

Curriculum Vitae

Name: Nadia Alicia Rosenthal

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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,
University of Western Australia
2003-present 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-present Visiting Scientist, EMBL
2015-present Scientific Director, The Jackson Laboratory, USA
2016-present Professorial Fellow, Murdoch Childrens Research Institute, Melbourne Australia

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 Torino)
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, Respiratory/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- 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
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-present 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
- 2013-2018 Scientific Advisory Board, Mount Desert Island Biological Laboratories USA

Professional Societies:

- 1988-present American Society for Biochemistry and Molecular Biology (member)
- 1992-present American Society for Cell Biology (member)
- 1994-present Society for Developmental Biology (member)
- 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-present Australia and New Zealand Society for Cell and Developmental Biology
- 2002-present 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-present Founding Editor, Regeneration
- 2014 Guest Editor, International Journal of Biochemistry and Cell Biology
- 2015-present 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)

Ongoing Research Support

- 2018-2023 NIH/NIGMS: 2 P20 GM104318; Comparative Biology of Tissue Repair, Regeneration and Aging (PI: Strange, Kevin) (Role: Consortium PI, Co-Core Lead, Administrative Core)
- 2018-2020 Director's Innovation Fund, The Jackson Laboratory. Structural Variation Discovery as a Resource for the Collaborative Cross. (PIs: Beck, Christine; Churchill, Gary; Lee, Charles; Reinholdt, Laura; Robson, Paul; Rosenthal, Nadia; and Srivastava, Anuj. (Role: Co-PI)
- 2019-2024 NIH/NIA: 5 U01 AG022308-17; Interventions that Retard Mammalian Aging (PIs: Harrison, David and Rosenthal, Nadia) (Role: PI)
- 2019-2020 Director's Innovation Fund, The Jackson Laboratory. Establishment of a platform to evaluate cardiotoxicity of anti-cancer drugs (PIs: Rosenthal, Nadia and Furtado, Milena) (Role: Co-PI)
- 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)
- 2020-2025 NIH/NCI: 2 P30 CA034196; Cancer Center Support (Core) Grant (PI: Liu, Edison)(Role: Scientific Executive Committee Member)

Recent Research Support

- 2010-2013 British Heart Foundation Project Grant, Regeneration of the mammalian cell heart with cell and gene therapy
- 2008-2014 British Heart Foundation: Research Excellence Award (Co-PI, Imperial College)
- 2010-2014 EU FP7 ENDOSTEM: Activation of vasculature associated stem cells and muscle stem cells for the repair and maintenance of muscle tissue (Co-PI - EMBL)
- 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)

Research contributions as an independent investigator (with major publications)

Overview: My background is in molecular biology, with principle fields of expertise in mammalian molecular 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. 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).

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 isoforms (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 NFκB plays an important survival role by reducing oxidative stress (Circ. 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). We have uncovered unique characteristics of cardiac fibroblasts (Circ. Res, 2014, Genom Data 2015, PLoS One. 2015). *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.*

Regeneration and immune function. We uncovered a complex interaction between local repair mechanisms and macrophages, which orchestrate the tissue repair process (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 Regenerative Medicine 2017) and in mammals (J Exp Med 2014). We have developed new models of autoimmune myocarditis (Disease Models Mechs. 2016) and used IGF-1 to suppress autoimmune disease (Disease Models Mechs 2014; EMBO Mol Med 2014) and to improve immune response to myocardial infarction (Mediators of Inflammation, 2015, NPJ 2016). Using advanced flow cytometric based analyses we redefined cardiac cell composition (Circ. Research 2016) and characterized the cellome of the mouse heart (Cell Reports 2018, 2020). *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.*

Educational contributions

Since establishing an independent laboratory I have trained over 60 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 participate in 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 se-

quel. 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 helped organize 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, Founding Editor of Disease Models and Mechanisms and Regeneration, founded the Nature journal NPJ Regenerative Medicine, of which I am currently Editor-in-Chief.

Advisees and Trainees:

Postdoctoral (44):

1985-1988	Heidemarie Ernst, Ph.D., M.D.	Psychiatrist, California
1986-1989	Bruce Wentworth, Ph.D.	Director, Cardiovascular Science, Genzyme
1993-2001	Craig Neville, Ph.D.	Instructor in Surgery, Massachusetts General Hospital
1994-1997	Jennifer Moss, Ph.D.	Assistant Professor, Tufts Medical School
1994-1996	Elena Ceccarelli, Ph.D.	Science and Higher Education Attache, Embassy of France to Finland, Helsinki
1994-1996	Hilary Clark, Ph.D.	Senior Bioinformatics Scientist, Genentech
1994-1997	Jiang Ping, Ph.D.	Scientist, Advanced Cell Technology
1996-1999	Jose Xavier-Neto, M.D., Ph.D.	Group Leader, Centro Nacional de Pasquisa em Energia e Materiais, CNPEM, Brazilian Biosciences National Laboratory
1996-1999	Antonio Musaro, Ph.D.	Professor, U/Rome la Sapienza, Italy
1998-2000	Lana Tsao, M.D.	Director, Advanced Heart Failure, Steward St. Elizabeth's Medical Center
1998-2000	Karl McCullagh, Ph.D.	Lecturer in Physiology, National University of Ireland
1999-2001	Frederic Depreux, Ph.D.	Otolaryngology, Northwestern University
2000-2003	Angelika Paul, Ph.D.	CEO, KiwiMotif (website design)
2002-2003	Joshua Downer, Ph.D.	Principal Software Engineer, VEO Robotics, Inc.
2002-2007	Michele Pelosi, Ph.D.	INSERM, AP_HP Assistance Publique-Hospital de Paris
2003-2008	Foteini Mourkioti, Ph.D.	Assistant Professor, Penn Institute for Regenerative Medicine, University of Pennsylvania
2003-2008	Ekatarina Semenova, Ph.D.	Netherlands Cancer Institute, Division of Molecular Genetics

