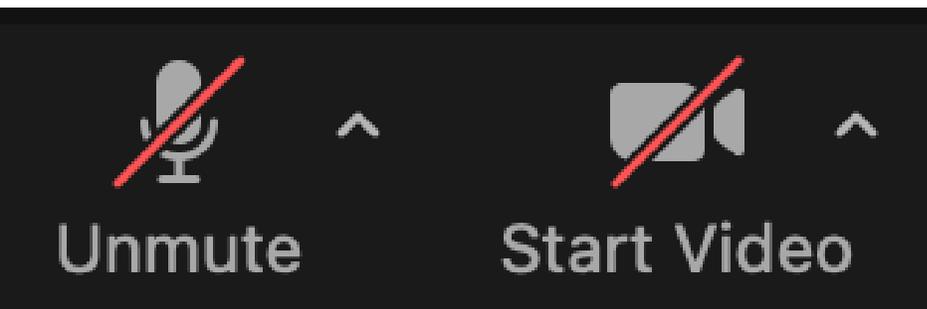
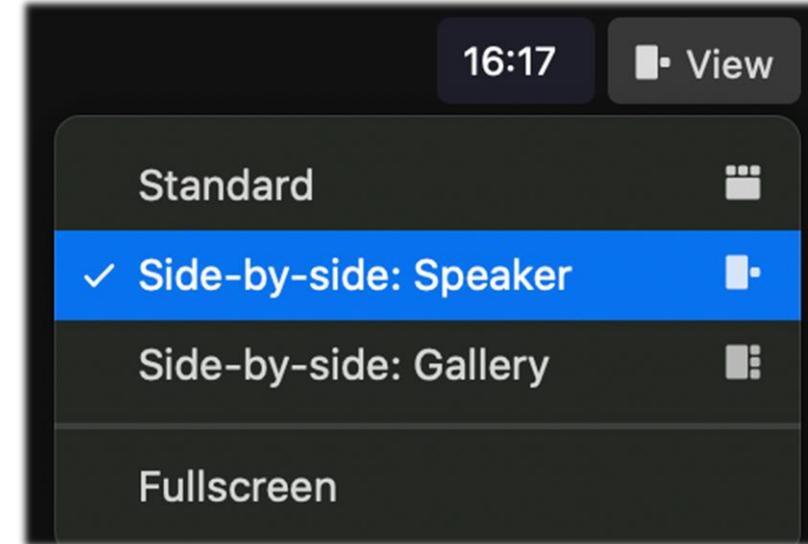


Housekeeping

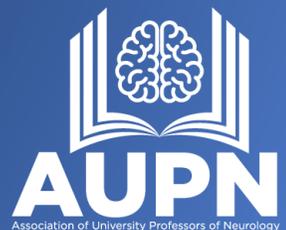
- Zoom Meeting
- Only Speakers will have video on
- We suggest using the “Side-by-side: Speaker” view
- Please keep your microphone muted and video off to preserve bandwidth
- Enter questions in **Q & A**
- Chat to “Technical Support” if you need assistance

