

## Curriculum Vitae

**Name:** Nadia Alicia Rosenthal

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National Heart and Lung Institute  
Imperial Centre for Translational and Experimental Medicine  
Imperial College London  
Du Cane Road, London W12 0NN, UK  
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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- Visiting Professor, University of Western Australia  
2005-2012 Director of Science, Harefield Heart Science Centre, Imperial College London  
2005- Chair in Cardiovascular Science, Imperial College London  
2007-2016 Founding Director, Australian Regenerative Medicine Institute, Monash University  
2010-2016 Scientific Head, EMBL Australia  
2012- Visiting Scientist, EMBL  
2015- Scientific Director, The Jackson Laboratory, USA  
2016- 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

**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- Grand Jury, Koerber Prize  
2007- Scientific Advisory Board, Center for Molecular Medicine, Vienna  
2007- Scientific Advisory Board, Finnish Institute for Molecular Medicine (FIMM), Finland  
2008-2010 Scientific Advisory Board, Institute of Molecular Biology Biotechnology, Heraklion  
2010- Scientific Advisory Committee, South Australian Health & Medical Research Inst.  
2010-2015 Chair, Grant Review Committee, European Research Council  
2011- Board of Trustees, College of the Atlantic USA  
2011- SENS Foundation Research Advisory Board  
2012- Scientific Advisory Board, Max Planck Institute, Bad Nauheim  
2013 - 2015 Scientific Research Council, The Jackson Laboratory, USA  
2013 - Scientific Advisory Board, Mount Desert Island Biological Laboratories USA

**Professional Societies:**

- 1988- American Society for Biochemistry and Molecular Biology (member)
- 1992- American Society for Cell Biology (member)
- 1994- 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- Australia and New Zealand Society for Cell and Developmental Biology
- 2002- International Society of Differentiation
- 2002- European Molecular Biology Organization (EMBO)

**Editorial Boards**

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

**Recent international contributions:**

- 2011:** Plenary Speaker: EMBO myogenesis meeting Wiesbaden; Invited Speaker: Australian Institute for Bioengineering and Nanotechnology, Brisbane; Plenary Speaker: Myoage Muscle Mass Regulation Symposium, Puglia; Plenary Speaker: Merck Endocrinology and Diabetes Forum, Sydney; Plenary Speaker: Chilean Society for Cell Biology meeting, Puerto Varas; Plenary Speaker: Australian International Collaborative Workshop, Florence ; Plenary Speaker: Vatican International Conference on Stem Cells, Rome; Plenary Speaker: Stem Cell Society Singapore Symposium, Singapore
- 2012:** Plenary Speaker: Infrafrontier: European mouse resources, Germany; Plenary Speaker, Keystone Cardiovascular Symposium, Taos; Keynote Speaker: Everett Symposium, Charleston; Keynote Speaker: Australasian Wound & Tissue Repair Society Meeting, Sydney; Keynote Speaker: World Biomaterials Congress, Chengdu; Plenary Speaker: China-Australia Symposium, Canberra; Plenary Speaker: EMBO Regeneration meeting, Oxford; Plenary Speaker: International Society for Differentiation Symposium, Amsterdam; Plenary Speaker and Panelist: Creative Innovation, Melbourne
- 2013:** Plenary Speaker: EMBO Macrophage Conference, Marseille; Plenary Speaker: BHF Symposium, Oxford; Plenary Speaker: Japan ICeMS meeting, Melbourne; Keynote Speaker: World President Organisation, Melbourne; Organiser and Plenary Speaker: Monash-Warwick Systems Biology Workshop, Venice; Keynote Speaker, RECOMB 2013, Beijing; Plenary Speaker: Human Genome Meeting/International Congress of Genetics, Singapore; Plenary Speaker: CCTRIM Research Symposium, Perth; Organiser and Plenary Speaker, EMBO/EMBL Cardiovascular Conference, Heidelberg; Plenary Speaker: Gordon Research Conference on Regeneration, USA; Delegate, Australian American Leadership Dialogue; Plenary Speaker: Mouse Molecular Genetics, Sanger Institute.
- 2014:** Plenary Speaker, Keystone Symposium on Skeletal/Cardiac Muscle; Plenary Speaker, Aging and Regeneration Workshop, Singapore; Instructor, Systems Biology Course, Innsbruck; Plenary Speaker, Stem Cell Conference, Lugano; Plenary Speaker, Stem Cells Australia meeting, Sydney;

