

**The Faculty of Medicine of Harvard University  
Curriculum Vitae**

[REDACTED] [REDACTED]  
**Name:** Natalia S. Rost, MD, MPH  
[REDACTED] [REDACTED]  
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**Education:**

09/94- 06/96	B.S. (High Honors)	Biological Science	U of Michigan (Flint)
09/96- 05/98	M.A.	Medical Science	Boston U. School of Medicine
09/98- 05/02	M.D. ( <i>cum laude</i> )	Medicine	Boston University School of Medicine
07/05- 08/05	Certificate	Program in Clinical Effectiveness	Harvard School of Public Health
03/2006	Certificate	Human Genetics (Postgraduate Course)	Harvard Medical School
09/08- 05/11	M.P.H.	Public Health	Harvard School of Public Health

**Postdoctoral Training:**

06/02- 06/03	Intern	Medicine	Massachusetts General Hospital
07/03- 06/06	Resident	Neurology	Partners Neurology
07/06- 06/07	Clinical Fellow	Vascular and Critical Care Neurology	Massachusetts General Hospital/Brigham and Women's Hospital

**Faculty Academic Appointments:**

12/07- 06/10	Instructor	Neurology	Harvard Medical School
06/10- 10/12	Assistant Professor	Neurology	Harvard Medical School
10/12- 03/19	Associate Professor	Neurology	Harvard Medical School
04/19 -	Professor	Neurology	Harvard Medical School

**Appointments at Hospitals/Affiliated Institutions:**

07/07	Assistant Physician	Neurology	Massachusetts General Hospital
10/12	Associate Physician	Neurology	Massachusetts General Hospital
10/20	Physician	Neurology	Massachusetts General Hospital

**Major Administrative Leadership Positions:****Local**

2005-2006	Chief Neurology Resident	Partners Neurology Residency Program
2007-2008	Facilitator, Cardiovascular and Stroke Genetics Group	Broad Institute of MIT and Harvard
2007-2008	Organizer, "Prevention, Imaging, Genetics"	MGH/BWH/Athinoula A. Martinos Center
2008-2013	Associate Director, Acute Stroke Service	Massachusetts General Hospital
2009-2014	Director, Acute Stroke Research Symposium	Massachusetts General Hospital
2012-2013	Project Leader, TPA Step Down Unit, Care Redesign Initiative	Massachusetts General Hospital
2013	Co-Director, "Ischemic and Hemorrhagic Update: Current Practices and Future Directions"	Harvard Medical School (CME)
2013-2015	Chair, Education Committee, Institute for Heart, Vascular and Stroke Care	Massachusetts General Hospital
2013-2018	Director, "Acute Stroke Breakfast Gala"	Massachusetts General Hospital
2013-2018	Director, Acute Stroke Service	Massachusetts General Hospital
2016-2020	House Chair, Partners Neurology Residency Program	Massachusetts General Hospital
2017-2023	Associate Director, Comprehensive Stroke Center	Massachusetts General Hospital
2018 -	Chief, Stroke Division	Massachusetts General Hospital

**Regional**

1999-2002	President and Founder, Student Interest Group in Neurology (SIGN)	Boston University School of Medicine
2011-2016	Member, Boston Board of Directors	American Heart Association/American Stroke Association, Founders Affiliate
2012-2013	Chair, Power-To-End Stroke Committee	American Heart Association/American Stroke Association, Founders Affiliate
2013-2014	President Elect, Boston Board of Directors	American Heart Association/American Stroke Association, Founders Affiliate
2014-2018	Education Director	MGH, New England Regional Coordinating Center (StrokeNET)
2014-2016	President, Boston Board of Directors	American Heart Association/American Stroke Association, Founders Affiliate
2014-2018	Organizer, Stroke Recovery Research Symposium	SRH/MGH, New England Regional Coordinating Center (StrokeNET)
2016-2017	Co-Chair, Boston Heart & Stroke Ball	American Heart Association/American Stroke Association, Founders Affiliate

**National**

2009-2017	Chair, "Clinical Trials" Plenary Work Group	American Academy of Neurology
2013-2014	Co-Director, HVSI Satellite Symposium	American Heart Association Scientific Sessions, Dallas, TX
2014	Co-Leader, StrokeNET Prevention Working Group #1	StrokeNET, NINDS-NIH
2016-2019	Course Director, "Update on Medical Management of Stroke"	Annual Meeting, American Academy of Neurology
2016-2018	Session Co-Chair	International Symposium on Collaterals to the Brain, Los Angeles, CA
2017-	Mentor, Diversity Leadership Program	American Academy of Neurology
2017 -	Mentor, Women Leading in Neurology	American Academy of Neurology
2019 -	Mentor, Transforming Leaders Program	American Academy of Neurology
2021	Lead, Writing Group, "Post-stroke Cognitive Impairment & Dementia," <i>Circulation Research</i> Compendia	American Heart Association
2021-2022	Scientific Chair, 2022 Alzheimer's Disease Related Dementias Workshop	NINDS/NIH

**International**

2013 -	Organizer, Neuroimaging Session	International Stroke Genetics Consortium
2016 -	Lead, "MRI-Genetics Interface Exploration study" Investigator meeting	International Stroke Genetics Consortium
2017 -	Lead, Investigator Meeting, MRI-GENIE in collaboration with SiGN/GISCO	International Stroke Genetics Consortium
2019	Facilitator, the Australian Stroke Think Tank, the 18 <sup>th</sup> Annual Scientific Meeting	Florey Institute of Neuroscience and Mental Health, San Remo, Victoria, AUS
2021-2023	Lead, Image Analysis Work Group	STRIVE-2 (STandards for Reporting Vascular changes on nEuroimaging ) Consortium
2021-2023	Vice Chair	International Stroke Genetics Consortium

**Committee Service:**

**Local**

2007-2008	Annual Retreat Planning Committee	Broad Institute of MIT and Harvard Member
2008-2017	Acute Stroke Quality Taskforce	Massachusetts General Hospital Member
	2008-2012	Member
	2012-2017	Chair
2010-2011	Women in Academic Medicine	Massachusetts General Hospital Member
2011-2016	Diversity Committee (Neurology)	Massachusetts General Hospital Member
2012-2015	Research Subcommittee; Institute for Heart, Vascular, and Stroke Care	Massachusetts General Hospital Member

2012-2015	Stroke Prevention Integrated Care Program Steering Committee; Institute for Heart, Vascular, and Stroke Care	Massachusetts General Hospital Member
2012-2015	Brain Aneurysm and AVM Integrated Care Program Steering Committee; Institute for Heart, Vascular, and Stroke Care	Massachusetts General Hospital Member
2012-2015	Department of Neurology Research Council	Massachusetts General Hospital Member
2013-2015	Council for Philanthropy; Institute for Heart, Vascular, and Stroke Care	Massachusetts General Hospital Member
2014 -	Selection Committee	Partners Vascular Neurology Fellowship Member
2014 -	Clinical Competency Committee	Partners Vascular Neurology Fellowship Member
2014 -	Program Evaluation Committee	Partners Vascular Neurology Fellowship Member
2014-2016	Institute Biorepository Steering Committee	MGH/Center for Genomic Medicine Member
2016 -	Neurology Department Search Committee	Massachusetts General Hospital Member
2016 -	Diversity Mentorship	Partners Neurology Residency Program Member
2016-2019	Comprehensive Stroke Center Executive Steering Committee	Massachusetts General Hospital Member
2017-2019	Comprehensive Stroke Center Operations Committee	Massachusetts General Hospital Member
2017-2019	Comprehensive Stroke Quality Taskforce	Massachusetts General Hospital Chair
2018-2023	Clinician-Educator Promotion Committee	MGH Neurology Department Chair
2020 -	Longer Service Subcommittee of the Promotions and Appointments	Harvard Medical School, Member
<b>Regional</b>		
2007-2008	Planning Committee, Making the Stroke Connection Professional Symposium	American Heart Association/American Stroke Association, Founders Affiliate
2008 -	Clinical Events Committee - Stroke	TIMI Study Group, Harvard Medical School
	2008-20012	Member, TRA 2°P-TIMI 50 trial
	2009-2014	Member, ENGAGE-AF48 trial
	2010-2014	Member, SAVOR trial
	2011-2013	Member, PEGASUS trial
	2014 - 2017	Member, FOURIER trial
	2014 -	Member, AMGEN Phase 3 trial
	2014 - 2017	Member, DECLARE trial
	2014 - 2017	Member, INTARCIA trial
	2014 - 2017	Member, CAMELIA trial

	2014 - 2016	Member, LOFT trial
	2016 -	Member, NIH-REPRIEVE trial
	2017 -	Member, MEASURE-HF trial
	2020 -	Member, ACTIV trials
		Member, AZALEA trial
		Member, VEZALIUS trial
2012-	Clinical Events Committee - Stroke	Center for Cardiovascular Disease Prevention & the Cardiovascular Division, Brigham and Women's Hospital, Harvard Medical School
	2012-2017	Member, CANTOS trial
	2014 -	Member, CIRT trial
	2017 -	Member, PROMINENT trial
2014-2018	Paul Dudley White Award Selection Committee	American Heart Association/American Stroke Association, Founders Affiliate
		Member
2015-2017	Executive Leadership Committee, Boston Heart and Stroke Ball	American Heart Association/American Stroke Association, Founders Affiliate
	2015-2016	Member
	2016-2017	Co-Chair-Stroke
2016-2017	PhD Thesis Committee (Candidate: Adrian Dalca, S.M.)	Massachusetts Institute of Technology Advisor: Polina Golland, PhD (CSAIL)
2019-2020	Ad Hoc Search Committee	Harvard Medical School Member

### National

2010	Standardized Data Collection for Cardiovascular Trials Working Group	Federal Drug Administration
		Member
2011	Transforaminal Injection of Particulate Steroids Working Group	Federal Drug Administration
		Member
2014-2016	Prevention Working Group	NIH StrokeNET Clinical Trials Network
		Member
2014	Ethics Involved in Competing Trials Committee	NIH StrokeNET Clinical Trials Network
		Member
2016	<i>Neurology Today</i> EIC Search Committee	American Academy of Neurology
		Member
2016-2019	Acute Stroke Working Group	NIH StrokeNET Clinical Trials Network
		Member
2016-2019	Vascular Neurology Examination Committee	American Board of Psychiatry & Neurology
		Member
2017 -	Board of Directors	American Academy of Neurology Institute Ex Officio

### International

2009-2013	White Matter Hyperintensity GWAS Working Group	International Stroke Genetics Consortium Co-Chair
2011-2014	STROKE GOAL	Dr. Foster International Collaborative Clinical Lead-MGH
2013 -	Neuroimaging Committee	International Stroke Genetics Consortium Chair
2014	High-Dimensional Research in Alzheimer's Disease (HD-READY)	Joint Programming for Neurodegenerative Diseases, EU Member, Advisory Committee
2014	Stroke Prevention, Canadian Stroke Best Practice Recommendations	Heart and Stroke Foundation, Canada External Reviewer
2015	Advisory Committee	Rotterdam Study Member
2015 -	Genetics of Ischemic Stroke and Outcomes (GISCOME) Working Group	International Stroke Genetics Consortium Member
2016 -	GENEDCSS (GENETic Determinants of Collateral Status in Stroke) Work Group	GENEDCSS study Clinical Lead
2016-2018	HARNESS (Harmonising Brain Imaging Methods for Vascular Contributions to Neurodegeneration) Collaborative	Joint Programming for Neurodegenerative Diseases, EU Member
2016 -	Planning Committee	International Symposium on Collaterals to the Brain Member
2017-2018	Neuroimaging Quality Control for Multicenter Studies, HARNESS Consortium	Joint Programming for Neurodegenerative Diseases, EU Chair
2018-2020	PhD Thesis Committee (Candidate: Florian Dubost)	Erasmus University, Rotterdam, NL Advisor: Marleen deBruijne, PhD
2019-2023	Steering Committee, International Stroke Genetics Consortium	Member
2020	PhD Thesis Committee (Candidate: Guri Hagberg, MD)	Oslo University, Norway Advisor: Hege Ihle-Hansen