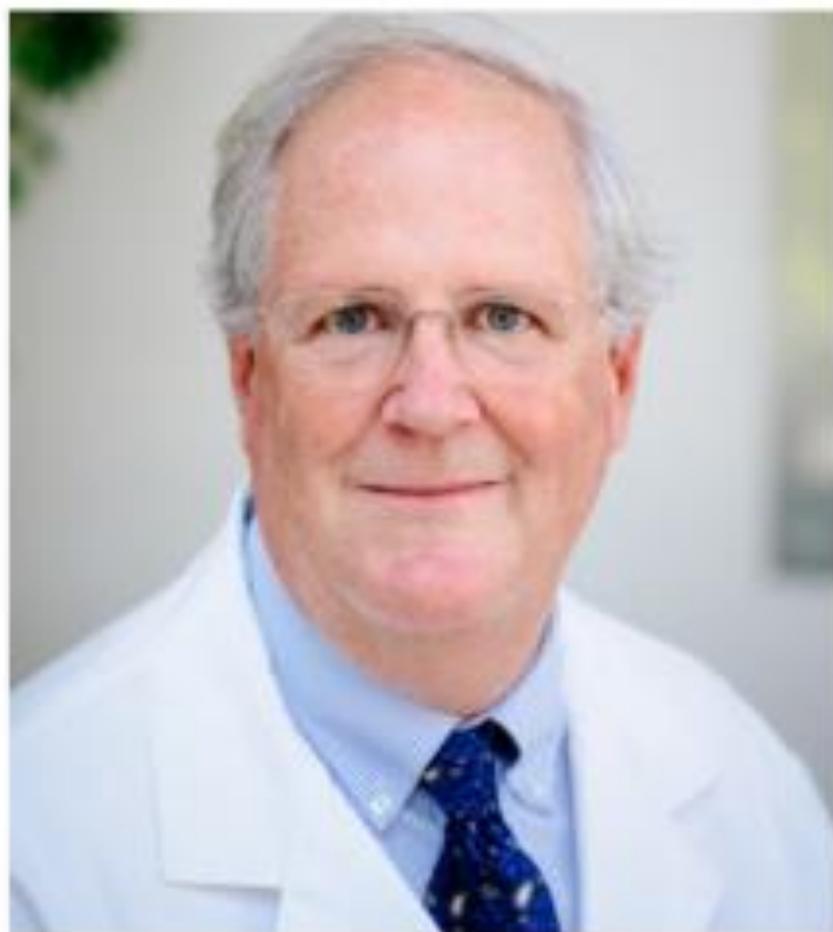


AUPN Spring Chairs Session:

Promoting Research Among Residents & Fellows

Friday, May 3, 2024





David Standaert, MD, PhD
University of Alabama at
Birmingham
Moderator

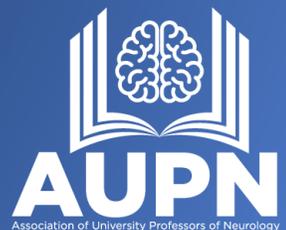
Promoting Research Among Residents & Fellows

2024 AUPN Spring Chairs Session

David G. Standaert, MD, PhD

Heersink School of Medicine

University of Alabama at Birmingham



Physician-scientists in the United States at 2020: Trends and concerns

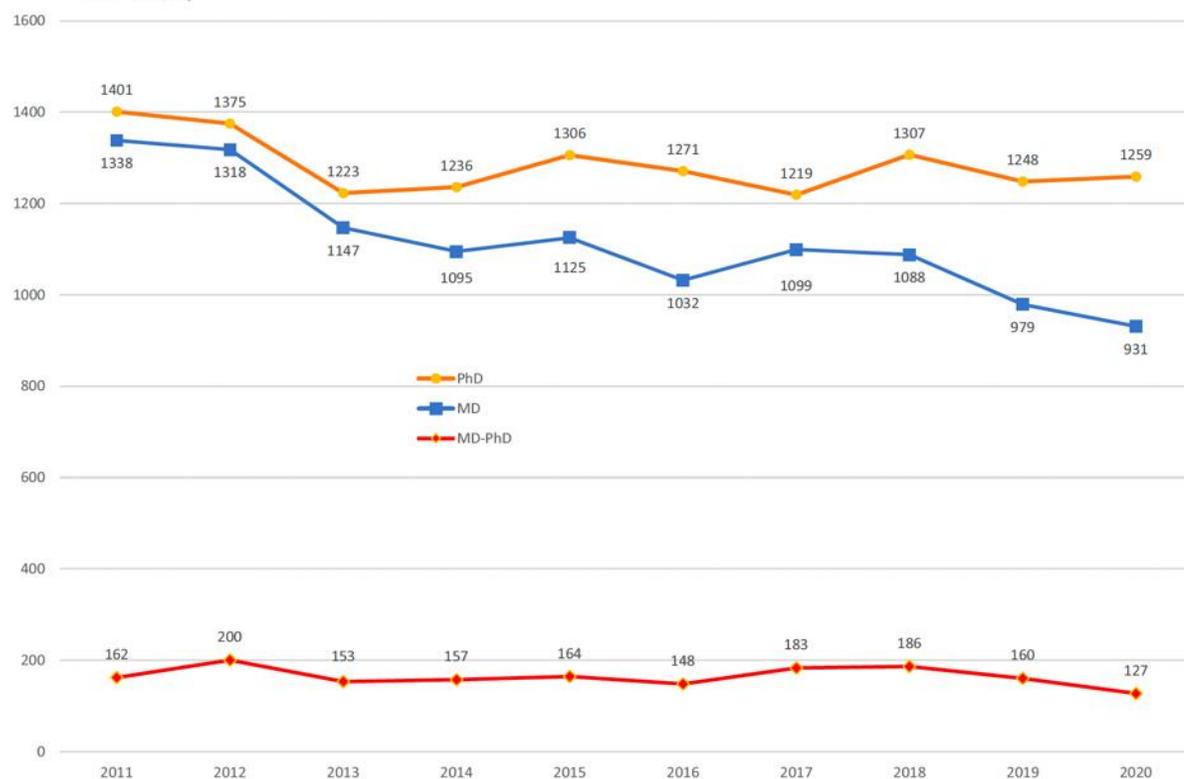


FIGURE 2 NIH Extramural Loan Repayment Program Applications by Degree, 2011–2020 (Source: National Institutes of Health. Loan Repayment Program Dashboard <https://dashboard.lrp.nih.gov/app/#/>, 2021 accessed July 1, 2021)

