



What We've Accomplished in the
First 10 years:

Education and Training Core

September 16, 2022

Education and Training Core

- Mission: To develop stroke-related knowledge and skills for RCC trainees through interactive content and mentorship
- Vision: To educate and train our future leaders in stroke research

Education and Training core

- Randolph Marshall (Chair)
- Devin Brown (Co-Chair)
- Scott Janis (NINDS)
- Harold Adams
- Tatjana Rundek
- Cemal Sozener
- Shyam Prabhakaran
- Farhaan Vahidy
- Anthony Kim
- Andrea Escobar (RCC coordinator)
- Stephanie Wilbrand (RCC coordinator)
- Lauri Bishop, U Miami (Trainee)
- Felipe Ayala, U Cincinnati (Trainee)
- *Jeanne Sester (coordinator)*

Education Training Core – Then and Now

- Programming –
 - Grand Rounds Webinar Series
 - Mentored Trainee Research with presentations
 - *Professional Development Webinar Series*
 - *Basic Science Webinars*
 - *Learning Communities*

National Institutes of Health StrokeNet Training Core

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Stephanie M. Wilbrand, PhD; Shyam Prabhakaran, MD; Barbara S. Bregman, PT, PhD;
Harold P. Adams, Jr, MD; Lori C. Jordan, MD, PhD; David S. Liebeskind, MD;
David Tirschwell, MD, MSc; L. Scott Janis, PhD; Randolph S. Marshall, MD, MS;
Dawn Kleindorfer, MD

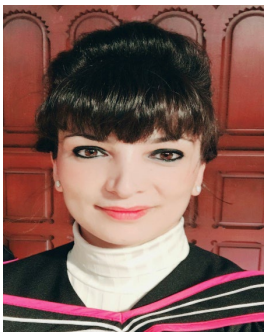
Background and Purpose—The National Institutes of Health (NIH) StrokeNet provides a nationwide infrastructure to advance stroke research. Capitalizing on this unique opportunity, the NIH StrokeNet Training Core (NSTC) was established with the overarching goal of enhancing the professional development of a diverse spectrum of professionals who are embedded in the stroke clinical trials network of the NIH StrokeNet.

Methods—This special report provides a descriptive account of the rationale, organization, and activities of the NSTC since its inception in 2013. Current processes and their evolution over time for facilitating training of NIH StrokeNet trainees have been highlighted. Data collected for monitoring training are summarized. Outcomes data (publications and grants) collected by NSTC was supplemented by publicly available resources.

Results—The NSTC comprises of cross-network faculty, trainees, and education coordinators. It helps in the development and monitoring of training programs and organizes educational and career development activities. Trainees are provided directed guidance towards their mandated research projects, including opportunities to present at the International Stroke Conference. The committee has focused on developing sustainable models of peer-to-peer interaction and cross-institutional mentorships. A total of 124 professionals (43.7% female, 10.5% underrepresented minorities) have completed training between 2013 and 2018, of whom 55% were clinical vascular neurologists. Of the total, 85% transitioned to a formal academic position and 95% were involved in stroke research post-training. Altogether, 1659 indexed publications have been authored or co-authored by NIH StrokeNet Trainees, of which 58% were published during or after their training years. Based on data from 109 trainees, 33% had submitted 72 grant proposals as principal or co-principal investigators of which 22.2% proposals have been funded.

Conclusions—NSTC has provided a foundation to foster nationwide training in stroke research. Our data demonstrate strong contribution of trainees towards academic scholarship. Continued innovation in educational methodologies is required to adapt to unique training opportunities such as the NIH StrokeNet.

Key Words: education ■ National Institutes of Health ■ neurologists ■ organizations ■ stroke



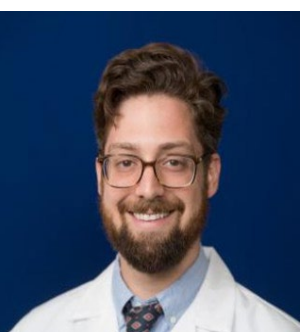
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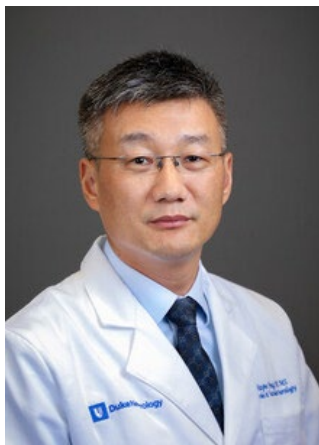
2022-2023 Trainees

Career stage	
Clinical Fellow	15
Junior Faculty	6
Clinical Instructor	1
Post-Doctoral Research Fellow	1
PhD student	1
Non-MD trainee	1
TOTAL	26

