

CURRICULUM VITAE

Jeffrey A. Medin PhD

Professor

Department of Pediatrics

Division of Pediatrics Hematology Oncology Blood and Marrow Transplant

OFFICE ADDRESS:

8701 Watertown Plank Road

Milwaukee, WI 53226

EDUCATION:

1980 - 1985 B.Sc., University of Wisconsin-Parkside, Kenosha, WI

1986 - 1991 Ph.D., University of Kentucky, Department of Biochemistry, Lexington, KY

FACULTY APPOINTMENTS:

1985 - 1986 Special Rare Reagents Technician, Work Experience: Quality Assurance on HIV and Hepatitis Test Kits, Abbott Laboratories, Diagnostic Division/QC, Abbott Park, IL

1986 - 1991 Doctoral Candidate, Mentor: Mary Sue Coleman, PhD, Areas of Research: Biochemistry, Molecular Biology, Enzymology, Baculovirus Protein Expression, University of Kentucky, Lexington, KY

1992 - 1993 National Research Council Bio-Tech Fellow, Mentor: Keiko Ozato, PhD, Areas of Research: Nuclear Hormone Receptors and Ligands Transcription, Protein-Protein and Protein-DNA Interactions, Laboratory of Molecular Growth Regulation, National Institute of Child Health and Human Development, NIH., Bethesda, MD

1994 - 1996 Intramural Research Fellow, Mentor: Stefan Karlsson, MD, PhD, Areas of Research: Gene Therapy for Gaucher Disease, Hematopoiesis, Retroviral Construction, Molecular and Medical Genetics Section DMNB, NINDS, NIH., Bethesda, MD

1996 - 1998 Senior Staff Fellow, Mentor: Roscoe Brady, MD, Areas of Research: Gene Therapy for Fabry Disease, Enzymology, Hematopoiesis, Developmental and Metabolic Neurology Branch, National Institute of Neurological Disorders and Stroke. NIH., Bethesda, MD

1998 - 2001 Assistant Professor of Medicine (tenure-track), Areas of Research: Gene Therapy, Hematopoiesis, Lysosomal Storage Diseases, Cancer, University of Illinois at Chicago

1999 - 2001 Affiliate Member, Biochemistry and Molecular Biology, University of Illinois at Chicago

2001 - 2006 Scientist, Division of Stem Cell and Developmental Biology, Ontario Cancer Institute

2001 - 2008 Associate Professor, Medical Biophysics, Faculty of Medicine, University of Toronto

2001 - 2012 Affiliated Scientist, Division of Experimental Therapeutics, Toronto General Research Institute

2004 - Present Full Member, Institute of Medical Science, Faculty of Medicine, University of Toronto

2006 - 2012 Senior Scientist (tenure-level), Areas of Research: Gene Therapy, Cancer, Lysosomal Storage Diseases, Hematopoiesis, Ontario Cancer Institute

2008 - Present Full Professor, Medical Biophysics, Faculty of Medicine, University of Toronto

2013 - 2015 Senior Scientist (tenure-level), University Health Network (Ontario Cancer Institute, Toronto General Research Institute, Toronto Western Research Institute Appointments)

2016 - Present Research Director, Pediatrics, Hematology/Oncology, Medical College of Wisconsin, Milwaukee, WI

2016 - Present Vice Chair of Research Innovation, Pediatrics, Hematology/Oncology, Medical College of Wisconsin, Milwaukee, WI

2016 - Present Inaugural MACC Fund Professor, Pediatrics, Hematology/Oncology, Medical College of Wisconsin, Milwaukee, WI

2016 - Present Professor of Biochemistry, Biochemistry, Medical College of Wisconsin, Milwaukee, WI

- 2016 - Present Adjunct Senior Investigator, Blood Research Institute, BloodCenter of Wisconsin, Milwaukee, WI
- 2016 - Present Affiliate Scientist, University Health Network, Toronto, Canada
- 2016 - 2017 Co-Program Leader, MCW Cancer Center, Hematologic Malignancy and Immunotherapy Research Program, Medical College of Wisconsin, Milwaukee, WI
- 2024 - Present Contract English Editor. Editpraise, China.

EDUCATIONAL ADMINISTRATIVE APPOINTMENTS:

- 2000 Course Director: BCHE 595: Biochemistry Graduate Student Journal Club, Biochemistry, University of Illinois at Chicago, Chicago, IL
- 2003 - Present Section Leader, MBP1001Y: Advanced Cell Biology, University of Toronto, Toronto, Canada
- 2004 - 2006 Section Leader, MBP1007/8: Fundamentals in Cell and Molecular Biology, University of Toronto, Toronto, Canada
- 2006 Course Coordinator - MBP1007/8: Fundamentals in Cell and Molecular Biology, University of Toronto, Toronto, Canada
- 2007 - Present Course Coordinator - MB1001Y: Advanced Cell Biology, University of Toronto, Toronto, Canada
- 2013 Course Coordinator of Biotherapeutics: Clinical implementation, Gene therapy, Immunotherapy, and New Mouse Model, University degli Studi di Palermo, Palermo, Sicily

AWARDS AND HONORS:

- 1986 Cash Awards: Abbott Employee Suggestion Program, Abbott Labs
- 1986 - 1989 Pre-doctoral Fellowship in Biotechnology, US Department of Defense
- 1992 - 1993 Associateship Award, National Research Council
- 1994 - 1996 Intramural Research Training Award, National Institutes of Health (NIH)
- 1995 Trainee Investigator Award, The Clinical Research Mtg.
- 1999 Prostate Cancer Research Program: New Investigator Award, US Department of Defense
- 2005 Visiting Professor: CIHR-CNR Exchange Program, University of Palermo, Sicily
- 2011 Visiting Professor, University degli Studi di Palermo, Palermo, Sicily
- 2011 Distinguished Alumni Award for Achievement, University of Wisconsin-Parkside
- 2014 Fall Commencement Speaker, University of Wisconsin-Parkside
- 2019 - Present University of Wisconsin-Parkside Foundation Board member
- 2022 - 2025 Advisory Board. College of Natural and Health Sciences., University of Wisconsin - Parkside.

MEMBERSHIPS IN HONORARY AND PROFESSIONAL SOCIETIES:

- 1987 - Present American Association for the Advancement of Science
- 1995 - Present American Society for Biochemistry and Molecular Biology
- 1996 - Present American Society of Hematology
- 1997 - Present American Society of Gene and Cell Therapy
- 1998 - 2008 International Society of Experimental Hematology
- 2003 - 2009 European Society of Gene Therapy
- 2005 - 2008 Canadian Society of Biochemistry, Molecular & Cellular Biology
- 2008 - 2009 Tissue Engineering and Regenerative Medicine International Society (TERMIS)
- 2021 - Present Society for Immunotherapy of Cancer

EDITORSHIPS/EDITORIAL BOARDS/JOURNAL REVIEWS:

- Editorial Board
 - 2009 - Present World Journal of Stem Cells
 - 2015 - Present Cell and Gene Therapy Insights
 - 2015 - Present Biomedicines
- Ad-Hoc Reviewer
 - 2006 Journal of Gene Medicine (2006 review)
 - 2006 Digestive Diseases and Sciences (2006 review)
 - 2006 Expert Review of Vaccines (2006 review)
 - 2006 - 2013 Cancer Detection and Prevention, Cancer Gene Therapy
 - 2007 Blood (2007 review)
 - 2007 Molecular Cancer Therapeutics (2007 review)

2007 Immunology Letters (2007 review)
2008 Canadian Medical Association Journal (2008 review)
2008 Pharmacological Research (2008x2 review)
2008 Drug News and Perspectives (2008 review)
2009 Biotechnology and Bioengineering (2009 review)
2009 Oncogene (2006, 2009 review)
2009 International Journal of Cancer (2009 review)
2009 Immunological Investigations (2009 review)
2010 Molecular Cancer (2010 review)
2010 Amino Acid (2010 review)
2010 Glycobiology (2010 review)
2011 Expert Opinion on Biological Therapy (2011 review)
2011 Journal of Mass Spectrometry (2011 review)
2012 Brain (2012 review)
2012 International Immunology (2012 review)
2013 Cancer Gene Therapy (2006x2, 2007x2, 2008x2, 2009x3, 2010, 2011x2, 2012, 2013 review)
2013 Immunology and Cell Biology (2013 review)
2014 Journal of Cellular and Molecular Medicine (2014 review)
2014 Journal of Lipid Research (2014 review)
2014 Science Translational Medicine (2014 review)
2014 Biological Chemistry (2014 review)
2015 Molecular Genetics and Metabolism (2008, 2010, 2015 review)
2015 PLOS ONE (2013, 2014, 2015 review)
2015 PLOS Genetics (2015x2 reviews)
2015 Human Molecular Genetics (2015 review)
2016 Orphanet Journal of Rare Diseases (2016 review)
2016 International Journal of Molecular Sciences (2016 review)
2017 Journal of Clinical Investigation (2017 review)
2017 Dental Research (2017 review)
2017 Cancers (2017 review)
2017 Journal of Advanced Research (2017 review)
2017 BBA - Molecular Basis of Disease (2017 review)
2017 Journal of Molecular Medicine (2011, 2017 review)
2017 Journal of Virological Methods (2017 review)
2018 Acta Pharmaceutica Sinica B (2018 review)
2019 Biochemical Journal (2019 review)
2019 Journal of Neuroscience Methods (2019 review)
2019 Scientific Reports (2015, 2019 review)
2019 Gene Therapy (2007x2, 2008x2, 2009, 2011x3, 2019x2 review)
2020 Human Gene Therapy (2006, 2020 review)
2020 Journal of Medical Genetics: Part A (2020 review)
2020 Immunotherapy (2008, 2020 review)
2020 Molecular Metabolism (2020 review)
2021 BMC Supplements (2020, 2021 review)
2021 Genetics in Medicine (2021 review)
2021 Ann NY Acad Sci (2021 review)
2021 Molecular Therapy (2006x3, 2007, 2008, 2009x5, 2010, 2011x2, 2012x2, 2013, 2015x2, 2017x2, 2019, 2021x2 review)
2021 BBA Molecular and Cell Biology of Lipids (2020, 2021 review)
2021 Nature Communications (2014, 2021 review)
2022 Molecular Therapy Methods & Clinical Development (2019, 2021x4, 2022x2 review)

LOCAL/REGIONAL APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:

- 2008 - 2009 Member, Research and Health Care Advisory Committee, Canadian Breast Cancer Foundation, Ontario Region
- 2008 - 2009 Member, Scientific and Medical Advisory Committee, Prostate Cancer Research Foundation of Canada

2013 - Present Ad hoc Member, Advisory Committee, US LDN
 2013 - Present Member, Scientific Advisory Board, Plexcera Therapeutics
 2015 - 2018 Member, Viral Gene Transfer Vectors Committee, American Society of Gene and Cell Therapy
 2016 Academic Founder, AVROBIO LTD
 2016 - Present Member, Scientific Advisory Board, AVROBIO LTD
 2016 - Present Member, Scientific Advisory Board, Rapa Therapeutics

RESEARCH GRANTS/AWARDS/CONTRACTS/PROJECTS:

Active

Peer Review

Title: Fabry Disease: Mechanisms and Next-Generation Therapies (Competitive Renewal)
 Source: Canadian Institutes of Health Research MOP 123528
 Role & Effort: Principal Investigator
 PI: Jeffrey A. Medin
 Dates: 01/2012 - 09/2017
 Direct Funds: \$724,611 (CAD)

Title: The FACTs Project: Fabry disease Clinical research and Therapeutics
 Source: CIHR Emerging Team Grant: Rare Diseases and the Kidney Foundation of Canada
 Role & Effort: Principal Investigator
 PI: Jeffrey A. Medin
 Dates: 02/01/2012 - 01/31/2017
 Direct Funds: \$2,500,000 (CAD)

Title: Red Flag: Overcoming Self-Tolerance to Leukemia
 Source: Princess Margaret Foundation. Toronto, Canada
 Role & Effort: Co-Principal Investigator
 PI: Paige
 Dates: 08/2012 - 07/2016
 Direct Funds: \$870,000 (CAD)

Title: Development and Application of a Therapeutic Cancer Vaccine
 Source: Krembil Foundation. Toronto, Canada
 Role & Effort: Co-Principal Investigator
 PI: Paige
 Dates: 08/2012 - 07/2016
 Direct Funds: \$480,000 (CAD)

Prior

Peer Review

Title: Fabry's disease MSC and recombinant retrovirus transduction in vitro normal, Fabry's patient and baboon model experiments
 Source: Osiris Therapeutics. UIC#99-2-327
 Role & Effort: Principal Investigator

PI: Jeffrey A. Medin
Dates: 03/20/1999 - 03/19/2001
Direct Funds: \$163,447 (USD)

Title: Improved "suicide" gene therapy in allogeneic BMT
Source: UIC Campus Research Board
Role & Effort: Principal Investigator
PI: Jeffrey A. Medin
Dates: 07/01/1999 - 06/30/2000
Direct Funds: \$13,520 (USD)

Title: Bridge funding for gene transfer core for program project grant
Source: UIC Office of the Vice Chancellor for Research
Role & Effort: Co-Investigator (Head of Core)
Dates: 09/01/1999 - 1999
Direct Funds: \$30,000 (USD)

Title: Retrovirus-mediated immunotherapy of prostate cancer
Source: Blowitz-Ridgeway Foundation
Role & Effort: Principal Investigator
PI: Jeffrey A. Medin
Dates: 09/01/1999 - 08/31/2001
Direct Funds: \$99,498 (USD)

Title: Development of retrovirus-mediated immunotherapy of prostate cancer
Source: US Department of Defense: #PC991135
Role & Effort: Principal Investigator
PI: Jeffrey A. Medin
Dates: 05/01/2000 - 02/28/2004
Direct Funds: \$225,000 (USD)

Title: Radiolabeled herceptin for breast cancer imaging and treatment
Source: Susan G. Komen Breast Cancer Foundation
Role & Effort: Co-Investigator
Dates: 10/01/2000 - 09/30/2002
Direct Funds: \$197,510 (USD. Year 2 surrendered due to overlap with next grant.)

Title: Enhancement of gene therapy outcomes for Fabry disease
Source: NIH 1 R01 HL70569-01
Role & Effort: Principal Investigator
PI: Jeffrey A. Medin
Dates: 09/29/2001 - 08/31/2006
Direct Funds: \$800,000 (USD)

Title: Novel approach for evaluating and treating advanced breast cancer patients whose tumors overexpress HER-2/neu
Source: US Department of Defense: #BC000229

Role & Effort:	Co-Investigator (PI: Blend)
Dates:	11/01/2001 - 05/31/2003
Direct Funds:	\$197,510 (USD)
Title:	The biodistribution of a-galactosidase A following gene therapy for Fabry disease.
Source:	National Organization for Rare Disorders
Role & Effort:	Mentor
PI:	Yoshimitsu
Dates:	06/01/2002 - 05/31/2004
Direct Funds:	\$125,000 (USD)
Title:	Molecular therapeutics of B cell malignancies
Source:	National Cancer Institute of Canada (Terry Fox Program Project)
Role & Effort:	Project Leader & Head of Animal Core
PI:	Stewart
Dates:	05/01/2003 - 06/30/2006
Direct Funds:	\$2,500,000 (CAD)
Title:	Maritimes dialysis screening for Fabry disease
Source:	TkTCorporation/Dalhousie University
Role & Effort:	Co-Investigator
PI:	West
Dates:	05/01/2003 - 04/30/2004
Direct Funds:	\$29,000 (CAD)
Title:	Cardiac remodeling: Role of intrinsic bone marrow stem cells and host regulatory factors
Source:	Heart and Stroke Foundation
Role & Effort:	Co-Investigator
PI:	Liu
Dates:	09/01/2003 - 08/31/2006
Direct Funds:	\$250,200 (CAD)
Title:	CRP Gene Therapy Grant
Source:	University Health Network
Role & Effort:	Principal Investigator
PI:	Jeffrey A. Medin
Dates:	04/01/2004 - 03/31/2008
Direct Funds:	\$336,662 (CAD)
Title:	Tissue Engineering: Immune response and vascularization
Source:	Canadian Institutes of Health Research
Role & Effort:	Co-Investigator
PI:	Sefton
Dates:	07/01/2004 - 06/30/2007
Direct Funds:	\$302,400 (CAD)
Title:	Research Program in Immune Tolerance in Transplantation (RITT)

Source:	Canada Foundation for Innovation (Infrastructure Only)
Role & Effort:	Head of Innovative Development Laboratory, Principal Investigator of Section on Modifying Gene Expression
PI:	Jeffrey A. Medin
Dates:	07/01/2004 - 06/30/2007
Direct Funds:	\$10,700,000 (CAD)
Title:	Combined radiation and immuno-gene therapy for prostate cancer
Source:	Canadian Prostate Cancer Research Institute
Role & Effort:	Principal Investigator
PI:	Jeffrey A. Medin
Dates:	03/01/2005 - 02/28/2006
Direct Funds:	\$50,000 (CAD)
Title:	Lentivirus gene therapy for Farber disease in NHPs
Source:	NINDS/NIH 1 R21 NS051500-01
Role & Effort:	Principal Investigator
Dates:	03/01/2005 - 02/31/2007
Direct Funds:	\$249,750 (USD)
Title:	Development of DC-based immunotherapy using erbB2 as a model antigen
Source:	Prostate Cancer Research Foundation of Canada
Role & Effort:	Principal Investigator
PI:	Jeffrey A. Medin
Dates:	04/01/2005 - 03/31/2007
Direct Funds:	\$112,500 (CAD)
Title:	Animal modeling and lentivirus- mediated correction of Farber disease
Source:	Vaincre les Maladies Lysosomales, France
Role & Effort:	Principal Investigator
PI:	Jeffrey A. Medin
Dates:	08/01/2005 - 07/31/2006
Direct Funds:	\$15,000 (Euros)
Title:	Screening of renal dialysis patients in Ontario for indications of Fabry disease
Source:	Genzyme Canada Corporation
Role & Effort:	Principal Investigator
PI:	Jeffrey A. Medin
Dates:	2005
Direct Funds:	\$53,321 (CAD)
Title:	Direct injection of recombinant lentivector into fetal primates for correction of Lysosomal Storage Disorders
Source:	NHLBI/NIH Center for Fetal Monkey

Role & Effort:	Gene Transfer
PI:	Principal Investigator
Dates:	Jeffrey A. Medin
Direct Funds:	2005
	\$0
Title:	Enhanced immunogene therapy for colon cancer
Source:	National Colorectal Cancer Campaign
Role & Effort:	Co-Principal Investigator
PI:	McCart
Dates:	02/01/2006 - 01/31/2007
Direct Funds:	\$55,000 (CAD)
Title:	Novel Suicide Gene Modified Donor Th2 Cells for GVHD Prevention (Exploratory/Development Grant)
Source:	NIH "Bench-to-Bedside"
Role & Effort:	Co-Principal Investigator
PI:	Fowler
Dates:	06/2006 - 05/2008
Direct Funds:	\$100,000 (USD)
Title:	Cardiac remodeling: Role of intrinsic bone marrow stem cells and host regulatory factors
Source:	Heart and Stroke Foundation (Competitive Renewal)
Role & Effort:	Co-Investigator
PI:	Liu
Dates:	09/01/2006 - 08/31/2009
Direct Funds:	\$290,233 (CAD)
Title:	Immunogene therapy for prostate cancer: Testing outcomes in non-human primates
Source:	Ontario Cancer Research Network
Role & Effort:	Principal Investigator
PI:	Jeffrey A. Medin
Dates:	09/01/2006 - 08/31/2009
Direct Funds:	\$560,100 (CAD)
Title:	Enhancement of gene transfer outcomes for Fabry disease
Source:	Heart and Stroke Foundation
Role & Effort:	Principal Investigator
PI:	Jeffrey A. Medin
Dates:	05/01/2007 - 04/30/2010
Direct Funds:	\$465,000 (CAD. Grant declined due to overlap with next grant.)
Title:	Cancer Immunotherapy Program - Group Grant
Source:	National Cancer Institute of Canada
Role & Effort:	head of Project 1
PI:	Bramson
Dates:	07/01/2007 - 06/30/2010

Direct Funds:	\$2,841,324 (CAD)
Title:	Enhancement of FasL-mediated killing of primary prostate cancer cells
Source:	Prostate Cancer Research Foundation of Canada
Role & Effort:	Principal Investigator
PI:	Jeffrey A. Medin
Dates:	07/2007 - 06/2008
Direct Funds:	\$60,000 (CAD)
Title:	The Regenerative Medicine Project (REMEDI)
Source:	Canada Foundation for Innovation (Infrastructure Only)
Role & Effort:	Head of Vector Core Facility
PI:	Weisel
Dates:	07/2007 - 06/2010
Direct Funds:	\$15,800,000 (CAD)
Title:	Enhanced immunogene therapy for colon cancer
Source:	National Colorectal Cancer Campaign
Role & Effort:	Co-Principal Investigator
PI:	McCart
Dates:	07/2007 - 06/2008
Direct Funds:	\$30,000 (CAD)
Title:	Enhancement of gene transfer outcomes for Fabry disease
Source:	Canadian Institutes of Health Research
Role & Effort:	Principal Investigator
PI:	Jeffrey A. Medin
Dates:	08/01/2007 - 07/31/2012
Direct Funds:	\$626,685 (CAD)
Title:	Ontario Regional Biotherapeutics Program (ORBiT)
Source:	Source and identifying no.: Ontario Cancer Research Network (OCRN)
Role & Effort:	Co-Principal Investigator
PI:	Keating
Dates:	10/2007 - 10/2008
Direct Funds:	\$55,020 (CAD)
Title:	Localized IL-12 Immunotherapy for CML
Source:	Canadian Institutes of Health Research (Proof-of-Principle)
Role & Effort:	Principal Investigator
PI:	Jeffrey A. Medin
Dates:	01/2008 - 12/2008
Direct Funds:	\$150,000 (CAD)
Title:	Molecular dynamics of the cell surface proteome in primary prostate cancer cells: Towards development of novel

Source:	combinatorial therapies Canadian Institutes of Health Research
Role & Effort:	Co-Principal Investigator
PI:	Kislinger
Dates:	01/01/2009 - 12/31/2011
Direct Funds:	\$423,000 (CAD)
Title:	Ontario Regional Biotherapeutics Program (ORBiT)
Source:	Ontario Institute of Cancer Research
Role & Effort:	Co-Principal Investigator
PI:	Lead PI: Bell
Dates:	01/01/2009 - 01/01/2011
Direct Funds:	\$260,045 (CAD)
Title:	CIHR Training Program in Regenerative Medicine (Trainee Support Only)
Source:	Canadian Institutes of Health Research
Role & Effort:	Co-Investigator
PI:	Levy
Dates:	03/2009 - 02/2015
Direct Funds:	\$1,950,000 (CAD)
Title:	CIHR Biological Therapeutics Training Grant (Trainee Support Only)
Source:	Canadian Institutes of Health Research
Role & Effort:	Co-Investigator
PI:	Hampson
Dates:	03/2009 - 02/2015
Direct Funds:	\$1,787,630 (CAD)
Title:	Proteomic profiling of prostatic secretions: Biomarker discovery and validation.
Source:	Prostate Cancer Foundation of Canada
Role & Effort:	Co-Principal Investigator
PI:	Kislinger
Dates:	06/01/2009 - 06/30/2010
Direct Funds:	\$60,000 (CAD)
Title:	GMP Cell and Vector Production Facility
Source:	Canadian Foundation for Innovation (Infrastructure Only)
Role & Effort:	Co-Principal Investigator
PI:	Keating
Dates:	01/01/2010 - 12/01/2013
Direct Funds:	\$18,443,813 (CAD)
Title:	Gamma- and lenti-vector transduction of MSCs: Cell-fate control for safety
Source:	Apeth GmbH
Role & Effort:	Principal Investigator
PI:	Jeffrey A. Medin
Dates:	07/2012 - 08/2013
Direct Funds:	\$157,000 (CAD)

Title:	Genetic correction of a novel 'knock-in' mouse model for Farber disease
Source:	NIH R21
Role & Effort:	Principal Investigator
PI:	Jeffrey A. Medin
Dates:	01/01/2013 - 12/31/2014
Direct Funds:	\$274,995 (USD)

INVITED LECTURES/WORKSHOPS/PRESENTATIONS:

International

- Is there a future potential for gene therapy in Fabry disease?, 1st International Symposium on Lysosomal Storage Diseases, Seville, Spain, 04/27/2001
- Gene therapy for Fabry disease, National Institute of Neuroscience National Center of Neurology and Psychology, Tokyo, Japan, 08/27/2001
- Gene therapy for Fabry disease, The First Department of Internal Medicine, Kagoshima University, Kagoshima, Japan, 08/30/2001
- Gene therapy for disorders with cardiovascular manifestations, Kagoshima University, Kagoshima, Japan, 10/23/2003
- Broad-scale implementation of lentivirus vectors for gene therapy of lysosomal storage diseases, Institut Federatif de Recherch Louis Bugnard, Toulouse, France, 09/17/2004
- Novel prodrug/enzyme combinations for suicide gene therapy using lentiviral vectors, European Institute of Oncology, Milan, Italy, 09/16/2005
- Lentivirus-mediated gene therapy for lysosomal storage disorders, Istituto di Biomedicina e Immunologia Molecolare, Consiglio Nazionale delle Ricerche, Palermo, Italy, 10/18/2005
- Lentivirus-mediated gene therapy for lysosomal storage disorders, Department of Medicine I of A.O. "V. Cervello" Hospital, Palermo, Italy, 10/28/2005
- Plenary Talk: Immunogene therapy for prostate cancer, XVth Congresso Nazionale della Societa Italiana di Urologia Oncologia, Taormina, Italy, 11/06/2005
- Gene therapy for Fabry disease, Lunchtime 'Meet-the-Professor' Session 54th Annual Scientific Session of the Japanese College of Cardiology, Kagoshima, Japan, 09/25/2006
- Multi-faceted gene therapy of cardiomyopathy using lentiviral vectors, Keynote speaker Symposium: Diagnoses and Treatment of Cardiomyopathies 54th Annual Scientific Session of the Japanese College of Cardiology, Kagoshima, Japan, 09/27/2006
- Cell fate control in gene and cell therapy, Department of Molecular Pharmacology Tohoku University, Sendai, Japan, 02/05/2008
- Cell fate control in gene and cell therapy, Department of Medicine Jichi Medical University, Tochigi-ken, Japan, 02/07/2008
- Gene therapy for cardiomyopathies, Graduate School of Medicine, Kagoshima University, Kagoshima, Japan, 02/21/2008
- Direct lentiviral injection induces potent anti-CEA immunity in CEA transgenic mice, EHRLICH II-2nd World Conference on Magic Bullets, Nurnberg, Germany, 10/04/2008
- Gene therapeutic approaches in Fabry disease, 2nd International Postgraduate Course 'Lysosomal Storage Disorders and the Nervous System', Berlin, Germany, 11/20/2009
- Gene therapeutic approaches in LSDs, 3rd International Postgraduate Course Lysosomal Storage Disorders: From science to clinic, Berlin, Germany, 11/08/2010
- Localized IL-12 immunotherapy for leukemia, Universita degli Studi di Palermo, Palermo, Italy, 05/11/2011
- Gene therapy for LSDs, 4th International Postgraduate Course Lysosomal Storage Disorders: Diagnostic background and clinical therapy, Berlin, Germany, 11/14/2011
- Generation and correction of a novel mouse model of ceramide storage disorder, Universita degli Studi di Palermo, Palermo, Italy, 10/05/2012
- Lunch Seminar: Life, Death, and Ceramide, Department of Cell and Molecular Pharmacology Medical College of South Carolina, Charleston, South Carolina, USA, 04/24/2013
- Towards a clinical trial of gene therapy in Fabry Disease, Gene, Cell & Molecular Therapies for Inherited Metabolic Diseases Mtg UCL Institute of Child Health, London, England, 03/27/2014
- IL-12 Immunotherapy for Cancer, University College, London, England, 03/31/2014
- Lentivector-mediated/IL-12 immunotherapy in cancer therapy from concept to clinic to company, Scuola di

Medicina eChirurgia, Universita degli Studi di Palermo, Palermo, Italy, 06/22/2016
Lentivirus-mediated gene therapy for Fabry disease, Corporate Seminar, 22nd Annual Meeting of the Japan Society of Gene and Cell Therapy, Tokyo, Japan, 07/29/2016
Modulation of the local tumor micro-environment by LV-mediated expression of IL-12 in primary AML cells, International Symposium, 22nd Annual Meeting of the Japan Society of Gene and Cell Therapy, Tokyo, Japan, 07/29/2016
Invited Lecture, Gene Therapy for Fabry Disease: Clinical Trial and New Directions. Scuola di Medicina e Chirurgia, Universita degli Studi di Palermo, Palermo, Italy, 06/06/2017
Gene Therapy in Inflammatory Diseases., International Genetics of Ankylosing Spondylitis Consortium (IGAS Conference)., Palermo, Italy, 10/14/2017
Invited Lecture, Gene Therapy for Fabry Disease., New Horizons in Fabry Disease: International Conference on Advances in the Treatment of Fabry Disease, Prague, Czech Republic., 11/25/2017
Invited Lecture, Gene Therapy for Fabry Disease., 5th European Fabry Summer School., Roissy CDG Cedex, France., 06/22/2018
Closing Keynote Presentation, Potential treatments for Rare Diseases: A bright future?, European Symposium on Lysosomal Storage Disorders 2018, Vienna, Austria, 10/27/2018

National

Gene transfer into bone marrow-derived cells for systemic correction of Fabry disease, American Red Cross Holland Laboratory, Rockville, MD, USA, 04/07/2000
Rational targets for gene therapy into hematopoietic cells: Fabry disease and beyond, University of Massachusetts Medical School, Worcester, MA, USA, 06/13/2000
Retrovirus-mediated immunotherapy of prostate cancer, University of Iowa College of Medicine, Iowa City, IA, USA, 07/17/2000
Gene therapy in Fabry disease, Queen Elizabeth II Health Sciences Center Dalhousie University, Halifax, Nova Scotia, Canada, 02/11/2002
Gene therapy for Fabry disease: provincial or pervasive tenets, Department of Human Genetics, McGill University, Montreal, Quebec, Canada, 03/19/2003
Therapeutic application of retrovirus-mediated gene transfer: Fabry disease and prostate cancer immunotherapy, Department of Molecular Genetics and Biochemistry University of Pittsburgh, Pittsburgh, PA, USA, 01/06/2004
Broad Scale Implementation Workshop on Advances in Pathogenesis and Therapy, Glycoproteinoses: An International Workshop on Advances in Pathogenesis and Therapy, Rockville, MD, USA, 04/02/2004
Broad-scale use of lentivectors and tissue remodeling in gene therapy for lysosomal storage disorders, Laboratoire d'Organogenese Experimentale Hospital du Saint-Sacrement, Quebec City, Quebec, Canada, 04/30/2004
Immunogene therapy for prostate cancer, Centre de Recherche du CHUL, Quebec City, Quebec, Canada, 04/30/2004
Retrovirus-mediated gene therapy for acquired and inherited disorders, The Department of Internal Medicine Wayne State University and the Karmanos Cancer Institute, Detroit, MI, USA, 08/11/2004
Broad-scale implementation of retroviral vectors for correction of lysosomal storage disorders, Child Health Research Center Speaker Series Columbus Children's Research Institute, Columbus, OH, USA, 11/04/2004
Gene therapy for Fabry disease, Canadian Fabry Association Meeting and Patient Conference, Halifax, Nova Scotia, Canada, 05/13/2006
Lentivirus-mediated gene therapy for Fabry disease, 9ieme Colloque de l'Association de Therapie Genique du Quebec Institut Neurologique de Montreal, Montreal, Quebec, Canada, 11/03/2006
DC and T cell directed immuno-gene therapy for prostate cancer, Department of Microbiology and Molecular Cell Biology Eastern Virginia Medical School, Norfolk, VA, USA, 11/09/2007
DC and T cell directed immuno-gene therapy for prostate cancer, Canadian Society of Consulting Pharmacists Annual Meeting, Philadelphia, PA, USA, 11/14/2007
Cell fate control gene therapy, 14th Annual Meeting of International Society for Cellular Therapy, Miami, FL, USA, 05/19/2008
Cell fate control mediated by novel enzyme/prodrug systems, 4th Canadian Gene Therapy and Vaccines Symposium ATGQ, Montreal, Quebec, Canada, 05/26/2008
Cell fate control gene therapy, Lentigen Corporate Symposium at the 11th Annual Meeting of the American Society for Gene Therapy, Boston, MA, USA, 05/29/2008

An overview of gene transfer therapy, Advances in the Treatment of Lysosomal Storage Disorders, Halifax, Nova Scotia, Canada, 06/07/2008

How to turn leukemia cells into vaccines in one easy step, Lentigen Corporation, Gaithersburg, MD, USA, 12/11/2008

Outcomes of testing lentivector-mediated gene therapy for Farber disease in non-human primates, 5th Annual WORLD Symposium (Lysosomal Diseases), San Diego, CA, USA, 02/19/2009

Direct injection of lentivectors for immunotherapy of cancer, BC Cancer Agency, Vancouver, British Columbia, Canada, 04/09/2009

Treatments in development: Gene Therapy, Canadian Fabry Association General Meeting & Patient Conference, Halifax, Nova Scotia, Canada, 09/19/2009

Gene therapy for lysosomal storage disorders, La 3e Journee de la Recherche du Regroupement Neurosciences et Sante mentale de l'Universite Laval Universite Laval, Quebec City, Quebec, Canada, 11/26/2009

Gene therapy for lysosomal storage disorders, 16th Annual Child Health Research Symposium Alberta Children's Hospital, Calgary, Alberta, Canada, 03/10/2010

Novel fate control safety systems for cell transplantation, Canadian Blood and Marrow Transplant Group 2010 Meeting, Vancouver, British Columbia, Canada, 04/08/2010

Updates on novel cell fate control systems Presenter and Session Chair, Association de therapie genique du Quebec Annual Meeting, Lac Carling, Quebec, Canada, 05/02/2010

Gene therapy for Fabry disease, Stem Cell Network and Health Canada Workshop on Cell Therapies: Challenges and Opportunities, Ottawa, Ontario, Canada, 12/14/2010

Novel mouse model to inform clinical gene therapy trials, The Jackson Laboratory, Bar Harbor, Maine, USA, 08/08/2011

Development of gene therapy for Fabry disease, Grand Rounds Departement de Pediatrie Centre hospitalier universitaire de Sherbrooke, Sherbrooke, Quebec, Canada, 05/29/2012

Updates on the development of gene therapy for Fabry disease, Canadian Fabry Associate 2012 National Conference, Halifax, Nova Scotia, Canada, 06/08/2012

Immunotherapy is driving the renaissance of gene therapy, Department of Cell and Molecular Pharmacology Medical College of South Carolina, Charleston, South Carolina, USA, 04/24/2013

Systemic ceramide accumulation: Generation of a novel murine model and genetic correction, Service de genetique medicale and Axe Sante Metabolique, Centre de Recherche CHU Sainte-Justine, Montreal, Quebec, Canada, 05/29/2013

Canadian FACTs Team progress towards implementation of clinical gene therapy for Fabry disease, 2013 Garrod Symposium, Sherbrooke, Quebec, Canada, 05/31/2013

Changes in biochemical pathways due to deletion of alpha-galactosidase A in different organs of the Fabry mouse., 2013 Garrod Symposium, Sherbrooke Quebec, Canada, 05/31/2013

Consequences of Ceramide Accumulation in a Mouse Model of Farber Disease, 14th Annual LSD Club, Quebec City, Quebec, Canada, 05/09/2014

Consequences of Ceramide Accumulation in a Mouse Model of Farber Disease, Laboratoire D'Organogenese Experimentale University of Laval, Quebec City, Quebec, Canada, 05/09/2014

Revisiting IL-12: Lentivirus-mediated localized expression generates potent anti-leukemia immunotherapy, Universite de Montreal, Montreal, Quebec, Canada, 09/11/2014

Gene Therapy Update, 15th Annual LSD Club Meeting, Banff, Alberta, Canada, 05/08/2015

Update on the status of the FACTs Gene Therapy Project, BC and Yukon Fabry Patient Conference, Vancouver, British Columbia, Canada, 09/26/2015 - 09/25/2015

Invited Lecture, Immunotherapy for AML., Therapeutic Advances in Childhood Leukemia and Lymphoma (TACL), Chicago, IL, 10/25/2017

Invited Lecture, Gene Therapy for Fabry Disease., 10th Stem Cell Clonality and Genome Stability Retreat, Chicago, IL, 05/15/2018

Invited Lecture, Surface Antigen Discovery and Novel Bispecific Antibodies for Multiple Myeloma., University of Florida Cancer Center Grand Rounds., Gainesville, FL, 11/14/2018

Invited Lecture, Gene Therapy for Fabry Disease: From Concept to Clinic to Company, American College of Medical Genetics and Genomics 2019 Annual Meeting, Seattle, WA, 04/04/2019

Regional

Parochial or pervasive tenets? Gene therapy for Fabry disease targeting hematopoietic cells, McMaster University Gene Therapy Series, Hamilton, Ontario, Canada, 11/20/2002

Pharmacological-regulated dimerization of KDR receptor: Effect on hematopoietic cells, 7th Annual NEB Symposium Mount Sinai Hospital, Toronto, Ontario, Canada, 04/27/2004

Progress in gene therapy for prostate cancer, Prostate Cancer Research Foundation of Canada, Hockley Valley Resort, Ontario, Canada, 01/20/2007

Limits of Regeneration: Remodeling and Tissue Integration, Tissue Engineering and Regenerative Medicine International Society (TERMIS) NA 2007 Conference, Toronto, Ontario, Canada, 06/13/2007

Lentivirus-mediated gene therapy for Lysosomal Storage Disorders, Children's Health Research Institute, London, Ontario, Canada, 01/21/2009

Immuno-gene therapy for cancer, Biology Seminar Series Winter 2010 York University, Toronto, Ontario, Canada, 02/01/2010

Development of gene therapy for Farber disease, Department of Biological Sciences Colloquium University of Wisconsin-Parkside, Kenosha, Wisconsin, USA, 10/07/2011

Progress on Implementation of a Pan-Canadian Gene Therapy Trial for Fabry Disease, 41st Annual AGSBS Graduate Symposium 'Human Intervention in Biology: the bad, the good, and the ugly' York University, Toronto, Ontario, Canada, 03/20/2014

You have made it a long way just on hard work, Fall Commencement Speaker, University of Wisconsin-Parkside, Kenosha, Wisconsin, USA, 12/13/2014

Consequences of acid ceramidase deficiency in mice and humans, 3rd International Conference on the Molecular Medicine of Sphingolipids, French Lick, Indiana, USA, 09/19/2016

Invited Lecture, CAR-T cells and the management of multiple myeloma, 5th Annual Advances in Hematology and Oncology Fall Symposium, Green Bay, WI, 10/22/2016

Invited Lecture, That New CAR Smell: From Antigen Discovery to Rationale Targets for Immunotherapy., UW-MCW-MACC Symposium, Waisman Center, University of Wisconsin-Madison. Madison, WI., 05/23/2017

Invited Lecture, Gene Therapy of Fabry Disease., BIOS Symposium Series, University of Wisconsin-Parkside. Kenosha, Wisconsin, 09/15/2017

Invited Lecture, New Targets for Immunotherapy in AML and MM, Elucidation and Implementation., UW Carbone Cancer Center. Madison, WI., 02/14/2018

Local

Rational targets for gene therapy into hematopoietic cells: Fabry disease and beyond, Toronto General Research Institute, Toronto, Ontario, Canada, 05/24/2000

Immunotherapy for prostate cancer by transfer of genes for prostate antigens into dendritic cells, Toronto General Research Institute Rounds Toronto General Hospital, Toronto, Ontario, Canada, 09/19/2001

Gene therapy for classical and 'cardiac variant' Fabry disease, Cardiovascular Research Seminar Series The Hospital for Sick Children, Toronto, Ontario, Canada, 05/02/2002

Gene therapy for hematopoietic disorders, Institute of Medical Science Summer Undergraduate Research Program, Toronto, Ontario, Canada, 06/24/2002

Prostate cancer immunotherapy, Bierstock Family Symposium on Prostate Cancer Ontario Science Centre, Toronto, Ontario, Canada, 09/23/2002

Immuno-gene therapy approaches targeting prostate cancer, Princess Margaret Hospital GU Tumor Board Special Presentation, Toronto, Ontario, Canada, 10/18/2002

Progress in the development of gene therapy for Fabry disease, Toronto General Hospital Research Institute Research Rounds, Toronto, Ontario, Canada, 02/19/2003

Lentivirus-mediated gene transfer: focus on cardiovascular applications, Stem Cell Network Cardiovascular Meeting, Toronto, Ontario, Canada, 07/06/2003

Update and new initiatives in immuno-gene therapy for prostate cancer, Bierstock Family Symposium on Prostate Cancer, Toronto, Ontario, Canada, 10/14/2003

Gene Therapy, Research Day in Transplantation and Immunology Vaughan Estate, Toronto, Ontario, Canada, 11/20/2003

Gene therapy for Fabry disease, Infection, Immunity, Injury and Repair Program Hospital for Sick Children, Toronto, Ontario, Canada, 11/24/2003

Immunological tolerance via therapeutic gene transfer, Challenges in Regenerative Medicine Conference University of Toronto, Toronto, Ontario, Canada, 01/19/2004

Retrovirus-mediated gene therapy for lysosomal storage disorders: Focus on Fabry and Farber disease, Genetics Grand Rounds Hospital for Sick Children, Toronto, Ontario, Canada, 02/12/2004

Lentivirus mediated gene therapy for lysosomal storage disorders, Toronto General Research Institute Rounds

Toronto General Hospital, Toronto, Ontario, Canada, 03/10/2004

Why gene therapy does not work and what is being done about it, Department of Oncology and Hematology Grand Rounds Princess Margaret Hospital, Toronto, Ontario, Canada, 04/23/2004

Neonatal gene therapy using lentivirus vectors for long-term correction of Fabry disease, HSC Pediatric Regenerative Medicine Retreat Hart House University of Toronto, Toronto, Ontario, Canada, 06/21/2004

Gene therapy for Fabry disease, Canadian LSD Club, Toronto, Ontario, Canada, 10/25/2004

Hematopoietic, cardiac, and neo-natal implementation of lentivectors for gene therapy of inherited diseases, UHN Research Day, Toronto, Ontario, Canada, 11/01/2004

Using the full bag of clubs: Alternative Immunological Approaches to Prostate Cancer Therapy, Plenary Speaker, Prostate Cancer Research Foundation of Canada Year 2005 Annual Meeting, Toronto, Ontario, Canada, 06/23/2005

Updates on immunotherapy for prostate cancer, Princess Margaret Hospital Urology Rounds, Toronto, Ontario, Canada, 09/07/2005

Gene therapy for lysosomal storage disorders: Focus on safety using novel suicide effector genes, Genetics Grand Rounds Hospital for Sick Children, Toronto, Ontario, Canada, 01/19/2006

Novel prodrug/enzyme combinations for suicide gene therapy using using lentiviral vectors, Molecular Pathobiology Invited Speaker Series, University of Toronto, Toronto, Ontario, Canada, 01/30/2006

Immunogene therapy for prostate cancer, Department of Surgery Research Committee Seminar Series University of Toronto, Toronto, Ontario, Canada, 02/08/2006

Engineered overexpression of FasL to enhance cytolysis of prostate cancer cells, Mount Sinai Hospital Urology Research Rounds, Toronto, Ontario, Canada, 06/07/2006

Somatic cell therapies: Gene therapy and dendritic cell vaccines, 4th Annual International Symposium on Transfusion Immunology and Related Topics: Cellular Therapies Canadian Blood Services, Toronto, Ontario, Canada, 09/16/2006

Immuno-gene therapy for prostate cancer, Plenary Speaker Toronto Wake-up Call Business Breakfast, Toronto, Ontario, Canada, 11/30/2007

Prostate Cancer: How research is helping patients, Panel Discussion Ontario Institute for Cancer Research/Prostate Cancer Research Foundation of Canada Public Panel Presentation, Toronto, Ontario, Canada, 09/16/2008

Better late than never onto the bandwagon: Proteomic studies with a defined focus in prostate cancer, PMH Urology Rounds, Toronto, Ontario, Canada, 11/05/2008

Lentivirus-mediated gene therapy for Lysosomal Storage Disorders, Mount Sinai Hospital Genetic Grand Rounds, Toronto, Ontario, Canada, 01/15/2009

Lentivirus-mediated gene therapy for lysosomal storage disease in large animal models, 12h Annual Department of Laboratory Medicine and Pathobiology Graduate Student Research Day University of Toronto, Toronto, Ontario, Canada, 02/24/2009

Gene therapy for Fabry disease, Canadian Fabry Association Ontario Meeting, Toronto, Ontario, Canada, 09/19/2010

The Renaissance of Gene Therapy, MaRS Future of Medicine Series, Toronto, Ontario, Canada, 01/10/2012

Lentivirus-mediated gene therapy for cancer immunotherapy, Medical College of Wisconsin Cancer Center, Milwaukee, Wisconsin, USA, 01/12/2012

Generation and correction of a novel mouse model of a ceramide storage disorder, Molecular Structure and Function Program Seminar Series. The Hospital for Sick Children, Toronto, Ontario, Canada, 10/29/2012

Canadian gene therapy trial for Fabry disease, 21st Annual Symposium New Developments in Prenatal Diagnosis and Medical Genetics Mount Sinai Hospital, Toronto, Ontario, Canada, 05/15/2013

Update on Fabry gene therapy trial, Metabolic Grand Rounds Hospital for Sick Children, Toronto, Ontario, Canada, 06/14/2013

Gene therapy for inherited defects, Summer Student Lecture Series Department of Medical Biophysics University of Toronto, Toronto, Ontario, Canada, 07/29/2013

Principles of gene therapy and cellular therapeutics, and potential application to Sickle Cell Disease Keynote Lecture, Learning for Life Seminar - Exploring new treatments for SCD Sickle Cell Awareness Group of Ontario, Toronto, Ontario, Canada, 09/14/2013

Gene Therapy - where are we now?, Canadian Fabry Association 4th Ontario Patient Meeting, Toronto, Ontario, Canada, 10/06/2013

Stem cell gene therapy: Canadian protocol targeting Fabry disease, Canadian College of Medical Geneticists

Annual Meeting, Toronto, Ontario, Canada, 11/09/2013
 Fabry Disease, Canadian Organization for Rare Disorders: Rare Disease Day Conference, Toronto, Ontario, Canada, 03/06/2015
 Applications of Lentivirus-Mediated Gene Transfer for Anti-Cancer Immunotherapy, Medical College Cancer Center, Milwaukee, Wisconsin, USA, 03/25/2015
 Acid ceramidase deficiency in mice and humans, Department of Biochemistry, Medical College of Wisconsin, Milwaukee, Wisconsin, USA, 02/03/2016
 Gene therapy and overview of lab program, Pediatric Hematology/Oncology Tumor Board, Medical College of Wisconsin, Milwaukee, Wisconsin, USA, 02/18/2016
 Novel CARs and CAR-Ls for immunotherapy of cancer, Hematologic Malignancy and Transplantation Research Program, Medical College of Wisconsin, Milwaukee, Wisconsin, USA, 03/24/2016
 Antigen independent and dependent immunotherapy, Cancer Center Grand Rounds, Medical College of Wisconsin Cancer Center, Milwaukee, Wisconsin, USA, 04/05/2016
 Lentivector-mediated gene transfer for antigen-dependent and antigen-independent immunotherapy of cancer, Department of Pediatrics, University of Wisconsin School of Medicine and Public Health, Madison, WI, USA, 04/28/2016
 Roundtable Participant, MACC Fund Celebration, Children's Hospital of Wisconsin, Milwaukee, Wisconsin, USA, 04/29/2016
 Modulation of the tumor microenvironment by lentivector/IL-12 gene transfer, 3rd Annual Pediatric Cancer Symposium sponsored by Northwestern Mutual, Milwaukee, Wisconsin, USA, 05/19/2016
 Translating Science into Stories, Medical College of Wisconsin Professionalism Week, Milwaukee, Wisconsin, USA, 10/10/2016
 Invited Lecture, Cancer Immunotherapy, MCW President's Advisory Council Luncheon, Milwaukee, WI, 01/04/2017
 Invited Lecture, Gene Therapy for Fabry Disease., Children's Research Institute Research Conference., Milwaukee, WI, 01/12/2018
 MCW Keynote Speaker, Designing new CARs for immunotherapy of MM and AML., 4th Department of Medicine Research Retreat, Milwaukee, WI, 03/09/2018
 Invited Lecture, How to Give a Bad Seminar in the Biomedical Sciences., MCW DOM Research Program, Milwaukee, WI, 03/13/2019

