistry, Boston U. School of Medicine
1991-1993 Associate Professor Biochemistry, Boston U. School of Medicine
1993-2001 Associate Professor of Medicine, Harvard Medical School
2001-2012 Head of Mouse Biology Unit, EMBL Monterotondo (Rome)
2001-2012 Senior Scientist, EMBL Developmental Biology Unit (Heidelberg)
2001-2003 Inaugural Professor at-Large, Institute of Advanced Studies, U. Western Australia
2003-2016 Visiting Professor, University of Western Australia
2005-2012 Director of Science, Harefield Heart Science Centre, Imperial College London
2005-present Chair in Cardiovascular Science, Imperial College London
2007-2016 Founding Director, Australian Regenerative Medicine Institute, Monash University
2010-2016 Scientific Head, EMBL Australia
2012-2016 Visiting Scientist, EMBL
2015-present Scientific Director and Professor, The Jackson Laboratory, USA
2016-present Professorial Fellow, Murdoch Childrens Research Institute, Melbourne Australia
2018-present Administrative Core Co-Director, CoBRE, Mt. Desert Island Biological Laboratory
2020-present Professor, Tufts University School of Medicine, Boston, MA, USA.

Hospital Appointments:

1984-1988 Research Associate in Cardiology, Children's Hospital Medical Center
1993- 2001 Associate Biologist in Medicine, Massachusetts General Hospital

Awards and Honors:

1978-1979 Paul Mazur Fellowship in Experimental Biology
1979-1981 National Institute of Health Student Fellowship
1981-1983 Damon Runyon-Walter Winchell Cancer Fund Postdoctoral Fellowship
1989-1990 Whitaker Health Sciences Award (Massachusetts Institute of Technology)
1991-1996 Established Investigator Award, American Heart Association
2002 Ferrari-Soave Prize in Cell Biology (University of Turin)
2002 EMBO member
2009 NH&MRC Australia Fellow
2009 Doctor *honoris causa*, Université Pierre et Marie Curie, Paris
2010 Doctor *honoris causa,* University of Amsterdam
2014 Fellow of the Academy of Medical Sciences, UK
2015 Fellow of the Australian Academy of Health and Medical Sciences
2019 Doctor *honoris causa*, Bowdoin College, Maine

Major Committee Assignments:

1989-1991 Ad hoc peer review, Genetics Study Section (member), NIH
1990-1993 Peer Review Committee, American Heart Association (member), MA Affiliate
1991-1993 Ad hoc peer review, Resp/Applied Physiology Study Section (member), NIH
1992-1993 Reviewers Reserve (member), NIH
1991-1992 Peer Review Committee, American Heart Association (member), NY Affiliate
1993-1995 Peer Review Committee, American Heart Association (member), National
1993-1998 Molecular Cytology Study Section (member), NIH
1993-1999 Peer Review Committee (member), Muscular Dystrophy Association
1995-2001 American Cancer Society Institutional Research Grant Committee (member)
2000- 2005 Scientific Advisory Committee, Genethon, Paris
2001- 2003 Scientific Advisory Board, Harefield Research Foundation, London
2001- 2003 EMBL representative, European Life Sciences Forum (ELSF)
2002- 2005 International Mouse Mutagenesis Consortium
2002 Special Advisor to the House of Lords: Select Committee on Stem Cell Research
2002-2006 European Group on Life Sciences (EGLS)
2002-2004 President-Elect, International Society of Differentiation
2002-2006 Grant Review Committee, Human Frontiers Science Program
2003-2005 Scientific Advisory Board, Genzyme
2003-2006 Selection Committee: Chiara D'Onofrio Prize
2004-2006 Scientific Advisory Board, ISMETT, Palermo
2004-2006 President, International Society of Differentiation
2004-2012 European Conditional Mouse Mutagenesis Program
2005-2010 Scientific Advisory Board, Institute of Advanced Studies, U. Western Australia
2005-2010 Grand Jury, Descartes Prize
2005-2015 Scientific Advisory Board, Keystone Symposia
2005-2009 Scientific Advisory Board, Max F. Perutz Laboratories, Vienna
2006-present Grand Jury, Koerber Prize
2007-present Scientific Advisory Board, Center for Molecular Medicine, Vienna
2007-present Scientific Advisory Board, Finnish Institute for Molecular Medicine (FIMM), Finland
2008-2010 Scientific Advisory Board, Institute of Molecular Biology Biotechnology, Heraklion
2010-2020 Scientific Advisory Committee, South Australian Health & Medical Research Inst.
2010-2015 Chair, Grant Review Committee, European Research Council