2003-2009	Enrique Lara-Pezzi, Ph.D.	Faculty, CNIC, Madrid
2004-2010	Pascal te Welscher, Ph.D.	Secondary School science teacher, Netherlands
2004-2010	Ekaterina Salimova, Ph.D.	Research Fellow, Monash Biomedical Imaging
2005-2009	Tommaso Nastasi, Ph.D.	Science Education Specialist, Associazione Adamas Scienza
2007-2012	Maria Paola Santini, Ph.D.	Staff Scientist, Cardiovascular Research Institute, Mt. Sinai NY
2007-2011	Marianne Hede, Ph.D.	Scientific Manager, VPCIR.com, Denmark
2008-2010	Kjiana Schwab, Ph.D.	Research Fellow, MIMR-PHI Institute, Monash University, Melbourne
2008-2011	Manlio Vinciguerra, Ph.D.	Principal Investigator, Centre for Translational Medicine, BRNO, Czech Republic
2008-2018	Joanne Tonkin, Ph.D.	(Maternity leave – Imperial College)
2009-2018	Alexander Pinto, Ph.D.	Head, Cardiac Cellular Systems, Baker Heart and Diabetes Institute, Australia
2009-2010	Arianna Casciat, Ph.D.	Staff Fellow, CNR
2009-2012	Elham Zarrinpashneh, Ph.D.	Postdoctoral Fellow, Kings College London
2009-2010	Olivia Rodrigues, Ph.D.	Postdoctoral fellow, U. Edinburgh
2010-2012	Bjarki Johannesson, Ph.D.	NY Stem Cell Foundation, Senior Research Investigator
2010- present	James Godwin, Ph.D.	(current - Research Scientist, JAX)
2011- 2012	Minnie Anko, Ph.D.	Research Group Head, RNA Biology In Health, Hudson Institute of Medical Research
2011- 2019	Mauro Costa, Ph.D.	Staff Research Scientist, Gladstone Institute
2011- 2019	Milena Furtado, Ph.D.	Research Scientist, Amgen
2012-present	Susanne Sattler, Ph.D.	(current – Imperial College)
2013-2017	Teresa Kennedy-Lydon Ph.D.	Research Scientist Boston Scientific, Ireland
2013-2015	Hieu Nim, Ph.D.	Staff Fellow – Monash University
2016-2018	Muneer Hasham, Ph.D.	Director, PDX Core, JAX
2017-present	John Graham, Ph.D.	(current – Research Scientist, JAX)
2017-2019	Raghav Pandey, Ph.D.	Scientific Associate, Omnicom

PhD students (32):

1985-1990	Maria Donoghue, Ph.D.	Professor, Georgetown University
1986-1990	Erick Berglund, Ph.D.	Co-founder & CSO, Intrommune Therapeutics
1987-1993	Uta Grieshammer, Ph.D.	Program Officer, Tobacco-Related Disease Research Program, U. of California
1989-1994	Yonghong Xiao, Ph.D.	Executive Director, Data Science and Bioinformatics, H3 Biomedicine