COMMITTEE SERVICE:

Medical College of Wisconsin

1999 - 2001 Member, Institutional BioSafety Committee, University of Illinois at Chicago
 2000 - 2001 Member, Medical Student Research Committee, University of Illinois at Chicago
 2002 Chair, PhD Oral Exam Committee, Department of Genetics, University of Toronto
 2002 - 2004 Poster Judge and Member, UHN Research Day Planning Committee, University Health Network
 2002 - 2005 Site Leader, Regenerative Medicine Platform Committee, University Health Network
 2003 - 2015 Member, Biosafety Committee, University Health Network
 2003 - 2004 Member, McEwen Funds Advisory Committee, University of Toronto
 2003 - 2004 Member, MaRS Building Space Committee, University of Toronto
 2004 - 2005 Member, McEwen Chair Search Committee, University of Toronto
 2004 Chair, PhD Oral Exam, Faculty of Dentistry, University of Toronto
 2005 Chair, PhD Exam Committee, University of Toronto
 2005 - 2015 Chairperson, Animal Care Committee (TGH/TWH/CBS), University Health Network
 2006 - 2010 Member, Molecular Medicine Training Program, University of Toronto
 2006 Chair, PhD Exam Committee, Department of Zoology, University of Toronto
 2006 Chair, PhD Exam Committee, Department of Public Health Services, University of Toronto
 2007 Chair, PhD Exam Committee, Department of Biology, University of Toronto
 2007 Chair, PhD Exam Committee, Department of Laboratory Medicine and Pathobiology, University of Toronto
 2007 Chair, PhD Exam Committee, Department of General Medicine and Microbiology, University of Toronto
 2007 - 2011 Member, PMH Prostate Research Program Training Grants Panel
 2007 Chair, PhD Exam Committee, Department of Pharmacology, University of Toronto

2008 Member, PhD Exam Committee, Department of Immunology, University of Toronto
 2008 Member, MSc Exam Committee, Department of Medical Biophysics, University of Toronto
 2008 Chair, PhD Exam Committee, Department of Pharmacology/Toxicology, University of Toronto
 2008 Chair, PhD Exam Committee, Department of Health Policy, Management, and Evaluation, University of Toronto
 2008 Member, MSc Exam Committee, Department of Medical Biophysics, University of Toronto
 2008 Chair, PhD Exam Committee, Department of Immunology, University of Toronto
 2009 Chair, PhD Exam Committee, Department of Pharmacology/Toxicology, University of Toronto
 2009 Chair, PhD Exam Committee, Department of Immunology, University of Toronto
 2009 Member, PhD Exam Committee, Institute of Medical Science, University of Toronto
 2010 Chair, PhD Exam Committee, Department of Ecology and Evolutionary Science, University of Toronto
 2010 Chair, MSc Exam Committee, Department of Medical Biophysics, University of Toronto
 2011 Chair, MSc Exam Committee, Department of Medical Biophysics, University of Toronto
 2011 Chair, Reclassification Exam Committee, Department of Medical Biophysics, University of Toronto
 2011 Chair, PhD Exam Committee, Department of Cell and Systems Biology, University of Toronto
 2011 Chair, MSc Exam Committee, Department of Medical Biophysics, University of Toronto
 2011 Chair, PhD Exam Committee, Department of Medical Genetics, University of Toronto
 2011 Chair, Qualifying Exam Committee, Department of Medical Biophysics, University of Toronto
 2011 Chair, PhD Exam Committee, Department of Ecology and Evolutionary Science, University of Toronto
 2012 Chair, PhD Exam Committee, Department of Speech Language Pathology, University of Toronto
 2012 Chair, PhD Exam Committee, Department of Biochemistry, University of Toronto
 2012 Chair, PhD Exam Committee, Institute of Medical Science, University of Toronto
 2013 Chair, PhD Exam Committee, Department of Laboratory Medicine and Pathobiology, University of Toronto
 2013 Chair, Department of Biochemistry, University of Toronto
 2014 Chair, PhD Exam Committee, Department of Physiology, University of Toronto
 2014 - 2015 Member, Curriculum Committee, Department of Medical Biophysics, University of Toronto
 2014 Chair, PhD Exam Committee, Department of Immunology, University of Toronto
 2016 - 2018 Member, Alison Ebert Mentoring Committee, Medical College of Wisconsin
 2016 Co-Chair, Section Chief Search Committee, Hematology/Oncology, Pediatrics, Medical College of Wisconsin
 2016 - Present Member, Institutional BioSafety Committee, Medical College of Wisconsin
 2017 - Present Ad hoc Member, Institutional Biosafety Committee, Medical College of Wisconsin
 2018 - Present Elected Member, MCW School of Medicine Rank Committee, Medical College of Wisconsin
 2018 - Present Member, Human Gene Transfer Scientific Review Committee – Non-Cancer, Medical College of Wisconsin

EXTRAMURAL TEACHING:

Medical Student Education

1999 University of Illinois at Chicago, BCHE 563: Principles of Molecular Medicine
 1999 University of Illinois at Chicago, Lecture: BCHE 495
 1999 University of Illinois at Chicago, Lecture: PMPC 495: Biotechnology I
 1999 University of Illinois at Chicago, Lecture: GC473: Seminar in Comparative Medicine

Graduate Student Education

1996 National Institute of Health (NIH), Lectures in the Foundation for Advanced Education in the Sciences - Gene 501M: Molecular Biology of Human Genetic Disease.
 2002 University of Toronto, Lecture: LMP1018S: Molecular Biology and Application to Human Disease
 2002 University of Toronto, Lecture: MSC2010Y: Advanced Concepts in Human Genetic Disease
 2004 University of Toronto, Lecture: LMP1018S: Molecular Biology and Application to Human Disease
 2004 - 2011 University of Toronto, Lecture: MSC2010Y: Advanced Concepts in Human Genetic Disease
 2006 University of Toronto, Lecture: LMP1018S: Molecular Biology and Application to Human Disease
 2007 University of Toronto, Lecture: MSC2020H: Diagnostic and Therapeutic Strategies in Genomic

Medicine

2008 University of Toronto, Lecture: LMP1018S: Molecular Biology and Application to Human Disease.

2008 University of Toronto, Lecture: MBP1007/8: Fundamentals in Cell and Molecular Biology.

2009 University of Toronto, Lecture: LMP1018S: Molecular Biology and Application in Human Disease

Continuing Medical Education

2000 - 2001 University of Illinois at Chicago, Written lecture for PHAR 605: Advances in Pharmacy.

Continuing Curriculum Option

2002 Princess Margaret Hospital, Toronto, Lectures in the Prostate Cancer Course. CPCRI Training Grant

2004 Princess Margaret Hospital, Toronto, Lectures in the Prostate Cancer Course, CPCRI Training Grant

MCW STUDENTS, FACULTY, RESIDENTS AND CLINICAL/RESEARCH FELLOWS MENTORED:

Graduate Students

Committees

Chris Reid, Medical College of Wisconsin

Samantha Chou MSTP/IDP, Medical College of Wisconsin

Postdoctoral Researchers

2018 - Present, Medical College of Wisconsin

2018 - Present Jitka Rybova, PhD, Medical College of Wisconsin

Clinical/Research Fellows

2016 - 2018 Salvatore Manuel Molino, PhD, Postdoctorate, Medical College of Wisconsin

2016 - 2018 Ensaf Alhujaily, PhD, Postdoctorate, Medical College of Wisconsin

EXTRAMURAL STUDENTS, FACULTY, RESIDENTS, AND CLINICAL/RESEARCH FELLOWS MENTORED:

Graduate Students

MS Students Advised

2013 - Present Robyn Oldham, University of Toronto

2014 - Present Murtaza Nagree, University of Toronto

Greg Rampersad, University of Toronto

Amanda Moretti, University of Toronto

Abdulfatah Alayoubi, University of Toronto

Lucia Lopez Vasquez, University of Toronto

Sean Devine, University of Toronto

Matthew Scaife, University of Toronto

Elliot Berinstein, University of Toronto

PhD Students Advised

2013 - Present Fabian Yu, University of Toronto

Shopha Ramsubir, University of Toronto

Shaalee Dworski, Msc, PhD, University of Toronto

Miriam Mossoba, University of Toronto

Anton Neschadim, University of Toronto

Juliane Symes (nee Bielawski), University of Toronto

James Wang, University of Toronto

Committees

Yonatan Lipsitz, University of Toronto

Mustafa Kamani (Biochemistry), University of Toronto

Michael Mielnik, University of Toronto

Joshua L. Paterson (IMS), University of Toronto

Christopher Thomson, University of Toronto

Michael Ha (MBP), University of Toronto

Billal Ayach (IMS), University of Toronto

Marcelo Cypel, University of Toronto

Louis Zhen Wei (Immunology), University of Toronto
Geoffrey de Couto (Physiology), University of Toronto
Emily Cowan, University of Toronto
Jane Cullis (MBP), University of Toronto
Ema Ciucurel (IBBME), University of Toronto
Lan-Chau Kha, University of Toronto
Mobin A. Karimi, University of Toronto
Gabrielle Lam (IBBME), University of Toronto
Clea Senechal (IMS), University of Toronto
Kathryn Ottolino-Perry (IMS), University of Toronto
Rama Grantab (MBP), University of Toronto
Shaanthy Tharmapalan, University of Toronto
Liu Zhang, University of Toronto

Clinical/Research Fellows

Koji Higuchi, MD, University Health Network
Severine Loisel-Meyer, PhD, Postdoctorate, University Health Network
Chyan-Jang Lee, PhD, Postdoctorate, University Health Network
Tania Felizardo, PhD, Postdoctorate, University Health Network
Nobuo Mizue, MD, PhD, Postdoctorate, University Health Network
Amir Varkouhi, MD, PhD, Postdoctorate, University Health Network
Mustafa Kamani, PhD, Postdoctorate, University Health Network
Takahiro Nonaka, PhD, Postdoctorate, University Health Network
Jianhui Cai, MD PhD, Postdoctorate, University Health Network
Takeya Sato, PhD, Postdoctorate, University Health Network
Jagdeep Walia, MD, Postdoctorate, University Health Network
Josh Silvertown, PhD, Postdoctorate, University Health Network
Toshihiro Takenaka, MD, PhD, Postdoctorate, National Institute of Health (NIH)
Salvadore Mejia-Guerrero, PhD, Postdoctorate, University Health Network
Natalia Pacienza, PhD, Postdoctorate, University Health Network
Christopher Siatskas, PhD, Postdoctorate, University of Illinois at Chicago, University Health Network
Sheng-Ben Liang, MD PhD, Postdoctorate, University Health Network
Gangjian Qin, MD, University of Illinois at Chicago, University Health Network
Makoto Yoshimitsu, MD, PhD, Postdoctorate, University Health Network

Faculty

2017 - Present Kevin Rarick, PhD, Department of Pediatrics, Medical College of Wisconsin

INTELLECTUAL PROPERTY: INVENTION DISCLOSURES:

- 01/07/2005 Medin, J., "Human CD25 can be used as an innocuous cell surface marker for selecting and tracking transduced cells following recombinant retrovirus-mediated gene transfer. VECTOR ENCODING THERAPEUTIC POLYPEPTIDE AND SAFETY ELEMENTS TO CLEAR TRANSDUCED CELLS." Invention No. 2005-041. Disclosure date: 01-07-2005. IP: CA2,584,494; PCT/CA2008/000579; US12/532,572; CA2,719711.
- 11/22/2005 Folwer, D., Lavie, A., Medin, J., Sato, T., "Lentivirus expressing mutant forms of human thymidylate monophosphate kinas (tmpk), F105Y and R16G Large lid. Invention No. 2005-003. Disclosure date: 11-22-2005. IP: US60/748,828; CA2,566,267; US11/559,757; US12/052,565; US12/843,238
- 05/11/2006 Loisel-Meyer, S., Medin, J. "Lenti-huCEA/LTS." Invention No. 2006-031. Disclosure date: 05-11-2006. IP: US60/916,136; PCT/CA2008/000848; US12/598,874.
- 05/11/2006 Loisel-Meyer, S, Medin, J., "Lenti-huCEA." Invention No. 2006-030. Disclosure date: 05-11-2006. IP: US60/916,136;PCT/CA2008/000848; US12/598,874
- 05/27/2006 du Manoir, J., Kerbel, R., Medin, J., Mossoba, M., "MDA-MB-W231/Her2/neu (231-H2N)." Invention No. 2006-033. Disclosure date: 05-27-2006.
- 01/11/2007 Devine, S., Medin, J., Neschadim, A., "Safety Cassette for Gene Therapy Vectors and Stem Cell Transplantations." Invention No. 2007-051. Disclosure date: 01-11-2007. IP: US61/038,398;

PCT/CA2009/000342.

01/23/2008 Devine, S., Medin, J., "Cell Fate Control Fusion Construct." Invention No. 2008-013. Disclosure date: 01-23-2008. IP: US61/038,398; PCT/CA2009/000342; US12/933,460

04/24/2008 McCart, J.A., Medin, J., Paige, C., "Lentivector IL-12 for Immunotherapy. Invention No. 2008-062. Disclosure date: 04-24-2008. IP: US61/038,398; PCT/CA2009/000342; US12/933,460

04/24/2008 McCart, J.A., Medin, J., Paige, C., "Lentivector IL-12 for Immunotherapy. Invention No. 2008-076. Disclosure date: 04/24/2008. IP: US60/916,136; PCT/CA2008/000848; US12/598,874

11/11/2009 Amarnath, S., Fowler, D, Medin, J., Chian-Ming Wong, J., "Programmed Death Ligand-1 (PD-L1) Immune Modulation Gene Therapy. Invention No. 2009-109. Disclosure date: 11-11-2009. IP: US61/261,081; PCT/US2010/56450

03/16/2011 Felizardo, T., Loisel-Meyer, S., Medin, J., Pacienza, N., "Induction of tolerance to human agalactosidase A in Fabry mice by administration of dendritic cells lentivirally transduced to express human IL-10." Invention No. 2011-025. Disclosure date: 3-16-2011. IP: Awaiting further research.

03/27/2011 Alayoubi, A., Haken, R., Medin, J., "Mouse Model of Farber Disease." Invention No. 2011-030. Disclosure date: 3-27-2011. IP: Under review.

06/24/2011 Medin, J., Neschadim, A., "Novel chimeric fusion protein for pharmacologically-controlled induction of apoptosis in gene and cell therapy applications." Invention number: 2011-048. IP: CA2,584,494; PCT/CA2008/000579; US12/532,572; CA2,719,711

11/20/2011 Amarnath, S., Fowler, D., Medin, J., Riley, "Programmed Death Ligand-1 (PDL1)-transduced K562 cells Convert Human Th1 Cells Into Regulatory T Cells." Invention No. 2012-008. Disclosure date: 11-20-2011.

01/09/2012 Fowler, D., Medin, J., Rader, C., "Modulated delivery of therapeutic factors using transduced and expanded rapamycin-resistant T cells." Invention No. 2012-008. Disclosure date: 01-09-2012. IP: Under review.

INTELLECTUAL PROPERTY: PATENTS:

10/31/2001 Fowler, D., Jung, U., Gress, R., Erdmann, A., Levin, B., June, C., Medin, J., "Generation and use of TC1 and TC2 cells." Application No. US60/336,473. Application date: 10-31-2001. Country: United States. Type: Provisional. Status: Expired.

10/31/2002 Fowler, D., Jung, U., Gress, R., Erdmann, A., Levine, B., June, C., Medin, J., "Generation of use of TC1 and TC2 cells." Application No. PCT/US02/35240. Application date: 10-31-2002. Country: PCT. Type: PCT. Status: Expired.

12/09/2005 Sato, T., Lavie, A., Fowler, D., Medin, J., "Thymidylate kinase mutants and uses thereof." Application No. US60/748,828. Application date: 12-09-2005. Country: United States. Type: Provisional. Status: Expired.

11/14/2006 Lavie, A., Fowler, D., Medin, J., "Thymidylate kinase mutants and uses thereof." Application No. CA2,566,267. Application date: 11-14-2006. Country: Canada. Type: Utility. Status: Patent pending.

11/14/2006 Sato, Takeya, Lavie, Arnon, Fowler, Daniel H., Medin, Jeffrey, "Thymidylate kinase mutants and uses thereof." Application No. US12/843,238. Application date: 11/14/2006. Country: US. TYPE: Utility-Continuation. Status: Patent Pending.

05/04/2007 McCart, J.A., Paige, C., Medin, J., "Compositions and methods for cancer treatment." Application No. US60/916,136. Application date: 05-04-2007. Country: United States. Type: Provisional. Status: Expired.

03/27/2008 Medin, J. "Vector encoding therapeutic polypeptide and safety elements to clear transduced cells." Application No. PCT/CA2008/000579. Application date: 03-27-2008. Country: PCT. Type: PCT. Status: Expired.

03/27/2008 Medin, J., "Vector encoding therapeutic polypeptide and safety elements to clear transduced cells." Application No. CA2,719,711. Application date: 03-27-2008. Country: Canada. Type: Utility. Status: Patent pending.

03/27/2008 Medin, J., "Vector encoding therapeutic polypeptide and safety elements to clear transduced cells." Application No. US12/532,572. Application date: 03-27-2008. Country: United States. Type: Utility. Status: Patent Pending.

05/05/2008 McCart, J.A., Paige, C., Medin, J., "IL-12 Immunotherapy for Cancer." Application No. US12/598,899. Application date: 05-05-2008. Country: United States. Type: Utility. Status: Patent pending.

05/05/2008 Paige, C., McCart, J.A., Medin, J., "IL-12 Immunology for Cancer." Application No. CA2,723,320. Country: Canada. Type: Utility. Status: Patent Pending.

05/05/2008 McCart, JA., Medin, J., Loisel-Meyer, S., "Composition and Methods of Cancer Treatment." Application No. US12/598,874. Application date: 05-05-2008. Country: United States. Type: Utility. Status: Patent Pending.

05/05/2008 McCart, JA., Paige, C., Medin, J., "IL-12 Immunotherapy for cancer." Application No. EP08748251.9 Country: Europe. Type: Utility. Status: Patent Pending.

05/05/2008 Paige, C., Medin, J., "IL-12 Immunotherapy for cancer." Application No. PCT/CA2008/000849. Application date: 05-05-2008. Country: PCT. Type: PCT. Status: Expired.

05/08/2008 McCart, JA., Medin, J., "Composition and Methods of Cancer Treatment." Application No. PCT/CA2008/000848. Application date: 05-05-2008. Country: PCT. Type: PCT. Status: Expired.

03/20/2009 Devine, S., Medin, J., "Thymidylate kinase fusions and uses thereof." Application No. PCT/CA2009/000342. Application date: 03-20-2009. Country: PCT. Type: PCT. Status: Expired.

03/20/2009 Devine, S., Medin, J., "Thymidylate kinase fusions and uses thereof." Application No. US12/933,460. Application date: 03-20-2009. Country: United States. Type: Utility. Status: Issued.

03/20/2009 Devine, S., Medin, J., "Thymidylate kinase fusions and uses thereof." Application No. US61/038,398. Application date: 03-20-2008. Country: United States. Type: Provision. Status: Expired.

11/13/2009 Fowler, D., Medin, J., Chian-Ming Wang, J., Amarnath, S., "Modulated Programmed Death Ligand-1." Application No. US61/261,081. Application date: 11-13-2009. Country: United States. Type: Provisional. Status: Expired.

11/12/2012 Medin, J., Chian-Ming Wang, J., Fowler, D., Amarnath, S., "Modulated programmed death ligand-1." Application No. PCT/US2010/56450. Application date: 11-12-2010. Country: PCT. Type: PCT. Status: Handled by other Institution or Co-Applicant.

REVIEWER FOR GRANTS:

2000 University of Illinois at Chicago Campus Research Board Internal Competition

2001 Associazione Italiana per la Ricerca sul Cancro

2002 NHLBI/NIH P01 Program Project Grant Reviewer

2002 Canadian Blood Services. Research and Developmental Intramural Grant Competition.

2002 NHLBI/NIH Tissue Engineering RFA Grant Reviewer

2002 Multiple Myeloma Research Foundation. Collaborative Program Grant Reviewer.

2003 CIHR Research Partnership Program.

2003 NIH Ad Hoc Reviewer, Pathology Study Section

2003 Krembil Neuroscience Grant Competition, Toronto, ON

2004 Canadian Breast Cancer Foundation Reviewer

2004 - 2006 Canada Research Chairs College of Reviewers

2004 National Cancer Institute of Canada Program Project Reviewer

2004 National Cancer Institute of Canada Program Project Reviewer

2004 - 2007 Cancer Research Society of Canada. Panel B: Pharmacogenetics/Immunology

2005 CIHR Ad Hoc Reviewer, Cancer Progression and Therapeutics (CPT) Panel

2005 SickKids Foundation Grant Reviewer

2005 Canadian Blood Services Intramural Grant Competition

2005 National Cancer Institute of Canada Program Project Reviewer

2005 Canadian Blood Services Intramural Grant Competition

2006 Canadian Breast Cancer Foundation Research Project Grant Reviewer Panel A

2006 - 2009 Ontario Research Fund (ORF) Life Sciences and Agriculture Peer Review Panel, Panel Member

2006 - Present ANR Reviewer. Programme pluriannuel de Recherche sur les Maladies Rares (MRAR)

2006 - Present Lysosomal Storage Disease Research Consortium (LSDRC), USA, Reviewer

2006 - 2009 Canadian Institute of Health Research: Cancer Biology and Therapeutics (CBT) Panel Member

2007 NIAID, NIH - MCW Center for Medical Countermeasures against Radiological Terrorism. Ad hoc Reviewer.

2007 NSERC Collaborative Health Research Projects, Ad hoc Reviewer

2007 Vienna Science and Technology Fund, Ad hoc Reviewer

2008 Manitoba Health Research Council Grant, Government of Manitoba. Ad hoc Reviewer.

2008 Canadian Breast Cancer Foundation Research Project Grant Reviewer Panel A

2008 Canadian Breast Cancer Foundation, BC/Yukon Region, Ad hoc Reviewer.

2009 Canadian Breast Cancer Foundation Research Project Grant Reviewer Panel A

2009 Heart and Stroke Foundation of Canada, Scientific Review Committee.

2009 - 2011 Canadian Breast Cancer Foundation, Ontario Region. Vice-Chair: Research Panel A.
 2009 MRC Strategic Grant Application. Medical Research Council. London. Ad Hoc Reviewer.
 2009 MRC Developmental Pathway Funding Scheme. Medical Research Council. London. Ad hoc Reviewer.
 2009 Principal Research Fellowship, The Wellcome Trust. London. Ad Hoc Reviewer
 2009 Research Training Fellowship, The Wellcome Trust. London. Ad hoc Reviewer.
 2010 - Present Cancer Research Society of Canada. Panel B: Pharmacogenetics/Immunology
 2010 MRC Strategic Grant Application. Medical Research Council. London. Ad hoc Reviewer.
 2010 MRC Molecular and Cellular Medicine Board. Medical Research Council. London. Ad hoc Reviewer.
 2010 Grant Application and Fellowship. Vaincre les Maladies Lysosomales. Paris. Ad hoc Reviewer.
 2010 Grant Applications. Heart and Stroke Foundation of Canada. Ad hoc Reviewer.
 2011 Kay Kendall Leukemia Fund. London. Ad hoc Reviewer.
 2011 ANR Blanc-SVSE1-Physiologie, physiopathologie, sante publique proposal.
 2011 - 2014 Canadian Institute of Health Research. Panel Member: Fellowship-Post-PhD Awards Committee.
 2013 Association Francaise contre les Myopathies. Paris. Ad hoc Reviewer.
 2013 OCI/PMH Knudson Fellowship Review Panel. Ad hoc Reviewer.
 2013 Wellcome Trust Early Postdoctoral Training Fellowship. Ad hoc Reviewer.
 2013 MRC Application: Stem Cell Gene Therapy. Ad hoc Reviewer.
 2013 NIH PPG Workgroup 031. October 2013. Ad hoc Reviewer.
 2014 - 2015 Canadian Institute of Health Research. Panel Member: New Investigators C Awards Committee.
 2014 Stichting tegen Kanker. Foundation Contre le Cancer. Belgium. Ad hoc Reviewer.
 2014 Wellcome Trust Principle Research Fellowship. London. Ad hoc Reviewer.
 2015 Alberta Innovates Health Solutions. Panel Member: Postgraduate Fellowship Review Committee.
 2016 Clinical Research Seed Grant Review Committee. MCW Cancer Center Spring Competition/ Ad hoc Reviewer.
 2017 Panel Member: Basic Science Pilot Grant Panel. MCW Cancer Center.
 2017 Ad hoc Reviewer. Genome Canada.
 2018 Ad hoc Reviewer. Sanfilippo Children's Foundation. Australia.
 2018 Organizing Committee. 4th International Workshop on the Molecular Medicine of Sphingolipids. Weizmann Institute and Ein Gedi, Israel.
 2018 Organizing Committee. 5th Annual Pediatric Cancer Symposium sponsored by Northwestern Mutual Life.
 2018 Ad hoc Reviewer. American Society of Gene and Cell Therapy Career Development Award 2018.
 2018 Ad hoc Reviewer. Stichting tegen Kanker. Foundation contre le Cancer. Belgium.
 2018 Organizing Committee. 1st Great Lakes Translational Glycomics Symposium. Milwaukee, WI.
 2019 Ad hoc Reviewer. Medicine by Design Cycle 2 Team Grant. University of Toronto. Toronto, Ontario.
 2019 Poster Reviewer. Adenovirus Vectors and Other DNA Virus Vectors. American Society of Gene and Cell Therapy 2019 Annual Meeting. Washington, DC.
 2019 Ad hoc Reviewer. NINDS Career Development and Fellowship Training at NST-2 Study Section, NIH.