**Professional Societies:**

1999 -	American Academy of Neurology	
	1999 – 2003	Member, Undergraduate Education Subcommittee
	2005-2007	Member, Graduate Education Subcommittee
	2009-2011	Member, Science Committee
	2009 -	Member, Late-Breaking Science Review
	2010-2011	Chair, Preventative Division, Brain Health Fair Planning Committee
	2011-2017	Vice-Chair, Science Committee
	2011-2013	Chair, Integrated Neuroscience Session Workgroup

2012-2014		Chair, Academic Career Work Group
2013-2015		Member, Academic Neurology Presidential Task Force
2016 -		Member, Meeting Management Committee
2016-2020		Member, Women in Leadership Work Group
2016-2018		Member, Breakthroughs in Neurology Conference Work Group
2017-2023		Chair, Science Committee
2019 -		Member, AAN Congressional Summit
2020		Member, Special Commission on Racism, Inequity, and Social Justice
2021-2023		Member, Global Taskforce
2021 -		Vice Chair, Committee on Public Engagement
2022		Moderator, AAN Brain Health Summit Workshop
2023 -		President Elect, American Academy of Neurology
2000-2002	Alpha Omega Alpha	Member (Junior)
2000-2003	American Medical Women's Association	Member
2000-2002	Association of Pathology Chair Honor Society	Elected Member
2006 -	American Heart Association/American Stroke Association	Member
2009 -		Abstract Grading Committee, International Stroke Conference
2021-2023		Member, " <i>Cognitive Impairment Following Ischemic and Hemorrhagic Stroke</i> " Writing Group, AHA/ASA
2006 -	Stroke Council, AHA/ASA	Member
2020 -		Member, International Stroke Conference Program Committee
2020-2023		Member, Go Red Women in Science and Medicine Subcommittee
2021-2023		Member, STROKE Brain Health Science Subcommittee
2007 -	International Stroke Genetics Consortium	Member
2016 -	American Neurological Association	Member
2018 -	European Stroke Organization	Member
2018 -		Member, Women's Initiative for Stroke in Europe (WISE)
<b>Grant Review Activities:</b>		
2009-2010	Clinical Research Training Fellowship Committee	Foundation Research Council, American Academy of Neurology Ad hoc Member
2011-2018	Stroke-Brain (Clinical) Study Section 2011-2013	American Heart Association Ad hoc Member

	2013-2016 2016 – 2018	Permanent Member Co-Chair
2013	Special Emphasis Panel (R01 MD13-008), Biological and Genetic Research and Clinical and Translational Research Related Health Disparities Research	National Institute on Minority Health and Health Disparities (NIMHD/NIH)
2014	Nursing and Related Clinical Sciences (NRCS) Study Section	SEP Member NIH
2016 -	Executive Committee on Research (ECOR)	Ad hoc Member Massachusetts General Hospital
	Special Emphasis Panel BRAIN/B90, “Theories, Models, and Methods for Analysis of Complex Data from the Brain (R01)”, the Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative	Ad hoc Member Emerging Technologies and Training in Neurosciences (ETTN) Integrated Review Group, Center for Scientific Review, NIH
2016	Special Emphasis Panel (ZRG1 VH-N (02)), “Ischemia and HDL,” Atherosclerosis and Inflammation of the Cardiovascular System Study Section	SEP Member Vascular and Hematology IRG, NIH
2017	The Netherlands Organisation for Health Research and Development	SEP Member Vidi programme NWO/ZonMw, The Netherlands
		Ad hoc Member
2018-2020	Fellowship Clinical Study Section	American Heart Association Chair

**Editorial Activities:**

**Ad hoc Reviewer**

Stroke  
Neurology  
Journal of Stroke and Cerebrovascular Disease  
European Journal of Neurology  
Archives of Neurology  
Atherosclerosis, Thrombosis, and Vascular Biology  
CNS Neuroscience & Therapeutics  
Annals of Neurology  
European Journal of Human Genetics  
Expert Review of Neurotherapeutics  
Circulation: Cardiovascular Quality and Outcomes  
New England Journal of Medicine  
Nature Reviews Neurology  
Circulation Research  
Journal of Cerebral Blood Flow and Metabolism



**Other Editorial Roles**

2009 -	Editorial Board Member	Stroke
2010-2020	Assistant Editor	Stroke
2010-2012	Associate Editor	Frontiers in Neuroscience
2013-2015	Editorial Board Member	Interventional Neurology
2014-2017	Section Editor – Cerebrovascular Disease and Stroke	Current Treatment Options in Cardiovascular Medicine
2016-2020	Editorial Board Member	Journal of Stroke and Cerebrovascular Disease
2016-2020	Editorial Board Member	International Journal of Stroke
2020	Guest Editor, Cerebrovascular Disease	<i>Continuum</i> , American Academy of Neurology
2020 -	Associate Editor	Stroke

**Honors and Prizes:**

1995	Angell Scholar	University of Michigan	Scholarship
1999	Medical Student Summer Scholarship	American Academy of Neurology	Scholarship
2000	Student Scholarship in Cerebrovascular Disease	Stroke Council, American Heart Association	Scholarship
2000	Junior AOA	Boston University School of Medicine	Scholarship
2000	Mordecai Y T Globus Young Investigator Award	American Stroke Association	Research
2000	Pathology Honor Society	Association of Pathology Chairs	Scholarship
2001-2002	The John Collins Foundation Scholarship	Boston University School of Medicine	Scholarship
2002	Anthony L.F. Gorman Prize in Physiology	Boston University School of Medicine	Scholarship
2002	Janet M. Glasgow Memorial Achievement Citation	American Medical Women's Association	Scholarship
2002	Medical Student Award	American Academy of Neurology	Scholarship
2005	The Residents' Symposium Scholarship	American Neurological Association	Scholarship
2005	Partners in Excellence Award	Partners HealthCare	Outstanding Performance and Commitment to Excellence
2006	Partners in Excellence Award	Partners HealthCare	Outstanding Performance and Commitment to Excellence
2006	Annual Meeting Resident Scholarship	American Academy of Neurology	Scholarship
2007	Clinical Research Day Poster of Distinction Award	Massachusetts General Hospital	Research
2007-2008	Clinical Research Fellowship in Cerebrovascular Disease	National Stroke Association	Research

2008-2009	Bugher Foundation Clinical Research Fellowship	American Heart Association/ American Stroke Association	Research
2008	Leadership Development Program	American Academy of Neurology	Leadership
2011	Translational and Clinical Research Course for Clinician-Scientists	American Neurological Association	Research
2011	Clinical Trials Course in Neurology (Vail, CO)	NIH-NINDS	Research
2011	Career Development Symposium	NINDS/ANA	Research/Leadership
2012	Junior Investigator	Princeton Conference	Research
2012	The Michael S. Pessin Stroke Leadership Prize	American Academy of Neurology	Leadership
2013-2014	Physician Leadership Development Program	MGH/MGPO	Leadership
2013	Fellow Nominee, The Annual Nathaniel Bodwitch Prize	American Academy of Neurology Massachusetts General Hospital	Leadership Clinical Care
2015	Fellow	American Heart Association	Leadership
2016	Fellow	American Neurological Association	Leadership
2016	Team Leader, The MGH Clinical Research Team Award, " <i>Genetics of White Matter Hyperintensity Burden in Acute Ischemic Stroke: the MRI-GENIE Study</i> " (first author: Anne-Katrin Giese)	Massachusetts General Hospital	Research
2016	Winning Abstract, Department of Neurology Award, MGH Clinical Research Day, " <i>Integrity of Normal Appearing White Matter and Functional Outcomes After Acute Ischemic Stroke</i> " (first author: Mark Etherton)	Massachusetts General Hospital	Research
2016	Winning Abstract, Department of Neurology Award, MGH Clinical Research Day, " <i>Genetic variant in VCAM1 mediates acute infarct size in ischemic stroke patients</i> " (first author: Anne-Katrin Giese)	Massachusetts General Hospital	Research
2017	"Women Executives In Health Care: Positioning for the Future"	Harvard School of Public Health	Leadership
2017	Ray Adams Clinical Mentor Award	Department of Neurology, Massachusetts General Hospital	Teaching/Mentorship
2018	Fellow	European Stroke Organization	Leadership

2018	Partners in Excellence Award	Comprehensive Stroke Quality Taskforce Team, MGH	Quality Treatment and Service Leadership
2019	Work Group Leader Award	International Stroke Genetics Consortium	Research
2019	MGH Research Scholar Award	MGH Executive Committee on Research (ECOR)	Mentorship
2021	Leading in Excellence Through Mentorship	AAN Leadership Program	

## **Report of Funded and Unfunded Projects**

### **Past Funded**

- 2007-2008 **Genetic Variation in the Hemostatic System and Clinical Course of Intracerebral Hemorrhage**  
National Stroke Association  
PI (\$ 50,000)  
This study is set to elucidate the role of common variation in key components of the hemostatic in pathogenesis of ICH
- 2007-2009 **Genetic Variation in the Hemostatic System and Clinical Course of Intracerebral Hemorrhage**  
NINDS, NIH Clinical Research Loan Repayment Program  
PI (\$ 70,000)  
This study is set to elucidate the role of common variation in key components of the hemostatic in pathogenesis of ICH
- 2008-2009 **Genetic Determinants and Outcomes of White Matter Hypertensity**  
Bugher Foundation-American Heart Association  
Clinical Research Fellow (PD: Karen Furie)  
This is a genome-wide association study of MRI-detected white matter hyperintensity in 2,500 individuals with acute ischemic stroke
- 2009-2014 **Genetic variation in white matter hyperintensity and risk of ischemic stroke**  
NINDS K23 NS064052-01A1  
PI (\$823,750)  
This study aims to investigate common genetic variants associated with risk of WMH and determine their role in clinical prediction of the risk of ischemic stroke
- 2009-2013 **Genetic variation in white matter hyperintensity and risk of ischemic stroke**  
NINDS, NIH Clinical Research Loan Repayment Program  
PI (\$105,000)  
This study aims to investigate common genetic variants associated with risk of WMH and determine their role in clinical prediction of the risk of ischemic stroke
- 2010-2014 **Neuroimaging Characteristics in Fabry Disease: Quantitation of White Matter Lesions**  
Investigator Initiated Award from Genzyme Sanofi Co.  
Co-PI (PI: Katherine Sims) (\$153,000)  
This project is designed to evaluate the neuroimaging characteristics of the cerebrovascular disease in patients with Fabry disorder, an X-linked lysosomal storage disorder characterized by decreased or absent activity of the enzyme  $\alpha$ -galactosidase A and linked to stroke and cerebrovascular disease in young adults.
- 2012-2013 **Novel Markers of Clinical Outcomes in Acute Ischemic Stroke**

MGH Institute for Heart, Vascular and Stroke Care, Spark Award in Clinical and Translational Research

PI (\$50,000)

This study aims to elucidate the role of novel neuroimaging and genetic markers in prediction of clinical outcomes after stroke.

2013-2015 **SPOTRIAS Sample Repository study**

NINDS P50NS051343

PI (\$77, 633)

The aims of the Partners SPOTRIAS Blood and Tissue Core are: (1) to process, maintain, and distribute blood specimens collected in ARISE (Project #2) at MGH; (2) to support blood collection and processing for the Neu-START study at the BWH; (3) to store blood specimens collected on SPOTRIAS subjects for future collaborative studies; (4) to collect genetic material for submission to the NINDS repository for use in future genetic studies proposed within Partners, the SPOTRIAS network, the International Stroke Genetics Consortium (ISGC), and the broader scientific community.

2014-2018 RHAPSODY: "Safety evaluation of 3K3A-APC in ischemic stroke"

NINDS NeuroNEXT

Site PI (2014P- 001034)

This is an early (IIa/b) phase trial of safety and preliminary efficacy of 3K3A-APC as a neuroprotectant in patients with acute ischemic stroke.

2018-2019 Curation and HARMonization of stroke imagING (CHARMING) study

The Institute for Precision Cardiovascular Medicine Uncovering New Patterns in Cardiovascular Disease and Stroke Grant, American Heart Association

Investigator (PI: Ona Wu) (\$150,000)

This study aims to develop deep machine learning methodologies that that promise to revolutionize the process of curation and harmonization of the stroke imaging data and to facilitate the wealth of clinically relevant investigations into biology of stroke and cerebrovascular disease.