2011-present Board of Trustees, College of the Atlantic USA
2011-present SENS Foundation Research Advisory Board
2012-present Scientific Advisory Board (Chair), Max Planck Institute, Bad Nauheim
2013-2015 Scientific Research Council, The Jackson Laboratory, USA
2017-present Executive Committee, The Jackson Laboratory Cancer Center
2013-2018 Scientific Advisory Board, Mount Desert Island Biological Laboratories USA
2020-present Scientific Advisory Council, Harry Perkins Inst. of Medical Research, West. Australia
2020-present Board of Scientific Counselors, National Heart Lung and Blood Institute, NIH
2021-present Chair, Advisory Board, Inst for Developmental & Regenerative Medicine, Oxford, UK
2022-present Scientific Committee, Human Technopole, Trieste, Italy

Professional Societies:

1988-2001 American Society for Biochemistry and Molecular Biology
1992-2001 American Society for Cell Biology
1994-2016 Society for Developmental Biology
1996-2005 Society for Developmental Biology (Board of Trustees)
1997-2001 Society for Developmental Biology (Northeastern Representative)
2001-2005 European Life Sciences Forum (EMBL Representative)
2001-2016 Australia and New Zealand Society for Cell and Developmental Biology
2002-2021 International Society of Differentiation
2002-present European Molecular Biology Organization (EMBO)
2015-present American Heart Association (AHA)
2016-present International Mammalian Genome Society (IMGC)
2017-present American Society of Human Genetics (ASHG)
2018-present American Association for the Advancement of Science

Editorial Boards

1992-1998 Editorial Board, Molecular and Cellular Biology
1993-2001 Editor, New England Journal of Medicine (Consultant in Molecular Medicine)
1995-present Editorial Board, Developmental Biology
2001-present Guest Editor, BioMedNet (mouse models of diseases reviews)
2003-present Editorial Board, Developmental Dynamics
2004-present Editorial Board, Rejuvenation Research
2007-present Founding Editor, Disease Models and Mechanisms
2010-present Editorial Board, Stem Cell Research and Therapy
2012-present Editorial Board, Regenerative Medicine Research
2012-2016 Editor-in-Chief, Differentiation
2013-2018 Founding Editor, Regeneration
2014 Guest Editor, International Journal of Biochemistry and Cell Biology
2015-2021 Editor-in-Chief, Regenerative Medicine (Nature Partner Journal)

Meeting organization

1994 Keystone Symposium on Muscle Development (Co-organizer)
1995 Society for Developmental Biology National Symposium (Co-organizer)
1996 National Institute on Aging Myogenesis Symposium (Co-organizer)
2003 EMBL Molecular Medicine: Mechanisms of Cardiovascular Disease (Co-organizer)
2004 Keystone Symposium on Cardiac Development and Disease (Co-organizer)
2007 Gordon Conference on Muscle Development (Co-organizer)
2009 Keystone Symposium on Cardiac Disease (Co-organizer)
2011 Gordon Conference on Myogenesis (Organizer)
2013 EMBO/EMBL Symposium on Cardiac Biology (Organizer)
2013 Monash-Warwick Systems Biology Workshop, Venice (Co-organizer)
2014 International Conference on Systems Biology, Melbourne (Organizer)

2014 Keystone Symposium on Skeletal/Cardiac Muscle (Co-organizer)
2018 EMBO Workshop on Tissue Regeneration and Repair (Co-organizer)
2021 Company of Biologists Workshop, Inflamm-aging and Regeneration: Pain or Partnership? (Co-Organizer)