Plenary Speaker, 8<sup>th</sup> Bioscaffolds Conference, Napa Valley; Keynote Speaker, World Congress on Cardiology, Melbourne; Plenary Speaker: Science/Science Translational Medicine Stem cell Symposium, Beijing; Plenary Speaker; American Heart Association Conference, Chicago.

**2015:** Plenary Speaker, Keystone Non-Myocyte Cardiac Symposium, Colorado; Plenary Speaker, Cell Biology meeting, Hunter Valley Australia; Keynote Speaker, World President's Organisation Global Leaders Conference, Melbourne; Keynote Speaker, Child X Conference, Stanford; Plenary Speaker, LKC School of Medicine Regeneration Workshop, Singapore; Plenary Speaker, 8th International Ascona Workshop on Cardiomyocyte Biology, Switzerland; 10<sup>th</sup> Randall Lecture, Kings College London; Plenary Speaker, International Symposium on Stem Cell Therapy and Cardiovascular Innovation, Madrid; Keynote Speaker, Think Tank on Stem Cell Revolution, Australian Academy of Science, Sydney.

**2016:** Plenary speaker, Keystone: Modular and Cellular Basis of Growth and Regeneration; Plenary speaker, UK Cardiovascular Workshop (Company of Biologists) Surrey, Invited special Seminar, Stanford University; Plenary speaker, Riken Conference on Developmental Biology, Kobe; Plenary speaker, Nature conference Tissue engineering and Regenerative Medicine, Guanzhou; Plenary speaker, 9th Symposium on Biologic Scaffolds for Regenerative Medicine, Napa Valley; TEDx presenter, Dirigo, Bar Harbor; Keynote speaker, Queenstown Research Week, New Zealand; Featured speaker, Murdoch Childrens Research Institute anniversary conference, Melbourne; Plenary speaker, EMBO Regeneration Conference, Paestum; Keynote address: Medicine by Design, Toronto

**2017:** Danks lecture, Murdoch Children's Research Institute, Melbourne; Plenary speaker, ISSCR Boston; Plenary speaker, Gordon Research Conference on Atherosclerosis, NH; Keynote address, NIH Global Postdoctoral Partnerships; Plenary speaker, JAX short course and cancer course; Chair, Paul J. Allen Center Symposium, Seattle; Plenary speaker, Allen Center inaugural Symposium, Tufts U; Plenary Speaker, Regeneration Conference, NHLBI; Plenary speaker, EMBO-JAX Course on Humanized Mice; Plenary Speaker, Infrafrontier Conference, Athens; Keynote address, Nature Regeneration Conference, Milan.