SERVICE:

1998 - 2000 Director: Clinical Gene Therapy Laboratory. University of Illinois at Chicago.
 1999 - 2001 Trainer: MD/PhD Training Program. University of Illinois at Chicago.
 2000 Fellow: Honors College. University of Illinois at Chicago.
 2002 - 2007 Founder and Meeting Organizer (yearly), Langdon Hall Gene Therapy Conference, Langdon Hall, Cambridge, Ontario.
 2002 Organizer: Department of Medical Biophysics Open House. University of Toronto.
 2002 Bickell/Cummings Foundation Reviewer. University of Toronto
 2003 - 2008 Mentor: Physician Scientist Training Program, School of Medicine, Temple University.
 2003 - 2004 Member: Orsino GMP Cell Processing Facility Scientific Advisory Board
 2003 External Thesis Reviewer: McGill University.
 2003 CRIO Grant Site Representative: OCI
 2003 Session Chair: Medical Biophysics Retreat. University of Toronto
 2004 - 2008 Head: Clinical Research Program in Gene Therapy, OCI
 2005 Judge: IMS Alan Wu Poster Competition
 2006 Coordinating Abstract Reviewer. American Society of Hematology Annual Meeting. Gene Transfer/Therapy Section.
 2006 - 2010 Member: University of Toronto Molecular Medicine Training Program

2006 Judge: IMS Summer Student Research Poster Day
 2007 External Academic Promotion Reviewer: Department of Oncology, University of Alberta.
 2007 - 2008 Judge: CREMS Research Day Poster. IMS at University of Toronto.
 2007 External Academic Promotion Reviewer: Baylor College of Medicine
 2008 Judge: IMS Summer Student Research Poster Day
 2008 External Academic Promotion Reviewer. Department of Oncology. University of Alberta.
 2009 Founder and Meeting Organizer, Langdon Hall Gene Therapy Conference, Langdon Hall, Cambridge, Ontario.
 2010 Qualifying examiner. University of Toronto. Institute of Medical Science.
 2010 Judge: IMS Summer Student Research Poster Day
 2011 External Academic Promotion Reviewer. Department of Medical Biophysics. University of Western Ontario.
 2011 CREMS Research Scholar Application Reviewer. University of Toronto.
 2011 PhD Examiner. Institute of Medicine. University of Toronto.
 2011 MSc Internal Examiner. Institute of Medical Science. University of Toronto.
 2011 PhD External Examiner. UBC Faculty of Graduate Studies.
 2012 External Academic Promotion Reviewer. Faculty of Medicine. University of Ottawa.
 2012 - 2015 Director, UHN Vector Core Facility at the Krembil Discovery Tower at Toronto Western Hospital
 2012 Session Chair. CBMTG Conference. April 2012. Toronto.
 2013 Session Chair. 9th WORLD Symposium. Lysosomal Disease Network Annual Research Meeting. February 2013. Orlando, FL.
 2017 - Present College of Reviewers. Canadian Institutes of Health Research
 2017 External Academic Promotion Reviewer. Faculty of Medicine. Northeast Ohio Medical University.
 2018 External Academic Promotion Reviewer. Department of Pediatrics. Emory University.
 2018 External Academic Promotion Reviewer. Faculty of Medicine. University of Virginia.
 2019 External Academic Promotion Reviewer. Department of Immunology and Microbiology. Scripps Research Institute, Florida.

BIBLIOGRAPHY

Refereed Journal Publications/Original Papers

1. **Medin JA**, Hunt L, Gathy K, Evans RK, Coleman MS. Efficient, low-cost protein factories: expression of human adenosine deaminase in baculovirus-infected insect larvae. *Proc Natl Acad Sci U S A*. 1990 Apr;87(7):2760-4. PMID: PMC53770
2. **Medin JA**, Coleman MS. Lack of functional significance of Cys227 and Cys234 in terminal deoxynucleotidyltransferase. *J Biol Chem*. 1992 Mar 15;267(8):5199-201.
3. Keller H, Dreyer C., Medin J., Mahfoudi A., Ozato K., and Wahli W. Fatty acids and retinoids control lipid metabolism through activation of PPAR/RXR heterodimers. *Proc Natl Acad Sci USA*. 90(6):21160-2164(1993).
4. Bhaumik K., Medin J., Gathy K., and Coleman M.S. Mutational analysis of active-site residues of human adenosine deaminase. *J Biol Chem*. 268(8):5464-5470 (1993).
5. Keller H., Mahfoudi A., Dreyer C., Hihi A.K., Medin J., Ozato K., and Wahli W. Peroxisome proliferator-activated receptors (PPARs) and lipid metabolism. *Annals NY Acad Sci* 684:157-173 (1993).
6. Segars JH, Nagata T, Bours V, **Medin JA**, Franzoso G, Blanco JC, Drew PD, Becker KG, An J, Tang T. Retinoic acid induction of major histocompatibility complex class I genes in NTera-2 embryonal carcinoma cells involves induction of NF-kappa B (p50-p65) and retinoic acid receptor beta-retinoid X receptor beta heterodimers. *Mol Cell Biol*. 1993 Oct;13(10):6157-69. PMID: PMC364675
7. Krey G., Keller H., Mahfoudi A., Medin J., Ozato K. Dreyer C., and Wahli W. Xenopus peroxisome proliferator activated receptors: Genomic organization, response element recognition, heterodimer formation with RXR, and activation by fatty acids. *J Steroid Biochem Mol Biol*. 47(1-6):65-73(1993).
8. Lee IJ, Driggers PH, **Medin JA**, Nikodem VM, Ozato K. Recombinant thyroid hormone receptor and retinoid X receptor stimulate ligand-dependent transcription in vitro. *Proc Natl Acad Sci U S A*. 1994 Mar 01;91(5):1647-51. PMID: PMC43220
9. Bovolenta C, Driggers PH, Marks MS, **Medin JA**, Politis AD, Vogel SN, Levy DE, Sakaguchi K, Appella E, Coligan JE. Molecular interactions between interferon consensus sequence binding protein and members of the interferon regulatory factor family. *Proc Natl Acad Sci U S A*. 1994 May

- 24;91(11):5046-50. PMID: PMC43928
10. **Medin JA**, Minucci S, Driggers PH, Lee IJ, Ozato K. Quantitative increases in DNA binding affinity and positional effects determine 9-cis retinoic acid induced activation of the retinoid X receptor beta homodimer. *Mol Cell Endocrinol.* 1994 Oct;105(1):27-35.
 11. Nunez SB, **Medin JA**, Keller H, Wang K, Ozato K, Wahli W, Segars J. Retinoid X receptor beta and peroxisome proliferator-activated receptor activate an estrogen response element. *Recent Prog Horm Res.* 1995;50:409-16.
 12. **Medin JA**, Gathy K, Coleman MS. Expression of foreign proteins in *Trichoplusia ni* larvae. *Methods Mol Biol.* 1995;39:265-75.
 13. Schiffmann R, **Medin JA**, Ward JM, Stahl S, Cottler-Fox M, Karlsson S. Transfer of the human glucocerebrosidase gene into hematopoietic stem cells of nonablated recipients: successful engraftment and long-term expression of the transgene. *Blood.* 1995 Aug 01;86(3):1218-27.
 14. Migita M, **Medin JA**, Pawliuk R, Jacobson S, Nagle JW, Anderson S, Amiri M, Humphries RK, Karlsson S. Selection of transduced CD34+ progenitors and enzymatic correction of cells from Gaucher patients, with bicistronic vectors. *Proc Natl Acad Sci U S A.* 1995 Dec 19;92(26):12075-9. PMID: PMC40299
 15. **Medin JA**, Migita M, Pawliuk R, Jacobson S, Amiri M, Kluepfel-Stahl S, Brady RO, Humphries RK, Karlsson S. A bicistronic therapeutic retroviral vector enables sorting of transduced CD34+ cells and corrects the enzyme deficiency in cells from Gaucher patients. *Blood.* 1996 Mar 01;87(5):1754-62.
 16. **Medin JA**, Tudor M, Simovitch R, Quirk JM, Jacobson S, Murray GJ, Brady RO. Correction in trans for Fabry disease: expression, secretion and uptake of alpha-galactosidase A in patient-derived cells driven by a high-titer recombinant retroviral vector. *Proc Natl Acad Sci U S A.* 1996 Jul 23;93(15):7917-22. PMID: PMC38849
 17. Nuñez SB, **Medin JA**, Braissant O, Kemp L, Wahli W, Ozato K, Segars JH. Retinoid X receptor and peroxisome proliferator-activated receptor activate an estrogen responsive gene independent of the estrogen receptor. *Mol Cell Endocrinol.* 1997 Mar 14;127(1):27-40.
 18. Pemrick SM, Abarzúa P, Kratzeisen C, Marks MS, **Medin JA**, Ozato K, Grippo JF. Characterization of the chimeric retinoic acid receptor RARalpha/VDR. *Leukemia.* 1998 Apr;12(4):554-62.
 19. **Medin JA**, Brandt JE, Rozler E, Nelson M, Bartholomew A, Li C, Turian J, Chute J, Chung T, Hoffman R. Ex vivo expansion and genetic marking of primitive human and baboon hematopoietic cells. *Ann N Y Acad Sci.* 1999 Apr 30;872:233-40; discussion 240-2.
 20. Medin J.A., Takenaka T., Caprentier S., Garcia V., Basile J.-P., Segui B., Andrieu-Abadie N., Auge N., Salvayre R., and Levade T. Retroviral-mediated correction of the metabolic defect in cultured Farber disease cells. *Hum Gene Ther* 10(8):1321-1329 (1999).
 21. **Medin JA**, Takenaka T, Carpentier S, Garcia V, Basile JP, Segui B, Andrieu-Abadie N, Auge N, Salvayre R, Levade T. Retrovirus-mediated correction of the metabolic defect in cultured Farber disease cells. *Hum Gene Ther.* 1999 May 20;10(8):1321-9.
 22. Takenaka T, Hendrickson CS, Tworek DM, Tudor M, Schiffmann R, Brady RO, **Medin JA**. Enzymatic and functional correction along with long-term enzyme secretion from transduced bone marrow hematopoietic stem/progenitor and stromal cells derived from patients with Fabry disease. *Exp Hematol.* 1999 Jul;27(7):1149-59.
 23. Takenaka T, Qin G, Brady RO, **Medin JA**. Circulating alpha-galactosidase A derived from transduced bone marrow cells: relevance for corrective gene transfer for Fabry disease. *Hum Gene Ther.* 1999 Aug 10;10(12):1931-9.
 24. Ségui B, Bezombes C, Uro-Coste E, **Medin JA**, Andrieu-Abadie N, Augé N, Brouchet A, Laurent G, Salvayre R, Jaffrézou JP, Levade T. Stress-induced apoptosis is not mediated by endolysosomal ceramide. *FASEB J.* 2000 Jan;14(1):36-47.
 25. Takenaka T, Murray GJ, Qin G, Quirk JM, Ohshima T, Qasba P, Clark K, Kulkarni AB, Brady RO, **Medin JA**. Long-term enzyme correction and lipid reduction in multiple organs of primary and secondary transplanted Fabry mice receiving transduced bone marrow cells. *Proc Natl Acad Sci U S A.* 2000 Jun 20;97(13):7515-20. PMID: PMC16577
 26. Qin G, Takenaka T, Telsch K, Kelley L, Howard T, Levade T, Deans R, Howard BH, Malech HL, Brady RO, **Medin JA**. Preselective gene therapy for Fabry disease. *Proc Natl Acad Sci U S A.* 2001 Mar 13;98(6):3428-33. PMID: PMC30670
 27. Veldman RJ, Maestre N, Aduib OM, **Medin JA**, Salvayre R, Levade T. A neutral sphingomyelinase resides in sphingolipid-enriched microdomains and is inhibited by the caveolin-scaffolding domain: potential implications in tumour necrosis factor signalling. *Biochem J.* 2001 May 01;355(Pt 3):859-68. PMID: PMC1221804

28. Veldman RJ, Mita A, Cuvillier O, Garcia V, Klappe K, **Medin JA**, Campbell JD, Carpentier S, Kok JW, Levade T. The absence of functional glucosylceramide synthase does not sensitize melanoma cells for anticancer drugs. *FASEB J.* 2003 Jun;17(9):1144-6.
29. Li J.-H., Shi W., Chia M., Sanchez-Sweetman O., Siatskas C., Huang D., Busson P., Klamut H., Yew W.C., Richardson C., O'Sullivan B., Gullane P., Neligan P., Medin J.A., and Liu F.-F. Efficacy of targeted FasL in nasopharyngeal carcinoma. *Mol Ther* 8(6):964-973 (2003).
30. Smith SL, Kiss J, Siatskas C, **Medin JA**, Moldwin RL. Enhanced effect of vascular endothelial growth factor, thrombopoietin peptide agonist, SCF, and Flt3-L on LTC-IC and reporter gene transduction from umbilical cord blood CD34+ cells. *Transfusion.* 2004 Mar;44(3):438-49.
31. Yoshimitsu M, Sato T, Tao K, Walia JS, Rasaiah VI, Sleep GT, Murray GJ, Poepl AG, Underwood J, West L, Brady RO, **Medin JA**. Bioluminescent imaging of a marking transgene and correction of Fabry mice by neonatal injection of recombinant lentiviral vectors. *Proc Natl Acad Sci U S A.* 2004 Nov 30;101(48):16909-14. PMID: PMC534735
32. Silvertown JD, Walia JS, **Medin JA**. Cloning, sequencing and characterization of lentiviral-mediated expression of rhesus macaque (*Macaca mulatta*) interleukin-2 receptor alpha cDNA. *Dev Comp Immunol.* 2005;29(11):989-1002.
33. Poepl AG, Murray GJ, **Medin JA**. Enhanced filter paper enzyme assay for high-throughput population screening for Fabry disease. *Anal Biochem.* 2005 Feb 01;337(1):161-3.
34. **Medin JA**, Liang SB, Hou JW, Kelley LS, Peace DJ, Fowler DH. Efficient transfer of PSA and PSMA cDNAs into DCs generates antibody and T cell antitumor responses in vivo. *Cancer Gene Ther.* 2005 Jun;12(6):540-51.
35. Lund N, Branch DR, Sakac D, Lingwood CA, Siatskas C, Robinson CJ, Brady RO, **Medin JA**. Lack of susceptibility of cells from patients with Fabry disease to productive infection with R5 human immunodeficiency virus. *AIDS.* 2005 Sep 23;19(14):1543-6.
36. Siatskas C, Underwood J, Ramezani A, Hawley RG, **Medin JA**. Specific pharmacological dimerization of KDR in lentivirally transduced human hematopoietic cells activates anti-apoptotic and proliferative mechanisms. *FASEB J.* 2005 Oct;19(12):1752-4.
37. Silvertown JD, Ng J, Sato T, Summerlee AJ, **Medin JA**. H2 relaxin overexpression increases in vivo prostate xenograft tumor growth and angiogenesis. *Int J Cancer.* 2006 Jan 01;118(1):62-73.
38. du Manoir JM, Francia G, Man S, Mossoba M, **Medin JA**, Vilorio-Petit A, Hicklin DJ, Emmenegger U, Kerbel RS. Strategies for delaying or treating in vivo acquired resistance to trastuzumab in human breast cancer xenografts. *Clin Cancer Res.* 2006 Feb 01;12(3 Pt 1):904-16.
39. Ayach BB, Yoshimitsu M, Dawood F, Sun M, Arab S, Chen M, Higuchi K, Siatskas C, Lee P, Lim H, Zhang J, Cukerman E, Stanford WL, **Medin JA**, Liu PP. Stem cell factor receptor induces progenitor and natural killer cell-mediated cardiac survival and repair after myocardial infarction. *Proc Natl Acad Sci U S A.* 2006 Feb 14;103(7):2304-9. PMID: PMC1413746
40. Mattocks M., Bagovich M., DeRosa M., Bond S., Binnington B., Rasaiah V.I., Medin J., and Lingwood C. Treatment of neutral glycosphingolipid lysosomal storage disease via inhibition of the ABC Drug Transporter, MDR1. Cyclosporin A can lower serum and liver globotriaosyl ceramide levels in the Fabry mouse model. *FEBS J.*273(9):2064-2075 (2006)
41. Silvertown JD, Walia JS, Summerlee AJ, **Medin JA**. Functional expression of mouse relaxin and mouse relaxin-3 in the lung from an Ebola virus glycoprotein-pseudotyped lentivirus via tracheal delivery. *Endocrinology.* 2006 Aug;147(8):3797-808.
42. Yoshimitsu M, Higuchi K, Dawood F, Rasaiah VI, Ayach B, Chen M, Liu P, **Medin JA**. Correction of cardiac abnormalities in fabry mice by direct intraventricular injection of a recombinant lentiviral vector that engineers expression of alpha-galactosidase A. *Circ J.* 2006 Nov;70(11):1503-8.
43. Yoshimitsu M, Higuchi K, Ramsbir S, Nonaka T, Rasaiah VI, Siatskas C, Liang SB, Murray GJ, Brady RO, **Medin JA**. Efficient correction of Fabry mice and patient cells mediated by lentiviral transduction of hematopoietic stem/progenitor cells. *Gene Ther.* 2007 Feb;14(3):256-65.
44. Liang SB, Yoshimitsu M, Poepl A, Rasaiah VI, Cai J, Fowler DH, **Medin JA**. Multiple reduced-intensity conditioning regimens facilitate correction of Fabry mice after transplantation of transduced cells. *Mol Ther.* 2007 Mar;15(3):618-27.
45. Silvertown JD, Symes JC, Neschadim A, Nonaka T, Kao JC, Summerlee AJ, **Medin JA**. Analog of H2 relaxin exhibits antagonistic properties and impairs prostate tumor growth. *FASEB J.* 2007 Mar;21(3):754-65.
46. Thomson CW, Mossoba ME, Siatskas C, Chen W, Sung A, **Medin JA**, Zhang L. Lentivirally transduced recipient-derived dendritic cells serve to ex vivo expand functional FcRgamma-sufficient double-

- negative regulatory T cells. *Mol Ther.* 2007 Apr;15(4):818-24.
47. Sato T, Neschadim A, Konrad M, Fowler DH, Lavie A, **Medin JA**. Engineered human tmpk/AZT as a novel enzyme/prodrug axis for suicide gene therapy. *Mol Ther.* 2007 May;15(5):962-70.
 48. Ramsubir S, Yoshimitsu M, **Medin JA**. Anti-CD25 targeted killing of bicistronically transduced cells: a novel safety mechanism against retroviral genotoxicity. *Mol Ther.* 2007 Jun;15(6):1174-81.
 49. Formigli L., Perna A.-M., Meacci E., Cinci L., Margheri M., Nistri S., Tani A., Silvertown J., Orlandini G., Porciani C., Zecchi-Orlandini S., Medin J., and Bani D. Paracrine effects of transplanted myoblasts and relaxin on post-infarction heart remodeling. *J Cell Mol Med.* 11(5):1087-1100 (2007).
 50. Bastianutto C., Mian A., Symes J., Mocanu J. Alajez N., Sleep G., Shi W., Keating A., Crump M. Gospodarowicz M., Medin J., Minden M., and Liu, F.-F. Local radiotherapy induces homing of hematopoietic stem cells to the irradiated bone marrow. *Cancer Res* 67(21): 10112-10116(2007).
 51. Mossoba ME, Walia JS, Rasaiah VI, Buxhoeveden N, Head R, Ying C, Foley JE, Bramson JL, Fowler DH, **Medin JA**. Tumor protection following vaccination with low doses of lentivirally transduced DCs expressing the self-antigen erbB2. *Mol Ther.* 2008 Mar;16(3):607-17.
 52. Rasaiah V.I., Underwood J.P., Oreopoulos D.G., and Medin J.A., Implementation of high-throughput screening for Fabry disease in Toronto dialysis patients. *NDT Plus.* 1(2):129-130 (2008). doi: 10.1093/ndplus/sfn009
 53. Symes JC, Kurin M, Fleshner NE, **Medin JA**. Fas-mediated killing of primary prostate cancer cells is increased by mitoxantrone and docetaxel. *Mol Cancer Ther.* 2008 Sep;7(9):3018-28.
 54. Francia G, Emmenegger U, Lee CR, Shaked Y, Folkins C, Mossoba M, **Medin JA**, Man S, Zhu Z, Witte L, Kerbel RS. Long-term progression and therapeutic response of visceral metastatic disease non-invasively monitored in mouse urine using beta-human chorionic gonadotropin secreting tumor cell lines. *Mol Cancer Ther.* 2008 Oct;7(10):3452-9.
 55. Ramsubir S, Nonaka T, Girbés CB, Carpentier S, Levade T, **Medin JA**. In vivo delivery of human acid ceramidase via cord blood transplantation and direct injection of lentivirus as novel treatment approaches for Farber disease. *Mol Genet Metab.* 2008 Nov;95(3):133-41. PMID: PMC2614354
 56. Surzyn M, Symes J, **Medin JA**, Sefton MV. IL-10 secretion increases signal persistence of HEMA-MMA-microencapsulated luciferase-modified CHO fibroblasts in mice. *Tissue Eng Part A.* 2009 Jan;15(1):127-36.
 57. Higuchi K, Ayach B, Sato T, Chen M, Devine SP, Rasaiah VI, Dawood F, Yanagisawa T, Tei C, Takenaka T, Liu PP, **Medin JA**. Direct injection of kit ligand-2 lentivirus improves cardiac repair and rescues mice post-myocardial infarction. *Mol Ther.* 2009 Feb;17(2):262-8. PMID: PMC2835055
 58. Symes J, Evangelou A, Ignatchenko A, Fleshner N, Kislinger T, **Medin JA**. Multidimensional protein identification technology analysis highlights mitoxantrone-induced expression modulations in the primary prostate cancer cell proteome. *Proteomics Clin Appl.* 2009 Mar;3(3):347-58.
 59. Loisel-Meyer S, Felizardo T, Mariotti J, Mossoba ME, Foley JE, Kammerer R, Mizue N, Keefe R, McCart JA, Zimmermann W, Dropulic B, Fowler DH, **Medin JA**. Potent induction of B- and T-cell immunity against human carcinoembryonic antigen-expressing tumors in human carcinoembryonic antigen transgenic mice mediated by direct lentivector injection. *Mol Cancer Ther.* 2009 Mar;8(3):692-702. PMID: PMC2846382
 60. Symes JC, Siatskas C, Fowler DH, **Medin JA**. Retrovirally transduced murine T lymphocytes expressing FasL mediate effective killing of prostate cancer cells. *Cancer Gene Ther.* 2009 May;16(5):439-52. PMID: PMC2857530
 61. Rodriguez-Sosa JR, Silvertown JD, Foster RA, **Medin JA**, Hahnel A. Transduction and transplantation of spermatogonia into the testis of ram lambs through the extra-testicular rete. *Reprod Domest Anim.* 2009 Aug;44(4):612-20.
 62. Labbe A, Nelles M, Walia J, Jia L, Furlonger C, Nonaka T, **Medin JA**, Paige CJ. IL-12 immunotherapy of murine leukaemia: comparison of systemic versus gene modified cell therapy. *J Cell Mol Med.* 2009 Aug;13(8B):1962-1976. PMID: PMC6512371
 63. Sato T, Ramsubir S, Higuchi K, Yanagisawa T, **Medin JA**. Vascular endothelial growth factor broadens lentivector distribution in the heart after neonatal injection. *J Cardiol.* 2009 Oct;54(2):245-54.
 64. Maekawa Y, Mizue N, Chan A, Shi Y, Liu Y, Dawood S, Chen M, Dawood F, de Couto G, Li GH, Suzuki N, Yeh WC, Gramolini A, **Medin JA**, Liu PP. Survival and cardiac remodeling after myocardial infarction are critically dependent on the host innate immune interleukin-1 receptor-associated kinase-4 signaling: a regulator of bone marrow-derived dendritic cells. *Circulation.* 2009 Oct 06;120(14):1401-14.
 65. Francia G, Man S, Lee CJ, Lee CR, Xu P, Mossoba ME, Emmenegger U, **Medin JA**, Kerbel RS.