Ongoing Research Support

2014-2025 NIH/NCI: 5 P30 CA034196; Cancer Center Support (Core) Grant (PI: Liu; Role: Scientific Executive Committee Member)
2018-2023 NIH/NIGMS: 2 P20 GM104318; Comparative Biology of Tissue Repair, Regeneration and Aging (PI: Strange/Drummond; Role: Consortium PI, Co-Core Lead, Administrative Core)
2019-2024 NIH/NIA: 5 U01 AG022308-17; Interventions that Retard Mammalian Aging (PIs: Harrison and Rosenthal; Role: PI)
2020-2021 NIAID: Special intramural fund for generation of new COVID-19 mouse models (PI: Rosenthal)
2020-2021 ORIP: KOMP supplement for phenotyping new COVID-19 mouse models (PIs: Murray, Rosenthal, Braun)
2021-2026 Foundation Leducq Transatlantic Network of Excellence in Cardiac Research: The Inflammatory-Fibrosis Axis in Adverse LV Remodeling: translating mechanisms into new diagnostics and therapeutics (Co-PI, Rosenthal, The Jackson Laboratory, Imperial College)
2021-2024 British Heart Foundation Programme Grant: "The immune-modulatory role of the cardiac lymphatics in heart failure" (co-PI with Paul Riley, Oxford University to fund work at JAX and Imperial College).
2021-2024 Milky Way Research Foundation "Multi-omic clocks of biological age and rates of aging" (co-PI with Tony Wyss-Coray, Stanford University)
2021-2024 Mark Foundation: "Mapping and identifying genes uniquely contributing to immune check point inhibitor-induced autoimmunity complications" (co-PI with Dave Serreze, The Jackson Laboratory)
2022-2026 NIH/NIA: 1 U54 AG079753: "The Jackson Laboatory Senescence Tissue Mapping Center (JAX Sen TMC)" (Contact PI, with co-PIs Ron Korstanje, Paul Robson, Sheng Li and Ming Xu (University of Connecticut).

Recent Research Support

2010-2015 EU FP7 EUCOMMTOOLS: Tools for functional annotation of the mouse genome (Co-PI- Monash University)
2011-2018 Australian Research Council Special Research Initiative: Stem Cells Australia (Co-PI, Monash University)
2012-2015 Cardionet FP7 EU Marie Curie Initial Training Network (Co-PI, Imperial College)
2013-2016 Sponsored Research Agreement, Mesoblast Ltd. (PI – Monash University)
2013-2018 British Heart Foundation Cardiovascular Regenerative Medicine Centre Award (Co-PI, Imperial College)
2013-2018 Foundation Leducq Transatlantic Network of Excellence in Cardiac Research: Cellular and Molecular Targets to Promote Cardiac Regeneration (Co-PI, Imperial College)
2014-2017 NH&MRC Project Grant: Congenital heart disease and cardiac stress (PI-Monash University)
2014-2017 NH&MRC Project Grant: The C-type lectin Mincle exemplifies a new mode of sterile inflammation in cardiovascular disease (co-PI, Monash University)
2018-2020 Director's Innovation Fund, The Jackson Laboratory. Structural Variation Discovery as a Resource for the Collaborative Cross (PI: Beck; Role Co-PI).
2019-2020 Director's Innovation Fund, The Jackson Laboratory. Establishment of a platform to evaluate cardiotoxicity of anti-cancer drugs (PI: Rosenthal)

2020-2021 Progress Charitable Foundation, DE and Tailwinds Charitable Foundation, Inc: Humanized mouse strains for research against the SARS-CoV-2 infection. (Role: PI)

2020-2021 Director's Innovation Fund, The Jackson Laboratory. Mapping and Identifying Genes Uniquely Contributing to Immune Check Point Inhibitor (ICI) Induced Autoimmunity Complications (PIs: Rosenthal, Nadia and Serreze, David) (Role: Co-PI)

Research contributions as an independent investigator (with major publications)

Overview: My background is in molecular biology, with principle fields of expertise in mammalian genetics, developmental biology, biology of ageing, stem cells and regenerative medicine. A specific focus on skeletal muscle and heart disease in the past decade has led to discoveries with significant therapeutic potential. A recent foray into outbreak science has yielded new mouse models for COVID-19. My major contributions are summarized below:

Mammalian gene structure: While a PhD student at Harvard in the 1970s, I cloned and characterised the first mammalian globin and insulin gene sequences with Walter Gilbert, who won the Nobel prize for this work. (Cell 1979, 2 papers). *Invited review Cold Spring Harbor Symp. Quant. Biol.*

Mammalian transcriptional control: As a postdoctoral fellow at NIH I designed new experimental approaches building on my molecular virology expertise, that led to my discovery of the first enhancer in the human genome (Science 1983). *Invited review Methods in Enzymol*.