**2018:**

### 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)

**Recent Funding Information:**

- 2005-2008 EU STREP: FLPFLEX (Coordinator): A flexible toolkit for controlling gene ex-pression in the mouse
- 2005-2009 EU Network of Excellence: MYORES: Multi-organismic approach to study normal and aberrant muscle development, function and repair
- 2005-2008 EU STREP: Gene transfer in skin equivalents and stem cells: Novel strategies for chronic ulcer repair and tissue regeneration
- 2005-2008 EU Integrated Project: Application and Optimization of Human Stem Cells for Myocardium Repair
- 2004-2010 Leducq Fondation Transatlantic Network of Excellence in Cardiac Research: Cardiac regeneration
- 2005-2008 EU Integrated Project: EUCOMM European Conditional Mouse Mutagenesis Program
- 2006-2009 EU Integrated Project: EUMODIC The European Mouse Disease Clinic: A distributed phenotyping resource for studying human disease
- 2005-2009 EU Integrated Project: Heart Failure and Cardiac Repair
- 2007-2011 Leducq Fondation Transatlantic Network of Excellence in Cardiac Research: Mitral Valve Repair
- 2008-2011 EU Coordination Action (Coordinator); CREATE: Coordination of resources for conditional expression of mutated mouse alleles
- 2009-2012 British Heart Foundation Project Grant, Insulin like-growth 1 and serum glucocorticoid kinases: in concert for cardiac protection and repair
- 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)
- 2012-2015 Cardionet (FP7 EU Marie Curie Initial Training Network (Co-PI, Imperial College)
- 2010-2016 NHMRC Australia Fellowship (PI- Monash University)
- 2013-2015 Sponsored Research Agreement, Mesoblast Ltd. (PI – Monash University)
- 2013-2017 British Heart Foundation Cardiovascular Regenerative Medicine Centre Award (Co-PI, Imperial College)
- 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)
- 2014-2017 NH&MRC Project Grant: Congenital heart disease and cardiac stress (PI-Monash University)
- 2011-2018 Australian Research Council Special Research Initiative: Stem Cells Australia (Co-PI, Monash University)
- 2017 Director's Innovation Fund, The Jackson Laboratory. Using evasins to treat myocardial infarction.

**Current:**

- 2013-2019 Fondation Leducq Transatlantic Network of Excellence in Cardiac Research: Cellular and Molecular Targets to Promote Cardiac Regeneration (Co-PI, Imperial College)
- 2019-2021 Director's Innovation Fund, The Jackson Laboratory. Establishment of a platform to evaluate cardiotoxicity of anti-cancer drugs.
- 2019-2024 NIA Interventional Testing Program (co-PI, The Jackson Laboratory)

**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 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). 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 cellulome of the mouse heart (Cell Reports 2018). *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 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 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 (42):

1985-1988	Heidemarie Ernst, Ph.D.	Research Asst Professor, Charleston, SC
1986-1989	Bruce Wentworth, Ph.D.	Director, Cardiovascular Science, Genzyme
1990 -1993	Xiaohua Gong, PhD. (scholar)	Professor, UC Berkeley
1993-2001	Craig Neville, Ph.D.	Instructor, Massachusetts General Hospital
1994-1997	Jennifer Moss, Ph.D.	Assistant Professor, Tufts Medical School
1994-1996	Elena Ceccarelli, Ph.D.	Director, Centre CEA de Saclay, Gif-sur-Yvette
1994-1996	Hilary Clark, Ph.D.	Scientist, Genetics Institute
1994-1997	Jiang Ping, Ph.D.	Scientist, Advanced Cell Technology
1996-1999	Jose Xavier-Neto, M.D.	Associate Professor, U/ Sao Paulo, Brazil
1996-1999	Antonio Musaro, Ph.D	Associate Professor, U/Rome la Sapienza, Italy
1998-2000	Lana Tsao, MD	Chief Cardiologist, Beth Israel Hospital
1998-2000	Karl McCullagh, Ph.D	Research Fellow, Oxford University
1999-2001	Frederic Depreux, Ph.D	Research Fellow, Harvard Med. School
2000-2003	Angelika Paul, Ph.D	Research Scientist, Novartis, Boston
2002-2003	Joshua Downer, Ph.D	Research Fellow, U. Colorado, Boulder
2002-2007	Michele Pelosi, Ph.D	Staff Fellow, Mendel Institute, Rome