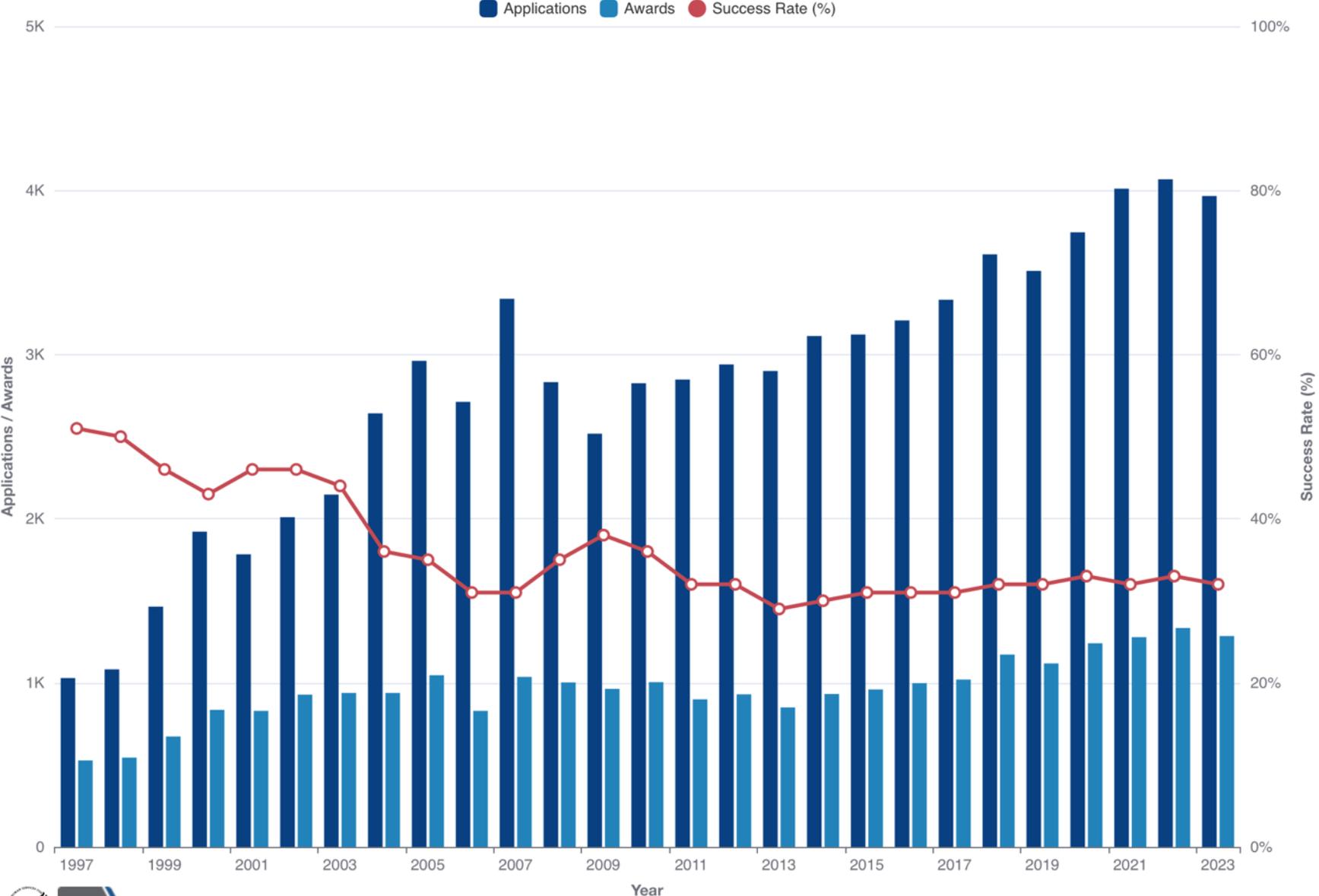
TABLE 5 Average Age and Degree of First-Time NIH R01-Equivalent Investigators (2011–2020)

Fiscal Year	MD	MD-PhD	PhD
2011	45.1	44.3	42.4
2012	44.7	44.7	42.2
2013	45.2	43.6	42.1
2014	45.0	44.8	42.0
2015	44.9	44.9	42.2
2016	45.3	45.2	42.6
2017	44.8	45.4	42.4
2018	45.8	45.5	42.3
2019	46.1	45.5	42.2
2020	46.1	45.5	42.5