Muscle gene developmental regulation: In my first independent lab at Harvard, we applied this approach to characterize the first downstream enhancer in a mammalian gene, and defined it as a direct target for myogenic factors (Genes and Dev. 1988). *Invited reviews Current Opinion in Cell Biol, Methods in Enzymol.*

Epigenetic regulation of embryonic pattern: We provided the first evidence for an embryonic muscle patterning mechanism involving selective gene accessibility through site-specific methylation, representing a new strategy for maintaining pattern in embryonic development and an important component of tissue remodelling and regeneration in the adult (Cell 1992, Development 1995). In a related project we cloned and characterized Zbu1, a novel human muscle protein belonging to the helicase superfamily involved in regulating gene accessibility (Dev. Biol. 1996). *Invited review Trends in Cardiovasc. Med.*

Heart development: We demonstrated an essential role for retinoids in vertebrate heart growth and patterning, and defined the molecular mechanisms of anteroposterior chamber specification in the developing heart (Development 1999, 2003). In 1999 I co-published a book with Prof. Richard Harvey, Heart Development, which is considered the "bible" of the field, and its sequel, Heart Development and Regeneration (2010). We characterized a novel mutation in the NKX2-5 gene associated with congenital heart disease and adult-onset cardiomyopathy.(Circ Cardiovasc Genet. 2013). We showed that cardiac fibroblasts express a unique profile of cardiogenic factors that are critical for normal heart development (Circ. Res, 2014). We defined transcriptional and metabolic perturbations in mouse models of congenital mutations in the human nkx2-5 gene *(*Differentiation 2016, JCI Insight 2017, Mol Metab. 2018). *Textbooks: Heart Development, Heart Development and Regeneration.*

Regulation of muscle hypertrophy, aging and regeneration: We described novel signaling pathways responsible for the hypertrophic action of Insulin-like Growth Factor-1 (IGF-1) on skeletal muscle cells, involving the GATA family of transcription factors and the ubiquitin-proteasome pathway (Nature 1999, Nature Genetics 2001, J Clin Invest 2005, Circ Research 2005). Our work implicated the NFkB pathway in the modulation of muscle hypertrophy and regeneration (J Clin Invest 2006) established a role for specific calcineurin isoforms in muscle and heart regeneration (J Cell Biol

2007, Endocrinol 2008*)* and pinpointed muscle as a primary target of oxidative damage in ALS (Cell Metab 2008*). Invited reviews J Mol Med, Trends Immunol, NPJ Regen Med.*

Stem cell-mediated regeneration: We described a stem cell-mediated repair mechanism whereby the IGF-1 increases recruitment of proliferating bone marrow cells to injured muscles, accompanied by elevated bone marrow stem cell production in response to distal trauma, readily converting co-cultured bone marrow to muscle (PNAS 2004). *Invited reviews: New England J Med, Scientific American, EMBO Reports, Nature Rev. Drug Discovery.*

Enhanced regeneration of the mammalian heart: We have provided new insight into the pathogenesis of heart failure and offered novel therapeutic targets by exploiting the regenerative action of IGF-1 to induce repair of cardiac infarcts without scar formation, by modulation of the inflammatory response and increasing proliferative activity of endogenous cardiac progenitor cells (Circ Research 2007, 2008, BBRC 2011). IGF-1 activates the epicardium (PLoS One 2010), engages novel signaling pathways through SirT1 (Aging 2011, Aging Cell 2011), novel calcineurin isofoms (Circulation 2011), and SRF (Disease Models and Mechs 2012).