Demographics	
Male	15
Female	11
Male Latino/Hispanic	2
Female African American	2

Degrees	
MD	15
MBBS	1
MD, MHS	1
MD, MSc	1
MD, PhD	2
Non MD Trainee	1
PharmD, BCPS	1
PhD	2
PhD, MD, MPT	1
PhD, PT, DPT	1

Disciplines	
Biomedical Engineering	1
Emergency Medicine	2
Emergency Medicine Pharmacist	1
Neurohospitalist	1
Neurologist/ Vascular Neurologist	15
Neuropsychologist	1
Neuroscientist	1
Pediatric Neurologist	1
Physical Therapy	1
Radiology	1
Sciences & Research	1



Wayne Feng, MD



Pam Duncan, PhD



Brett Cucchiara, MD



Anthony Kim, MD



Cemal Sozener, MD



Brad Worrall, MD

2022-2023 Learning Community Group Leaders

Learning Communities

Site	Trainee	Status	Research Interest
Anthony Kim's group			
08 Chicago	Farhan Khan, MD - At Upenn until	Fellow	QI in stroke/TIA, mhealth interventions, ESUS/PFO, PRES
17 Michigan #2	Christopher Becker, MD	Research Fellow	Health services research, optimizing stroke survivorship
18 Minnesota	Dania Qaryouti, MD	Fellow	Healthcare disparities, Telestroke, Endovascular
19 UPENN	Michela Rosso, MD	Fellow	Stroke-heart syndrome, gender differences
20 U. Pittsburgh	Murat Sari, MD	Junior Faculty	COVID-19 and Stroke relation, Healthcare disparities
Brad Worrall's group			
02 Columbia Health Sciences	Chinwe Ibeh, MD	Junior Faculty	Cardioembolic; cognitive impairment in heart failure
11 UCLA	Keiko Fukuda, MD	Fellow	Vascular neurology and interventional neurology
12 UCSD	Ben Alwood, MD	Fellow - PGY5	Imaging for acute stroke treatment, systems of care, dispa
26 University of Alabama Birmingham	Victor A. Del Bene, PhD	Junior Faculty	Vascular risk factors and cognitive decline; neurodegenera
29 Yale University (Southern NE)	Ten J. Peng Zhao, MD	Fellow	Cerebral autoregulation after intracerebral hemorrhage
Brett Cucchiara's group			
10 Stanford	Anirudh Sreekrishnan, MD, MHS	Fellow	Perfusion Imaging, Secondary Stroke Prevention
USC	Trevor Cline, MD	Fellow	Reperfusion therapies of acute ischemic stroke
13 UCSF	Nicole Rosendale, MD	Junior Faculty	Stroke risk factor disparities in sex/gender minority adults
21 Texas	Mohammad Rauf Chaudhry, MBBS	Fellow	Predictors of readmissions among stroke subsites
27 Wake Forest (Western NC)	Mohammad Iyas Kawas, MD, PhD	MD, PhD Student	Neuroimaging structural and functional biomarkers of agin
Cemal Sozener's group			
03 Emory University	Mateus Damiani Monteiro, MD	Fellow	Neurointerventional, Acute Stroke, Neuroimaging
14 UC	Felipe Ayala, MD	Fellow	Large vessel occlusion, acute stroke research, stroke trials
15 Iowa	Anne Zepeski, PharmD, BCPS	Trainee	Anticoagulation reversal in hemorrhagic stroke, DOACs
17 Michigan	Lauren Mamer, MD, PhD	Clinical Instructor	AIS intervention, imaging acquisition, systems of care
22 Utah	Holden Wagstaff, MD	Fellow PGY 4	Improved pre-hospital stroke care through EMS
Pam Duncan's group /Wayne Feng's			
01 Case Western Reserve	Akhil Mohan, PhD	Post-doctoral Fello	Stroke rehabilitation, Brain stimulation, Neurophysiology
04 Massachusetts General	Kenda Alhadid, MD, MSc	Fellow	Cerebrovascular reserve, functional connectivity in pediatri
05 MUSC	Ewan Rhys Williams, PhD, MD, MP	Fellow	Stroke Rehabilitation and Recovery
06 Medstar	Melissa E. Pauling	Trainee	Neuroimaging, stroke recovery/rehabilitation, technology
16 Miami	Lauri Bishop, PhD, PT DPT	Junior Faculty	Locomotor recovery, Motor Learning, Disparities
28 Washington University (MARCC)	Alyssa Smith, MD	Junior Faculty	Neuromodulation after pediatric acquired brain injury