Note: The definition of First-Time investigator has changed over time, and data reflect investigator policies that were in place during those years. Data produced by the division of statistical analysis and reporting—OERStats@mail.nih.gov

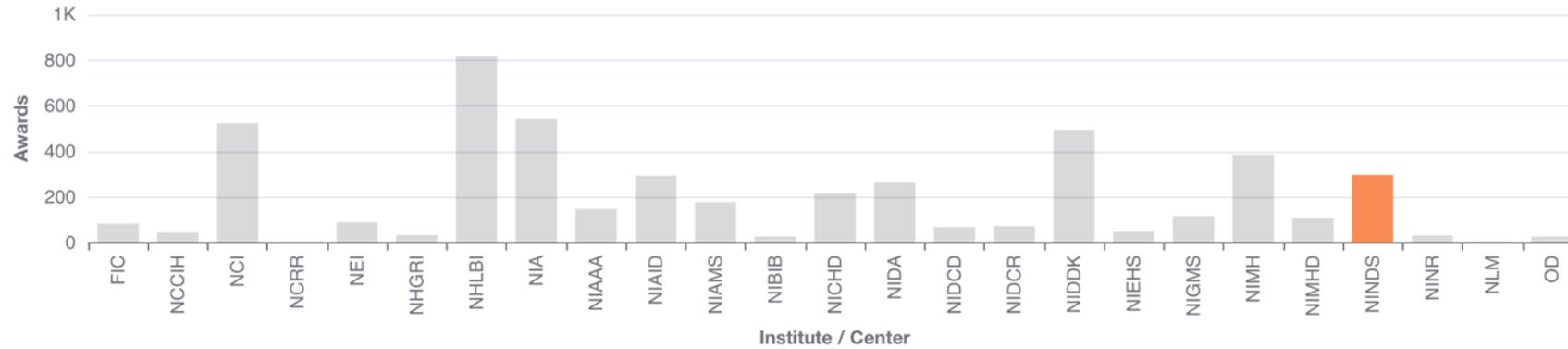
Source: Table #1300-20 Numbers for FY1980–2019 are historical and from previously published sources (#610-19). 2020 data drawn from Success Rate File on 12/10/2020.

Research Career Development Awards: Competing Applications, Awards, and Success Rates

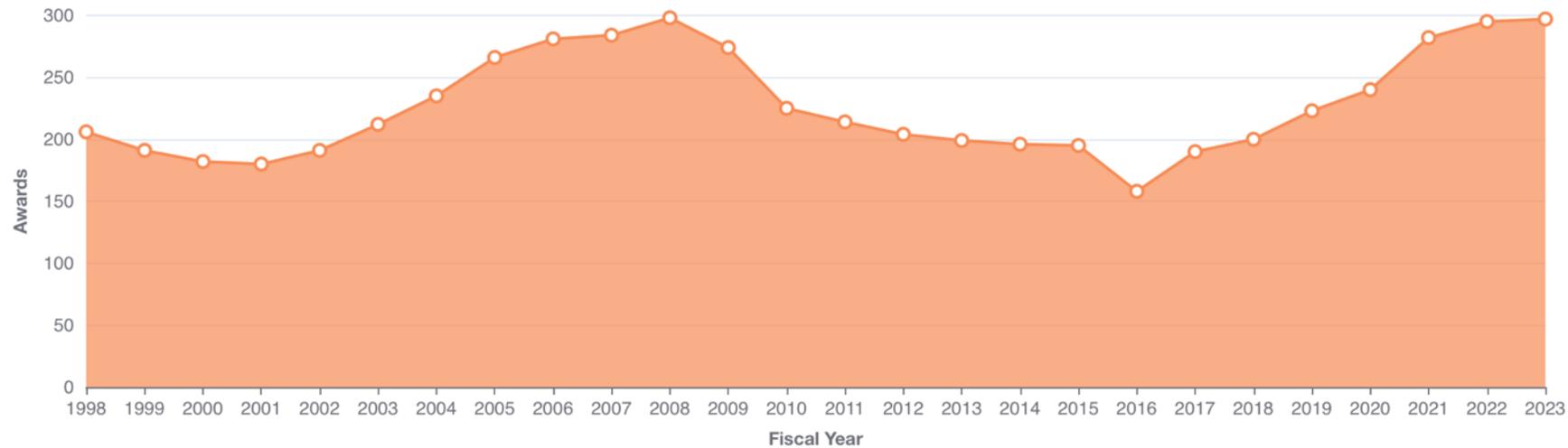


Individual Research Career Development Awards: Awards, by Institute / Center

Awards for 2023



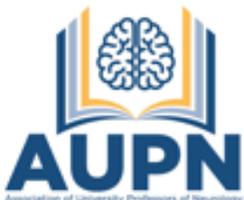
Awards Trend for NINDS



AAMC Report on Residents 2023

- 3,447 active Neurology Residents
 - 1,820 US and Canadian MD graduates
 - 132 MD/PhD Active Neurology residents
 - 18 First Year MD/PhD Neurology residents
 - 519 US DO graduates
 - 1,108 International Medical graduates