In a more clinical setting we discovered that elevated myocardial expression of follistatin-like genes is a feature of human heart failure and may be linked to both disease severity and mechanisms underlying recovery (Endocrinology 2008, J Cardiovasc Transl Res. 2012). We showed that NFkB plays an important survival role by reducing oxidative stress (Cir. Research 2010a) and implicated cell-autonomous Notch signaling in an improved regenerative response (Circ Research 2010b). We showed that IGF-1 blocks dilated cardiomyopathy through blockade of myocardial fibrosis and SRF-dependent CTGF induction (Disease Models Mechs. 2012) and applied in a clinically relevant protocol (npj RegenMed 2016). We have uncovered unique characteristics of cardiac fibroblasts in cardiac regeneration (Circ. Res, 2014, 2016, Genom Data 2015, PLoS One. 2015, Cell Reports 2018, 2020(2), Circulation 2020). *Invited reviews: Disease Models Mechs, Adv Exp Med Biol, Prog Biophys Mol Biol, Proceedings Biol Sci, Biochim Biophys Acta, Development, Differentiation, NPJ Regenerative Medicine, Science Transl. Med, Frontiers Cardiovasc Med.*

Regeneration genetics and immune function. We uncovered a complex interaction between local repair mechanisms and macrophages, which orchestrate the tissue repair process in both salamanders and mice (PNAS 2009, PLoS One 2012, Molecular Therapy 2015). We identified an abundant tissue macrophage population in the adult murine heart (PLoS One 2013) and implicated macrophages as a critical component of regeneration in salamander (PNAS 2013, NPJ RegenMed 2017) and in mammals (J Exp Med 2014). We have developed new models of autoimmune myocarditis (Disease Models Mechs. 2016, Circulation 2020) and used IGF-1 to suppress autoimmune disease (Disease Models Mechs 2014; EMBO Mol Med 2014) to improve immune response to myocardial infarction (Mediators of Inflammation, 2015, npj RegMed 2016).

Using advanced single cell analyses we redefined cardiac cell composition (Circ. Research 2016) and characterized the cellulome of the mouse heart (Cell Reports 2018, 2020, Circulation 2020). We mapped the regenerative potential of the mammalian heart in genetically diverse mouse panels (npj RegenMed 2019) at the cellular level (Cell Reports 2020). We identified distinct toll-like receptor signaling in the salamander response to tissue damage (Dev Dyn. 2022) and demonstrated a role for cross-prining dendritic cells in the exacerbation of immunopathology after ischemic heart damage in the mammalian heart (Circulation 2021) and revealed the organ-specific identity retained by adult fibroblasts (Elife, 2022). *Invited reviews: Stem Cell Res, Int J Biochem Cell Biol., Nature Clin Practice, Nature Medicine, Int J Biochem Cell Biol. Semin Cell Dev Biol, NPJ Regenerative Medicine, EMBO Reports, Disease Models Mechs, Nature Rev Cardiology, J Am Coll Cardiol, New Engl. J.Med.*

Outbreak Science. To investigate the broad spectrum of COVID-19 responses in human patients, we exploited interbred panels of mouse strains offering allelic diversity that mimics human genetic variation with the requisite statistical power and resolution for dissecting complex traits. These panels display a correspondingly wide range of responses to SARS-CoV2 virus and variants (Robertson et al, 2022). Continuing analysis is already uncovering pathways contributing to variable illness in mice and humans, yielding greater insight into the genetic architecture underlying COVID-19 disease risk and progression.

Educational contributions

Since establishing an independent laboratory I have trained over 75 PhD students and postdoctoral fellows, and have hosted numerous high school and university students in summer work-study programs. I initiated and organized graduate and medical courses at Harvard Medical School and Boston University School of Medicine, and ran a course on genetics in modern medicine on the HST curriculum (a collaboration between Harvard Medical School and MIT). As an Editor at the New England Journal of Medicine, I established and wrote the Molecular Medicine series, and co-organized the Clinical Implications of Basic Research series, to provide our clinical readership with the principles and current advances in medical research. I introduced mice into the curriculum of the Woods Hole Embryology Course where I served as faculty and course organized for several years. For ten years I served as faculty on the annual American Association for Cancer Research Clinical Oncology Workshop. I currently teach heart development at the annual Mouse Genetics Course at Cold Spring Harbor. In 2002 I was a guest faculty member at the Australian Developmental Biology Workshop. In 2006 I delivered the Howard Hughes Holiday Lectures on *Potent Biology: Stem Cells, Cloning and Regeneration*. At EMBL I participated in the first year graduate course, and have hosted several EMBO workshops in Rome including From Mice to Cells and Mouse Colony Management. At Imperial College I participate in a British Heart Foundation Research Excellence Award, supporting interdisciplinary postdoctoral fellowships in cardiovascular medicine. In my capacity as EMBL Australia Scientific Head I organized the annual EMBL Australia International PhD School. I currently co-organize the Jackson Laboratory McCusick Short Course.