1989-1995	James Engert, Ph.D.	Associate Professor, McGill University, Montreal
1989-1998	Leslie Houghton, Ph.D.	Faculty, Mayo Clinic
1990-1995	Michael McGrew, Ph.D.	Group Leader, Roslin Institute, Edinburgh
1995-1997	Sunjay Kaushal, M.D./Ph.D.	Professor of Surgery, University of Maryland
1997-2001	Michael Shapiro, Ph.D.	Professor, University of Utah
2001-2006	Maria Paola Santini, Ph.D.	Staff Scientist, Cardiovascular Research Institute, Mt. Sinai NY
2002-2007	Nadine Winn, Ph.D.	Staff, Novartis, Basel
2002-2007	Olivier Mirabeau, Ph.D.	Senior Bioinformatician, Institut Curie, France
2004-2009	Paschalis Kratsios, Ph.D.	Assistant Professor, Neurobiology, U. Chicago
2005-2009	Caterina Catela, Ph.D.	Instructor/Research Scientist, U. Chicago
2005-2010	Lieve Temmerman, Ph.D.	Postdoctoral fellow, Maastricht U.
2006-2011	Lars Bochmann, Ph.D.	Scientific Communication, Profil Institut fuer Stoffwechselforschung GmbH
2006-2011	Nicholas Lam, Ph.D.	Postdoctoral Fellow, University of Texas Southwestern
2007-2010	Kalyani Panse	Business School, London
2008-2011	Bhawana Poudel-Bochmann, Ph.D.	Associate Marketing Manager, Qiagen GmbH, Germany
2008-2012	Jonas Lexow, Ph.D.	Research Governance and Quality, MRC Unit, Gambia
2009-2013	Janko Gospocic, Ph.D.	Postdoctoral fellow, U. of Pennsylvania
2010-2013	Tommaso Poggioli, Ph.D.	Consultant, Boston Consulting Group
2012-2015	Enrique Colon, Ph.D., M.D.	Medical resident, Poland
2012-2013	Drew Kuraitis, M.D.	Dermatology, Tulane University
2013-2017	Ryan Debuque, Ph.D.	Medical student, Australia
2013-2017	Alexei Ilinykh, Ph.D.	Senior Software Engineer, Venturebeat
2015-2019	Arianna Ferrini, Ph.D.	Postdoctoral Research Fellow, University College of London
2017-present	Michael McLellan	(current – Tufts/JAX)
2017-present	Liliana Brito	(current- Imperial College)
2018-present	Ilona Sunyovszki	(current- Imperial College)
2018-present	Amalia Sintou	(current- Imperial College)
2019-present	Cathy Jenkins	(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**: 1285-1297.

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**: 1285-1297.

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**: 545-558.

Rosenthal N, Kress M, Gruss P, Houry, G. The BK viral enhancer element and a human cellular homolog. Science 1983; **222**: 749-755.

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**: 1779-1790.

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**: 7780-7784.

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**: 821-831.

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**: 6239-6245.

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**: 1242-1246.

Ernst H, Walsh K, Rosenthal N. The myosin light chain enhancer and the skeletal actin promoter share binding sites for common nuclear factors. Mol. Cell. Biol. 1991; **11**: 3735-3744.

Donoghue M, Merlie JP, Rosenthal N, Sanes JR. Rostrocaudal gradient of transgene expression in adult skeletal muscle. Proc. Natl Acad. Sci. 1991; **88**: 5847-5851.

Grieshammer U, Sassoon D, Rosenthal N. A transgene target for positional regulators marks early rostrocaudal specification of myogenic lineages. Cell 1992; **69**: 79-93.

Benecke H, Flier JS, Rosenthal N, Siddle K, Klein HH, Moller DE. Muscle-specific expression of the human insulin receptor in transgenic mice. Diabetes, 1992; **42**: 206-212.

Rosen K, Rosenthal N, Villa-Komaroff L. Specific, temporally regulated expression of the insulin-like growth factor II (IGFII) gene during muscle differentiation. Endocrinology 1993; **133**: 474-481.

McGrew M, Rosenthal N. Quantitation of genomic methylation using ligation-mediated PCR. Biotechniques 1993; **15**: 822-729.

Grieshammer U, McGrew M, Rosenthal N. Role of methylation in maintenance of positionally restricted transgene expression in developing muscle. Development, 1995, **121**: 2245-2253.

Xiao Y-H, Grieshammer U, Rosenthal N. Regulation of a muscle-specific transgene by retinoic acid. J. Cell Biol., 1995, **129**: 1345-1354.

- Engert J, Servaes S, Sutrave P, Hughes S, Rosenthal N.** . Activation of a muscle specific enhancer by the ski proto-oncogene Nucl. Acids. Res. 1995; **23**: 2988-2994.
- Moss JM, Price AL, Raz E, Driever W, Rosenthal, N.** Green fluorescent protein marks skeletal muscle in murine cell lines and zebrafish. Gene 1995; **173**: 89-98.
- McGrew M, Bogdanova N, Hasegawa K, Hughes S, Kitsis R, Rosenthal, N.** Distinct gene expression patterns in skeletal and cardiac muscle are dependent on common regulatory sequences in the MLC1/3 locus. Mol. Cell. Biol. 1996; **16**: 4524-4534.
- Neville C, Gonzales D, Houghton L, McGrew M, Rosenthal N.** Modular elements of the MLC1/3 locus confer fiber-specific transcriptional regulation in transgenic mice. Dev. Genet. 1996; **19**: 157-162.
- Engert J, Berglund E, Rosenthal N.** Proliferation precedes differentiation in IGF-1 stimulated myogenesis. J. Cell Biol. 1996; **135**: 431-440.
- Gong X, Kaushal S, Ceccarelli E, Bogdanova N, Clark H, Khatib Z, Valentine M, Look T, Rosenthal N.** Developmental regulation of Zbu1/HIP116, a DNA-binding member of the SWI2/SNF2 family. Dev. Biol. 1997; **183**: 166-182.
- Slack JP, Grupp IL, Ferguson DG, Rosenthal N, Kranias EG.** Ectopic expression of phospholamban in fast-twitch skeletal muscle alters sarcoplasmic reticulum Ca²⁺ transport and muscle relaxation. J. Bio. Chem., 1997; **272**: 18862-18868.
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