2003-2008	Foteini Mourkioti, Ph.D	Staff Fellow, Stanford Medical School
2003-2008	Ekatarina Semenova, Ph.D	Staff Fellow, Imperial College London
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	Grants administrator, Monash U
2005-2009	Tommaso Nastasi, Ph.D	ELLS, EMBL-Monterotondo
2007-2012	Maria Paola Santini, Ph.D	Staff Scientist, Mt. Sinai NY
2007-2011	Marianne Hede, Ph.D	Staff Scientist, Netherlands
2008-2010	Kjiana Schwab, Ph.D	CSIRO, Melbourne
2008-2011	Manlio Vinciguerra, Ph D	Assistant Professor, Birbeck U London
2008-2017	Joanne Tonkin, Ph.D	(Imperial College)
2009-	Alexander Pinto, Ph.D	(current -Research Scientist, JAX)
2009-2010	Arianna Casciat, PhD	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 Johanesson, Ph.D	Postdoctoral Fellow, NYU
2010-	James Godwin, Ph.D	(current - Research Scientist, JAX)
2011- 2012	Minnie Anko, Ph.D	Assistant Professor, Monash U
2011-	Mauro Costa, Ph.D	(current - Research Scientist, JAX)
2011-	Milena Furtado, Ph.D	(current - Research Scientist, JAX)
2012-	Susanne Sattler, Ph.D	(current – Research Fellow, Imperial College)
2013-2017	Teresa Kennedy-Lydon Ph.D	Resarch Staff, Boston Scientific, Ireland
2013-2015	Hieu Nim, Ph.D	Staff fellow – Monash University
2016 -2018	Muneer Hasham, PhD	Manager, PDX core, JAX
2017 -	John Graham	(current – Research Scientist, JAX)
2017 -	Raghav Pandey	(current – postdoctoral fellow, JAX)

**PhD students (28):**

1985-1990	Maria Donoghue, Ph.D.	Professor, Georgetown University
1986-1990	Erick Berglund, Ph.D.	Research Scientist, Hoechst Inc, Germany
1987-1993	Uta Grieshammer, Ph.D.	Instructor, Department of Anatomy, UCSF
1989-1994	Yonghong Xiao, Ph.D.	Research Scientist, LION Bioscience
1989-1995	James Engert, Ph.D	Professor, McGill University, Montreal
1989-1998	Leslie Houghton, Ph.D.	Research Fellow, MGH
1990-1995	Michael McGrew, Ph.D	Scientist, Roslin Institute, Edinburgh
1995-1997	Sunjay Kaushal, M.D./Ph.D	Cardiothoracic surgeon, Baltimore MD
1997-2001	Michael Shapiro	Professor, University of Utah
2001-2006	Maria Paola Santini	Senior Research Staff, Beth Israel, NY
2002-2007	Nadine Winn	Staff, Novartis, Basel
2002-2007	Olivier Mirabeau	Staff fellow, Gif-sur-Yvette, France
2004-2009	Paschalis Kratsios	Asst Professor, U. Chicago
2005-2009	Caterina Catela	Staff Scientist, U. Chicago
2005-2010	Lieve Temmerman	Staff Scientist, Netherlands
2006-2011	Lars Bochmann	Research and Development, Qiagen
2006-2011	Nicholas Lam	Postdoctoral fellow, UT Southwestern
2007-2010	Kalyani Panse	Business School, London
2008-2011	Bhawana Poudel	Postdoctoral Fellow, Dusseldorf
2008-2012	Jonas Lexow	Postdoctoral Fellow, Imperial College
2009-2013	Janko Gospocic	Postdoctoral fellow, US
2010-2013	Tommaso Poggioli	Postdoctoral fellow, Harvard Medical School
2012-2013	Drew Kuraitis	Medical student, US

2012-2015	Enrique Colon	Medical student, Poland
2013-2017	Ryan Debuque	(Medical student, Australian National University)
2013-2017	Alexei Ilinykh	(Postdoctoral Fellow, Sydney)
2015-	Arianna Ferrini	(current- Imperial College)
2016 -	Michael McClellan	(current – The Jackson Laboratory)
2017-	Liliana Brito	(current- Imperial College)
2018-	Ilona Sunyovszki	(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, Khoury, 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.

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