- Comparative impact of trastuzumab and cyclophosphamide on HER-2-positive human breast cancer xenografts. *Clin Cancer Res.* 2009 Oct 15;15(20):6358-66. PMID: PMC2788792
66. Cypel M, Liu M., Rubacha M., Yeung J.C., Hirayama S., Anraku M., Sato M., Medin J., Davidson B.L., de Perrot M., Waddell T.K., Slutsky A.S., and Keshavjee S. Functional repair of human donor lungs by IL-10 gene therapy.
67. Silvertown JD, Neschadim A, Liu HN, Shannon P, Walia JS, Kao JC, Robertson J, Summerlee AJ, **Medin JA**. Relaxin-3 and receptors in the human and rhesus brain and reproductive tissues. *Regul Pept.* 2010 Jan 08;159(1-3):44-53.
68. Higuchi K, Yoshimitsu M, Fan X, Guo X, Rasaiah VI, Yen J, Tei C, Takenaka T, **Medin JA**. Alpha-galactosidase A-Tat fusion enhances storage reduction in hearts and kidneys of Fabry mice. *Mol Med.* 2010;16(5-6):216-21. PMID: PMC2864812
69. Drake RR, Elschenbroich S, Lopez-Perez O, Kim Y, Ignatchenko V, Ignatchenko A, Nyalwidhe JO, Basu G, Wilkins CE, Gjurich B, Lance RS, Semmes OJ, **Medin JA**, Kislinger T. In-depth proteomic analyses of direct expressed prostatic secretions. *J Proteome Res.* 2010 May 07;9(5):2109-16. PMID: PMC2869496
70. Fan X, Lang H, Zhou X, Zhang L, Yin R, Maciejko J, Giannitsos V, Motyka B, **Medin JA**, Platt JL, West LJ. Induction of human blood group a antigen expression on mouse cells, using lentiviral gene transduction. *Hum Gene Ther.* 2010 Jul;21(7):877-90. PMID: PMC2938359
71. Likar Y, Zurita J, Dobrenkov K, Shenker L, Cai S, Neschadim A, **Medin JA**, Sadelain M, Hricak H, Ponomarev V. A new pyrimidine-specific reporter gene: a mutated human deoxycytidine kinase suitable for PET during treatment with acycloguanosine-based cytotoxic drugs. *J Nucl Med.* 2010 Sep;51(9):1395-403. PMID: PMC4405132
72. Romieu-Mourez R, François M, Abate A, Boivin MN, Birman E, Bailey D, Bramson JL, Forner K, Young YK, **Medin JA**, Galipeau J. Mesenchymal stromal cells expressing ErbB-2/neu elicit protective antibreast tumor immunity in vivo, which is paradoxically suppressed by IFN-gamma and tumor necrosis factor-alpha priming. *Cancer Res.* 2010 Oct 15;70(20):7742-7.
73. Lee CJ, Fan X, Guo X, **Medin JA**. Promoter-specific lentivectors for long-term, cardiac-directed therapy of Fabry disease. *J Cardiol.* 2011 Jan;57(1):115-22.
74. Siegers GM, Felizardo TC, Mathieson AM, Kosaka Y, Wang XH, **Medin JA**, Keating A. Anti-leukemia activity of in vitro-expanded human gamma delta T cells in a xenogeneic Ph+ leukemia model. *PLoS One.* 2011 Feb 03;6(2):e16700. PMID: PMC3033392
75. Wang AY, Crome SQ, Jenkins KM, **Medin JA**, Bramson JL, Levings MK. Adenoviral-transduced dendritic cells are susceptible to suppression by T regulatory cells and promote interleukin 17 production. *Cancer Immunol Immunother.* 2011 Mar;60(3):381-8. PMID: PMC11028621
76. Tsunooka N, Hirayama S, **Medin JA**, Liles WC, Keshavjee S, Waddell TK. A novel tissue-engineered approach to problems of the postpneumectomy space. *Ann Thorac Surg.* 2011 Mar;91(3):880-6.
77. Yoshimitsu M, Higuchi K, Miyata M, Devine S, Mattman A, Sirrs S, **Medin JA**, Tei C, Takenaka T. Identification of novel mutations in the α -galactosidase A gene in patients with Fabry disease: pitfalls of mutation analyses in patients with low α -galactosidase A activity. *J Cardiol.* 2011 May;57(3):345-53.
78. Yoshimitsu M, Higuchi K, Fan X, Takao S, **Medin JA**, Tei C, Takenaka T. Sequencing and characterization of the porcine α -galactosidase A gene: towards the generation of a porcine model for Fabry disease. *Mol Biol Rep.* 2011 Jun;38(5):3145-52.
79. Walia JS, Neschadim A, Lopez-Perez O, Alayoubi A, Fan X, Carpentier S, Madden M, Lee CJ, Cheung F, Jaffray DA, Levade T, McCart JA, **Medin JA**. Autologous transplantation of lentivector/acid ceramidase-transduced hematopoietic cells in nonhuman primates. *Hum Gene Ther.* 2011 Jun;22(6):679-87. PMID: PMC3155125
80. Siegers GM, Dhamko H, Wang XH, Mathieson AM, Kosaka Y, Felizardo TC, **Medin JA**, Tohda S, Schueler J, Fisch P, Keating A. Human V α 1 T cells expanded from peripheral blood exhibit specific cytotoxicity against B-cell chronic lymphocytic leukemia-derived cells. *Cytherapy.* 2011 Jul;13(6):753-64.
81. Felizardo TC, Wang JC, McGray RA, Eveleigh C, Spaner DE, Fowler DH, Bramson JL, **Medin JA**. Differential immune responses mediated by adenovirus- and lentivirus-transduced DCs in a HER-2/neu overexpressing tumor model. *Gene Ther.* 2011 Oct;18(10):986-95. PMID: PMC6948845
82. Hirayama S, Sato M, Liu M, Loisel-Meyer S, Yeung JC, Wagnetz D, Cypel M, Zehong G, **Medin JA**, Keshavjee S. Local long-term expression of lentivirally delivered IL-10 in the lung attenuates obliteration of intrapulmonary allograft airways. *Hum Gene Ther.* 2011 Nov;22(11):1453-60.

83. Amarnath S, Mangus CW, Wang JC, Wei F, He A, Kapoor V, Foley JE, Massey PR, Felizardo TC, Riley JL, Levine BL, June CH, **Medin JA**, Fowler DH. The PDL1-PD1 axis converts human TH1 cells into regulatory T cells. *Sci Transl Med.* 2011 Nov 30;3(111):111ra120. PMID: PMC3235958
84. Neschadim A, Wang JC, Sato T, Fowler DH, Lavie A, **Medin JA**. Cell fate control gene therapy based on engineered variants of human deoxycytidine kinase. *Mol Ther.* 2012 May;20(5):1002-13. PMID: PMC3345984
85. Scaife M, Pacienza N, Au BC, Wang JC, Devine S, Scheid E, Lee CJ, Lopez-Perez O, Neschadim A, Fowler DH, Foley R, **Medin JA**. Engineered human Tmpk fused with truncated cell-surface markers: versatile cell-fate control safety cassettes. *Gene Ther.* 2013 Jan;20(1):24-34.
86. Swift BE, Williams BA, Kosaka Y, Wang XH, **Medin JA**, Viswanathan S, Martinez-Lopez J, Keating A. Natural killer cell lines preferentially kill clonogenic multiple myeloma cells and decrease myeloma engraftment in a bioluminescent xenograft mouse model. *Haematologica.* 2012 Jul;97(7):1020-8. PMID: PMC3396673
87. Berthod F, Symes J, Tremblay N, **Medin JA**, Auger FA. Spontaneous fibroblast-derived pericyte recruitment in a human tissue-engineered angiogenesis model in vitro. *J Cell Physiol.* 2012 May;227(5):2130-7.
88. Principe S, Kim Y, Fontana S, Ignatchenko V, Nyalwidhe JO, Lance RS, Troyer DA, Alessandro R, Semmes OJ, Kislinger T, Drake RR, **Medin JA**. Identification of prostate-enriched proteins by in-depth proteomic analyses of expressed prostatic secretions in urine. *J Proteome Res.* 2012 Apr 06;11(4):2386-96. PMID: PMC3642074
89. Pacienza N, Yoshimitsu M, Mizue N, Au BC, Wang JC, Fan X, Takenaka T, **Medin JA**. Lentivector transduction improves outcomes over transplantation of human HSCs alone in NOD/SCID/Fabry mice. *Mol Ther.* 2012 Jul;20(7):1454-61. PMID: PMC3393855
90. Neschadim A, Wang JC, Lavie A, **Medin JA**. Bystander killing of malignant cells via the delivery of engineered thymidine-active deoxycytidine kinase for suicide gene therapy of cancer. *Cancer Gene Ther.* 2012 May;19(5):320-7.
91. Kim Y, Ignatchenko V, Yao CQ, Kalatskaya I, Nyalwidhe JO, Lance RS, Gramolini AO, Troyer DA, Stein LD, Boutros PC, **Medin JA**, Semmes OJ, Drake RR, Kislinger T. Identification of differentially expressed proteins in direct expressed prostatic secretions of men with organ-confined versus extracapsular prostate cancer. *Mol Cell Proteomics.* 2012 Dec;11(12):1870-84. PMID: PMC3518113
92. Sun Z, Lee CJ, Mejia-Guerrero S, Zhang Y, Higuchi K, Li RK, **Medin JA**. Neonatal transfer of membrane-bound stem cell factor improves survival and heart function in aged mice after myocardial ischemia. *Hum Gene Ther.* 2012 Dec;23(12):1280-9.
93. Yannarelli G., Dayan V., Pacienza N., Lee C.-J., Medin J., and Keating A. Human umbilical cord perivascular cells exhibit enhanced cardiomyocyte reprogramming and cardiac function after experimental acute myocardial infarction. *Cell Transplant* [Epub ahead of print] (2012).
94. Yannarelli G., Pacienza N., Cuniberti L., Medin J., Davies J., and Keating A. Brief Report: The potential role of epigenetics on multipotent cell differentiation capacity of mesenchymal stromal cells. *Stem Cells* 31(1)215-220 (2013).
95. Payne NL, Sun G, McDonald C, Moussa L, Emerson-Webber A, Loisel-Meyer S, **Medin JA**, Siatskas C, Bernard CC. Human adipose-derived mesenchymal stem cells engineered to secrete IL-10 inhibit APC function and limit CNS autoimmunity. *Brain Behav Immun.* 2013 May;30:103-14.
96. Hirayama S, Sato M, Loisel-Meyer S, Matsuda Y, Oishi H, Guan Z, Saito T, Yeung J, Cypel M, Hwang DM, **Medin JA**, Liu M, Keshavjee S. Lentivirus IL-10 gene therapy down-regulates IL-17 and attenuates mouse orthotopic lung allograft rejection. *Am J Transplant.* 2013 Jun;13(6):1586-93.
97. Felizardo TC, Foley J, Steed K, Dropulic B, Amarnath S, **Medin JA**, Fowler DH. Harnessing autophagy for cell fate control gene therapy. *Autophagy.* 2013 Jul;9(7):1069-79. PMID: PMC3722316
98. Alayoubi AM, Wang JC, Au BC, Carpentier S, Garcia V, Dworski S, El-Ghamrasni S, Kirouac KN, Exertier MJ, Xiong ZJ, Privé GG, Simonaro CM, Casas J, Fabrias G, Schuchman EH, Turner PV, Hakem R, Levade T, **Medin JA**. Systemic ceramide accumulation leads to severe and varied pathological consequences. *EMBO Mol Med.* 2013 Jun;5(6):827-42. PMID: PMC3779446
99. Wang JC, Felizardo TC, Au BC, Fowler DH, Dekaban GA, **Medin JA**. Engineering lentiviral vectors for modulation of dendritic cell apoptotic pathways. *Virology.* 2013 Jul 20;10:240. PMID: PMC3723442
100. Sato T, Neschadim A, Lavie A, Yanagisawa T, **Medin JA**. The engineered thymidylate kinase (TMPK)/AZT enzyme-prodrug axis offers efficient bystander cell killing for suicide gene therapy of cancer. *PLoS One.* 2013;8(10):e78711. PMID: PMC3806853
101. Wei LZ, Xu Y, Nelles EM, Furlonger C, Wang JC, Di Grappa MA, Khokha R, **Medin JA**, Paige CJ. Localized interleukin-12 delivery for immunotherapy of solid tumours. *J Cell Mol Med.* 2013

- Nov;17(11):1465-74. PMID: PMC4117559
102. Jones EE, Dworski S, Canals D, Casas J, Fabrias G, Schoenling D, Levade T, Denlinger C, Hannun YA, **Medin JA**, Drake RR. On-tissue localization of ceramides and other sphingolipids by MALDI mass spectrometry imaging. *Anal Chem*. 2014 Aug 19;86(16):8303-11. PMID: PMC4139181
 103. Nelles ME, Moreau JM, Furlonger CL, Berger A, **Medin JA**, Paige CJ. Murine splenic CD4⁺ T cells, induced by innate immune cell interactions and secreted factors, develop antileukemia cytotoxicity. *Cancer Immunol Res*. 2014 Nov;2(11):1113-24.
 104. Sato T, Neschadim A, Nakagawa R, Yanagisawa T, **Medin JA**. Evaluation of Bystander Cell Killing Effects in Suicide Gene Therapy of Cancer: Engineered Thymidylate Kinase (TMPK)/AZT Enzyme-Prodrug Axis. *Methods Mol Biol*. 2015;1317:55-67.
 105. Dworski S, Berger A, Furlonger C, Moreau JM, Yoshimitsu M, Trentadue J, Au BC, Paige CJ, **Medin JA**. Markedly perturbed hematopoiesis in acid ceramidase deficient mice. *Haematologica*. 2015 May;100(5):e162-5. PMID: PMC4420221
 106. Au B.C., Lee C-J., Lopez-Perez O., Foltz W., Felizardo T.C., Wang J.C.M., Huang J., Fan X., Madden M., Goldstein A., Jaffray D.A., Moloo B., McCart J.A., and Medin J.A. Direct lymph node vaccination of Lentivector/Prostate-Specific Antigen is safe and generates tissue specific responses in rhesus macaques. *Biomedicines* 4,6:doi:10.3390/biomedicines4010006 (2016)
 107. Provençal P, Boutin M, Dworski S, Au B, **Medin JA**, Auray-Blais C. Relative distribution of Gb3 isoforms/analogues in NOD/SCID/Fabry mice tissues determined by tandem mass spectrometry. *Bioanalysis*. 2016 Sep;8(17):1793-807. PMID: PMC4992964
 108. Kamani M, Provençal P., Boutin M., Pacienza N., Fan X., Novak A., Huang T.C., Binnington B., Au B.C., Auray-Blais C., Lingwood C.A., and Medin J.A. Glycosphingolipid storage in Fabry mice extends beyond globotriosylceramide and is affected by ABCB1 depletion. *Future Science OA*. 2016 Oct 13;2(4): FSO147 doi:10.4155/foa-2016-0027 PMID 28116130.
 109. Huang J., Liu Y., Au B.C., Barber D.L., Arruda A., Schambach A., Rothe M., Minden M. Paige C.J. and Medin J.A. Preclinical Validation: LV/IL-12 transduction of patient leukemia cells for immunotherapy of AML. *Mol Ther p Methods and Clinical Development*(in press).
 110. Kamani, M., Provençal, P., Boutin, M., Pacienza, N., Fan, X., Guo, C., Binnington, B., Novak, A., Auray-Blais, C., Lingwood, C.A., and Medin, J.A.: Complex role of ABCB1 in glycosphingolipid synthesis in the Fabry mouse. (submitted).
 111. Dworski S., Lu P., Khan A., Maranda B., Mitchell J., Parini R., Di Rocco M., Hugel B., Yoshimitsu M., Schuchman E.H., Norris J.S., Levade T., and Medin J.A. Altered cytokine and ceramide metabolite levels in plasma from Farber mice and Farber patients (under revision).
 112. Sikora J., Dworski S., Jones E.E., Kamani M.A., Micsenyi M.C., Sawada T., Le Faouder P., Bertrand-Michel J., Dupuy A., Dunn C.K., Xuan I.C.Y., Casas J., Fabrias G., Hampson D.R., Levade T., Drake R.R., Medin J.A. and Walkley S.U. Acid ceramidase deficiency in mice results in broad range of central nervous system abnormalities (under revisions).
 113. Yu, F., Islam, D., Belcastro, R., Carpentier, S., Casas, J., Fabrias, G., Levade, T., Tanswell, K., Zhang, H., and Medin, J.A.: Impaired lung mechanics in the acid ceramidase deficient mouse (manuscript in preparation).
 114. Au, B.C., Liu, Y., Huang, J., Nelles, M., Arruda, A., Rothe, M., Paul, G., Schambach, A., Barber, D., Minden, M., Paige, C., and Medin, J.A.: Pre-clinical preparation and validation of tumor cell-based IL-12 immunotherapy for Acute Myeloid Leukemia (manuscript in preparation).
 115. Khan, A., Au, B.C., Huang, J., Dworski, S., O'Hoski, P., Prokopishyn, N., Rothe, M., Paul, G., Bischof, D., Nagree, M., Vazquez, L.L., Viswanathan, S., Sirrs, S., Auray-Blais, C., Morel, C., Raiman, J., Schambach, A., West, M., Rupal, T., Keating, A., Cornetta, K., Foley, R., and Medin, J.A.: Pre-clinical safety and efficacy of lentiviral vector-transduced patient CD34⁺ hematopoietic stem cells for gene therapy of Fabry disease (manuscript in preparation).
 116. Dworski, S., Kamani, M., Jones, E.E., Le Faouder, P., Bertrand-Michel, J., Dupuy, A., Ying, S., Grabowski, G., Casas, J., Fabrias, G., Levade, T., Drake, R.R., and Medin, J.A.: Ceramide species identity, quantity, and localization are affected by acid ceramidase deficiency in the adult mouse brain. (manuscript in preparation).
 117. **Medin JA**. Roscoe Owen Brady: Passion for patients. *Proc Natl Acad Sci U S A*. 2016 Oct 18;113(42):11644-11645. PMID: PMC5081591
 118. Desnick RJ, Barton NW, Furbish S, Grabowski GA, Karlsson S, Kolodny EH, **Medin JA**, Murray GJ, Mistry PK, Patterson MC, Schiffmann R, Weinreb NJ. Roscoe Owen Brady, MD: Remembrances of co-investigators and colleagues. *Mol Genet Metab*. 2017;120(1-2):1-7.

119. Dworski S, Lu P, Khan A, Maranda B, Mitchell JJ, Parini R, Di Rocco M, Hogle B, Yoshimitsu M, Magnusson B, Makay B, Arslan N, Guelbert N, Ehler K, Jarisch A, Gardner-Medwin J, Dagher R, Terreri MT, Lorenco CM, Barillas-Arias L, Tanpaiboon P, Solyom A, Norris JS, He X, Schuchman EH, Levade T, **Medin JA**. Acid Ceramidase Deficiency is characterized by a unique plasma cytokine and ceramide profile that is altered by therapy. *Biochim Biophys Acta Mol Basis Dis*. 2017 Feb;1863(2):386-394. PMID: PMC7192210
120. Huang J, Liu Y, Au BC, Barber DL, Arruda A, Schambach A, Rothe M, Minden MD, Paige CJ, **Medin JA**. Preclinical validation: LV/IL-12 transduction of patient leukemia cells for immunotherapy of AML. *Mol Ther Methods Clin Dev*. 2016;3:16074. PMID: PMC5142463
121. He X, Dworski S, Zhu C, DeAngelis V, Solyom A, **Medin JA**, Simonaro CM, Schuchman EH. Enzyme replacement therapy for Farber disease: Proof-of-concept studies in cells and mice. *BBA Clin*. 2017 Jun;7:85-96. PMID: PMC5338723
122. Kamani MA, Provençal P, Boutin M, Paccienza N, Fan X, Novak A, Huang TC, Binnington B, Au BC, Auray-Blais C, Lingwood CA, **Medin JA**. Glycosphingolipid storage in Fabry mice extends beyond globotriaosylceramide and is affected by ABCB1 depletion. *Future Sci OA*. 2016 Dec;2(4):FSO147. PMID: PMC5242178
123. Thomson CW, Mossoba ME, Siatskas C, Chen W, Sung A, **Medin JA**, Zhang L. Lentivirally Transduced Recipient-derived Dendritic Cells Serve to Ex Vivo Expand Functional FcR γ -sufficient Double-negative Regulatory T Cells. *Mol Ther*. 2007 Apr;15(4):818-824.
124. Sikora J, Dworski S, Jones EE, Kamani MA, Micsenyi MC, Sawada T, Le Faouder P, Bertrand-Michel J, Dupuy A, Dunn CK, Xuan ICY, Casas J, Fabrias G, Hampson DR, Levade T, Drake RR, **Medin JA**, Walkley SU. Acid Ceramidase Deficiency in Mice Results in a Broad Range of Central Nervous System Abnormalities. *Am J Pathol*. 2017 Apr;187(4):864-883. PMID: PMC5397689
125. Oldham RAA, **Medin JA**. Practical considerations for chimeric antigen receptor design and delivery. *Expert Opin Biol Ther*. 2017 Aug;17(8):961-978.
126. Nomura R, Sato T, Sato Y, **Medin JA**, Kushimoto S, Yanagisawa T. Azidothymidine-triphosphate impairs mitochondrial dynamics by disrupting the quality control system. *Redox Biol*. 2017 Oct;13:407-417. PMID: PMC5498287
127. Huang J, Khan A, Au BC, Barber DL, López-Vásquez L, Prokopishyn NL, Boutin M, Rothe M, Rip JW, Abaoui M, Nagree MS, Dworski S, Schambach A, Keating A, West ML, Klassen J, Turner PV, Sirrs S, Rupar CA, Auray-Blais C, Foley R, **Medin JA**. Lentivector Iterations and Pre-Clinical Scale-Up/Toxicity Testing: Targeting Mobilized CD34⁺ Cells for Correction of Fabry Disease. *Mol Ther Methods Clin Dev*. 2017 Jun 16;5:241-258. PMID: PMC5453867
128. Au BC, Lee CJ, Lopez-Perez O, Foltz W, Felizardo TC, Wang JCM, Huang J, Fan X, Madden M, Goldstein A, Jaffray DA, Moloo B, McCart JA, **Medin JA**. Direct Lymph Node Vaccination of Lentivector/Prostate-Specific Antigen is Safe and Generates Tissue-Specific Responses in Rhesus Macaques. *Biomedicines*. 2016 Feb 19;4(1). PMID: PMC5344243
129. Rasaiah VI, Underwood JP, Oreopoulos DG, **Medin JA**. Implementation of high-throughput screening for Fabry disease in Toronto dialysis patients. *NDT Plus*. 2008 Apr;1(2):129-130. PMID: PMC5477914
130. Molino S, Tate E, McKillop WM, **Medin JA**. Sphingolipid pathway enzymes modulate cell fate and immune responses. *Immunotherapy*. 2017 Nov;9(14):1185-1198.
131. Yu FPS, Islam D, Sikora J, Dworski S, Gurka J, López-Vásquez L, Liu M, Kuebler WM, Levade T, Zhang H, **Medin JA**. Chronic lung injury and impaired pulmonary function in a mouse model of acid ceramidase deficiency. *Am J Physiol Lung Cell Mol Physiol*. 2018 Mar 01;314(3):L406-L420. PMID: PMC5900354
132. Broglie L, Margolis D, **Medin JA**. Yin and Yang of mesenchymal stem cells and aplastic anemia. *World J Stem Cells*. 2017 Dec 26;9(12):219-226. PMID: PMC5746642
133. Yu FPS, Dworski S, **Medin JA**. Deletion of MCP-1 Impedes Pathogenesis of Acid Ceramidase Deficiency. *Sci Rep*. 2018 Jan 29;8(1):1808. PMID: PMC5789088
134. Fougerat A, Pan X, Smutova V, Heveker N, Cairo CW, Issad T, Larrivé B, **Medin JA**, Pshezhetsky AV. Neuraminidase 1 activates insulin receptor and reverses insulin resistance in obese mice. *Mol Metab*. 2018 Jun;12:76-88. PMID: PMC6001920
135. Filomeno PA, Kim KP, Yoon N, Rashedi I, Dayan V, Kandel RA, Wang XH, Felizardo TC, Berinstein E, Jelveh S, Filomeno A, **Medin JA**, Ferguson PC, Keating A. Human mesenchymal stromal cells do not promote recurrence of soft tissue sarcomas in mouse xenografts after radiation and surgery. *Cytotherapy*. 2018 Aug;20(8):1001-1012.
136. Oishi H, Juvet SC, Martinu T, Sato M, **Medin JA**, Liu M, Keshavjee S. A novel combined ex vivo and