Other contributions

Mouse genetics in Europe: I established EMBL's role in multiple European mouse biology initiatives including EUMORPHIA (EU Integrated Project), a 12-centre initiative to understand human molecular physiology and pathology through integrated functional genomics in the mouse model, and a successive project, EUMODIC (EU Integrated Project): undertaking a primary phenotype assessment of up to 650 mouse mutant lines as a first step towards a comprehensive functional annotation of the mouse genome. I was a founding Partner in EUCOMM (EU Integrated Project): the European Conditional Mouse Mutagenesis Program, an 11-partner project to place conditional mutations throughout the mouse genome using high-throughput technologies, and EUCOMMTOOLS, its sequel. I coordinated CREATE, an EU-supported initiative generating and organizing Cre driver mouse strains representing the first international effort in this area funded through the EU.

EMBL Associate Membership for Australia; EMBL Australia: I initiated and spearheaded Australia's successful application for the first Associate (non-European) membership in EMBL and was elected Scientific Head of EMBL Australia, coordinating the establishment of EMBL Partner Laboratories; recruiting the EBI Associate Director Graham Cameron to establish the EMBL Australia Bioinformatics Resource at University of Queensland; supported the establishment of the Australian Bioinformatics Network; and coordinating the establishment of EMBL Australia Laboratory Nodes at the South Australian Health and Medical Research Institute, Adelaide and at University of New South Wales, Sydney, hosting internationally recruited groups.

Editorial: I was Editor in Chief of Differentiation (then Deputy Editor), Founding Editor of Disease Models and Mechanisms and Regeneration, and founded the Nature Partner journal NPJ Regenerative Medicine (Editor in Chief).

Advisees and Trainees:

Postdoctoral (44):