Metrics

- Attendance on Grand Rounds Webinars, Professional Development webinars (mandatory), participation in Learning communities
- Trainee presentations
 - In person/*remote* at national meeting (3)
 - In person/remote on a special, mentored 3-hour session (9)
 - On the Professional Development webinar series (15)
- Survey publications, grant submissions, and professional appointments during and post-StrokeNet training
- Database kept by Jeanne Sester

Professional Development Webinar series

- Trial design
- Grant writing
- How to present your data
- Writing your CV and Biosketch
- Creating a Study budget
- Finding and Negotiating your perfect job
- Work-life balance

Basic Science Webinar series

2017 Atrial Cardiopathy. (ARCADIA) David Tirschwell

2018 Cerebral Hemodynamics (CREST-H) Randy Marshall

2019 The Science Underlying the MOST Trial (MOST) Joe Broderick

2020 Pediatric Stroke (FOCAS) Heather Fullerton

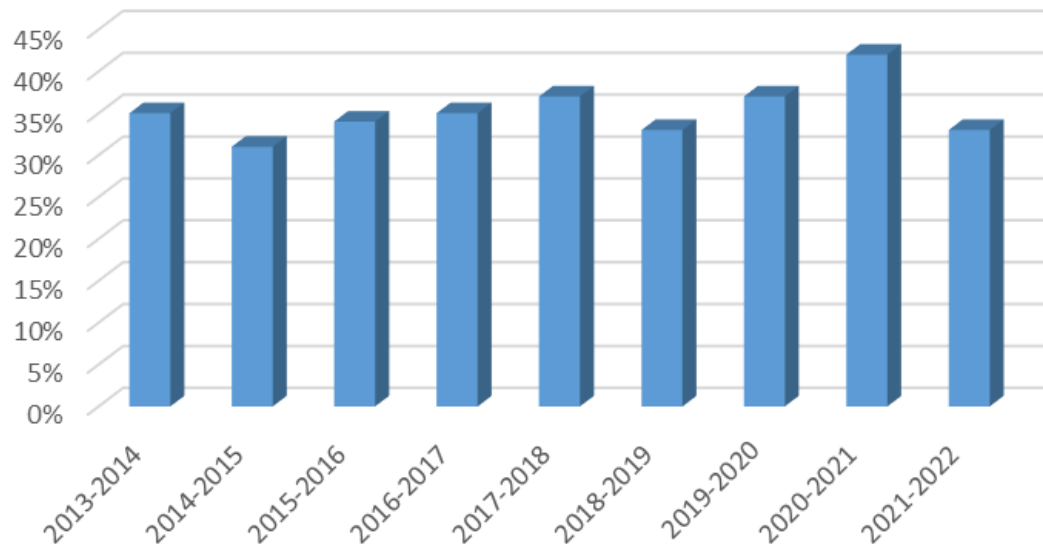
2021 Stroke Genetics (ARCADIA G) Dana Leifer

2022 Intracranial Athero and Vascular Remodeling (CAPTIVA) Jose Gutierrez

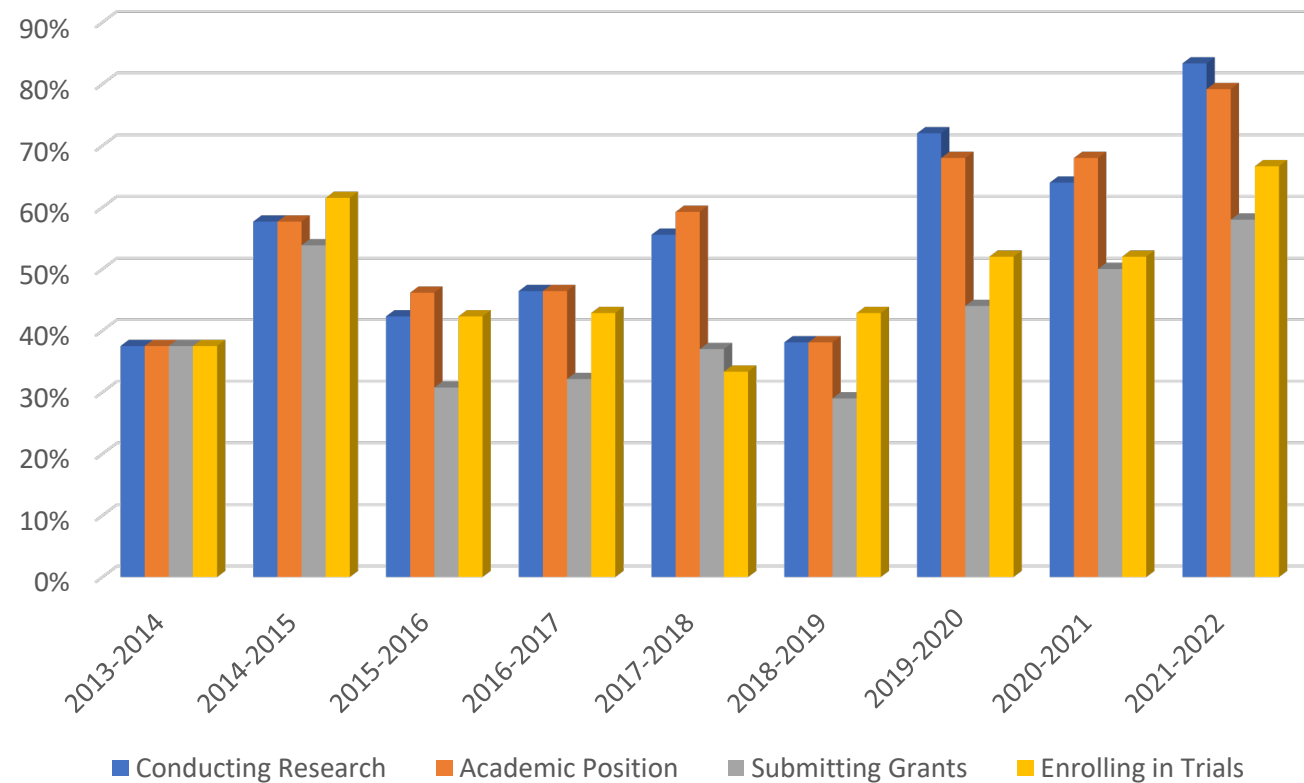
2022 Neuromodulation (TRANSPORT2) Wayne Feng