- in vivo lentiviral interleukin-10 gene delivery strategy at the time of transplantation decreases chronic lung allograft rejection in mice. *J Thorac Cardiovasc Surg.* 2018 Sep;156(3):1305-1315.
137. Yu FPS, Amintas S, Levade T, **Medin JA**. Acid ceramidase deficiency: Farber disease and SMA-PME. *Orphanet J Rare Dis.* 2018 Jul 20;13(1):121. PMID: PMC6053731
 138. Yu FPS, Sajdak BS, Sikora J, Salmon AE, Nagree MS, Gurka J, Kassem IS, Lipinski DM, Carroll J, **Medin JA**. Acid Ceramidase Deficiency in Mice Leads to Severe Ocular Pathology and Visual Impairment. *Am J Pathol.* 2019 Feb;189(2):320-338. PMID: PMC6412726
 139. Neschadim A, **Medin JA**. Engineered Thymidine-Active Deoxycytidine Kinase for Bystander Killing of Malignant Cells. *Methods Mol Biol.* 2019;1895:149-163.
 140. Liu M, Juvet SC, **Medin JA**, Martinu T, Oishi H, Keshavjee S. Lentiviral interleukin-10 gene therapy: Safety and questions. *J Thorac Cardiovasc Surg.* 2019 Feb;157(2):818-819.
 141. Yu FPS, Molino S, Sikora J, Rasmussen S, Rybova J, Tate E, Geurts AM, Turner PV, Mckillop WM, **Medin JA**. Hepatic pathology and altered gene transcription in a murine model of acid ceramidase deficiency. *Lab Invest.* 2019 Oct;99(10):1572-1592.
 142. Nagree MS, Scalia S, McKillop WM, **Medin JA**. An update on gene therapy for lysosomal storage disorders. *Expert Opin Biol Ther.* 2019 Jul;19(7):655-670.
 143. Dubot P, Sabourdy F, Rybova J, **Medin JA**, Levade T. Inherited monogenic defects of ceramide metabolism: Molecular bases and diagnoses. *Clin Chim Acta.* 2019 Aug;495:457-466.
 144. Islam, D. Huang, Y., Fanelli, V., Delsedime, L., Wu, S., Khang, J., Han, B., Grassi, A., Li, M., Xu, Y., Luo, A., Wu, J., Liu, X., Mckillop, M., Medin, J., Qiu, H., Zhong, N., Liu, M., Laffey, J., Li, Y., and Zhang, H.: Identification and modulation of microenvironment is crucial for effective mesenchymal stromal cell therapy in acute lung injury. *Am J Respir Crit Care Med.* 2019 May 15;199(10):1214-1224
 145. Islam D, Huang Y, Fanelli V, Delsedime L, Wu S, Khang J, Han B, Grassi A, Li M, Xu Y, Luo A, Wu J, Liu X, McKillop M, Medin J, Qiu H, Zhong N, Liu M, Laffey J, Li Y, Zhang H. Identification and Modulation of Microenvironment Is Crucial for Effective Mesenchymal Stromal Cell Therapy in Acute Lung Injury. *Am J Respir Crit Care Med.* 2019 May 15;199(10):1214-1224.
 146. Li Y, Xu Y, Benitez BA, Nagree MS, Dearborn JT, Jiang X, Guzman MA, Woloszynek JC, Giaramita A, Yip BK, Elsbernd J, Babcock MC, Lo M, Fowler SC, Wozniak DF, Vogler CA, **Medin JA**, Crawford BE, Sands MS. Genetic ablation of acid ceramidase in Krabbe disease confirms the psychosine hypothesis and identifies a new therapeutic target. *Proc Natl Acad Sci U S A.* 2019 Oct 01;116(40):20097-20103. PMID: PMC6778236
 147. Nanbakhsh A, Best B, Riese M, Rao S, Wang L, Medin J, Thakar MS, Malarkannan S. Dextran Enhances the Lentiviral Transduction Efficiency of Murine and Human Primary NK Cells. *J Vis Exp.* 2018 Jan 15(131). PMID: PMC5908645
 148. Ellen Jones E, Dworski S, Kamani M, Canals D, Wada M, Liu X, Hannun YA, Norris J, **Medin JA**, Drake RR. Detection and distribution of sphingolipids in tissue by FTICR MALDI-imaging mass spectrometry Bioactive Sphingolipids in Cancer Biology and Therapy. August 28, 2015:339-358.
 149. Yannarelli G, Pacienza N, Cuniberti L, Medin J, Davies J, Keating A. Brief report: The potential role of epigenetics on multipotent cell differentiation capacity of mesenchymal stromal cells. *Stem Cells.* 2013 Jan;31(1):215-20.
 150. Yannarelli G, Dayan V, Pacienza N, Lee CJ, Medin J, Keating A. Human umbilical cord perivascular cells exhibit enhanced cardiomyocyte reprogramming and cardiac function after experimental acute myocardial infarction. *Cell Transplant.* 2013;22(9):1651-66.
 151. Medin J, Fowler D. Experimental and applied immunotherapy *Experimental and Applied Immunotherapy.* 2011:1-442.
 152. . Radiation therapy and cancer treatment: From the basics to combination therapies that ignite immunity *Experimental and Applied Immunotherapy.* 2011:357-388.
 153. Moretti A, Jaffray DA, **Medin JA**. Radiation therapy and cancer treatment: From the basics to combination therapies that ignite immunity *Experimental and Applied Immunotherapy.* 2011:357-388.
 154. Cypel M, Liu M, Rubacha M, Yeung JC, Hirayama S, Anraku M, Sato M, Medin J, Davidson BL, de Perrot M, Waddell TK, Slutsky AS, Keshavjee S. Functional repair of human donor lungs by IL-10 gene therapy. *Sci Transl Med.* 2009 Oct 28;1(4):4ra9.
 155. **Medin JA**. *Molecular Therapeutics in Hematology: Gene Therapy Molecular Hematology: Third Edition.* 10 March 2010:318-335.
 156. Bastianutto C, Mian A, Symes J, Mocanu J, Alajez N, Sleep G, Shi W, Keating A, Crump M, Gospodarowicz M, Medin J, Minden M, Liu FF. Local radiotherapy induces homing of hematopoietic stem cells to the irradiated bone marrow. *Cancer Res.* 2007 Nov 01;67(21):10112-6.

157. Berger A, Colpitts SJ, Seabrook MSS, Furlonger CL, Bendix MB, Moreau JM, McKillop WM, **Medin JA**, Paige CJ. Interleukin-15 in cancer immunotherapy: IL-15 receptor complex versus soluble IL-15 in a cancer cell-delivered murine leukemia model. *J Immunother Cancer*. 2019 Dec 19;7(1):355. PMID: PMC6924073
158. Formigli L, Perna AM, Meacci E, Cinci L, Margheri M, Nistri S, Tani A, Silvertown J, Orlandini G, Porciani C, Zecchi-Orlandini S, Medin J, Bani D. Paracrine effects of transplanted myoblasts and relaxin on post-infarction heart remodelling. *J Cell Mol Med*. 2007;11(5):1087-100. PMID: PMC4401276
159. Mattocks M, Bagovich M, De Rosa M, Bond S, Binnington B, Rasaiah VI, Medin J, Lingwood C. Treatment of neutral glycosphingolipid lysosomal storage diseases via inhibition of the ABC drug transporter, MDR1. Cyclosporin A can lower serum and liver globotriaosyl ceramide levels in the Fabry mouse model. *FEBS J*. 2006 May;273(9):2064-75.
160. Khatami S, Rendon A, Yoshimitsu M, Medin J, Lilge L. Effect of GFP expression on the sensitivity of glioma cell lines to photodynamic therapy Progress in Biomedical Optics and Imaging - Proceedings of SPIE. 2005;5969.
161. Li JH, Shi W, Chia M, Sanchez-Sweatman O, Siatskas C, Huang D, Busson P, Klamut H, Yeh WC, Richardson C, O'Sullivan B, Gullane P, Neligan P, Medin J, Liu FF. Efficacy of targeted FasL in nasopharyngeal carcinoma. *Mol Ther*. 2003 Dec;8(6):964-73.
162. **Medin JA**. Vector divergence to convergence? *Gene Therapy*. August 2003;10(17):1407.
163. Taknaka T, Hendrickson CS, Tudor M, Schulmann R, Brady RO, **Medin JA**. Extending metabolic cooperativity in gene transfer for fabry disease: Transduction of patient bone marrow cells leads to intracellular enzymatic correction and secretion *FASEB Journal*. 1997;11(9).
164. **Medin JA**, Tudor M, Simovitch R, Quirk JM, Tacobson S, Murray GJ, Brady RO. Gene therapy for fabry disease: Expression, secretion and uptake of a-galactosidase a (?-gal A) driven by a high titer recombinant retroviral vector *FASEB Journal*. 1996;10(6).
165. Krey G, Keller H, Mahfoudi A, Medin J, Ozato K, Dreyer C, Wahli W. Xenopus peroxisome proliferator activated receptors: genomic organization, response element recognition, heterodimer formation with retinoid X receptor and activation by fatty acids. *J Steroid Biochem Mol Biol*. 1993 Dec;47(1-6):65-73.
166. Keller H, Mahfoudi A, Dreyer C, Hihi AK, Medin J, Ozato K, Wahli W. Peroxisome proliferator-activated receptors and lipid metabolism. *Ann N Y Acad Sci*. 1993 Jun 11;684:157-73.
167. Bhaumik D, Medin J, Gathy K, Coleman MS. Mutational analysis of active site residues of human adenosine deaminase. *J Biol Chem*. 1993 Mar 15;268(8):5464-70.
168. Keller H, Dreyer C, Medin J, Mahfoudi A, Ozato K, Wahli W. Fatty acids and retinoids control lipid metabolism through activation of peroxisome proliferator-activated receptor-retinoid X receptor heterodimers. *Proc Natl Acad Sci U S A*. 1993 Mar 15;90(6):2160-4. PMID: PMC46045
169. Bayerle A, Marsching C, Rabionet M, Dworski S, Kamani MA, Chitraju C, Gluchowski NL, Gabriel KR, Herzer S, Jennemann R, Levade T, **Medin JA**, Sandhoff R. Endogenous levels of 1-O-acylceramides increase upon acidic ceramidase deficiency and decrease due to loss of Dgat1 in a tissue-dependent manner. *Biochim Biophys Acta Mol Cell Biol Lipids*. 2020 Sep;1865(9):158741.
170. Oldham RAA, Faber ML, Keppel TR, Buchberger AR, Waas M, Hari P, Gundry RL, **Medin JA**. Discovery and validation of surface *N*-glycoproteins in MM cell lines and patient samples uncovers immunotherapy targets. *J Immunother Cancer*. 2020 Aug;8(2). PMID: PMC7418848
171. Koduri V, Duplaquet L, Lampson BL, Wang AC, Sabet AH, Ishoey M, Paulk J, Teng M, Harris IS, Endress JE, Liu X, Dasilva E, Paulo JA, Briggs KJ, Doench JG, Ott CJ, Zhang T, Donovan KA, Fischer ES, Gygi SP, Gray NS, Bradner J, **Medin JA**, Buhrlage SJ, Oser MG, Kaelin WG Jr. Targeting oncoproteins with a positive selection assay for protein degraders. *Sci Adv*. 2021 Feb;7(6). PMID: PMC7864573
172. Koduri V, Duplaquet L, Lampson BL, Wang AC, Sabet AH, Ishoey M, Paulk J, Teng M, Harris IS, Endress JE, Liu X, Dasilva E, Paulo JA, Briggs KJ, Doench JG, Ott CJ, Zhang T, Donovan KA, Fischer ES, Gygi SP, Gray NS, Bradner J, **Medin JA**, Buhrlage SJ, Oser MG, Kaelin WG Jr. Targeting oncoproteins with a positive selection assay for protein degraders. *Sci Adv*. 2021 Feb;7(6). PMID: PMC7864573
173. Khan A, Barber DL, Huang J, Rupa CA, Rip JW, Auray-Blais C, Boutin M, O'Hoski P, Gargulak K, McKillop WM, Fraser G, Wasim S, LeMoine K, Jelinski S, Chaudhry A, Prokopishyn N, Morel CF, Couban S, Duggan PR, Fowler DH, Keating A, West ML, Foley R, **Medin JA**. Lentivirus-mediated gene therapy for Fabry disease. *Nat Commun*. 2021 Feb 25;12(1):1178. PMID: PMC7907075

174. McKillop WM, **Medin JA**. Molecular therapeutics in hematology: Gene therapy Molecular Hematology. 1 January 2019;319-338.
175. Rademacher MJ, Cruz A, Faber M, Oldham RAA, Wang D, **Medin JA**, Schloemer NJ. Sarcoma IL-12 overexpression facilitates NK cell immunomodulation. *Sci Rep*. 2021 Apr 15;11(1):8321. PMID: PMC8050085
176. Domm JM, Wootton SK, **Medin JA**, West ML. Gene therapy for Fabry disease: Progress, challenges, and outlooks on gene-editing. *Mol Genet Metab*. 2021;134(1-2):117-131.
177. Nagree MS, Felizardo TC, Faber ML, Rybova J, Rupar CA, Foley SR, Fuller M, Fowler DH, **Medin JA**. Autologous, lentivirus-modified, T-rapa cell "micropharmacies" for lysosomal storage disorders. *EMBO Mol Med*. 2022 Apr 07;14(4):e14297. PMID: PMC8988206
178. Rabionet M, Bernard P, Pichery M, Marsching C, Bayerle A, Dworski S, Kamani MA, Chitraju C, Gluchowski NL, Gabriel KR, Asadi A, Ebel P, Hoekstra M, Dumas S, Ntambi JM, Jacobsson A, Willecke K, **Medin JA**, Jonca N, Sandhoff R. Epidermal 1-O-acylceramides appear with the establishment of the water permeability barrier in mice and are produced by maturing keratinocytes. *Lipids*. 2022 May;57(3):183-195.
179. Zhang H, Nagree MS, Liu H, Pan X, **Medin JA**, Lipinski DM. rAAV-mediated over-expression of acid ceramidase prevents retinopathy in a mouse model of Farber lipogranulomatosis. *Gene Ther*. 2023 Apr;30(3-4):297-308.
180. Rybova J, Kuchar L, Sikora J, McKillop WM, **Medin JA**. Skin inflammation and impaired adipogenesis in a mouse model of acid ceramidase deficiency. *J Inherit Metab Dis*. 2022 Nov;45(6):1175-1190. PMID: PMC9826362
181. Alvarez-Argote J, Dlugi TA, Sundararajan T, Kleynerman A, Faber ML, McKillop WM, **Medin JA**. Pathophysiological characterization of the Townes mouse model for sickle cell disease. *Transl Res*. 2023 Apr;254:77-91.
182. Saleh AH, Rothe M, Barber DL, McKillop WM, Fraser G, Morel CF, Schambach A, Auray-Blais C, West ML, Khan A, Fowler DH, Rupar CA, Foley R, **Medin JA**, Keating A. Persistent hematopoietic polyclonality after lentivirus-mediated gene therapy for Fabry disease. *Mol Ther Methods Clin Dev*. 2023 Mar 09;28:262-271. PMID: PMC9932294
183. Domm JM, Wootton SK, **Medin JA**, West ML. Corrigendum to "Gene therapy for Fabry disease: Progress, challenges, and outlooks on gene-editing" [2021 Sep-Oct;134(1-2):117-131]. *Mol Genet Metab*. 2023 May;139(1):107541.
184. Kleynerman A, Rybova J, Faber ML, McKillop WM, Levade T, **Medin JA**. Acid Ceramidase Deficiency: Bridging Gaps between Clinical Presentation, Mouse Models, and Future Therapeutic Interventions. *Biomolecules*. 2023 Feb 01;13(2). PMID: PMC9953133
185. Nagree MS, Rybova J, Kleynerman A, Ahrenhoerster CJ, Saville JT, Xu T, Bachochin M, McKillop WM, Lawlor MW, Pshezhetsky AV, Isaeva O, Budde MD, Fuller M, **Medin JA**. Spinal muscular atrophy-like phenotype in a mouse model of acid ceramidase deficiency. *Commun Biol*. 2023 May 25;6(1):560. PMID: PMC10212955
186. Wang X, McKillop WM, Dlugi TA, Faber ML, Alvarez-Argote J, Chambers CB, Wilber A, **Medin JA**. A mass spectrometry assay for detection of endogenous and lentiviral engineered hemoglobin in cultured cells and sickle cell disease mice. *J Gene Med*. 2024 Jan;26(1):e3567.
187. Faber ML, Oldham RAA, Thakur A, Rademacher MJ, Kubicka E, Dlugi TA, Gifford SA, McKillop WM, Schloemer NJ, Lum LG, **Medin JA**. Novel anti-CD30/CD3 bispecific antibodies activate human T cells and mediate potent anti-tumor activity. *Front Immunol*. 2023;14:1225610. PMID: PMC10461807
188. Levade T, **Medin JA**. Acid ceramidase deficiency: Farber lipogranulomatosis and spinal muscular atrophy with progressive myoclonic epilepsy *Lysosomal Storage Disorders: A Practical Guide*. 22 July 2022:144-147.
189. Norris MK, Tippetts TS, Wilkerson JL, Nicholson RJ, Maschek JA, Levade T, **Medin JA**, Summers SA, Holland WL. Adiponectin overexpression improves metabolic abnormalities caused by acid ceramidase deficiency but does not prolong lifespan in a mouse model of Farber Disease. *Mol Genet Metab Rep*. 2024 Jun;39:101077. PMID: PMC11002753
190. McKillop WM, **Medin JA**. Molecular therapeutics in hematology: Gene therapy Molecular Hematology. 8 March 2024:321-341.
191. Rademacher MJ, Faber ML, Bone KM, **Medin JA**, Schloemer NJ. Fate control engagement augments NK cell responses in LV/hu-IL-12 transduced sarcoma. *Exp Mol Pathol*. 2024 Jun;137:104898.
192. Rybova J, Sundararajan T, Kuchar L, Dlugi TA, Ruzicka P, McKillop WM, **Medin JA**. Hematopoietic stem

- cell transplantation leads to biochemical and functional correction in two mouse models of acid ceramidase deficiency. *Mol Ther.* 2024 Oct 02;32(10):3402-3421. PMID: PMC11489543
193. Dufau C, Genais M, Mucher E, Jung B, Garcia V, Montfort A, Tosolini M, Clarke CJ, **Medin JA**, Levade T, Delord JP, Meyer N, Pancaldi V, Andrieu-Abadie N, Ségui B. Ceramide metabolism alterations contribute to Tumor Necrosis Factor-induced melanoma dedifferentiation and predict resistance to immune checkpoint inhibitors in advanced melanoma patients. *Front Immunol.* 2024;15:1421432. PMID: PMC11317267
 194. Kleynerman A, Rybova J, McKillop WM, Dlugi TA, Faber ML, Fuller M, O'Meara CC, **Medin JA**. Cardiac dysfunction and altered gene expression in acid ceramidase-deficient mice. *Am J Physiol Heart Circ Physiol.* 2025 Jan 01;328(1):H141-H156. PMID: PMC12233101
 195. **Medin JA**, West ML. The FACTs trial for Fabry disease highlights the promise and challenges of gene therapy *Clinical and Translational Discovery.* February 2025;5(1).
 196. Khan A, Barber DL, McKillop WM, Rupar CA, Auray-Blais C, Fraser G, Fowler DH, Berger A, Foley R, Keating A, West ML, **Medin JA**. Lentivirus-mediated gene therapy for Fabry disease: 5-year End-of-Study results from the Canadian FACTs trial. *Clin Transl Med.* 2025 Jan;15(1):e70073. PMID: PMC11726700
 197. Auray-Blais C, Lavoie P, Martineau T, Rupar CA, Barber DL, Keating A, Foley R, Khan A, West ML, **Medin JA**. Longitudinal biomarker evaluation in Fabry disease patients receiving lentivirus-mediated gene therapy *Rare Disease and Orphan Drugs Journal.* September 2024;3(3).
 198. Khan A, Barber DL, Foley R, Keating A, West ML, **Medin JA**. Reduced-intensity conditioning in LV-mediated gene therapy for Fabry disease targeting HSPCs. *Mol Ther.* 2025 Sep 03;33(9):4034-4035. PMID: PMC12432897
 199. **Medin JA**. Tissue accessibility and thresholds in gene therapy for a lysosomal storage disorder. *Mol Ther.* 2026 Jan 07;34(1):8-9. PMID: PMC12925739
 200. Dlugi TA, Alvarez-Argote J, Sundararajan T, Rybova J, Wang X, Faber M, McKillop W, **Medin JA**. Improved lentivector-modified hematopoietic stem cell transplantation in the Townes mouse model of sickle cell disease. *Cytherapy.* 2026 Jun;28(6):102779.

Books, Chapters, and Reviews

1. Medin, J.A., Migita, M., and Karlsson, S.: Gene therapy of enzyme and immunodeficiencies in the hematopoietic system. in *Cell Therapy* (Morstyn, G. and Sheridan, W.P., eds.) Cambridge University Press, UK (1995).
2. Karlsson, S., Medin, J.A., Migita, M., Stahl, S.K., and Schiffmann, R.: Towards gene therapy of Gaucher's disease. in *Molecular Biology of Hematopoiesis vol. 4* (Abraham, N.G. et al., eds.) Intercept Limited, Andover, United Kingdom (1996).
3. **Medin JA**, Karlsson S. Selection of retrovirally transduced cells to enhance the efficiency of gene therapy. *Proc Assoc Am Physicians.* 1997 Mar;109(2):111-9.
4. **Medin JA**, Karlsson S. Viral vectors for gene therapy of hematopoietic cells. *Immunotechnology.* 1997 Mar;3(1):3-19.
5. Medin, J.A., Richter, J. and Karlsson, S.: Clinical applications of gene therapy: Correction of genetic disease affecting hematopoietic cells. in *Stem Cell Biology and Gene Therapy* (Stein, G.S., Quesenberry, P., Forget, B., Weissman, S., eds.) Wiley-Liss, NY, NY (1998).
6. Medin, J.A., and Buttrick, P.: Corrective gene transfer for cardiovascular disease: Update 2000. *Heart Disease.* 2(6):409-421 (2000).
7. Siatskas C, **Medin JA**. Gene therapy for Fabry disease. *J Inherit Metab Dis.* 2001;24 Suppl 2:25-41; discussion 11-2.
8. **Medin JA**, Fowler DH. Post-transduction events in retrovirus-mediated gene therapy involving hematopoietic stem cells: beyond efficiency issues. *J Cell Biochem Suppl.* 2002;38:46-54.
9. Medin, J.A.: Fabry disease: vector divergence to convergence? *Gene Ther.* 10:1407 (2003).
10. Medin, J.A., Brenner, M., and Keating, A.: Gene therapy in blood and marrow transplantation. in *Clinical Bone Marrow and Blood Stem Cell Transplantation, 3rd Edition.* (Atkinson, K., Champlin, R., Ritz, J., Fibbe, W., Ljungman, P, Brenner, M., eds.) Cambridge University Press, (2004).
11. Siatskas, C., Yoshimitsu, M., and Medin, J.A.: Transduction and post-transduction events in therapy targeting hematopoietic stem cells: Focus on Fabry disease. in *Progress in Stem Cell Research.* (Columbus, F., ed) Nova Science Publishers, Hauppauge, NY. 191-197 (2004).
12. Stewart, A.K., and Medin, J.A.: Molecular therapeutics in haematology. in *Molecular Haematology.* (Provan, D., and Gribben, J., eds) Blackwell Science, Oxford, UK. 2nd Edition Ppg. 280-297 (2005).