2013-2020 Statins augment small vessel function and improve stroke outcomes (SALVO)

NINDS R01 NS082285-01A1 (NCE: 2018-2021)

PI (\$2,644, 364)

This study aims to elucidate the underlying mechanisms of cerebral tissue susceptibility to acute ischemia in subjects with advanced white matter disease. We proposed to investigate the effect of statin use on outcomes after stroke, utilizing WMH severity as a clinical model of microvascular dysfunction in a prospective case-control study of patients with acute ischemic stroke.

2015-2021 The MRI-GENetics Interface Exploration (MRI-GENIE) study

NINDS R01 NS086905-01A1 (NCE: 2020-2021)

PI (\$3,252,979)

This multicenter, international collaborative aims to: 1) develop, validate, and disseminate a clinical MRI scan analysis platform that will advance genetic discovery in acute ischemic stroke and chronic cerebrovascular disease, and 2) to facilitate development of novel clinical applications that personalize stroke risk and outcome assessment in stroke patients with MRI and genetic data.

2014-2018 New England Regional Coordinating Center for the NINDS Stroke Trials Network  
2018-2023 NINDS U10 NS086729  
Site PI (PI/PD: Lee Schwamm)  
This is an integrated team of hospitals and EMS agencies in Boston and Western Massachusetts that will develop new translational science and successfully execute the StrokeNET (NINDS Stroke Trials Network) Phase 1,2, and 3 studies.

### **Past Unfunded**

- 2006-2010 **Specialized Program Of Translational Research In Acute Stroke (SPOTRIAS)**  
Investigator (SPOTRIAS projects 1, 2, 3)  
This comprehensive program project aims at understanding the role of serum biomarkers in pathophysiology of ischemic stroke, their association with the neuroimaging findings in acute cerebral ischemia, and in stroke outcomes
- 2008-2010 **Interventional Management of Stroke (IMS)-3 trial**  
Investigator  
This clinical phase III trial aims to investigate the efficacy of IV tPA as compared to the combination of intravenous and intra-arterial treatment for treatment of acute ischemic stroke.
- 2009-2010 **Minimally Invasive Surgery plus rtPA in ICH (MISTIE) trial**  
Investigator  
The aim of this trial is to determine the safety of using a combination of minimally invasive surgery plus clot lysis (using rt-PA) to remove ICH.
- 2009-2010 **Stenting vs. Aggressive Medical Management to Prevent Ischemic Stroke (SAMMPRIS) trial**  
Investigator  
This clinical trial aims to determine whether intracranial stenting (Wingspan stent) with intensive medical therapy is superior to the medical therapy alone for preventing second stroke in high-risk patients with symptomatic stenosis of a major intracranial artery.
- 2009-2011 **MR and Recanalization of Stroke Clots Using Embolectomy (MR ReSCUE)**  
Investigator  
The purpose of this study is to compare the effectiveness of treating acute ischemic stroke with mechanical embolectomy using the Merci Retriever or the Penumbra System within 8 hours of symptom onset to standard medical treatment, and to identify people who might benefit from mechanical embolectomy by the appearance of stroke on multimodal computerized tomography (CT) or magnetic resonance (MR) imaging.
- 2009-2013 **Desmoteplase In Acute Stroke (DIAS)-4 trial**  
Investigator  
The purpose of the study is to determine whether desmoteplase is effective and safe in the treatment of patients with acute ischemic stroke when given within 3 to 9 hours from onset of stroke symptoms
- 2010-2015 **MR Witness trial (SPOTRIAS project)**  
Investigator  
The purpose of this study is to evaluate the safety of intravenous (IV) rt-PA in patients with to people with unwitnessed stroke but with MRI evidence of early ischemic stroke, and the efficacy of rt-PA in this patient population
- 2010-2021 **MGH Acute Stroke Clinical Trials Program**  
Investigator  
ACTION 2 & 3 (Site PI: Patricia Musolino): natalizumab in acute ischemic stroke

iDEF (Site PI: Joshua Goldstein): deferoxamine in intracranial hemorrhage  
Ponezumab (Site PI: Anand Viswanathan): ponezumab in CAA  
GAMES-RP (Site PI: WT Kimberly): glyburide in malignant ischemic edema  
DEFUSE 3 (Site PI: Bay Leslie-Mazwi): endovascular therapy in extended window  
POINT trial (Site PI: Scott Silverman): dual antiplatelet therapy in TIA and mild stroke  
ARCADIA trial (Site PI: Aneesh Singhal)

### Current Funded

- 2019-2025 **DISCOVERY: Determinants of Incident Stroke Cognitive Outcomes and Vascular Effects on Recovery**  
NINDS/NIA U19 NS115388  
Contact PI (\$62,646,087)  
The major goal(s) of this project is to develop a collaborative nationwide network of clinical sites with access to diverse acute stroke US populations and the expertise, experience and capacity to execute a large prospective study that will unravel the mechanisms of post-stroke cognitive disability, early recovery after stroke, and potential targets for personalized prevention, intervention, and rehabilitation
- 2019-2024 **Resilient brain: from biomarkers of susceptibility to mechanisms of stroke recovery**  
MGH ECOR (MGH Research Scholar Prize)  
Principal Investigator (\$500,000)  
The overall aim of this proposal is to develop the concept of brain reserve in stroke, and through that, to fully characterize the brain's capacity to withstand acute ischemic injury and understand the mechanisms of stroke recovery.
- 2021-2025 **PET Imaging of Thrombus**  
R01HL109448  
Co-Investigator (Co-PIs: Caravan and Sosnovik)  
The aim of this renewal application is to use the fibrin-binding PET probe <sup>64</sup>Cu-FBP8 to detect the source of embolism in patients with recent cryptogenic stroke

### Training Grants and Mentored Trainee Grants

- 2014-2015 **Genetic Heritability Estimates of Ischemic Stroke Severity and Post Stroke Outcomes**  
Alpha Omega Alpha's Carolyn L. Kuckein Student Research Fellowship  
*Mentor of Arooshi Kumar, B.S.*  
This study aims to explore the role of genetic variation on the severity of ischemic stroke and post-stroke outcomes.
- 2016 - 2021 **Effects of Vitamin D and Omega-3 on Cerebrovascular Disease**  
NIH K01 HL128791 (PI: Pamela Rist)  
*Mentor of Pamela Rist, PhD*  
The major goal of this project is to examine the impact of vitamin D and omega-3 fatty acids supplements on stroke outcomes in initially healthy populations and the burden of cerebrovascular disease in the brains of participants with ischemic stroke.
- 2017 - 2020 **ARTEMIS: Assessment of Reserve: Translational Evaluation of Medical Images and Statistics**

H2020-MSCA-IF-2016 (Marie Skłodowska-Curie Actions, Horizon 2020 - Research and Innovation Framework Programme, European Commission)

*Mentor of Markus Schirmer, PhD*

This proposal aims to develop computational framework to exhaustively characterize WMH lesions on clinical MRI scans of patients with acute ischemic stroke, to test the prognostic power of the brain reserve construct in prediction of functional outcomes in patients with ischemic stroke, and to validate this construct in prediction of brain health in a population of healthy aging adults

2017 - **Advanced Neuroimaging to Predict Functional Outcomes After Ischemic Stroke**  
2019

Clinical Scientist Training Program – American Heart Association

*Mentor of Mark Etherton, MD, PhD*

This study will assess the impact of WM structural integrity and blood-brain-barrier permeability on ischemic tissue and functional outcomes after stroke using DTI and DSC MRI in a prospective cohort of patients with acute ischemic stroke.

2020- **White Matter Tract Integrity and Ischemic Stroke Outcomes**  
2022 – Clinical Research Training Scholarship – American Academy of Neurology

*Mentor of Mark Etherton, MD, PhD*

This proposal aims to identify the critical white matter tracts and mechanisms of white matter injury that influence recovery after acute ischemic stroke, which is an important step towards the discovery of novel treatments for improving outcomes after ischemic stroke.

2021- **Microvascular Dysfunction in Cerebral Small Vessel Disease and Stroke**  
2026 K23NS 119575-01A1 – NINDS/NIH

*Mentor of Mark Etherton, MD, PhD*

This research will yield important pathophysiological insights regarding the complex interrelations of microvascular dysfunction and cerebral small vessel disease, which may contribute to improved stroke prevention, risk stratification, and individualized therapies to improve post-stroke outcomes in patients with small vessel disease.

2021- **Sex-aware Precision Medicine in Acute Ischemic Stroke**  
2022 MGH ECOR Fund for Medical Discovery (FMD) Clinical Research Fellowship Award

*Mentor of Anna Bonkhoff, M.D.*

This study aims to design and employ innovative methodological approaches, that combine state-of-the-art Bayesian and Frequentist modelling, to predict and understand sex-specific characteristics of stroke outcome based on unique large-scale, multi-center stroke neuroimaging datasets.

2022- **Hemorrhagic Transformation After Large-Vessel Ischemic Stroke**  
2023 The Andrew David Heitman Foundation

*Mentor of Robert Regenhardt, MD, PhD*

This study will contribute to the current understanding of hemorrhagic transformation after LVO stroke and important implications for LVO patient management, such as stenting and antithrombotic risks.

2023- **HERMES: HEmorrhagic stroke Research on quantitative Methods for Evaluating Small**  
2024 **vessel disease burden**

The Andrew David Heitman Foundation

*Mentor of Markus Schirmer, PhD*

This study will harness the vastly underutilized clinical imaging data of ICH patients to gain significant insight into stroke pathology and to advance translational image analysis across stroke types.

### **Unfunded Current Projects**

- 2007 - **Genes Affecting Stroke Risk and Outcomes (GASROS) Study**  
Principal Investigator  
The purpose of this ongoing prospective, observational cohort of patients with ischemic stroke confirmed by neuroimaging is to determine genetic underpinnings of stroke risk and outcomes.

### **Report of Local Teaching and Training**

#### **Teaching of Students in Courses:**

2004	Patient Doctor II, Neurological Examination Medical students	HMS 4 hours/year
2011-2014	PCE Case Conference (Neurology Expert) Medical students	HMS 2 hours/year
2008 -	Neurology Bedside Examination Medical students	HMS 2 hours/year

#### **Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs):**

2005	Movement Disorders Neurology residents	MGH 1 hour lecture
2005-2006	Neurology Imaging for Medical House staff Medical residents	MGH 1 hour lecture 4 times/year
2005-2006	Neurology Morning Report (Teaching Senior) Neurology residents	MGH 0.5-hour didactic session, 4 weeks/year
2006	CMF Mortality and Morbidity Rounds Neurology Residents	MGH 1 hour lecture
2006	DMD Mortality and Morbidity Rounds Neurology Residents	BWH 1 hour lecture
2007	Emergency Neurology Medical Mortality and Morbidity Rounds	MGH 1 hour lecture
2007	Fundamentals of Epidemiology Post-doctoral fellows	MGH-Broad Institute 1 hour lecture
2007	Cerebral Blood Flow Stroke fellows	MGH
2008	Evaluating and improving power in GWAS using fixed marker set Post-doctoral fellows	MGH-Broad Institute 1 hour lecture
2009- 2010	Genetics of Stroke Stroke fellows	MGH 1 hour lecture/year
2009	Patient selection for acute stroke treatments Stroke fellows	MGH 1 hour lecture
2010	Stroke and Critical care for the RITE exam	MGH/BWH