<https://www.aamc.org/data-reports/students-residents/report/report-residents>



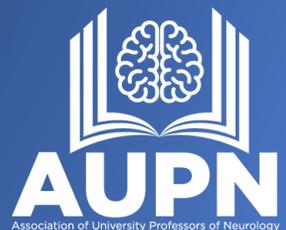


Krish Sathian, MBBS, PhD
Penn State Health

APPROACHES TO FOSTERING RESEARCH DURING CLINICAL TRAINING

Krish Sathian, MBBS, PhD

Professor & Chair of Neurology, Penn State Health



Influence of Research Continuity on Physician-Scientists' Career Success

Brownrout et al., Neurology 2021; 97:e2039-e2045

To determine if maintaining continuity in research topic and method from early to late career yields a greater likelihood of physician-scientists' research career success; that is, achieving research independence and producing impactful publications.

We followed a cohort of neurologists who were medical scientist training program (**MSTP**) graduates (2000-2010) as an example of one type of a physician-scientist—physician scientists who hold a PhD—and measured continuity in a research topic and method from their early research training period to late career (postgraduation after neurology residency) and compared that to research career success via publications, ensured protected research time, and establishment of research independence.

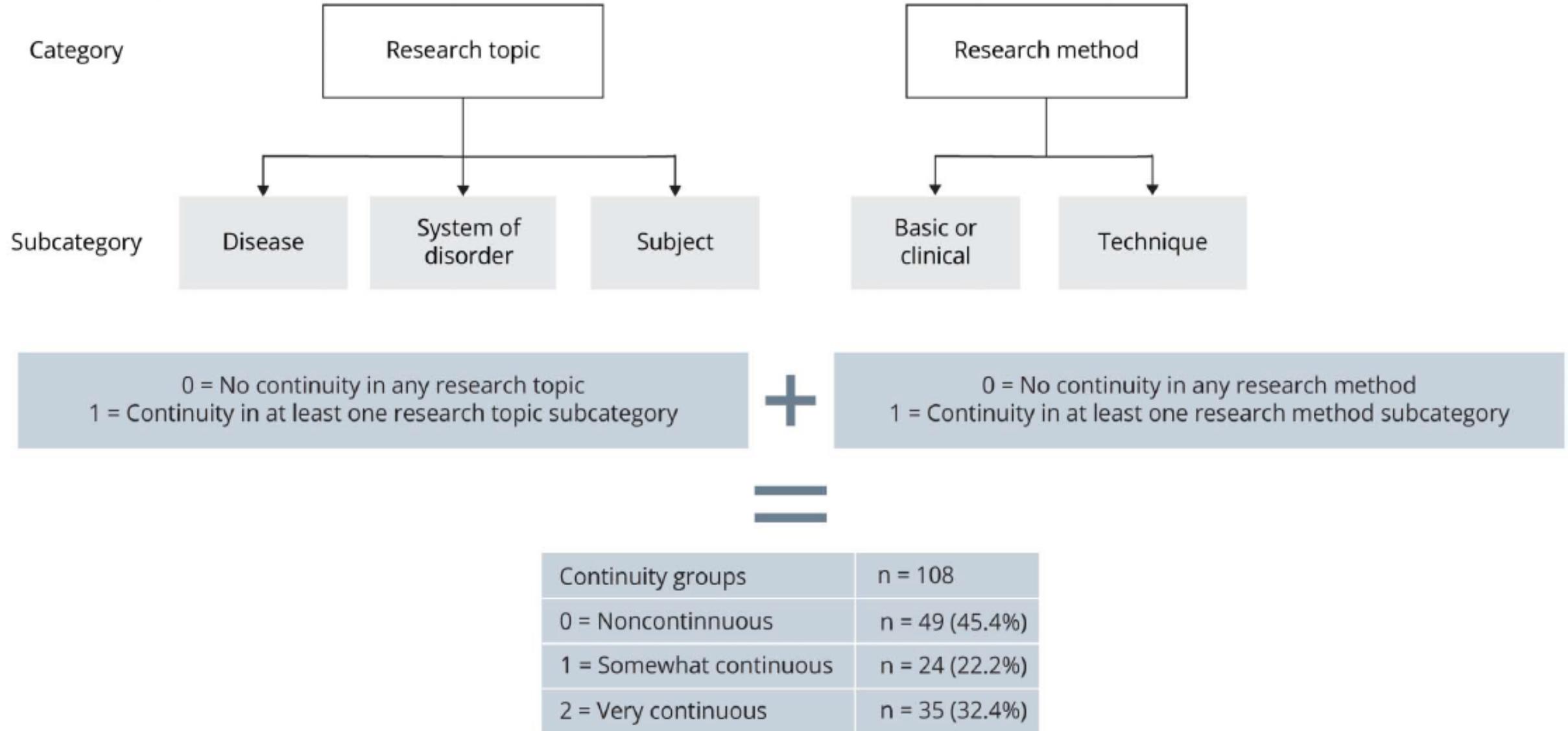
Poll: How important is continuity of research topic / method to physician-scientists' success?