1985-1988	Heidemarie Ernst, PhD, MD	Psychiatrist, California
1986-1989	Bruce Wentworth, PhD	Director, Cardiovascular Science, Genzyme
1993-2001	Craig Neville, PhD	Instructor in Surgery, Mass. General Hospital
1994-1997	Jennifer Moss, PhD	Assistant Professor, Tufts Medical School
1994-1996	Elena Ceccarelli, PhD	Science and Higher Education Attache, Embassy of France to Finland, Helsinki
1994-1996	Hilary Clark, PhD	Senior Bioinformatics Scientist, Genentech
1994-1997	Jiang Ping, PhD	Scientist, Advanced Cell Technology
1996-1999	Jose Xavier-Neto, MD, PhD	Professor, Brazilian Biosciences National Laboratory
1996-1999	Antonio Musaro, PhD	Professor, U/Rome la Sapienza, Italy
1998-2000	Lana Tsao, MD	Director, Advanced Heart Failure, St. Elizabeth's Medical Center/Mass. General Hospital
1998-2000	Karl McCullagh, PhD	Lecturer in Physiology, National University of Ireland
1999-2001	Frederic Depreux, PhD	Sen. Research Associate, Northwestern University
2000-2003	Angelika Paul, PhD	CEO, KiwiMotif (website design)
2002-2003	Joshua Downer, PhD	Principal Software Engineer, VEO Robotics, Inc.
2002-2007	Michele Pelosi, PhD	INSERM, Assistance Publique-Hospital de Paris
2003-2008	Foteini Mourkioti, PhD	Asst Professor, Penn Institute for Regenerative Medicine, University of Pennsylvania
2003-2008	Ekatarina Semenova, PhD	Netherlands Cancer Institute, Division of Molecular Genetics
2003-2009	Enrique Lara-Pezzi, PhD	Faculty, CNIC, Madrid
2004-2010	Pascal te Welscher, PhD	Secondary School science teacher, Netherlands
2004-2010	Ekaterina Salimova, PhD	Research Fellow, Monash Biomedical Imaging
2005-2009	Tommaso Nastasi, PhD	Science Education Specialist, Associazione Adamas Scienza
2007-2012	Maria Paola Santini, PhD	Staff Scientist, Cardiovascular Research Institute, Mt. Sinai NY
2007-2011	Marianne Hede, PhD	Scientific Manager, VPCIR.com, Denmark
2008-2010	Kjiana Schwab, PhD	Research Fellow, MIMR-PHI Institute, Monash University, Melbourne
2008-2011	Manlio Vinciguerra, PhD	Principal Investigator, Centre for Translational Medicine, BRNO, Czech Republic
2008-2018	Joanne Tonkin, PhD	Cinical Trials Specialist, Sir Charles Gairdner Hospital Perth WA
2009-2018	Alexander Pinto, Ph.D.	Head, Cardiac Cellular Systems, Baker Heart and Diabetes Institute, Australia
2009-2010	Arianna Casciat, PhD	Staff Fellow, CNR, Rome
2009-2012	Elham Zarrinpashneh, PhD	Postdoctoral Fellow, Kings College London
2009-2010	Olivia Rodrigues, PhD	Manager, Flow Cytometry Core, Fate Therapeutics
2010-2012	Bjarki Johanesson, PhD	NY Stem Cell Foundation, Sen. Res. Investigator
2010-	James Godwin, PhD	(current - Research Scientist, JAX)
2011- 2012	Minnie Anko, PhD	Research Group Head, RNA Biology In Health, Hudson Institute of Medical Research
2011- 2019	Mauro Costa, PhD	Gladstone Institute for Cardiovacsular Research
2011- 2019	Milena Furtado, PhD	Associate Principal Scientist, Merck
2012-	Susanne Sattler, PhD	(current – Imperial College)
2013-2017	Teresa Kennedy-Lydon PhD	Research Scientist Boston Scientific, Ireland
2013-2015	Hieu Nim, PhD	Staff Fellow – Monash University

2016-2018	Muneer Hasham, PhD	Director, PDX Core, JAX
2017-2021	Dan Skelly, PhD	Computational Scientist, JAX
2017-	John Graham, PhD	(current – Research Scientist, JAX)
2017-2019	Raghav Pandey, PhD	Scientific Associate, Omnicom
2017-2021	Elvira Forte, PhD	Founding editor, Nature Cardiovascular Research
2022 -	John Bachman, PhD	(current – JAX)

PhD students (33):

1985-1990	Maria Donoghue, PhD	Professor, Georgetown University
1986-1990	Erick Berglund, PhD	Co-founder & CSO, Intrommune Therapeutics
1987-1993	Uta Grieshammer, PhD	Program Officer, Tobacco-Related Disease Research Program, U. California
1989-1994	Yonghong Xiao, PhD	Executive Director, Data Science and Bioinformatics, H3 Biomedicine
1989-1995	James Engert, PhD	Professor, McGill University, Montreal
1989-1998	Leslie Houghton, PhD	Principal Scientist/Project Leader/Boston University
1990-1995	Michael McGrew, PhD	Group Leader, Roslin Institute, Edinburgh
1995-1997	Sunjay Kaushal, MD PhD	Professor of Surgery, University of Maryland
1997-2001	Michael Shapiro, PhD	Professor, University of Utah
2001-2006	Maria Paola Santini, PhD	Staff Scientist, Cardiovascular Research Institute, Mt. Sinai NY
2002-2007	Nadine Winn, PhD	Staff, Novartis, Basel
2002-2007	Olivier Mirabeau, PhD	Senior Bioinformatician, Institut Curie, France
2004-2009	Paschalis Kratsios, PhD	Assist Professor, Neurobiology, U. Chicago
2005-2009	Caterina Catela, PhD	Instructor/Research Scientist, U. Chicago
2005-2010	Lieve Temmerman, PhD	Postdoctoral fellow, Maastricht U.
2006-2011	Lars Bochmann, PhD	Scientific Communication, Profil Institut fur Stoffwechselforschung Gmbh
2006-2011	Nicholas Lam, PhD	Asst. Instructor, U Texas Southwestern
2007-2010	Kalyani Panse	Business School, London
2008-2011	Bhawana Poudel-Bochmann, PhD	Associate Marketing Manager, Qiagen GmbH, Germany
2008-2012	Jonas Lexow, PhD	Research Governance & Quality, MRC Unit, Gambia
2009-2013	Janko Gospocic, PhD	KMG Academic Administrator, Smilow Center for Translational Research, U. Pennsylvania
2010-2013	Tommaso Poggioli, PhD	Consultant, Boston Consulting Group
2012-2015	Enrique Colon, PhD MD	Medical resident, Poland
2012-2013	Drew Kuraitis, MD	Dermatology, Tulane University
2013-2017	Ryan Debuque, PhD	Medical student, Australia
2013-2017	Alexei Ilinykh, PhD	
2015-2019	Arianna Ferrini PhD	Science writer, London
2017-2021	Micheal McLellan	Postdoctoral Fellow, Boston University
2017-	Liliana Brito	(current- Imperial College)
2018-	Ilona Sunyovszski	(current- Imperial College)
2018-	Amalia Sintou	(current- Imperial College)
2019-	Cathy Jenkins	(current- Imperial College)
2020-	Natasha de Winter	(current- Imperial College)