2010-2013	Partners Neurology residents MGH Acute Stroke Service: An Introduction	1 hour lecture MGH
2010	Stroke and Neuro-Critical fellows Patient Selection for Intra-Arterial Treatment	1 hour lecture/year MGH
2011	Stroke and Neuro-Critical fellows Pathophysiology of Stroke	1 hour lecture MGH/BWH
2011	Partners Neurology residents Brain Susceptibility to Acute Ischemia	1 hour lecture MGH/BWH
2012	Partners Neurology residents Attending a Scientific Conference	1 hour lecture in the neuroscience and career development series MGH/BWH
2012	Partners Neurology residents Strategies for Successful Team Management	1 hour mentorship panel MGH/BWH
2012-2015	Partners Neurology residents Acute Stroke Management	1 hour lecture Spaulding Rehabilitation Hospital
2013	PM&R residents Carotid Dissection	1 hour lecture/year MGH/BWH
2013	Partners Neurology residents Outcomes and prognosis after stroke	1 hour lecture MGH/BWH
2014-2016	Partners Neurology residents MGH Acute Stroke Protocols: Lecture and Mock Drill	1 hour lecture MGH
2016	Vascular and Critical Care Neurology Fellows Update on the Medical Management of Stroke	2-hour activity MGH/BWH
2016	Partners Neurology residents Neuroimaging of Acute Stroke	1 hour lecture Spaulding Rehabilitation Hospital
2016	PM&R residents Why White Matter Matters?	1 hour lecture MGH/BWH
2017	Partners Neurology residents Comprehensive Stroke Center: An Overview	1 hour lecture MGH/BWH
2017	Partners Neurology residents Comprehensive Stroke Center: An Update	1 hour lecture MGH/BWH
2017	Vascular and Critical Care Neurology Fellows Patient Selection for Endovascular Therapy in Extended Time Window	1 hour lecture MGH/BWH
2018	Partners Neurology residents Stroke Management for the Internists	1 hour lecture MGH Department of Medicine
2018	Partners Neurology residents Why White Matter Matters?	1 hour lecture MGH/BWH
2020	Partners Neurology residents Why White Matter Matters?	1 hour lecture MGH/BWH
2021	MGB Neurology Residents Resilient Brain and Stroke	1 hour lecture MGH/MGB
2022	MGB Neurology Residents Why White Matter Matters?	1 hour lecture MGH/MGB
	MGB Neurology Residents	1 hour lecture

### Clinical Supervisory and Training Responsibilities:

2004-2006	Neurology Core Rotation Student Teaching	Daily supervision (as resident)
2006-2007	Neurology Core Rotation Student Teaching	Daily supervision (as clinical fellow)
2007 -	Neurology Core Rotation Preceptor/MGH	6-8 weeks/year

2007 -	Attending, MGH Stroke/ICU Consult Service (MGB neurology residents/vascular fellows)	2 weeks/year
2007 -	Attending, MGH Inpatient Stroke Neurology (CMF) Service (MGB neurology residents/vascular fellows)	6-8 weeks/year
2007 -	Attending, MGH Acute Stroke Service (MGB neurology residents/vascular fellows)	1 full day weekly
2007-2013	Outpatient Neurology Clinic Preceptor	4 half-day sessions/year
2007-2015	Emergency Neurology Review (residents)	1 hour/week
2013 -	Vascular Neurology Fellow Clinic Preceptor	6 half-day sessions/year
2013-2017	Core Neurology Clinic Preceptor	12 half-day session/year
2015-2020	Neurology Morning Report (residents)	1 hour/week
2019 -	WINNERS ( <i>Women In Neurology – Networking, Education, and Research for Success</i> ) initiative for women neurology trainees – founding mentor	1 hr/month

### Laboratory and Other Research Supervisory and Training Responsibilities:

2007-	Training and supervision of the post-doctoral fellows, pre-doctoral candidates, and students involved in clinical research projects at the MGH Stroke Research Center/Rost Stroke Research Program	Daily supervision and mentorship 4-6 hours per week (including Rost lab meetings, monthly WHISR research seminars, journal club moderation, training in the research protocols and procedures, data QC, and 1:1 meetings)
2010-2014	“Uber Mentor,” Partners Neurology residency program	Career development and mentorship for neurology residents interested in pursuing research careers
2014 -	R25 mentor, Partners Neurology residency	Career development and mentorship for neurology residents interested in pursuing R25 application
2017-2019	Mentor, R25 TRANSCENDS ( <i>Training in Research for Academic Neurologists to Sustain Careers and Enhance the Numbers of Diverse Scholars</i> ) Scholar Program	American Academy of Neurology/National Institutes of Health
2017-2019	Mentor, Research Career Development Symposium	American Academy of Neurology, Boston, MA
2017-2019	Mentor, StrokeNET Trainee Learning Community Program	NIH/NINDS
2020-2022	Speaker, MGH Youth Neurology Education and Research Program	Massachusetts General Hospital, Boston, MA

### Formal Teaching of Peers (e.g., CME and other continuing education courses):

***No presentations below were sponsored by outside entities***

2008	<i>Office management of stroke-prone patients</i>	Lecture
	Ischemic and Hemorrhagic Update (HMS CME)	Boston
2009	<i>Cardio embolic stroke</i>	Lecture
	Ischemic and Hemorrhagic Update (HMS CME)	Boston
2009	<i>Stroke prevention and management</i>	Lecture

	Primary Care Internal Medicine: Principles & Practice course (HMS CME)	Boston
2010	<i>Antithrombotics for TIA and ischemic stroke: when to use what?</i>	Lecture
2010	Ischemic and Hemorrhagic Update (HMS CME) <i>Neuro-ICU Management of Acute Ischemic Stroke: Medical and Surgical Care</i>	Boston Lecture
2011	Ischemic and Hemorrhagic Update (HMS CME) <i>Antiplatelets/anticoagulants for TIA and stroke: when to use what?</i>	Boston Lecture
2011	Ischemic and Hemorrhagic Update (HMS CME) <i>Specific Stroke Issues</i>	Boston Lecture
2012	Ischemic and Hemorrhagic Update (HMS CME) <i>Antiplatelets/anticoagulants for TIA and stroke</i>	Boston Lecture
2012	Ischemic and Hemorrhagic Update (HMS CME) <i>The basics of carotid artery disease</i>	Boston Lecture
	MGH Institute for Heart, Vascular and Stroke Care (Partners CME)	Boston
2013	<i>Atrial fibrillation and stroke: rapid evolution of treatment options</i>	Lecture
	MGH Institute for Heart, Vascular and Stroke Care (Partners CME) – ACC Satellite Symposium	San Francisco
2013	<i>Practical management of arterial dissections</i>	Lecture
2013	Ischemic and Hemorrhagic Update (HMS CME) <i>Carotid artery disease: the basics</i>	Boston Lecture
2013	Neuroradiology Post Graduate Course (HMS CME) <i>Cardioembolic stroke</i>	Boston Lecture
	MGH Institute for Heart, Vascular and Stroke Care (Partners CME) – AHA Scientific Sessions Satellite Symposium	Dallas
2014	<i>Silent Cerebral Ischemia: an Incidental Finding or Call to Action?</i>	Lecture
	MGH Institute for Heart, Vascular and Stroke Care (Partners CME) – ISC Satellite Symposium	San Diego
2015	<i>Intravenous Therapy for Ischemic Stroke: Where Do We Stand?</i>	Lecture
2015	Neuroradiology Post Graduate Course (HMS CME) <i>Overview of Stroke in Neurology Review Course</i>	Boston Lecture
2016	Harvard Current Trends in Medicine (HMS CME) <i>Ischemic Stroke</i>	Boston Lecture
	Neurological Emergencies, Massachusetts Medical Society (HMS CME)	Boston
2016	<i>Carotid stenosis: stents, surgery, or medications?</i>	Lecture
	Neurological Emergencies, Massachusetts Medical Society (HMS CME)	Boston

**Local Invited Presentations:**

***No presentations below were sponsored by outside entities***

2007	Genetics of Cerebral Small Vessel Disease: Not Just Stroke / Seminar Broad Institute of MIT and Harvard Retreat
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2007 Prediction of Functional Outcome in Patients with Primary ICH: The FUNC score  
Hemorrhagic Research Group meeting (MGH Neurology)

2007 Candidate-Gene Approach / Lab meeting  
Rosand Lab Meeting, Center for Human Genetic Research (MGH)

2008 Imaging-Guided Selection of Patients with Acute Ischemic Stroke: Current Guidelines  
and Future Directions / Telestroke Grand Rounds  
Acute Stroke Service (MGH)

2008 Genome-Wide Association Study in Small-Vessel Disease Stroke: A Progress Report /  
Seminar  
Center for Human Genetic Research (MGH)

2009 Understanding Leukoaraiosis in Patients with Stroke / Lab meeting  
Rosand Lab Meeting, Center for Human Genetic Research (MGH)

2010 Patient Selection for Acute Ischemic Stroke Therapies / Learning Series  
Vascular Center (MGH)

2010 Patient selection for catheter-based therapies in stroke / Expert Debate Forum  
Acute Stroke Symposium (MGH)

2010 IV Thrombolysis in Patients with Acute Stroke and Cardiac Ischemia / Telestroke  
Grand Rounds  
Acute Stroke Service (MGH)

2011 Mechanisms of cerebral microvascular disease / Lab meeting  
Rosand Lab Meeting, Center for Human Genetic Research (MGH)

2011 A Tale of Two Trials: Stroke Prevention in 2011 / Symposium  
MGH Acute Stroke Symposium, MGH

2011 Genome-Wide Association Study in Small-Vessel Disease Stroke: A Meta-Analysis /  
Seminar  
Center for Human Genetic Research (MGH)

2011 Stroke: Etiology, Classification, and General Considerations / Seminar  
Stroke Clinical Research Educational Series (MGH)

2011 Vascular Anatomy of the Central Nervous System and Select Clinical Syndromes /  
Seminar  
Stroke Clinical Research Educational Series (MGH)

2011 Genetics 101 for Clinical Researchers / Seminar  
Stroke Clinical Research Educational Series (MGH)

2011 Stroke Prevention and Management / Learning Series  
Vascular Center (MGH)

2011 Genetic Architecture of the White Matter Disease / Seminar  
Center for Human Genetic Research (MGH)

2011 Novel Biomarkers of Cerebral Susceptibility to Acute Ischemia / Grand Rounds  
Department of Neurology (MGH)

2011 Novel Biomarkers of Cerebral Susceptibility to Acute Ischemia / Grand Rounds  
Longwood Neurology (HMS)

2012 Novel Mechanisms of Stroke In Delayed Radiation-Induced Cerebrovascular Injury /  
Seminar  
Stroke Service Conference (MGH)

2012 Of Heart and Brain: the link between stroke and cardiac disease / Learning series  
Nuclear Cardiology Education Series (MGH)

2012 Novel Biomarkers of Cerebral Susceptibility to Acute Ischemia / Anne B. Young  
Scientific Symposium  
Department of Neurology (MGH)

2012 Novel Markers of Outcomes in Stroke / Seminar  
Neuroepidemiology (Harvard School of Public Health)

2013 Novel Markers of Clinical Outcomes in Stroke / Research Series  
Institute for Heart, Vascular and Stroke Care (MGH)

- 2013 Imaging small vessel disease in patients with acute stroke  
Stroke Imaging Research Group (Martinos Biomedical Imaging Center)
- 2013 Bad luck and other risk factors for stroke / Seminar  
Kistler Stroke Research Center (MGH)
- 2014 Epidemiology, Etiology, Risk Factors, and Semiology of Stroke Syndromes / Seminar  
Stroke 101: Summer Stroke Series (MGH)
- 2014 Stroke in Women / Grand Rounds  
Corrigan Women's Heart Health Program (MGH)
- 2014 White Matter Hyperintensity, Imaging, Stroke Research (WHISR) / Research Series  
Kistler Stroke Research Center (MGH)
- 2015 Acute Stroke Care in 2015: Back to the Future / Symposium  
MGH Acute Stroke Symposium (MGH)
- 2015 Novel Biomarkers of Brain Susceptibility to Acute Ischemia / Grand Rounds  
Longwood Neurology (HMS)
- 2015 Stroke 101: All You Ever Wanted to Ask About Stroke / Seminar  
Kistler Stroke Research Center (MGH)
- 2015 Brain Susceptibility to Acute Ischemia: Why White Matter Matters? / Grand Rounds  
Department of Neurology, Massachusetts General Hospital, Boston, MA
- 2016 All You Ever Wanted to Ask About Stroke  
Stroke 101: Summer Stroke Series (MGH)
- 2016 MGH Acute Stroke Excellence  
General Executive Committee (MGH)
- 2016 Beyond Your Initial R: Strategies for Additional NIH Funding /Multiple R01 Workshop  
Grant Review and Support Program (GRASP), Harvard Catalyst (HMS)
- 2017 Stroke: Etiology, Classification, and General Considerations / Seminar  
Kistler Stroke Research Center (MGH)
- 2017 Select Clinical Stroke Syndromes / Seminar  
Kistler Stroke Research Center (MGH)
- 2019 In Search of Brain Resilience In Stroke: the First Decade/Grand Rounds  
Department of Neurology, Massachusetts General Hospital, Boston, MA
- 2020 Building Global Partnerships: Challenges and Strategies for Success in Team Science  
MGH Youth Neurology Education and Research Program (MGH), Boston, MA
- 2021 In Search of Brain Resilience in Stroke: a Road to DISCOVERY  
MGH Executive Committee on Research, Boston , MA