1. Very Important

2. Somewhat Important

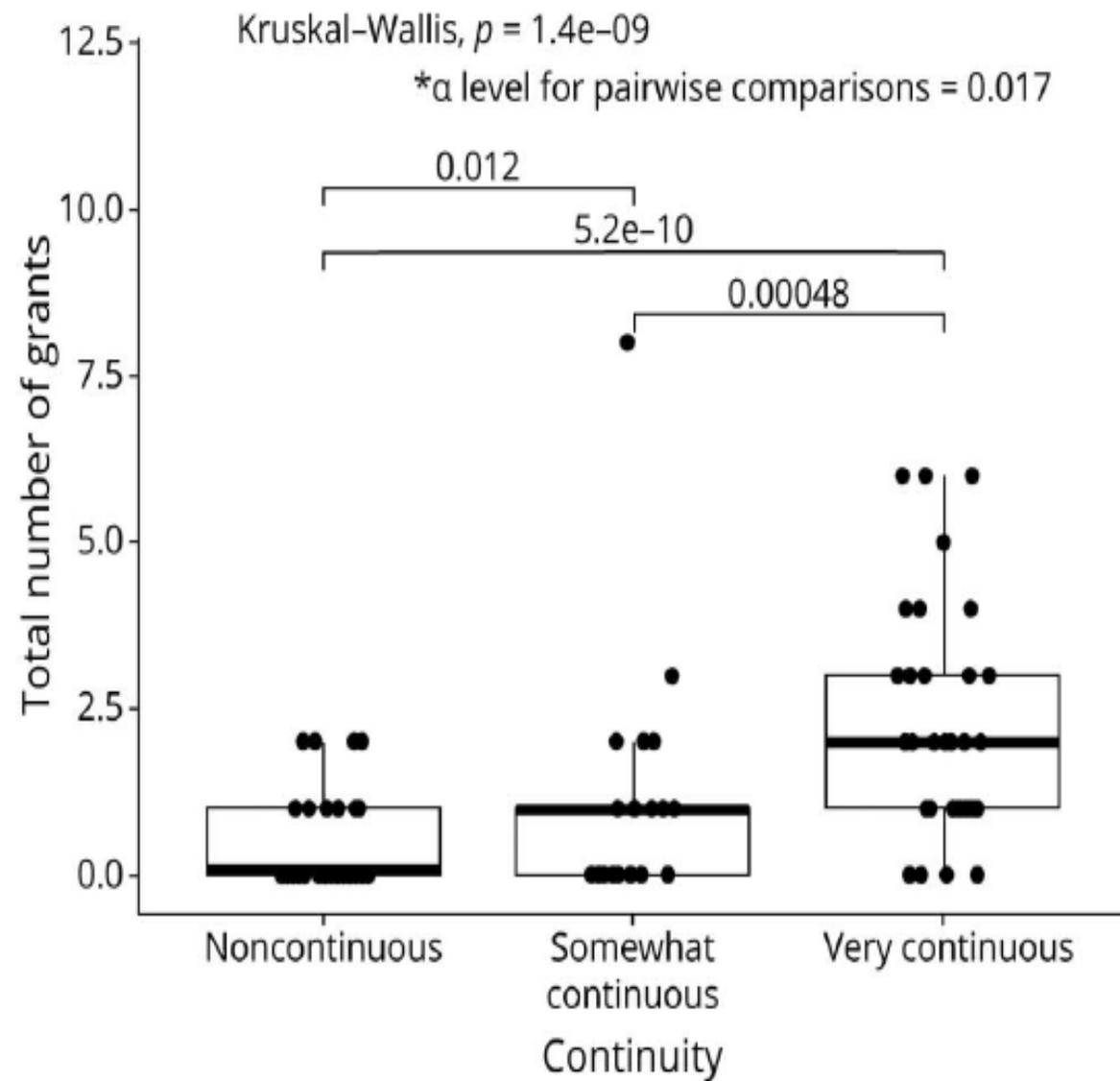
3. Unimportant

B. Continuity classification system

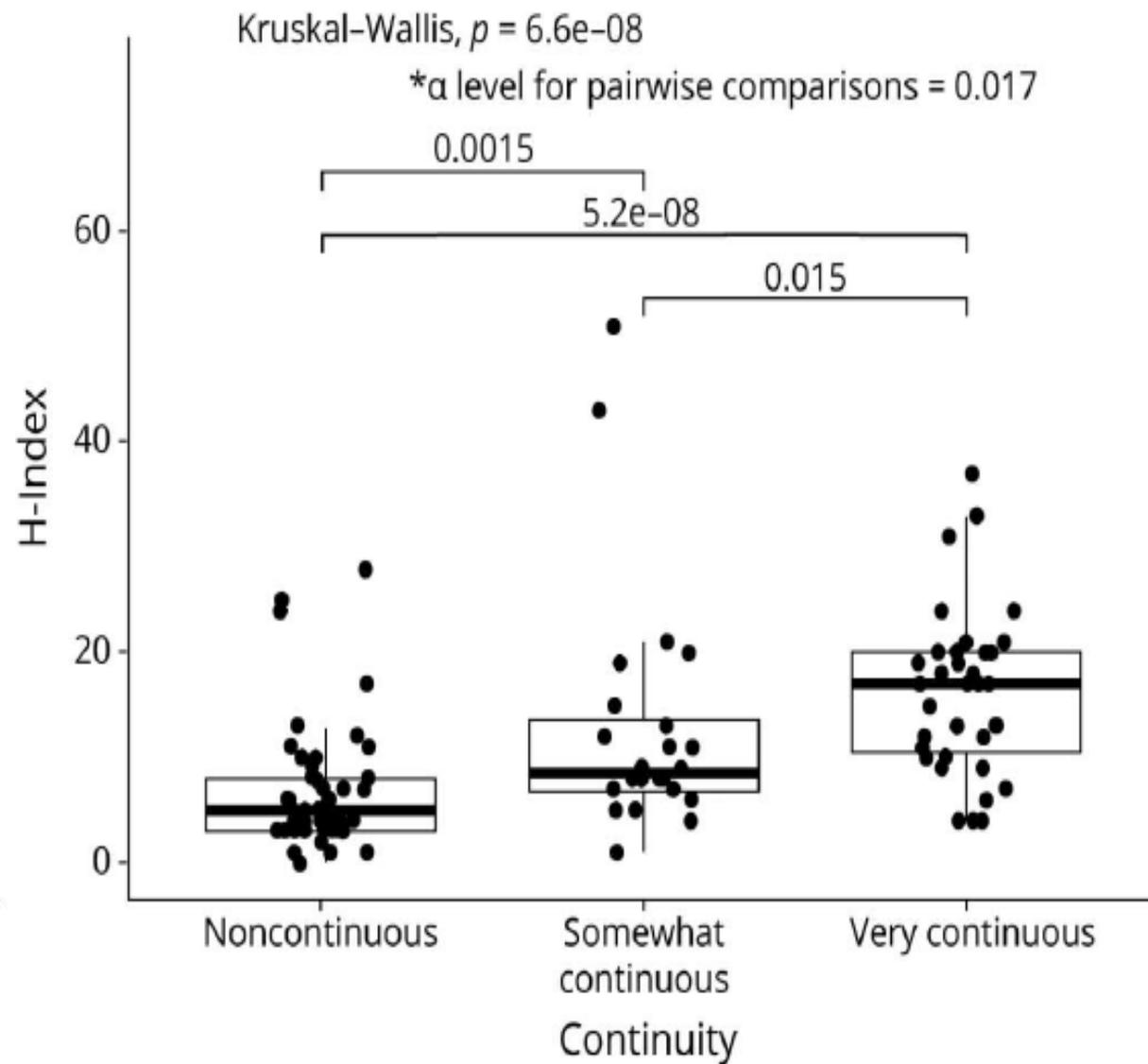


(A) Early vs late career: continuity was assessed through comparison of the works from 2 time points in each individual's career. The works assessed at each time point are listed above. (B) Continuity classification system: points were assigned if continuity from early to late career was present in each subcategory of interest. If an individual had a total of zero points, that individual was classified as noncontinuous. Those with 1 point were classified as somewhat continuous. Those with 2 points were classified as very continuous.