13. Mossoba ME, **Medin JA**. Cancer immunotherapy using virally transduced dendritic cells: animal studies and human clinical trials. *Expert Rev Vaccines*. 2006 Oct;5(5):717-32.
14. Higuchi K, **Medin JA**. Lentiviral vectors for gene therapy of heart disease. *J Cardiol*. 2007 Jan;49(1):1-11.
15. Neschadim A, McCart JA, Keating A, **Medin JA**. A roadmap to safe, efficient, and stable lentivirus-mediated gene therapy with hematopoietic cell transplantation. *Biol Blood Marrow Transplant*. 2007 Dec;13(12):1407-16.
16. Loisel-Meyer S, Foley R, **Medin JA**. Immuno-gene therapy approaches for cancer: from in vitro studies to clinical trials. *Front Biosci*. 2008 May 01;13:3202-14.
17. Symes, J., and Medin, J.A.: Genetic modification of T lymphocytes for cancer therapy. in *Gene Therapy and Cancer Research Trends*. (Columbus, F., ed) Nova Science Publishers, Hauppauge, NY. (2008).
18. Scaife MD, Neschadim A, Fowler DH, **Medin JA**. Novel application of lentiviral vectors towards treatment of graft-versus-host disease. *Expert Opin Biol Ther*. 2009 Jun;9(6):749-61.
19. Medin, J.A.: Molecular therapeutics in haematology: Gene Therapy. in *Molecular Haematology*. (Provan, D., and Gribben, J., eds) Blackwell Science, Oxford, UK. 3rd Edition Ppg. TBA (2010).
20. Levade, T., Sandhoff, K., Schulze, H., and Medin, J.A.: Chapter #143. Acid Ceramidase Deficiency: Farber Lipogranulomatosis. in *Scriver's Online Metabolic and Molecular Bases of Inherited Disease* (Valle, Beaudet, Vogelstein, Kinzler, Antonarakis, Ballabio, eds). McGraw-Hill (2010).
21. Elschenbroich S, Kim Y, **Medin JA**, Kislinger T. Isolation of cell surface proteins for mass spectrometry-based proteomics. *Expert Rev Proteomics*. 2010 Feb;7(1):141-54.
22. Moretti, A., Jaffray, D.A., and Medin, J.A.: Radiation therapy and cancer treatment: From the basics to combination therapies that ignite immunity. In *Experimental and Applied Immunotherapy*. Edited by Jeffrey A. Medin and Daniel H. Fowler. Springer Science. (2011).
23. Ricci MJ, **Medin JA**, Foley RS. Advances in haplo-identical stem cell transplantation in adults with high-risk hematological malignancies. *World J Stem Cells*. 2014 Sep 26;6(4):380-90. PMID: PMC4172667
24. Oldham RA, Berinstein EM, **Medin JA**. Lentiviral vectors in cancer immunotherapy. *Immunotherapy*. 2015;7(3):271-84.
25. Jones, E.E., Dworski, S., Kamani, M., Canals, D., Wada, M., Liu, X., Hannun, Y.A., Norris, J., Medin, J.A., and Drake, R.R: Detection and distribution of sphingolipids in tissue by FTICR MALDI-Imaging mass spectrometry. in *Bioactive Sphingolipids in Cancer Biology and Therapy* (Hannun, Luberto, Mao, Obeid, eds). Springer (2015).
26. Nagree MS, López-Vásquez L, **Medin JA**. Towards in vivo amplification: Overcoming hurdles in the use of hematopoietic stem cells in transplantation and gene therapy. *World J Stem Cells*. 2015 Dec 26;7(11):1233-50. PMID: PMC4691692
27. Medin, J.A., Fowler, D.H., (Editors) *Experimental and Applied Immunotherapy*. Springer Science (2011).
28. Neschadim, A., Resetca, D., and Medin, J.A.: Engineering hematopoietic cells for cancer immunotherapy: Strategies to address safety and toxicity concerns. (Submitted - under revision).
29. Resetca D, Neschadim A, **Medin JA**. Engineering Hematopoietic Cells for Cancer Immunotherapy: Strategies to Address Safety and Toxicity Concerns. *J Immunother*. 2016 Sep;39(7):249-59.
30. Al-Hujaily EM, Oldham RA, Hari P, **Medin JA**. Development of Novel Immunotherapies for Multiple Myeloma. *Int J Mol Sci*. 2016 Sep 08;17(9). PMID: PMC5037783

Abstracts

1. Medin, J.A., Hunt, L., Gathy, K., Evans, R.K., and Coleman, M.S.: Expression of human adenosine deaminase (ADA) in baculovirus-infected insect larvae. *FASEB J*. 4:A2288 (1990).
2. Medin, J.A. and Coleman, M.S.: Recombinant circle PCR (RCPCR) site-specific mutagenesis of Cys227 in human terminal deoxynucleotidyl transferase (TdT): Effect on catalytic activity. *FASEB J*. 5:A826 (1991).
3. Philips, A.V., Chancellor, K., Trangas, T., Medin, J.A., Yang, B.L., and Coleman, M.S.: Tissue specific transcription of the human terminal deoxynucleotidyl transferase (TdT) gene in vitro. *FASEB J*. 5:A1526 (1991).
4. Medin, J.A., Driggers, P.H., and Ozato, K.: 9-cis retinoic acid alters the DNA binding characteristics of recombinant RXRB. *J Cell Biochem*. 17A:B659 (1993).
5. Bovolenta, C., Driggers, P.H., Marks, M.S., Medin, J.A., Politis, A.D., Vogel, S.N., Coligan, J.E., and Ozato, K.: ICSBP requires an accessory molecule for high affinity DNA binding and may compete with ISGF3. *J Cell Biochem*. 17A:B310 (1993).
6. Segars, J., Nagata, T., Drew, P., Bours, V., Medin, J., An, J., Becker, K., Stephany, D., Siebenlist, U., and

- Ozato, K.: Induction of MHC Class I genes in retinoic acid treated NTera2 cells: Co-activation of retinoid receptors and P50/P65-NFkB factors. *J Cell Biochem.* 17A:B690 (1993).
7. Lee, I.J., Driggers, P.H., Medin, J.A., and Ozato, K.: Analysis of retinoid X receptor (RXR β) function by an in vitro transcription assay. *J Cell Biochem.* 17A:B653 (1993).
 8. Pemrick, S.M., Sturzenbecker, L.J., Abarzna, P., Kratzeisen, C., Marks, M.S., Medin, J.A., Ozato, K., Levin, A.A., Hunziker, W., and Grippo, J.F.: 1,25-Dihydroxyvitamin D₃ induction of a retinoic acid response element by a chimeric receptor. *J Cell Biochem.* 17A:B672 (1993).
 9. Pemrick, S.M., Sturzenbecker, L.J., Kratzeisen, C., Arbusua, P., Marks, M.S., Medin, J.A., Ozato, K., Levin, A.A., Hunziker, W., and Grippo, J.F.: Relative transactivation efficiencies of RAR and RXR chimeric receptors containing the hormone binding domain of the vitamin D receptor. *Biophys J.* 64(2):A278 (1993).
 10. Bhaumik, D., Medin, J., Gathy, K., and Coleman, M.S.: Site-directed mutagenesis of human adenosine deaminase. Important roles for Zn, Histidine-238, and Glutamate-217 in catalysis. *FASEB J.* 7:A1198 (1993).
 11. Nunez, S.B., Medin, J.A., Wang, K., Wahli, W., Ozato, K., and Segars, J.H.: Retinoid X receptor β and peroxisome proliferator-activated receptor γ activate the A2 estrogen response element. in *Collected Abstracts of: The Endocrine Soc Ann Mtg.* p54 (1993).
 12. Minucci, S., Hallenbeck, P., Medin, J.A., Zand, D.J., Nikodem, V., and Ozato, K.: RXR and diverse heterodimer partners are involved in RA-mediated transcription in embryonal carcinoma cells. *J Cell Biochem.* 18A:K222 (1994).
 13. Nunez, S.B., Keller, H., Medin, J., Ozato, K., Wahli, W., and Segars, J.: Evidence for dominant negative inhibition of PPAR γ -mediated ERE activation by RXR β deletion mutants. *J Cell Biochem.* 18A:K223 (1994).
 14. Blanco, J., Segars, J., Medin, J., Minucci, S., and Ozato, K.: C-terminal truncation of RXR β inhibits retinoic acid induced transcription in embryonal carcinoma cells. *J Cell Biochem.* 18C:L204 (1994).
 15. Schiffmann, R., Medin, J.A., Ward, J., Stahl, S., Cottler-Fox, M., and Karlsson, S.: Transfer of the human glucocerebrosidase (hGC) gene into hematopoietic stem cells of non-ablated mice. *Blood.* 84(suppl1):401a (1994).
 16. Medin, J.A., Migita, M., Pawliuk, R., Jacobson, S., Amiri, M., Humphries, R.K., and Karlsson, S.: Correction of the metabolic deficiency in Gaucher's disease using a bicistronic retroviral vector that allows selection of transduced cells. *Blood.* 84(suppl1):356a (1994).
 17. Migita, M., Medin, J.A., Pawliuk, R., Jacobson, S., Amiri, M., Humphries, R.K., and Karlsson, S.: The enzyme deficiency in Gaucher fibroblasts is corrected by retroviral vectors containing the genes for the glucocerebrosidase gene and the selectable cell surface antigen, CD24. *Blood.* 84(suppl1):357a (1994).
 18. Medin, J.A., Migita, M., Jacobson, S., Pawliuk, R., Humphries, R.K., and Karlsson, S.: Sorting of hematopoietic cells transduced with a retroviral vector that delivers a therapeutic gene and a cell surface marker. *J Invest Med.* 43 (suppl.2):278A (1995).
 19. Medin, J.A., Migita, M., Pawliuk, R., Jacobson, S., Amiri, M., Kluepfel-Stahl, S., Brady, R.O., Humphries, R.K. and Karlsson, S.: A bicistronic therapeutic retroviral vector enables sorting of transduced CD34+ cells and corrects the enzyme deficiency in cells from Gaucher patients. *Blood.* 86(suppl1):413a (1995).
 20. Migita, M., Medin, J.A., Pawliuk, R., Anderson, S., Stahl, S.K., Amiri, M., Humphries, R.K., and Karlsson, S.: Selection and enzymatic correction of transduced cells from Gaucher patients using bicistronic vectors containing genes for glucocerebrosidase and the selectable cell surface antigen, CD24. *Blood.* 86(suppl1):626a (1995).
 21. Migita, M., Amiri, M., Medin, J.A., Nagle, J.W., and Karlsson, S.: The level of enzyme activity generated by two different glucocerebrosidase cDNAs following gene transfer varies widely. *Blood.* 86(suppl1):1003a (1995).
 22. Nunez, S.B., Medin, J.A., and Segars, J.H.: Pattern of RXR/PPAR heterodimerization binding to the ERE compared to the estrogen-receptor binding. *Pediatr Res.* 37(4):A95 (1995).
 23. Medin, J.A., Pawliuk, R., Amiri, M., Brooks, C., Kluepfel-Stahl, Migita, M., Humphries, R.K., and Karlsson, S.: Selection and metabolic correction of normal and Gaucher patient CD34+ hematopoietic progenitors with a therapeutic and selectable retrovirus. *J Invest Med.* 44(3):279A (1996).
 24. Pemrick, S.M., Arbusua, P., Kratzeisen, C., Sturzenbecker, L.J., Levin, A.A., Hunziker, W., Marks, M.S., Medin, J.A., Ozato, K., and Grippo, J.F.: Functional comparison of retinoic acid receptors with heterologous ligand-binding domains. *Biophys J.* 70(2):U483 (1996).
 25. Medin, J.A., Tudor, M., Simovitch, R., Quirk, J.M., Jacobson, S., Murray, G.J., and Brady, R.O.: Gene

- therapy for Fabry disease: Expression, secretion, and uptake of α -galactosidase A driven by a high-titer recombinant retroviral vector. *FASEB J.* 10(6):A1152 (1996).
26. Nunez, S.B., Medin, J.A., Wahli, W., and Segars, J.: Mechanism of estrogen-responsive gene activation by the retinoid X receptor and peroxisome proliferator-activated receptor. in *Collected Abstracts of: The Endocrine Soc Ann Mtg.* p54 (1996).
 27. Migita, M., Anderson, S., Stahl, S.K., Medin, J.A., Humphries, R.K., and Karlsson, S.: Selection of transduced CD34+ progenitors and enzymatic correction of cells from Gaucher patients using bicistronic vectors containing the genes for glucocerebrosidase and the selectable cell surface antigen, CD24. in *Collected Abstracts of: Japan Soc of Gene Ther.* (1996).
 28. Tudor, M., Brady, R.O., and Medin, J.A.: Correction of the metabolic defect in Fabry disease patient cells through gene transfer. *Proc Soc for Exp Biol and Med.* 212(4):388 (1996).
 29. Takenaka, T., Hendrickson, C.S., Tudor, M., Schiffmann, R., Brady, R.O., and Medin, J.A.: Extending metabolic cooperativity in gene transfer for Fabry disease: Transduction of patient bone marrow cells leads to intracellular enzymatic correction and secretion. *FASEB J.* 11(9):A1090 (1997).
 30. Takenaka, T., Tworek, D., Brady, R.O., and Medin, J.A.: Direct biochemical evidence for circulating α -galactosidase A derived from transduced bone marrow cells. in *Collected Abstracts of: The American Society of Gene Therapy 1st Annual Meeting* (1998).
 31. Medin, J.A., Brandt, J.E., Li, C., Rosler, E., Fitting, P., Chute, J., and Hoffman, R.: Genetic modification and expansion of human CD34+CD38- cells. in *Collected Abstracts of: 2nd Conference on Stem Cell Gene Therapy* (1998).
 32. Brandt, J.E., Medin, J.A., Rosler, E.S., Li, C., Chute, J.P., and Hoffman, R.: High-level transgene expression by human CD34+CD38- hematopoietic stem cells following in vitro expansion. *Exp Hematol.* 26: 640 (1998).
 33. Brandt, J.E., Medin, J.A., Rosler, E.S., Nelson, M.C., Chute, J.P., and Hoffman, R.: Retroviral gene marking of human and non-human primate bone marrow progenitor and stem cells. *AFMR.* (1998).
 34. Takenaka, T., Oshima, T., Tworek, D.M., Murray, G.J., Quirk, J.M., Brady, R.O., Kulkarni, A.B., and Medin, J.A.: Long-term retroviral-mediated correction in α -galactosidase A deficient mice. *Blood.* 92 (suppl1):298a (1998).
 35. Karp, B.I., Ali, S., Takenaka, T., Brady, R.O., and Medin, J.A.: Modification of the human α -galactosidase A (α -gal A) C-terminus enhances uptake by Fabry patient fibroblasts. *FASEB J.* 13:A1403 (1999).
 36. Medin, J.A., Brandt, J.E., Rosler, E., Li, C., Kelley, L., Chute, J., and Hoffman, R.: Expansion of genetically modified human CD34+ cells with maintenance of phenotype and extended expression of the transgene. *The American Society of Gene Therapy 2nd Annual Meeting.* (1999).
 37. Medin, J.A., Brandt, J.E., Rosler, E., Li, C., Kelley, L., Chute, J., and Hoffman, R.: Expansion of genetically modified human CD34+ cells with maintenance of phenotype and extended expression of the transgene. *Exp Hematol.* 27: 62 (1999).
 38. Deans, R., Kowalski, R., Buyaner, D., Slawewski, M., Qin, G., Lee, K., Mosca, J., Moseley, A., Hoffman, R., and Medin, J.A.: Fabry's disease: A clinical application of gene transfer into mesenchymal stem cells. *Blood.* 94(suppl2):418b (1999).
 39. Siatskas, C., Hu, Z., Westbrook, C., and Medin, J.A.: Identification and characterization of a novel c-kit splice variant: implications for the onset and development of cellular transformation. *Blood.* 94(suppl2):143b (1999).
 40. Takenaka, T., Murray, G., Qin, G., Quirk, J., Oshima, T., Clark, K., Qasba, P., Brady, R.O., Kulkarni, A., and Medin, J.A.: Long-term enzyme expression and lipid reduction in multiple organs of α -gal A deficient mice receiving transduced bone marrow cells. *Blood.* 94(suppl1):642a (1999).
 41. Keralavarma, B., Qin, G., Kelley, L., Reddy, D., Devine, S., and Medin, J.A.: Improved "suicide" retroviral vector containing mutant HSV-tk gene confers increased sensitivity to gancyclovir. *Blood.* 94(suppl2):329b (1999).
 42. Qin, G., Clark, K., Kelley, L., Keralavarma, B., Mulder, C., and Medin, J.A.: Development of preselective gene therapy for Fabry disease. *Keystone Symposia-Gene Therapy: The Next Millenium.* p.87 (2000).
 43. Qin, G., Clark, K., Kelley, L., Mulder, C., Turin, J., Keralavarma, B., Chung, T., and Medin, J.A.: Development of preselective gene therapy for Fabry disease. *Mol Ther.* 1:S73 (2000).
 44. Medin, J.A.: Enzyme correction and lipid reduction in multiple organs of primary and secondary transplanted Fabry mice receiving retrovirally-transduced bone marrow cells. *Joint meeting of: Int'l. Symp. on Innovative Therapies & 6th Int'l Symp. on Mucopolysaccharidosis and Related Diseases.* (2000).
 45. Siatskas, C., Hu, Z., Westbrook, C., and Medin, J.A.: Identification and characterization of a novel c-kit splice variant. *13th Int'l. Symp. on Treatment of Leukemia and Cancer.* (2000).

46. Qin, G., Clark, K., Telsh, K., Kelley, L., Malech, H., Turin, J., Takenaka, T., Howard, T., Chung, T., Howard, B., Brady, R.O., and Medin, J.A.: Long-term improvement in a gene therapy outcome for Fabry disease by employment of a preselective strategy. *Cancer and Molecular Genetics in the 21st Century* (2000).
47. Siatskas, C., Hu, Z., Westbrook, C., and Medin, J.A.: Identification of a novel alternatively spliced c-kit variant. *Cancer and Molecular Genetics in the 21st Century* (2000).
48. Qin, G., Kelley, L., Peace, D., and Medin, J.A.: Retrovirus-mediated gene transfer of prostate specific antigen (PSA) into dendritic cell precursors for the immunotherapy of prostate cancer. *Cancer Gene Ther.* 7:S27 (2000).
49. Peace, D., Qin, G., Kelley, L., and Medin, J.A.: Immunogene therapy for prostate cancer by engineered expression of prostate specific membrane antigen (PSMA). *Cancer Gene Ther.* 7:S29 (2000).
50. Smith, S.L., Siatskas, C., Agbemadzo, B., Kiss, J., Medin, J.A., and Moldwin, R.L.: Long-term culture of enGFP+ cells in cord blood after retroviral transduction and culture with TPO, FLT-3L, SCF, and VEGF. *Blood.* 96(suppl1):773a (2000).
51. Hendricks, J.K., Buyaner, D., Liu, L., Lee, K., Medin, J.A., Murray, G.J., Brady, R.O., and Deans, R.: Use of human mesenchymal stem cells as gene delivery vehicles for the treatment of Fabry's disease. *Blood.* 96(suppl1):845a (2000).
52. Siatskas, C., Qin, G., Smith, S.L., Moldwin, R.L., Brady, R.O., and Medin, J.A.: Enrichment and functional assessment of -gal A-transduced murine and human primitive hematopoietic cells: Implications for the treatment of Fabry disease. *Mol Ther.* 3:S222 (2001).
53. Medin, J.A., Qin, G., Hou, J., Kelley, L., Peace, D., and Fowler, D.: Dendritic cells engineered to express prostate-specific antigens for immunotherapy of prostate cancer. *Exp Hematol.* 29(suppl1):55 (2001).
54. Li, J.-H., Shi W., Chia, M., Medin, J., Huang, D., Klamut, H.J., Yeh, W.-C., Richardson, C., and Liu, F.-F.: A novel EBV-targeted adenoviral vector utilizing a non-cleavable FasL for nasopharyngeal cancer therapy. *Cancer Gene Ther.* 8:035 (2001).
55. Medin, J.A., Liang, S.-B., Qin, G., Hou, J. and Fowler, D.: Retrovirally-transduced dendritic cell vaccines boost immunity to prostate antigen-expressing murine tumors. *Blood.* 98: 2915 (2001).
56. Liang, S.-B., Hou, J.W.-S., Peace, D.J., Fowler, D.H., and Medin, J.A.: Vaccination with retrovirally-transduced dendritic cells introduces cellular and humoral immune responses along with specific protection against prostate antigen expressing tumors. *Cancer Gene Ther.* 10:S34 (2003).
57. Mossoba, M.E., Siatskas, C., and Medin, J.A.: Development of cancer immunotherapy using Her2/neu-transduced dendritic cells. *Keystone Symposia: Dendritic cells (J7)* p.65 (2003).
58. Yoshimitsu, M., Siatskas, C., Liang, S.-B., Eliopoulos, N., Galipeau, J., and Medin, J.A.: Gene therapy for Fabry disease by lentiviral transduction of primitive hematopoietic cells and stroma cells. *European Society of Gene Therapy Meeting, Edinburgh, Scotland* (2003).
59. Siatskas, C., and Medin, J.A.: Pharmacological activation of KDR induces the selective proliferation of lentivirally-transduced cells. *European Society of Gene Therapy Meeting, Edinburgh, Scotland* (2003).
60. Du Manoir, J.M., Vilorio-Petit, A., Man, S., Mossoba, M., Medin, J.A., and Kerbel, R.S.: Antitumor effects of low-dose metronomic cyclophosphamide combined with Herceptin in orthotopic erbB2-overexpressing mammary tumors. *Clinical Cancer Research.* 9(16):6149S-6149S Part 2 Suppl. (2003).
61. Yoshimitsu, M., Tao, K., Fan, X., West, L., and Medin, J.A.: Sustained therapeutic levels of -galactosidase A in Fabry mice by neonatal gene therapy. *Glycoproteinoses: An International Workshop on Advances in Pathogenesis and Therapy.* (2004).
62. Yoshimitsu, M., Tao, K., Fan, X., West, L., and Medin, J.A.: Neonatal gene therapy with a lentiviral vector results in therapeutic levels of -galactosidase A correction in Fabry mice. *Molecular Therapy.* 9(Suppl.1):S327 (2004).
63. Ramsuvar, S.H., Tardy, C., Carpentier, S., Levade, T. and Medin, J.A.: Enhancement of gene therapy approaches for the correction of Farber disease. *Molecular Therapy.* 9(Suppl.1):S330 (2004).
64. Bielawski, J.C., Fowler, D., and Medin, J.A.: FasL-over-expressing T lymphocytes as effector cells in anti-prostate cancer gene therapy. *Molecular Therapy.* 9(Suppl.1):S364 (2004).
65. Ayach, B., Yoshimitsu, M., Rasaiah, V.I., Siatskas, C., Lee, P., Lim, H., Dawood, F., Chen, M., Medin, J.A., and Liu, P.: c-kit receptor is essential for functional cardiac repair post-MI. *J Cardiac Failure.* 10: S24 (2004).
66. Ayach, B., Siatskas, C., Yoshimitsu, M., Lee, P., Lim, H., Dawood, F., Chen, M., Medin, J.A., and Liu, P.: c-kit + BM cells are essential for reducing deteriorating myocardial and heart function post-myocardial infarction. *Circulation.* 110: III-68 (2004).