**Report of Regional, National and International Invited Teaching and Presentations**

***No presentations below were sponsored by outside entities***

**Regional**

- 2000 Plasma Concentration of CRP and Risk of Ischemic Stroke: The Framingham Study  
BUSM Board of Visitors' Meeting, Office of Development, Boston University School of  
Medicine, Boston, MA
- 2008 Image-guided Patient Selection for Acute Stroke Therapies: Current Guidelines and  
Future Directions / Grand Rounds  
Berkshire Medical Center, Pittsfield, MA
- 2008 Imaging-guided patient selection beyond 3 hours / Symposium  
Making the Stroke Connection/ Symposium, Founders Affiliate, American Heart  
Association, Boston, MA
- 2009 Stroke Connection: Acute Stroke and Telestroke Partnership Programs

- Board of Trustees and the Executive Administrative Team, Wentworth Douglas Hospital, Boston, MA
- 2009 Patient Selection for Acute Stroke Therapies: Current Guidelines and Future Directions / Grand Rounds  
South New Hampshire Medical Center, Nashua, NH
- 2009 Acute thrombolysis in stroke: extending the window beyond 3 hours / Grand Rounds  
Martha's Vineyard Hospital, Oak Bluffs, MA
- 2009 Understanding Leukoaraiosis in Patients with Stroke / Grand Rounds  
Department of Neurology, Boston University School of Medicine, Boston, MA
- 2010 IV Thrombolysis in Patients with Acute Stroke and Cardiac Ischemia / Grand Rounds  
Charlton Memorial Hospital, New Bedford, MA
- 2011 Novel Biomarkers of Cerebral Susceptibility to Acute Ischemia / Grand Rounds  
Department of Neurology, Boston University School of Medicine, Boston, MA
- 2012 Novel Biomarkers of Cerebral Susceptibility to Acute Ischemia / Grand Rounds  
Department of Neurology, Yale University School of Medicine, New Haven, CT
- 2013 Novel Biomarkers of Cerebral Susceptibility to Acute Ischemia / Grand Rounds  
Department of Neurology, Brown University, Providence, RI
- 2014 Novel Biomarkers of Cerebral Susceptibility to Acute Ischemia / Grand Rounds  
Department of Neurology, Tufts University, Boston, MA
- 2014 Acute Stroke and Other Cerebrovascular Disease / Seminar  
Neuropsychology/Neuroimaging Lecture Series, Boston VA Hospital, Boston, MA
- 2016 Acute Stroke Interventions: Current Guidelines and Future Directions / Grand Rounds  
Medicine Department, Brigham & Women's Faulkner Hospital, Boston, MA
- 2018 Why White Matter Matters / Seminar  
Neurology Department, Boston University School of Medicine, Boston, MA
- 2019 Cryptogenic Stroke and Embolic Stroke of Unknown Source: Definition and Approach to Management / Presentation and Panel Discussion  
Heart & Rhythm Society Symposium, Boston MA
- 2019 Influence of White Matter Dysfunction on Stroke Outcomes / Grand Rounds  
Neurology Department, Boston University School of Medicine, Boston, MA
- 2020 Expert Panel Discussion, Northeast Cerebrovascular Consortium Summit (Virtual)

## National

- 2000 Plasma Concentration of C-Reactive Protein and Risk of Ischemic Stroke: The Framingham Study (Mordecai Y T Globus Young Investigator Award presentation)  
International Stroke Conference, New Orleans, LA
- 2009 White Matter Hyperintensity Volume is Increased in Small Vessel Stroke (highlighted "Data Blitz" presentation at the Cerebrovascular Disease Special Interest Group)  
American Neurological Association annual meeting, Baltimore, MD
- 2009 Computer-assisted analysis of MRIs in patients with stroke  
Bugher Centers for Stroke Prevention Research workshop, American Stroke Association, Boston, MA
- 2009 GWAS of WMH in Patients with Acute Ischemic Stroke  
Bugher Centers for Stroke Prevention Research workshop, American Stroke Association, Boston, MA
- 2010 Emerging Concepts in Genetics (Integrated Neuroscience Session Moderator)  
American Academy of Neurology Annual Meeting, Toronto, ON
- 2010 Clinical Trials Plenary (Chair)  
American Academy of Neurology Annual Meeting, Toronto, ON
- 2010 Genetic Determinants of White Matter Hyperintensity

In: 'Whole Genome Association Studies in Stroke: Collaboration and the American Stroke Association-Bugher Foundation Centers for Stroke Prevention Model,' Invited symposium, International Stroke Conference, San Antonio, TX

2010 Intracerebral Hemorrhage: Diagnosis (Poster Session Moderator)  
International Stroke Conference, San Antonio, TX

2010 Clinical Trials Plenary (Chair)

2011 Improving Rates of IV tPA for Acute Ischemic Stroke: the Massachusetts Primary Stroke Service Experience, 2004-2008 (selected moderated poster presentation)  
International Stroke Conference, Los Angeles, CA

2011 Acute Stroke/Diagnosis (Oral Abstracts Session Moderator)  
International Stroke Conference, Los Angeles, CA

2011 White matter hyperintensity burden accumulation is accelerated in inherited vs. sporadic disorders of small cerebral vasculature (selected moderated poster presentation)  
International Stroke Conference, Los Angeles, CA

2011 Brain natriuretic peptide predicts functional outcome in ischemic stroke (selected moderated poster presentation)  
International Stroke Conference, Los Angeles, CA

2011 Stroke Across Subspecialties in Neurology (Integrated Neuroscience Session Moderator)  
American Academy of Neurology Annual Meeting, Honolulu, HI  
Cerebrovascular Disease: Acute Stroke (Oral Abstracts Session Moderator)  
American Academy of Neurology Annual Meeting, Honolulu, HI

2011 Clinical Trials Plenary (Chair)  
American Academy of Neurology Annual Meeting, Honolulu, HI

2011 NINDS/ANA Medical Student Workshop (Mentor)  
NINDS Research Career Development Program, Washington, DC

2011 Novel Biomarkers of Cerebral Susceptibility to Acute Ischemia (Grand Rounds)  
Department of Neurology, Albert Einstein University School of Medicine, New York, NY

2011 Research Career Development Symposium for Neurology Residents (Mentor)  
NINDS R25 program, Washington, DC

2012 Vascular Cognitive Impairment (Oral Abstracts Session Moderator)  
International Stroke Conference, New Orleans, LA

2012 Mitochondrial Diseases in Neurology (Integrated Neuroscience Session Moderator)  
American Academy of Neurology Annual Meeting, New Orleans, LA

2012 Evaluating the Causes and Effects of Stroke (Oral Abstracts Session Moderator)  
American Academy of Neurology Annual Meeting, New Orleans, LA

2012 Frontiers in Translational Neuroscience Plenary (Chair)  
American Academy of Neurology Annual Meeting, New Orleans, LA

2012 Clinical Trials Plenary (Chair)  
American Academy of Neurology Annual Meeting, New Orleans, LA

2012 Genetic variants associated with severity of leukoaraiosis predict ischemic stroke risk (Selected Poster Interview)  
American Neurological Association, Boston, MA

2013 Emergent Care/Acute Stroke Systems (Oral Abstract Session Moderator)  
International Stroke Conference, Honolulu, HI

2013 Acute Stroke (Integrated Neuroscience Session Moderator)  
American Academy of Neurology Annual Meeting, San Diego, CA

2013 Frontiers in Translational Neuroscience Plenary (Chair)  
American Academy of Neurology Annual Meeting, San Diego, CA

2013 Clinical Trials Plenary (Chair)  
American Academy of Neurology Annual Meeting, San Diego, CA

- 2013 Atrial Fibrillation and Stroke: Rapid Evolution of Treatment Opportunities  
American College of Cardiology, San Francisco, CA
- 2013 New Advances in Diagnosis and Management of Ischemic Stroke (Grand Rounds)  
Holy Cross Hospital, Ft. Lauderdale, FL
- 2013 Novel Biomarkers of Cerebral Susceptibility to Acute Ischemia (Grand Rounds)  
Department of Neurological Sciences, Rush University, Chicago, IL
- 2014 Brain Susceptibility to Acute Ischemia (Webinar)  
StrokeNET/SPOTRIAS Network, Cincinnati, OH
- 2014 Treating Stroke in the Field: Lessons from the First Generation of Prehospital Stroke  
Trials (Invited Symposium Moderator)  
International Stroke Conference, San Diego, CA
- 2014 Preventive Strategies (Oral Abstract Session Moderator)  
International Stroke Conference, San Diego, CA
- 2014 Contemporary Clinical Issues Plenary (Chair)  
American Academy of Neurology Annual Meeting, Philadelphia, PA
- 2014 Clinical Trials Plenary (Chair)  
American Academy of Neurology Annual Meeting, Philadelphia, PA
- 2014 Cerebrovascular Disease and Interventional Neurology: Hemorrhage, Aneurysms, and  
Vascular Malformations (Oral Abstract Session Moderator)  
American Academy of Neurology Annual Meeting, Philadelphia, PA
- 2014 Novel Biomarkers of Cerebral Susceptibility to Acute Ischemia (Grand Rounds)  
Department of Neurology, University of California, San Francisco, CA
- 2014 Small Vessel Phenotype: Lumping, Splitting, Reimaging (Lunch Workshop)  
American Neurological Association, Baltimore, MD
- 2015 New Antithrombotic Agents in Stroke Prevention (Integrated Neuroscience Session  
Moderator)  
Breakthroughs in Neurology Conference, American Academy of Neurology, Phoenix,  
AZ
- 2015 Controversies in Neurology Plenary (Chair)  
Breakthroughs in Neurology Conference, American Academy of Neurology Phoenix,  
AZ
- 2015 Year in Review Plenary (Chair)  
Breakthroughs in Neurology Conference, American Academy of Neurology, Phoenix,  
AZ
- 2015 Novel Biomarkers of Brain Susceptibility to Acute Ischemia (Grand Rounds)  
Department of Neurology, Northwestern University, Chicago, IL
- 2015 Novel Biomarkers of Cerebral Susceptibility to Acute Ischemia  
Distinguished Lecturer, Oklahoma Center for Neurosciences Seminar Series,  
Oklahoma University, Oklahoma City, OK
- 2015 Enhanced Resident Leadership Program (Discussion Leader)  
American Academy of Neurology Annual Meeting, Washington, DC
- 2015 Invited Science: Stroke (Chair)  
American Academy of Neurology Annual Meeting, Washington, DC
- 2015 Clinical Trials Plenary (Chair)  
American Academy of Neurology Annual Meeting, Washington, DC
- 2015 Innovations Room Series: Presenting Your Science (Session Co-Lead)  
American Academy of Neurology Annual Meeting, Washington, DC
- 2016 Controversies in Neurology Plenary (Chair)  
Breakthroughs in Neurology Conference, American Academy of Neurology, Orlando,  
FL
- 2016 Asymptomatic Intracranial Vascular Malformations