Post-training Survey Results on Research

% Time Spent on Research



Post-training Activities



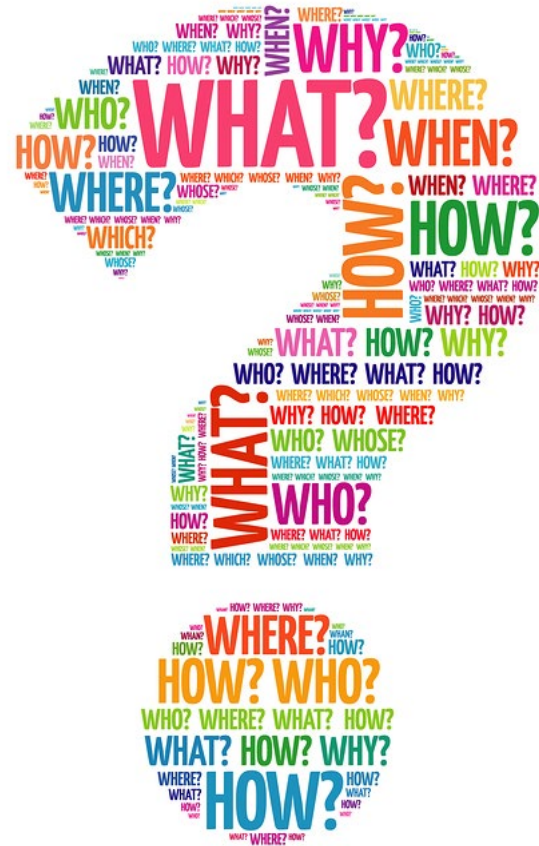
New initiatives

1. Trainees observe in WGs
 1. Trainees sign up to join a WG session
 2. Feedback positive
2. Tracking clinical trial enrollments
 1. Self reporting of enrollments
 2. Award at the end of the year
3. Remote mentoring
 1. Trainees specify outside mentors on training plan
 2. Mentors have an initial Zoom meeting, discuss and meet as mutually decided.

New Directions for the competitive renewal

1. Expanding education and training – coordinators, data management group
2. Interface with other platforms – NeuroNEXT? GAINS?

Questions?



Reminder: Deadlines

- Request for new Trainees' training plans – May
- Solicit Grand Rounds Webinar topics and speakers – May
- Survey to Trainees – June
- Final Trainee Progress report – June
- Trainee Contact form – June
- Update from prior trainees – June

Self-directed learning opportunities (trainees, coordinators, mentors)

- <https://www.nihstrokenet.org/education>
 - Introduction to the Principles and Practice of Clinical Research (IPPCR)
<https://ocr.od.nih.gov/courses/ipPCR.html>
 - Ethical and Regulatory Aspects of Clinical Research
<https://bioethics.nih.gov/courses/ethical-regulatory-aspects.shtml> | <https://videocast.nih.gov/PastEvents?c=22>
 - Principles of Clinical Pharmacology
<https://ocr.od.nih.gov/courses/principles-clinical-pharmacology.html>