67. Yoshimitsu, M., Tao, K., Sato, T., Murray, G.J., West, L., Brady, R.O., and Medin, J.A.: Long-term expression of human α -galactosidase A in Fabry mice by neonatal lentiviral gene transfer. *American Society for Human Genetics*. (2004).
68. Ayach, B., Yoshimitsu, M., Rasaiah, V.I., Siatskas, C., Lee, P., Lim, H., Dawood, F., Chen, M., Medin, J.A., and Liu, P.: c-kit receptor is essential for functional cardiac repair post-MI. *Canadian Journal of Cardiology*. 20: 110D (2004).
69. Sato, T., Yoshimitsu, M., Tao, K., West, L., and Medin, J.A.: Bioluminescent imaging of a marking transgene product in mice resulting from neonatal injection of recombinant lentiviral vector. *Third Annual Gene Therapy Symposium for Heart, Lung, and Blood Diseases*. (2004).
70. Ayach, B., Yoshimitsu, M., Dawood, F., Arab, S., Sun, M., Chan, M.Y., Higuchi, K., Stanford, W.L., Medin, J.A., Liu, P.P.: Stem cell factor receptor induces progenitor and natural killer cell mediated cardiac survival and repair post-myocardial infarction *J Cardiac Failure*. 11:S91 (2005).
71. Ayach, B., Dawood, F., Chan, M.Y., Higuchi, K., Medin, J.A., Stanford, W.L., Liu, P.P.: CXCR4 receptor improves cardiac remodeling and revascularization post-MI. *J Cardiac Failure*. 11:S126 (2005).
72. Surzyn, M., Bielawski, J., Medin, J.A., and Sefton, M.: Non-destructive method for in vivo assessment of microencapsulated cell viability. *Society for Biomaterials 30th Annual Meeting*. (2005).
73. Sato, T., Neschadim, A., Rasaiah, V.I., Konrad, M., Lavie, A., and Medin, J.A.: Development of a novel lentivirus-based suicide gene therapy approach using modified human thymidylate monophosphate kinase. *Japanese Society of Gene Therapy 11th Annual Meeting*. (2005).
74. Ayach, B., Yoshimitsu, M., Dawood, F., Sun, M., Arab, S., Chen, M., Zhang, J., Higuchi, K., Stanford, W.L., Medin, J.A., and Liu, P.P.: Stem cell factor receptor induces progenitor and natural killer cell mediated cardiac survival and repair post-myocardial infarction. *Circulation*. 112:II-266 (2005).
75. Ayach, B., Dawood, F., Chen, M., Higuchi, K., Medin, J.A., Stanford, W.L., and Liu, P.P.: Cxcr4 receptor improves cardiac remodeling and revascularization post-myocardial infarction. *Circulation*. 112:II-37 (2005).
76. Yoshimitsu, M., Siatskas, C., Liang, S.-B., Rasaiah, V.I., Poepl, A.G., Higuchi, K., Ramsuibir, S., Takenaka, T., Murray, G.J., Tei, C., Brady, R.O., and Medin, J.A.: Long-term and sustained correction in hearts of Fabry mice receiving lentivirally transduced hematopoietic stem/progenitor cells. *Circulation*. 112:II-11 (2005).
77. Medin, J.A., Liang, S.-B., Poepl, A., Yoshimitsu, M., Walia, J.S., Cai, J., Rasaiah, V.I., and Fowler, D.H.: Functional engraftment of retrovirally transduced and pre-selected hematopoietic cells into partially ablated recipient Fabry mice. *Blood*. 106:847a (2005).
78. Sato, T., Neschadim, A., Rasaiah, V.I., Konrad, M., Fowler, D.H., Lavie, A., and Medin, J.A.: Improved suicide gene therapy: lentiviral gene transfer of equine herpes virus type 4 thymidine kinase into target cells. *Blood*. 106:396b (2005).
79. Sato, T., Neschadim, A., Rasaiah, V.I., Konrad, M., Lavie, A., and Medin, J.A.: Development of a novel lentivirus-based suicide gene therapy approach using modified human thymidylate monophosphate kinase. *Blood*. 106:397b (2005).
80. Yoshimitsu, M., Siatskas, C., Liang, S.-B., Rasaiah, V.I., Higuchi, K., Murray, G.J., Takenaka, T., Tei, C., Brady, R.O., and Medin, J.A.: Long-term and sustained correction of the α -galactosidase A deficiency in Fabry mice and patient cells receiving lentivirally transduced hematopoietic stem/progenitor cells. *Blood*. 106:374a (2005).
81. Walia, J.S., Cai, J.H., Fowler, D.H., and Medin, J.A.: Genetically modified DCs engineered to express PSA and/or PSMA can induce a potent immune response against prostate cancer cells. *Blood*. 106:860a (2005).
82. Walia, J.S., Yoshimitsu, M., Silvertown, J.D., Poepl, A.G., Rasaiah, V.I., Donahue, R.E., Andrews, R.G., McCart, J.A., and Medin, J.A.: Initiation of a pre-clinical gene therapy study in non-human primates using lentivectors targeting hematopoietic cells for correction of Fabry disease. *Blood*. 106:474b (2005).
83. Lund, N., Lingwood, C.A., Medin, J.A., Olsson, M.L., Levene, C., Yahalom, V., and Branch, D.R.: Novel mechanisms for Pk (Gb3) inhibition of HIV infection. *Blood*. 106:413a (2005).
84. Silvertown, J., Walia, J.S., Summerlee, A.J., and Medin, J.A.: Functional expression of mouse relaxin-1 (M1) and Relaxin-3 (M3) in the lung from an Ebola pseudotyped lentivirus via tracheal delivery. *The Endocrine Society Annual Meeting*. OR41-1 (2006).
85. Silvertown, J., Symes, J.C., Nonaka, T., Fleschner, N., Summerlee, A.J.S., and Medin, J.A.: H2 Relaxin analog suppresses prostate tumor growth. *The Endocrine Society Annual Meeting*. P3-351 (2006).
86. Sato, T., Neschadim, A., Rasaiah, V.I., Konrad, M., Lavie, A., and Medin, J.A.: Development of a novel

- lentivirus-based suicide gene therapy approach using modified human thymidylate monophosphate kinase. *Journal of Gene Medicine*. 8:399 (2006).
87. Higuchi, K., Ayach, B., Dawood, F., Chen, M., Bansal, T., Liu, P.P., and Medin, J.A.: Overexpression of Kit Ligand-2 by direct cardiac injection of recombinant lentiviruses improves cardiac repair and rescues mice post-myocardial infarction. *American Heart Association Annual Meeting*. (2006).
 88. Ayach, B.B., Higuchi, K., Bansal, T., Dawood, F., Lam, K., Chen, M., Tata, N., Stanford, W.L., Medin, J.A., and Liu, P.P.: CXCR4 improves cardiac remodeling and neovascularization, and regulated inflammatory and progenitor stem cell mobilization post-myocardial infarction. *American Heart Association Annual Meeting*. (2006).
 89. Ayach, B.B., Dawood, F., Higuchi, K., Lam, K., Bansal, T., Chen, M., Medin, J.A., Stanford, W.L., and Liu, P.P.: SCF/C-kit compensates for FL/FLT3 deficiency to mediate myocardial rescue and repair post-MI. *American Heart Association Annual Meeting*. (2006).
 90. Maekawa, Y., Ayach, B.B., Dawood, F., Chen, M., Higuchi, K., Medin, J.A., and Liu, P.P.: MRL mice are protected against rupture post myocardial infarction through unique matrix dynamics. *American Heart Association Annual Meeting*. (2006)
 91. Ayach, B.B., Lam, K., Higuchi, K., Dawood, F., Stanford, W.L., Medin, J.A., and Liu, P.P.: C-kit receptor regulates cell mobilization and cytokine production post-myocardial infarction. *Canadian Cardiovascular Society Annual Meeting*. (2006).
 92. Ayach, B.B., Dawood, F., Higuchi, K., Lam, K., Bansal, T., Chen, M., Medin, J.A., Stanford, W.L., and Liu, P.P.: SCF/C-kit compensates for FL/FLT3 deficiency to mediate myocardial rescue and repair post-MI. *Canadian Cardiovascular Society Annual Meeting*. (2006).
 93. Ayach, B.B., Higuchi, K., Bansal, T., Dawood, F., Lam, K., Chen, M., Tata, N., Stanford, W.L., Medin, J.A., and Liu, P.P.: CXCR4 improves cardiac remodeling and neovascularization, and regulated inflammatory and progenitor stem cell mobilization post-myocardial infarction. *Canadian Cardiovascular Society Annual Meeting*. (2006).
 94. Neschadim, A., Sato, T., Fowler, D.H., Lavie, A., and Medin, J.A.: Development of improved lentiviral 'suicide' gene therapy for the management of GvHD in allogeneic BMT. *Blood*. 108: 929a (2006).
 95. Mossoba, M.E., Walia, J.S., Rasaiah, V.I., Fowler, D.H., and Medin, J.A.: Overcoming self-tolerance: Long-term protection against specific erbB2-expressing prostate tumors using low doses of lentivirus-transduced DCs. *Blood*. 108: 1056a (2006).
 96. Sato, T., Sukegawa, J., Medin, J., Yanagisawa, T.: A model for mitochondrial myopathy; AZT-triphosphate toxicity. *J Pharmacol Sciences*. 103:72P (2007).
 97. Medin, J.A., Mossoba, M.E., Walia, J.S., Rasaiah, V.I., Foley, J.E., Buxhoeveden, N., and Fowler, D.H.: Low doses of lentivirus-transduced DCs overcome self-tolerance and protect against ErbB2-expressing prostate tumors. *IMPACT: Innovative Minds in Prostate Cancer Today. DODPCRP Meeting*. Atlanta, Georgia. (2007).
 98. Ayach, B.B., Higuchi, K., Dawood, F., Lam, K., Chen, M., Tata, N., Stewart, D.J., Stanford, W.L., Medin, J. A., and Liu, P.P.: CXCR4 synergistically activates FLT3 receptor and regulates mobilization of innate immune and stem progenitor cells post-myocardial infarction. *Canadian Journal of Cardiology*. 23:159C (2007).
 99. Higuchi, K., Yoshimitsu, M., Takenaka, T., Medin, J.A., and Tei, C.: Enzymatic correction in hearts of Fabry mice by neonatal injection of a recombinant lentiviral vector that engineers expression of alpha-galactosidase A. *J American College of Cardiology*. 51:page? (2008).
 100. Sato, T., Neschadim, A., Sukegawa, J., Yanagisawa, T., and Medin, J.A.: Bystander killing highlights the utility of the tmpkF105Y/AZT system for suicide gene therapy of cancer. *Molecular Therapy*. 16:S158 (2008).
 101. Devine, S.P., Neschadim, A., Fowler, D.H., Lavie, A., and Medin, J.A.: Towards a master cell fate control lentiviral vector for cell and gene therapy. *Molecular Therapy*. 16:S211 (2008).
 102. Neschadim, A., Lavie, A., Sato, T., Fowler, D.H., and Medin, J.A.: Novel lentiviral cell fate control gene therapy based on engineered variants of the human deoxycytidine kinase. *Molecular Therapy*. 16:S212 (2008).
 103. Amarnath, S., Foley, J., Mariotti, J., Costanzo, C., Ryan, K., Levine, B., Dropulic, B., Medin, J.A., and Fowler, D.: Incorporation of the tmpk/AZT cell fate safety switch in human Th2Rapamycin cells for allograft augmentation after hematopoietic stem cell transplantation. *Molecular Therapy*. 16:S237 (2008).
 104. Walia, J.S., Neschadim, A., Ramsuvar, S., Yoshimitsu, M., Head, R., Rasaiah, V.I., Donahue, R.E., Cheung, F., Jaffray, D., McCart, J.A., and Medin, J.A.: Acid ceramidase expression at supranormal levels in

- non-human primates following autologous transplantation of lentivirus-transduced hematopoietic cells. *Molecular Therapy*. 16:S263 (2008).
105. Head, R., Turner, P.V., Madden, M., Baig, E., Tang, N., Lafrance, S., Belford, S., Walia, J., Moloo, B., Medin, J.A., and McCart, J.A.: Assessment of vaccinia virus toxicity after intraperitoneal delivery to rhesus macaques. *Molecular Therapy*. 16:S272 (2008).
 106. Siegers, G.M., Al-Beirouti, B.M., Mathieson, A.M., Felizardo, T.C., Helke, S., Medin, J.A., and Keating, A.: Gamma delta T cells (GDTCs) to eliminate minimal residual disease (MRD) in Chronic Myeloid Leukemia (CML): A pre-clinical model. *Blood*. 112: 574 (2008).
 107. Medin, J., Walia, J., Neschadim, A., Fan, X., Madden, M., Cheung, F., Jaffray, D., Levade, T., Brady, R., and McCart, J.A. Outcomes of testing lentivector-mediated gene therapy for Farber disease in non-human primates. *Molec Genet Metabol*. 96:S31 (2009).
 108. Maekawa, Y., Mizue, N., Chan, A.N., Shi, Y., Liu, Y., Manyin, C., Dawood, F., de Couto, G., Li, G.H., Medin, J.A., and Liu, P.P.: Survival and cardiac remodeling after myocardial infarction are critically dependent on the host innate immune Interleukin-1 Receptor Associated Kinase-4 (IRAK-4) signaling: A regulator of bone marrow-derived dendritic cells. *J Card Fail*. 15(6):S1 (2009).
 109. Hirayama, S., Sato, M., Zehong, G., Liu, M., Waddell, T.K., Medin, J.A., and Keshavjee, S.: Lentivirus-mediated long-term gene transduction in the lung attenuates allograft airway obliteration after mouse intra-pulmonary trachea transplantation. (submitted)
 110. Pacienza, N., Mizue, N., Yoshimitsu, M., Scaife, M., Foley, R., and Medin, J.A.: Generation and implementation of a novel murine xenograft model for evaluating human hematopoietic cell-targeted gene therapies for Fabry disease. *Blood*. 114(22):1385-1386 (2009).
 111. Pacienza, N., Mizue, N., Scaife, M., Foley, R., and Medin, J.A.: Use of MGMT resistance to enrich for transduced hematopoietic cells in gene therapy for Fabry disease. *Blood*. 114(22):1388 (2009).
 112. Likar, Y., Zurita, J., Dobrenkov, K., Shenker, L., Neschadim, A., Medin, J.A., James, L., Cai, S., Hricak, H., and Ponomarev, V.: A new pyrimidine-specific human-derived reporter gene for PET imaging in humans: Truncated mutant deoxycytidine kinase. *World Molecular Imaging Congress*. Sept. 25 2009.
 113. Amarnath, S., Wang, J., Massey, P.R., Riley, J.L., Levine, B., June, C.H., Medin, J.A., and Fowler, D.: PD-L1 Immuno-gene therapy under cell fate control: Persistence of cellular delivery vehicle and transgene expression. *Blood*. 114(22):1387 (2009).
 114. Wang, A.Y., Crome, S.Q., Jenkins, K.M., Medin, J.A., Bramson, J.L., and Levings, M.K.: Interaction between adenoviral vector-transduced dendritic cell-based cancer vaccine and T regulatory or T helper 17 cells. *Mol Ther*. 18:S31 (2010).
 115.) Likar, Y., Zurita, J., Shenker, L., Moroz, M., Cai, S., Neschadim, A., Medin J., Hricak, H., Sadelain, M., and Ponomarev, V.: A new human-derived reporter gene suitable for clinical PET imaging of T-cell trafficking. *Mol Ther*. 18:S71 (2010).
 116. Neschadim, A., Lavie, A., Sato, T., Fowler, D.H., Ponomarev, V., and Medin, J.A.: Next-generation lentiviral cell fate control gene therapy based on engineered variants of human deoxycytidine kinase. *Mol Ther*. 18:S129 (2010).
 117. Amarnath, S., Wang, J., Mangus, C., Riley, J., Levine, B., June, C., Medin, J., and Fowler, D.: Engineered human regulatory T cells expressing lentiviral PDL1 under cell fate control prevent lethal xenogeneic GVHD. *Mol Ther*. 18:S132 (2010).
 118. Sato, T., Neschadim, A., Sukegawa, J., Yanagisawa, T., and Medin, J.A.: Mechanisms of the tmpk/AZT-system bystander effect; cell fate control gene therapy for anti-cancer treatment. *Mol Ther*. 18:S196 (2010).
 119. Scaife, M.D., Devine, S.P., Neschadim, A., Pacienza, N.A., Fowler, D.H., and Medin, J.A.: Truncated CD19 fused with mutant human tmpk: A versatile cell fate control safety cassette. *Mol Ther*. 18:S196 (2010).
 120. Mossoba, M., Foley, J., Gangopadhyay, A., Ylaya, K., Winterton, M., Taylor, J., Massey, P., Hewitt, S.M., Medin, J.A., and Fowler, D.H.: Effective dendritic cell immuno-gene therapy of established ErbB2-expressing tumors using pentostatin-based host immune depletion and subsequent host Th1/Tc1 cell transfer. *Mol Ther*. 18:S257 (2010).
 121. Scaife, M.D., Devine, S.P., Neschadim, A., Pacienza, N.A., and Medin, J.A.: Lentiviral vector correction of Fabry disease encompassing a cell fate control safety element. *Mol Ther*. 18:S300 (2010).
 122. Hirayama, S., Sato, M., Zehong, G., Liu, M., Waddell, T.K., Medin, J.A., and Keshavjee, S.: Lentivirus-mediated long-term gene transduction in the lung attenuates allograft airway obliteration after mouse intra-pulmonary trachea transplantation. *J Heart Lung Transpl*. 29:S117 (2010).
 123. Sato, T., Ramsbiri, S., Higuchi, K., Medin, J., Yanagisawa, T.: VEGF increases lentivector distribution

- after neonatal injection. *J. Pharm. Sciences*. 112:128P (2010).
124. Medin, J.: Hematopoietic cell-based gene therapy for Fabry disease and Farber disease. XXXIII World Congress of the International Society of Hematology (2010).
 125. Lavie, A., Fowler, D., and Medin, J.: Development and implementation of novel cell fate control systems for cell therapy and GvHD. XXXIII World Congress of the International Society of Hematology (2010).
 126. Sato, T., Neschadim, A., Medin, J.A., and Yanagisawa, T.: Gap junction-mediated bystander killing highlights the utility of the tmpk/AZT system for cancer suicide gene therapy. *J Gene Med*. 12:1052-1053 (2010).
 127. Medin, J., Pacienza, N., Mizue, N., Fan, X., Scaife, M.: Enhanced Gb3 reduction mediated by lentivector transduction of human CD34+ bone marrow-derived cells in a novel Fabry/NOD/SCID xenograft model. *Molec Genet Metabol*. 102:S29 (2011).
 128. Pacienza, N., Mizue, N., Scaife, M., and Medin, J.: MGMT-based selection of lentivector transduced cells: Application to Fabry disease. *Molec Genet Metabol*. 102:S32 (2011).
 129. Filomeno, P.A., Dayan, V., Kandel, R.A., Wang, X.-H., Felizardo, T.C., Jelveh, S., Filomeno, A., Medin, J. A., Keating, A., and Ferguson, P.C.: Human bone marrow mesenchymal stromal cells (MSCs) decrease proliferation of human soft tissue sarcoma (STS) cell lines in vitro and do not affect local recurrence in xenograft models in vivo. ORS 2011 Meeting
 130. Alayoubi, A., Wang, J.C.M., Au, B.C.Y., Carpentier, S., Garcia, V., Dworski, S., Turner, P., El-Ghamrsni, S., Hakem, R., Levade, T., and Medin, J.A.: Generation and correction of a novel mouse model of acid ceramidase deficiency. *Mol Ther* 20:S123 (2012).
 131. Au, B.C.Y., Lee, C.-Y., Lopez-Perez, O., Fan, X., Foltz, W., Madden, M., Goldstein, A., van der Kwast, T., McCart, J.A., and Medin, J.A.: Prostate cancer immunotherapy by direct lentivirus vector injection: murine and rhesus macaque models. *Mol Ther* 20:S260 (2012).
 132. Dworski, S., Berger, A., Yoshimitsu, M., Alayoubi, A., Au, B., Exertier, M., Forster, J., Furlonger, C., Wang, J.C., Takenaka, T., Paige, C.J., and Medin, J.A.: Systemic ceramide accumulation causes dysregulated hematopoiesis. *Blood* 120:21 November (2012).
 133. Alayoubi, A., Wang, J.C.M., Au, B.C.Y., Carpentier, S., Garcia, V., Dworski, S., Turner, P., El-Ghamrsni, S., Hakem, R., Levade, T., and Medin, J.A.: Generation and correction of a novel mouse model of acid ceramidase deficiency. *Mol Ther* 20(Suppl. 1):S123-S123 (2012).
 134. Au, B.C.Y., Lee, C.J., Lopez-Perez, O., Fan, X., Foltz, W., Madden, M., Goldstein, A., van der Kwast, T., McCart, J.A., and Medin, J.A.: Prostate cancer immunotherapy by direct lentivirus vector injection: murine and rhesus macaque models. *Mol Ther* 20(Suppl. 1):S260-S261 (2012).
 135. Dworski, S., Jones, E., Alayoubi, A., Medin, J.A., and Drake, R.: Identification of accumulated ceramide species in a Farber disease mouse model by MALDI-MS imaging. 2013 ASMS (American Society for Mass Spectrometry), February (2013).
 136. Auray-Blais, C., Boutin, M., Lavoie, P., Casey, R., Clarke J.T.R., Foley, S.R., Keating, A., Khan, A., West, M.L., and Medin, J.A.: Gene therapy for Fabry disease patients: the importance of efficient biomarker monitoring. *Molec Genet and Metabol*. 108:S21 (2013).
 137. Dworski, S., Berger, A., Yoshimitsu, M., Alayoubi, A., Au, B., Forster, J., Furlonger, C., Wang, J.C.M., Takenaka, T., Paige, C.J., and Medin, J.A.: Hematopoiesis is dysregulated in a novel mouse model of Farber disease. *Molec Genet and Metabol*., 108:S36 (2013).
 138. Khan, A., Au, B.C., Taylor, C., Rothe, M., Bischof, D., Sirrs, S., Auray-Blais, C., Rupa T., Prokopishyn, N., Ohoski, P., Huang, J., Paul, G., Benabid, R., Viswanathan, S., Morel, C., Raiman, J., Schambach, A., West, M., Keating, A., Cornetta, K., Foley, R., and Medin, J.A.: Pre-clinical patient cell mobilizations and transduction outcomes in preparation for a Clinical Trial Application of lentivirus-mediated gene therapy for Fabry disease. ASGCT 17TH Annual Meeting May (2014)
 139. Au, B.C., Hermann, F., Rana, N., Neschadim, A., Huss, R., Guenther, C., and Medin, J.A.: Bystander tumor cell killing mediated by gap junctions formed with MSCs engineered to express novel prodrug-converting enzymes. ASGCT 17th Annual Meeting May (2014).
 140. Au, B.C., Liu Y, Huang, J., Nelles, M., Arruda, A., Rothe, M., Paul, G., Schambach, A., Barber, D.L., Minden, M.D, Paige, C.J., and Medin, J.A.: Pre-Clinical Preparation and Validation of Tumor Cell-Based IL-12 Immunotherapy for Acute Myeloid Leukemia. American Society of Gene and Cell Therapy 18th Annual Meeting. May (2015).
 141. McKillop, W.M., Au, B.C., Moncada, C., Andreev, N., Keever-Taylor, C.A., Drobyski, W.R., Minden, M.D., Paige, C.J., and Medin, J.A.: Clinical LV design incorporating human-derived cell-fate control (suicide) elements. American Society of Gene and Cell Therapy 18th Annual Meeting. May (2015).

142. Oldham, R.A.A., Berinstein E.M., Medin J.A.: Immunotherapeutic Targeting of AML with a Novel CD123 CAR. 8th Canadian Cancer Immunotherapy Consortium (CCIC) Symposium. May (2015).
143. Yu, F.P.S., Islam, D., Belcastro, R., Casas, J., Fabrias, G., Levade, T., Tanswell, K.A., Zhang, H., and Medin, J.A.: Impaired lung function in the acid ceramidase deficient mouse. *Molec Genet and Metabol.* 114:S127 (2015).
144. Berinstein, E.M., Oldham, R.A.A., Williams, B., Keating, A., Medin, J.A.: Transduction of NK-92 Cells with a High Affinity Variant of the Fc Receptor to Enhance Antibody Dependent Cellular Cytotoxicity. 8th Canadian Cancer Immunotherapy Consortium (CCIC) Symposium. May (2015).