- In: Challenges in Managing Incidental and Asymptomatic Cerebrovascular Lesions  
Integrated Neuroscience Session, Breakthroughs in Neurology Conference, American  
Academy of Neurology, Orlando, FL
- 2016 White Matter Disease: Advances in Understanding and Treatments  
In: Asymptomatic Cerebrovascular Lesions: Emerging Insights Guiding Understanding  
and Management Integrated Neuroscience Session, Breakthroughs in Neurology  
Conference, American Academy of Neurology, Orlando, FL
- 2016 Brain Susceptibility to Acute Ischemia: From Biomarkers to Mechanisms (Grand  
Rounds)  
Department of Neurology, University of Miami, Miami, FL
- 2016 R25 Research Education Program for Residents and Fellows Workshop (Investigator  
Panel)  
NINDS, National Institutes of Health, Bethesda, MD
- 2016 Patient Selection Pathways in Acute Stroke Intervention (Keynote Address)  
Elaine J. Skalabrin Stroke Symposium, University of Utah, Salt Lake City, UT
- 2016 Why White Matter Matters? (Stroke Science Breakout Session),  
Elaine J. Skalabrin Stroke Symposium, University of Utah, Salt Lake City, UT
- 2016 Future Directions and Challenges in Stroke Team Action Therapy (Integrated  
Neuroscience Session Moderator)  
American Academy of Neurology, Vancouver, BC
- 2016 Clinical Trials Plenary (Chair)  
American Academy of Neurology, Vancouver, BC
- 2016 Hyperacute Stroke: All That On-Call Neurologists Need to Know  
In: Update on Medical Management of Stroke Course, American Academy of  
Neurology Annual Meeting, Vancouver, BC
- 2016 Difficult Decision-Making in Acute Stroke: Tools and Resources for Management of  
Unstable Patients  
In: Update on Medical Management of Stroke Course, American Academy of  
Neurology Annual Meeting, Vancouver, BC
- 2016 Stroke  
In: Neurology Update Course, Fall Conference, American Academy of Neurology, Las  
Vegas, NV
- 2016 Continuum: Test Your Knowledge  
In: Neurology Update Course, Fall Conference, American Academy of Neurology, Las  
Vegas, NV
- 2016 Neuroimaging Approach to Hyperacute Stroke Diagnosis (Session Moderator)  
3rd International Symposium on Collaterals to the Brain, UCLA, Los Angeles, CA
- 2016 Statins Augment Small Vessel Function and Clinical Outcomes in Acute Ischemic  
Stroke (SALVO) study  
Stroke Staff Research Seminar, University of Utah, Salt Lake City, UT
- 2017 New Tools to Predict Functional Outcomes after Stroke  
Breakthroughs in Neurology Conference, American Academy of Neurology, Phoenix,  
AZ
- 2017 Women in Leadership (Invited Panel)  
Leadership University of the American Academy of Neurology, Phoenix, AZ
- 2017 Curbside Consults: Stroke (Expert Presenter)  
American Academy of Neurology Annual Meeting, Boston, MA
- 2017 Hyperacute Stroke: All That On-Call Neurologists Need to Know  
In: Update on Medical Management of Stroke Course, American Academy of  
Neurology Annual Meeting, Boston, MA
- 2017 Difficult Decision-Making in Acute Stroke: Tools and Resources for Management of  
Unstable Patients

- In: Update on Medical Management of Stroke Course, American Academy of Neurology Annual Meeting, Boston, MA
- 2017 Presidential Plenary Session (Chair)  
American Academy of Neurology Annual Meeting, Boston, MA
- 2017 Contemporary Clinical Issues in Neurology Plenary (Chair)  
American Academy of Neurology Annual Meeting, Boston, MA
- 2017 Clinical Trials Plenary (Chair)  
American Academy of Neurology Annual Meeting, Boston, MA
- 2017 Statins Augment Small Vessel Function and Clinical Outcomes in Acute Ischemic Stroke (SALVO) study  
Stroke Staff Research Seminar, Stanford University, CA
- 2017 Collateral Research in Scandinavian Countries (Session Moderator)  
4<sup>th</sup> International Symposium on Collaterals to the Brain, UCLA, Los Angeles, CA
- 2018 Recent Genetic Conditions in Stroke (Invited Symposium Moderator)  
International Stroke Conference, Los Angeles, CA
- 2018 Hot Topics Plenary (Chair)  
Breakthroughs in Neurology Conference, Orlando, FL
- 2018 Presidential Plenary Session (Chair)  
American Academy of Neurology Annual Meeting, Los Angeles, CA
- 2018 Clinical Trials Plenary (Chair)  
American Academy of Neurology Annual Meeting, Los Angeles, CA
- 2018 Hyperacute Stroke: All That On-Call Neurologists Need to Know  
In: Update on Medical Management of Stroke Course, American Academy of Neurology Annual Meeting, Los Angeles, CA
- 2018 Difficult Decision-Making in Acute Stroke: Tools and Resources for Management of Unstable Patients  
In: Update on Medical Management of Stroke Course, American Academy of Neurology Annual Meeting, Los Angeles, CA
- 2018 Team Science  
In: Career Development Symposium, American Academy of Neurology Annual Meeting, Los Angeles, CA
- 2018 The BRAIN (Brain Research through Advancing Innovative Neurotechnologies) Initiative, NINDS/AAN Invited Science Session (Moderator), American Academy of Neurology Annual Meeting, Los Angeles, CA
- 2018 Combining Clinical and Research Career in Neuroscience Symposium (Invited Panel)  
National Institutes of Health/National Institutes of Neurological Disorders and Stroke, Bethesda, MD
- 2018 Neuroimaging (Session Chair)  
International Stroke Genetics Consortium Workshop, Washington, DC
- 2019 Influence of White Matter Dysfunction on Stroke Outcomes/Grand Rounds  
Neurology Department, Johns Hopkins University, Baltimore, MD
- 2020 Overview and Scientific Objectives of DISCOVERY (Oral Presentation)  
In: The DISCOVERY Network: Invited Symposium, International Stroke Conference, Los Angeles, CA
- 2020 In Search of Brain Resilience in Stroke: A Road to DISCOVERY/Grand Rounds,  
Neurology Department, University of Pennsylvania, Philadelphia, PA (Virtual)
- 2021 The Future of Stroke is Discovery/Key Note Address (Virtual)  
The Future of Stroke Symposium, Houston Methodist Neurologic Institute, Houston, Tx
- 2021 Determinants of Incident Stroke Cognitive Outcomes and Vascular Effects on Recovery, MarcVCID Annual Symposium (Virtual)
- 2021 DISCOVERY: Overview and Scientific Objectives,

- In: Post-Stroke Cognitive Impairment and Dementia – A Global Effort, International Stroke Conference (Virtual)
- 2021 In Search of Brain Resilience In Stroke: A Road to DISCOVERY/Grand Rounds, Department of Neurology, Albert Einstein College of Medicine (Virtual)
- 2021 Top Science Conference (Presenter), American Academy of Neurology Annual Meeting (Virtual)
- 2021 Hot Topics Plenary: COVID-19 (Chair, Drs. Fauci & Koroshetz session), American Academy of Neurology Annual Meeting (Virtual)
- 2021 Presidential Plenary (Chair)/Fireside Chat (Moderator) American Academy of Neurology Annual Meeting (Virtual)
- 2022 In Search of Brain Resilience In Stroke: A Road to DISCOVERY/Grand Rounds, Department of Neurology, Ohio State University (Virtual)
- 2022 Presidential Plenary (Chair)/Fireside Chat (Moderator) American Academy of Neurology Annual Meeting, Seattle, WA
- 2022 In Search of Brain Resilience In Stroke: A Road to DISCOVERY/Grand Rounds, Department of Neurology, University of Maryland (Virtual)
- 2022 In Search of Brain Resilience In Stroke: A Road to DISCOVERY, Stroke Grand Rounds, University of Texas-Houston (Virtual)
- 2022 In Search of Brain Resilience In Stroke: A Road to DISCOVERY/Grand Rounds, Clinical Neuroscience, National Institute of Neurological Disorders and Stroke
- 2022 In Search of Brain Resilience In Stroke: A Road to DISCOVERY/Grand Rounds, Neurology Department, University of Chicago (Virtual)
- 2022 The AAN's Vision for the Future of Brain Health/Invited Speaker, The Inaugural AAN Brain Health Summit, Washington, DC
- 2023 DISCOVERY: Baseline Characteristics Of The First 1,000 Study Participants, Late-Breaking Science (Oral Presentation), 2023 ISC (Dallas, TX)
- 2023 Chronological versus Biological Age: Assessing the Biology of Frailty, Invited Symposium, 2023 ISC (Dallas, TX)
- 2023 Presidential Plenary and Fireside Chat (Moderator), Annual Meeting, American Academy of Neurology, Boston, MA
- 2023 A Global Brain Health Conversation (Panelist), Annual Meeting, American Academy of Neurology, Boston, MA
- 2023 Redefining Brain Health – Advancing Brain Health Equity (Panelist), Annual Meeting, American Academy of Neurology, Boston, MA
- 2023 DISCOVERY Science – Where We Are and Where We Are Going, In: The DISCOVERY Network Annual Meeting, Boston, MA

## International

- 2005 *Neurocritical Care: Intracerebral Hemorrhage* (Grand Rounds)  
Gulf Medical College, Dubai, United Arab Emirates
- 2005 *Acute Ischemic Stroke: Diagnosis and Management* (Grand Rounds)  
Gulf Medical College, Dubai, United Arab Emirates
- 2007 *Genome-Wide Association Study of WMH in Patients with Acute Ischemic Stroke*  
International Stroke Genetics Consortium, Boston, MA
- 2008 *Imaging-Guided Patient Selection for Acute Thrombolysis Within and Beyond 3-hour Treatment Window*  
Jordan University of Science and Technology, King Abdullah II Teaching Hospital, Amman, Jordan
- 2009 *Genome-Wide Association Study of White Matter Hyperintensity in Patients with Acute Ischemic Stroke: A Meta-Analysis*  
International Stroke Genetics Consortium, Munich, Germany

- 2010 *White Matter Hyperintensity Volume is Increased in Small Vessel Stroke*  
International Stroke Genetics Consortium, Cincinnati, OH
- 2011 *Update and Future directions: WMH GWAS Meta-Analysis*  
International Stroke Genetics Consortium, Leuven, Belgium
- 2011 *WMH GWAS Initiative: Meta Analysis and Future Directions*  
International Stroke Genetics Consortium Workshop, Jacksonville, FL
- 2013 *Update from the ISGC Neuroimaging Working Group*  
International Stroke Genetics Consortium, Charlottesville, VA
- 2013 *WMH GWAS Initiative: update and future directions*  
International Stroke Genetics Consortium, Charlottesville, VA
- 2013 *Non-Atherosclerotic Vasculopathy (Session Chair)*  
International Stroke Genetics Consortium, Charlottesville, VA
- 2013 *WMH GWAS Update (Session Chair and Oral Presentation)*  
International Stroke Genetics Consortium, Lund, Sweden
- 2014 *Neuroimaging (Session Chair)*  
International Stroke Genetics Consortium Workshop, Salt Lake City, UT
- 2014 *Neuroimaging and Genetics Interface in Stroke: Where Do We Go from Here?*  
International Stroke Genetics Consortium Workshop, Salt Lake City, UT
- 2014 *Recent NOAC Trials: Considerations in Acute Stroke Prevention and Treatment*  
In: Damage Control: Decisions for Preventing Acute Stroke (Medscape Symposium),  
European Stroke Conference, Nice, France
- 2014 *The ENGAGE AF-TIMI 48 trial: what does it add to our knowledge on NOACs?*  
Advances in AF-related Stroke Prevention (Daiichi-Sankyo Satellite Symposium),  
European Stroke Conference, Nice, France
- 2014 *Report from the Imaging Working Group and Update on the ISGC MRI Repository*  
International Stroke Genetics Consortium, Paris, France
- 2014 *"Genetics of Small Vessel Disease" (Session Chair)*  
International Stroke Genetics Consortium, Paris, France
- 2014 *Genetics of Acute Infarct Lesions*  
International Stroke Genetics Consortium, Paris, France
- 2014 *Efficacy & Safety of Edoxaban vs. Warfarin in High-Risk Patients: ENGAGE AF-TIMI 48*  
World Stroke Congress, Istanbul, Turkey
- 2014 *Does a history of prior stroke affect antithrombotic strategy?*  
In: Keeping an Eye on Thromboembolic Stroke (Medscape Symposium), World Stroke  
Congress, Istanbul, Turkey
- 2014 *Brain White Matter Disease: Why It Matters?*  
International Stroke Symposium, Ribeirão Preto - SP – Brazil
- 2015 *Management of Acute Stroke*  
Ukrainian Stroke Association, Kiev, Ukraine
- 2015 *MRI-Genetics Interface Exploration (MRI-GENIE) study*  
International Stroke Genetics Consortium, Hamilton, Ontario, Canada
- 2015 *"Imaging Genetics" (Session Chair)*  
International Stroke Genetics Consortium, Hamilton, ON
- 2015 *Stroke Subtypes: Clinical Significance in Diagnosis and Treatment*  
Ukrainian National Stroke Meeting, Kiev, Ukraine
- 2015 *"Neuroimaging Genetics" (Session Chair and Oral Presentation)*  
International Stroke Genetics Consortium, Barcelona, Spain
- 2016 *Genetics of Neuroimaging: A Working Group Update*  
International Stroke Genetics Consortium, Boston, MA
- 2016 *Imaging Working Group: Phenotypes and Advanced Approaches (Session Chair)*  
International Stroke Genetics Consortium, Boston, MA