Full Publication List

Original Articles

Jones, WC, Rosenthal N, Rodakis G, Kafatos FC. Evolution of two major chorion multigene families as inferred from cloned cDNA and protein sequences. Cell 1979; **18**(4):1317-32. doi: 10.1016/0092-8674(79)90242-3. PubMed PMID: 519771.

Hardison, RC, Butler ET, Lacy E, Maniatis T, Rosenthal N, Efstratiadis A. The structure and evolution of four linked rabbit B-like globin genes. Cell 1979; **18**(4):1285-97. doi: 10.1016/0092-8674(79)90239-3. PubMed PMID: 519769.

Lomedico P, Rosenthal N, Efstratiadis A, Gilbert W, Kolodner R, Tizard R. The structure and evolution of two non-allelic rat preproinsulin genes. Cell 1979; **18**(2):545-58. doi: 10.1016/0092-8674(79)90071-0. PubMed PMID: 498284.

Rosenthal N, Kress M, Gruss P, Khoury, G. The BK viral enhancer element and a human cellular homolog. Science 1983; **222**(4625):749-55. doi: 10.1126/science.6314501. Review. PubMed PMID: 6314501.

Donoghue M, Ernst, E, Wentworth B, Nadal-Ginard B, Rosenthal N. A muscle-specific enhancer is located at the 3' end of the myosin light chain 1/3 gene locus. Genes and Dev. 1988; **2**(12B):1779-90. doi: 10.1101/gad.2.12b.1779. PubMed PMID: 3240859.

Rosenthal N, Kornhauser J, Donoghue M, Rosen K, Merlie J. The myosin light chain enhancer activates muscle-specific, developmentally regulated gene expression in transgenic mice. Proc. Natl., Acad. Sci. 1989; **86**(20):7780-4. doi: 10.1073/pnas.86.20.7780. PubMed PMID: 2813357; PubMed Central PMCID: PMC298154.

Braun T, Bober E, Winter B, Rosenthal N, Arnold H. Myf-6, a new member of the human gene family of myogenic determination factors: evidence for a gene cluster on chromosome 12. EMBO J., 1990; **9**(3):821-31. PubMed PMID: 2311584; PubMed Central PMCID: PMC551742.

Rosenthal N, Berglund E, Wentworth B, Donoghue M, Winter B, Braun T, Bober E, Arnold H. A highly conserved enhancer downstream of the human MLC1/3 locus is a target for multiple myogenic factors. Nucl. Acids Res. 1990; **18**(21):6239-46. doi: 10.1093/nar/18.21.6239. PubMed PMID: 2243772; PubMed Central PMCID: PMC332487.

Wentworth B, Donoghue M, Engert J, Berglund E, Rosenthal N. Paired MyoD binding sites regulate myosin light chain gene expression. Proc. Natl. Acad. Sci. 1991; **88**(4):1242-6. doi: 10.1073/pnas.88.4.1242. PubMed PMID: 1847512; PubMed Central PMCID: PMC50993.

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