- 2016 *MRI-GENetics Interface Exploration: Epidemiological Approaches to Clinical MRI*  
2<sup>nd</sup> Annual Neuroepiomics Course, Boston MA/Bordeaux, France
- 2016 *Genetics of Neuroimaging Cerebrovascular Phenotypes* (Session Chair)  
International Stroke Genetics Consortium, Milan, Italy
- 2017 *Neuroimaging of Small Vessel Disease: Evidence for Reliability and Reproducibility, and Implications for Multicentre Studies*  
HARNESS (*Harmonising Brain Imaging Methods for Vascular Contributions to Neurodegeneration*) Consortium conference, Toronto, Canada
- 2017 *Small Vessel Disease: Imaging, Treatment, Prognosis*  
19<sup>th</sup> Nordic Congress on Cerebrovascular Disease, Aarhus, Denmark
- 2017 *The New Acute Stroke Era: State-of-the-Art and Future Directions*  
19<sup>th</sup> Nordic Congress on Cerebrovascular Disease, Aarhus, Denmark
- 2017 “*Neuroimaging*” (Session Chair)  
International Stroke Genetics Consortium, Utrecht, NL
- 2018 *Women In Stroke Leadership Symposium* (Speaker)  
European Stroke Organization Conference, Gothenburg, Sweden
- 2018 *RABEP2 is associated with ischemic stroke phenotypes: a translational replication study*  
(Oral presentation), European Stroke Organization Conference, Gothenburg, Sweden
- 2018 *Influence of white matter dysfunction on the outcomes of stroke patients* (Oral presentation), In: *Small Vessel Diseases & Cerebral Microbleeds* (Invited Symposium)  
World Stroke Congress, Montreal, CAN
- 2019 *Artificial Intelligence for Clinical Research: Are We Ready?* (Oral Presentation), In: *Artificial Intelligence* (Invited Symposium, Stroke Think Tank, 18<sup>th</sup> Annual Scientific Meeting, The Florey Institute of Neuroscience and Mental Health, San Remo, AUS
- 2020 *Scientific Objectives of DISCOVERY* (Oral Presentation), In: *Cognitive impacts: aging, polygenic risk scores and cerebral small vessel disease*, Virtual Mini-Workshop, International Stroke Genetics Consortium
- 2020 *Why White Matter Matters?* (Invited Seminar), The Neuroscience and Mental Health Institute, University of Alberta, Edmonton, CAN (Virtual)
- 2020 *Understanding Brain Resilience in Stroke* (Neuroscience Rounds, George Monckton Lecture Series, University of Alberta, Edmonton, CAN (Virtual)
- 2020 *The Evolution from Clinician To Researcher* (Oral Presentation), In: *Navigating Career Transitions* (Seminar), European Stroke Organization Conference, Vienna, AUT (Virtual)
- 2021 *The Future of Stroke is Discovery* (Key Note Address),  
In: *Evidence-Based Neurology*, Society of Evidence-Based Neurology, Russia (Virtual)
- 2021 *Diagnosis and Acute management of Lacunar Infarcts* (Oral Presentation),  
In: *Stroke Update 2021*, Ukrainian Stroke Association (Virtual)
- 2021 VCI: when and how to screen in clinical practice? (Oral presentation)  
In: *Vascular Cognitive Impairment*, World Stroke Congress (Virtual)
- 2022 *The Future of Brain Health – the AAN Prospective* (Invited Speaker)  
In: *Brain Health collaborative Event/Roux Prize*, IHME, Guildhall, London, UK
- 2023 *DISCOVERY: Sceinctific Rationale and Insights from the First 1,000 Participants*  
Keynote, In: *International Stroke Genetics Consortium Workshop*, Melbourne, AUS
- 2023 *Post-Stroke Cognitive Impairment and Dementia*/Invited Speaker,  
European Stroke organization/Ukrainian Stroke Society Series (Virtual)

## **Report of Clinical Activities and Innovations**

### **Current Licensure and Certification:**

2002	ACLS
2005 -	Massachusetts Medical License
2007 -	New Hampshire Medical License (Telestroke)
2008 -	Maine Medical License (Telestroke)
2007, 2017	Neurology Certification, American Board of Psychiatry and Neurology
2008, 2017	Vascular Neurology Certification, American Board of Psychiatry and Neurology

### **Practice Activities:**

2007 -	Ambulatory care	Stroke/Vascular Neurology, MGH	2 half-day sessions/month
2007 -	Inpatient attending	Stroke Neurology (CMF) Inpatient Service, MGH	6-8 weeks/year
2007 -	Inpatient consult attending	Stroke/ICU Neurology Consult Service, MGH	2 weeks/year
2007 -	Diagnostic interpretation	Cerebrovascular ultrasound (carotid and transcranial), Vascular Center, MGH	13 weeks/year
2007 -	Attending	Acute Stroke Service, MGH	1 full day/week
2007 -	Attending	Telestroke/Emergency Teleneurology Program, MGH	1 full day/week

### **Clinical Innovations:**

“ED2CT”: The MGH Acute Stroke Alert system (2008- )	“ED2CT” is a unique virtual group alert system, which facilitates the emergency acute stroke response in the MGH Emergency Department, streamlines communication between multi-disciplinary hospital services and departments involved in the diagnosis, and coordinates rapid treatment response. I was responsible for the design and implementation of this this quality improvement (QI) project for emergency diagnosis and management of acute stroke at MGH.
EMS Post-IV tPA Transfer Protocol (2009)	This protocol was developed to assure the safety of patients receiving intravenous thrombolysis (IV tPA) at the outside hospitals and being transferred for further evaluation and management to MGH or other hospitals in Massachusetts. In collaboration with the Massachusetts Department of Public Health, I developed the “EMS Post-IV tPA Transfer Protocol,” which was implemented in the state of Massachusetts as a mandatory clinical protocol for all post-IV tPA patients sent by the critical care transport or by ALS to assure patient safety <i>en route</i> to the Primary Stroke Center. The protocol and a corresponding checklist are now a part of standard EMS stroke packet in MA.
“Likely to Benefit” protocol (2011)	This protocol is intended to guide selection of patients with acute ischemic stroke for intra-arterial (endovascular) therapies. In collaboration with the members of the MGH Acute Stroke Service, I spearheaded a systematic review and QA program for improving care and outcomes of patients with acute ischemic stroke and indication for endovascular intervention. As result, the MGH’s “Likely to Benefit” protocol was developed and implemented through the efforts of the multi-disciplinary team.

“Dr. Foster, Stroke-GOAL” (2012)	As the MGH Lead on this international stroke QA collaboration, “Dr. Foster, Stroke-GOAL” I have spearheaded a prospective pilot of functional post-stroke outcome assessment of all consecutive MGH patients admitted with acute ischemic stroke using modified Rankin Scale score at 30 and 90 days after their admission. I have assembled, trained, and supervised a team of clinical research staff, who obtained the outcome scores. This project demonstrated demonstrate feasibility and applicability of these outcome measures across the international communities.
Pre-hospital alert: EMS notification of acute stroke (2013)	This project aimed to improve pre-hospital alert system by EMS for acute stroke. As part of the MGH Acute Stroke Quality Taskforce, I have developed and supervised a <i>prospective pilot of pre-hospital notification of acute stroke by EMS</i> . This project builds the foundation for improvement of communication between EMS and the Emergency Department/Acute Stroke Service, with the goal to improve quality of care for patients with acute stroke.
The Acute Stroke Care Unit (2014)	As part of the MGH Stroke Care Redesign Initiative, I have led a multi-disciplinary taskforce that developed, tested, and implemented the Acute Stroke Care Unit, a highly innovative acute stroke care model that allowed for a safe and effective management of the patients receiving IV thrombolysis in the specialized floor setting, as compared to the Neuro-ICU.
Emergency Department Acute Stroke Protocol for Thrombolysis (2014)	This protocol details the process of Emergency Department diagnosis and management of patients with acute stroke in preparation, during, and following administration of IV tPA. As Chair of the MGH Acute Stroke Quality Taskforce, I have led the effort to revise and update this protocol to ensure systems compliance and multi-disciplinary process quality assurance.
In-House Acute Stroke Protocol (2014)	This protocol details the process of In-House diagnosis and management of patients with acute stroke in preparation, during, and following administration of IV tPA. As Chair of the MGH Acute Stroke Quality Taskforce, I have led the effort to revise and update this protocol to ensure systems compliance and multi-disciplinary process quality assurance.
Protocol for Patient Selection for Endovascular Therapy (2015)	This protocol details the process of diagnosis and management of patients with acute stroke in consideration for endovascular therapy. I have led the effort to revise and update this protocol to ensure systems compliance and multi-disciplinary process quality assurance.
“LVO2OR” protocol (2016)	As Chair of the MGH Acute Stroke Quality Taskforce, I have led the multidisciplinary, multi-departmental LVO2OR taskforce to develop and implement a process that facilitates access to endovascular therapy (IAT) for acute stroke patients with large vessel occlusion (LVO) by directly admitting them to the MGH Operating Room (OR) to by-pass the hospital capacity challenge. In collaboration with Dr. Leslie-Mazwi (Neuroendovascular Lead), MGH Nursing leadership, and OR leadership, we have developed and implemented a protocol for triage and admission of the “ <i>proven to benefit</i> ” LVO patients from the pilot hospitals directly to OR for IAT.
The Joint Commission Comprehensive Stroke Center certification (2017)	The Joint Commission has named MGH as the first Comprehensive Stroke Center (CSC) in the state of Massachusetts. This certification is designed to recognize the specific capabilities of hospitals that can treat the most complex stroke case, and demonstrates MGH’s continuous commitment to advancing the care of stroke patients in Boston, New England and nationwide. I have played an instrumental role in planning and preparation for the CSC certification. During this process, I have transformed the Acute Stroke Quality Taskforce into Comprehensive Stroke Quality Taskforce

(CSQT), which required strategic planning for innovation in operations and expansion of the multidisciplinary expertise and multiservice collaboration for high-quality, comprehensive stroke care. I spearheaded the CSC core group operations, including supervision of the quality compliance staff, oversight of the CSQT work groups in Quality Assessment/Practice Improvement (QAPI) process, clinical practice guidelines development and dissemination, communications campaign, and competencies of the MGH CSC medical staff. I have also served as a Clinical Lead during the Joint Commission Survey, and in this leadership capacity, I guided this innovative, one-of-kind in the state of Massachusetts Stroke Program to success.

## **Report of Education of Patients and Service to the Community**

***No presentations below were sponsored by outside entities***

### **Activities**

2008	Partners Health and Fitness Expo / Volunteer Physician (MGH Vascular Center)
2008	" <i>Neurology on the Hill</i> " / Patient Advocate (American Academy of Neurology)
2010 -	Brain Health Fair / Volunteer (American Academy of Neurology)
2012	"Power To End Stroke" / Physician Lead (American Heart Association)
2012	"Stroke and Heart Disease" State Street's Italian Employee Network / Panel Discussant (American Heart Association)
2014	"Acute Stroke Evaluation," Clinical Community Outreach Initiative for the Revere High School / MGH Institute for Heart, Vascular, and Stroke Care
2014	"Together To End Stroke," Stroke Lobby Day, Massachusetts State House / Speaker (American Heart Association)
2014	"Stroke Prevention, Treatment, and Recovery," Fox Hill Seniors Community / Speaker (MGH Institute for Heart, Vascular, and Stroke Care)
2015	"Acute Stroke Advances," at the 10 <sup>th</sup> Anniversary of the Tedy's Team / Speaker (American Heart Association/ American Stroke Association)
2015	"Young Women and Stroke," at the 2015 World Stroke Day event / Speaker (American Heart Association/ American Stroke Association)
2016	"AHA Mission Moment: Focus on Stroke," Boston AHA Board meeting / Speaker (American Heart Association/ American Stroke Association)
2017	"Together We Can Beat Stroke," at the 2017 Boston Heart & Stroke Ball (American Heart Association/ American Stroke Association)
2019	"Stroke in Women," at the 2019 Go Red For Women Inaugural Galentine's Day Tea, Panel and Discussion (American Heart Association/ American Stroke Association)
2021	"Understanding Stroke," Mass General Brigham-YouTube Educational Initiative

### **Educational Material for Patients and the Lay Community:**

#### ***Books, monographs, articles and presentations in other media (that educate the public about medicine, health or biomedical sciences)***

2008	<i>You've Had a Transient Ischemic Attack: Now What?</i>	Expert (interview by Susan Jimison Vitek)	"Mind, Mood, and Memory" magazine
2009	<i>Heading Off a Second Stroke</i>	Expert (interview by Susan Jimison Vitek)	"Mind, Mood, and Memory" magazine



2010	Stroke: Preventing and treating "brain attack"	Kistler JP and <b>Rost NS</b> (Medical Editors)	A Harvard Medical School Special Health Report. 2010; Boston, MA.
2013	<i>What's Hot in Science at AAN 2013?</i>	Expert (interview by Susan Jeffrey)	"Medscape"
2013	<i>Eight things you can do to prevent stroke</i>	Expert (interview by Stephanie Watson)	"Harvard Women's Health Watch"
2013	<i>Strokes still largely misunderstood</i>	Expert (interview by Karen Miller)	"Bay State Banner"
2013	<i>Healthier habits reduce stroke risk factors</i>	Expert (interview by Karen Miller)	"Bay State Banner"
2013	<i>Mini-Stroke: What Should You Do?</i>	Expert (interview by Stephanie Watson)	"Harvard Women's Health Watch"
2014	<i>What's Hot in Science at AAN 2014?</i>	Expert (interview by Susan Jeffrey)	"Medscape"
2014	<i>AAN Top Research To Watch</i>	Lead (press conference)	Press Corps
2014	<i>Do You Know the Symptoms of a Stroke?</i>	Expert (interview by Heidi Godman)	"Harvard Health Letter"
2014	<i>Blood Thinners and Your Brain</i>	Expert (interview by Susan Jimison Vitek)	"Mind, Mood, and Memory" magazine
2015	<i>What's Hot in Science at AAN 2015?</i>	Expert (interview by Susan Jeffrey)	"Medscape"
2015	<i>AAN Top Research To Watch</i>	Lead (press conference)	Press Corps
2015	<i>Prospective: CADISS trial</i>	Expert (review by Erik Swain)	"Cardiology Today"
2015	<i>Mild strokes and outcomes</i>	Author commentary (by Jacob Remaly)	"Neurology Today"
2015	<i>Stroke in Women</i>	Expert (interview by Beverly Merz)	"Harvard Women's Health Watch"
2015	Stroke: Diagnosing, treating, and recovering from a "brain attack"	<b>Rost NS</b> and Black-Shaffer RM (Medical Editors)	A Harvard Medical School Special Health Report. 2015; Boston, MA
2016	<i>What's Hot in Science at AAN 2016?</i>	Expert (interview by Susan Jeffrey)	"Medscape"

2016	<i>Why you should heed a mini-stroke</i>	Expert (interview by Beverly Mertz)	“Harvard Women’s Health Watch”
2016	<i>Protect yourself from TIA</i>	Expert (interview by Matthew Solan)	“Harvard’s Men’s Health Watch”
2016	<i>AAN Top Research To Watch</i>	Lead (press conference)	Press Corps
2016	<i>Options for Acute Stroke Evolving Rapidly With New Standards for Optimal Management</i>	Expert (interview by Glenn Williams)	Neurology Reviews, MedPage
2017	<i>AAN Top Science</i>	Lead (press conference)	Press Corps
2017	<i>When a Pain in the Neck is Serious (A tear in the main neck arteries is a rare cause of stroke)</i>	Expert (interview by Julie Corliss)	“Harvard Heart Letter”
2018	<i>When a Stroke Strikes</i>	Expert (interview by Julie Corliss)	“Harvard Heart Letter”
2018	<i>AAN Top Science</i>	Lead (press conference)	Press Corps
2018	Stroke: Strategies to prevent, treat, and recover from a “brain attack”	<b>Rost NS</b> and Black-Shaffer RM (Medical Editors)	A Harvard Medical School Special Health Report. 2018; Boston, MA
2019	<i>AAN Top Science</i>	Lead (press conference)	Press Corps
2019	<i>More Young Americans Suffering Strokes</i>	Expert (interviewed by Alexi Cohan)	“Boston Herald”
2023	<i>Brain Health</i>	Expert (interviewed by Autria Godfrey)	AAN TV
2023	<i>Highlights From the 2023 AAN Conference</i>	Expert (interviewed by Revital Marcus)	JAMA Podcast

## **Report of Scholarship**

**Peer-Reviewed Scholarship in print or other media:**

**Research Investigations**

1. **Rost NS**, Wolf PA, Kase CS, Kelly-Hayes M, Silbershatz H, D'Agostino RB, Franzblau C and Wilson PWF. Plasma Concentration of C-Reactive Protein and Risk of Ischemic Stroke and TIA: The Framingham Study. *Stroke*. 2001; **32**: 2575-2579.
2. Rosand J, Bayley N, **Rost NS**, deBakker PIW. Many Hypotheses but No Replication for the Association between PDE4D and Stroke. *Nature Genetics* 2006; **38**:1091-1012.
3. FitzMaurice E, Wendell L, Snider RW, Schwab K, Chanderraj R, Kinnecom C, Nandigam K, **Rost NS**, Viswanathan A, Rosand J, Greenberg SM, Smith EE. Effect of statins on intracerebral hemorrhage outcome and recurrence. *Stroke* 2008; **39**: 2151-2154.
4. **Rost NS**, Smith EE, Chang, Y Snider RW, Chanderraj R, Schwab K, FitzMaurice E, Wendell L, Goldstein JN, Greenberg SM, Rosand J. Prediction of Functional Outcome in Patients with Primary Intracerebral Hemorrhage: The FUNC Score. *Stroke* 2008; **39**:2304-2309.
5. Goldstein JN, Fazen LE, Wendell L, Chang Y, **Rost NS**, Snider RW, Schwab K, Chanderraj R, Kabrhel C, FitzMaurice E, Smith EE, Greenberg SM, Rosand J. Risk of Thromboembolism Following Acute Intracerebral Hemorrhage. *Neurocrit Care* 2009; **10**:28-34.
6. Kumar MA, **Rost NS**, Snider RW, Chanderraj R, Greenberg SM, Smith EE, Rosand J. Anemia and Hematoma Volume in Acute Intracerebral Hemorrhage. *Crit Care Med* 2009; **37**:1442-1447.
7. Arsava EM, Rahman RM, Rosand J, Lu J, **Rost NS**, Smith EE, Singhal AB, Lev MH, Furie KL, Koroshetz WJ, Sorensen AG, Ay H. Severity of Leukoaraiosis Correlates with Clinical Outcome After Ischemic Stroke. *Neurology* 2009; **72**:1403-1410.
8. Kimberly WT, Gilson A, **Rost NS**, Rosand J, Viswanathan A, Smith EE, Greenberg SM. Silent Ischemic Infarcts are Associated with Increased Hemorrhage Burden in Cerebral Amyloid Angiopathy. *Neurology* 2009; **72**:1230-1235.
9. Jimenez-Conde J, Biffi A, Rahman R, Kanakis A; Butler C, Massasa E, Cloonan L, Gilson A, Capozzo K, Cortellini L, Ois A, Cuadrado-Godia E, Rodriguez-Campello A, Furie KL, Rosand J, Roquer J, **Rost NS**. Hyperlipidemia and Reduced White Matter Hyperintensity Volume in Patients with Ischemic Stroke. *Stroke* 2009; **41**: 437-442.
10. **Rost NS**, Masrur S, Pervez M, Schwamm L. Unsuspected Coagulopathy Rarely Prevents IV Thrombolysis in Acute Ischemic Stroke. *Neurology* 2009; **73**: 1957-62.
11. Pervez MA, Silva G, Masrur S, Betensky R, Furie K, Renzo H, Lima F, Rosenthal E, **Rost NS**, Viswanathan A, Schwamm LH. Remote Supervision of IV-tPA for Acute Ischemic Stroke by Telemedicine or Telephone Prior to Transfer to a Regional Stroke Center is Feasible and Safe. *Stroke* 2010; **41**(1): e18-24.
12. Anderson CD, Biffi A, **Rost NS**, Cortellini L, Furie KL, Rosand J. Chromosome 9p21 In Ischemic Stroke: Population Structure and Meta-Analysis. *Stroke*. 2010; **41**:1123-31.
13. **Rost NS**, Rahman R, Sonni S, Kanakis A, Butler C, Massasa E, Cloonan L, Gilson A, Delgado P, Chang Y, Biffi A, Jimenez-Conde J, Besanger A, Silva G, Smith E, Rosand J, Furie KL. Determinants of White Matter Hyperintensity Volume in Patients with Acute Ischemic Stroke. *J Stroke Cerebrovas Dis* 2010; **19**: 230-235.
14. Thompson B, Caso V, Castillo J, Christensen H, Flaherty M, Foerch C, Ghandehari K, Giroud M, Greenberg S, Hallevy C, Hemphill JC, Heuschmann P, Juvela J, Kimura K, Myint P, Nagakane Y, Passero S, Roquer J, Rosand J, **Rost NS**, Saloheimo P, Sivenius J, Sorimachi T, Togha M, Toyoda K, Turaj W, Vemmos K, Wolfe C, Yanez M, Smith EE. Prior Antiplatelet Therapy and Outcome Following Intracerebral Hemorrhage: Systematic Review and Meta-Analysis of 9,910 Patients. *Neurology* 2010; **75**:1333-1342.

15. **Rost NS**, Rahman RM, Biffi A, Smith E, Arsava EM, Kanakis A, Lima F, Massasa E, Cloonan L, Sonni S, Gilson A, Delgado P, Butler C, Schwab K, Cortellini L, Worrall BB, Meschia JF, Brown RD, Brott TG, Sorensen AG, Greenberg SM, Ay H, Furie KL, Rosand J. White Matter Hyperintensity Volume is Increased in Small-Vessel Stroke. *Neurology* 2010;**75**: 1670-1677.
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17. Biffi A, Sonni A, Anderson CD, Jagiella J, Schmidt H, Jimenez-Conde J, Fernandez I, Cortellini L, Ayres A, Schwab K, Juchniewicz C, Urbanik A, **Rost NS**, Viswanathan A, Seifert T, Montaner J, Kidwell C, Brown D, Silliman S, Selim M, Worrall B, Meschia J, Roquer J, Schmidt R, Greenberg S, Slowik A, Broderick J, Woo D, Rosand J. on behalf of the ISGC. Variants at the APOE Locus Influence Risk of Deep and Lobar Intracerebral Hemorrhage. *Ann Neurol.* 2010; **68**:934-943.
18. Biffi A, Halpin A, Towfighi A, Gilson A, Busl K, **Rost NS**, Smith EE, Greenberg SM, Rosand J, Viswanathan A. Aspirin and recurrent cerebral hemorrhage in cerebral amyloid angiopathy. *Neurology* 2010; **7**:693-698.
19. Anderson CD, Biffi A, Rahman R, Ross OA, Jagiella JM, Kissela B, Cole JW, Cortellini L, **Rost NS**, Cheng YC, Greenberg SM, de Bakker PI, Brown RD Jr, Brott TG, Mitchell BD, Broderick JP, Worrall BB, Furie KL, Kittner SJ, Woo D, Slowik A, Meschia JF, Saxena R, Rosand J; on behalf of the International Stroke Genetics Consortium. Common mitochondrial sequence variants in ischemic stroke. *Ann Neurol.* 2011; **69**:471-480.
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