A. Protected research time



B. Impactful publication



(A) Protected research time: ability to ensure protected research time is exemplified by the total number of grants received by each individual. This is displayed across level of continuity. (B) Impactful publication: h-index, a measure of impactful publication, is displayed across level of continuity.

The NINDS R25 Program

- Grant to institutions to support research education programs during residency & fellowship in Neurology, Neurosurgery or related specialties.
- Funding through supplements for participants “that the PI believes are highly likely to continue to an independent research career”.
 - Increment 1: 6-12 contiguous* months during residency
 - Increment 2: 9-12 months during fellowship or 2nd residency year
 - Increment 3: 12 months during fellowship

The NINDS R25 Program

- The first two increments of support must total at least 18 months of participation at 80% effort.
- A gap is allowed between increments 1 and 2 to allow for clinical activities, including completion of residency or clinical fellowships.
- A gap is not allowed between increments 2 and 3.
- The final 6 months of support during increment 3 is contingent upon submission of an NIH Career Development (K) or R01 application by the end of 18 months of fellowship (post-1st increment) support.

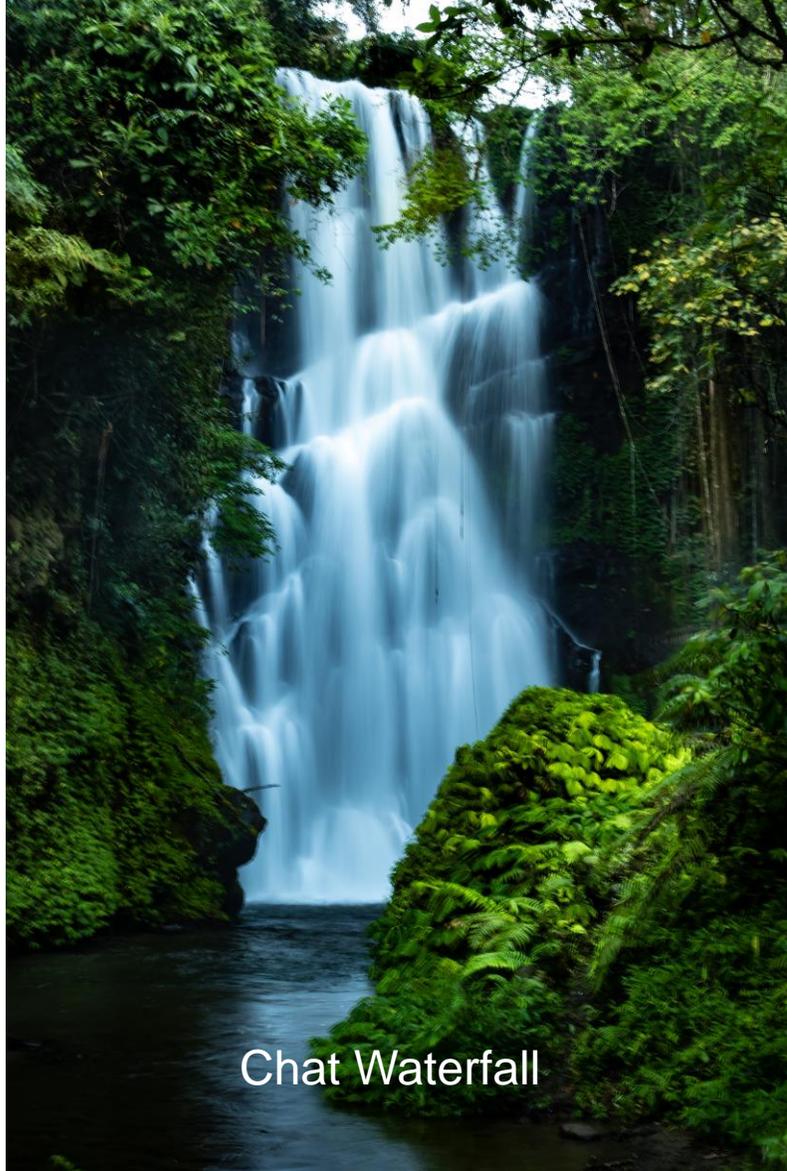
The NIH K99 / R00 Pathway to Independence Award

- K99-R00 has 60% higher conversion rate to R01 than K01, K08 or K23 (Conte & Omary, JCI 2018: 128, 5187-5190)
- Award mechanism established 2007; 2 phases with a K99 phase (2yrs) in the later stages of postdoctoral training followed by R00 phase (3yrs) requiring a full-time tenure-track position
- From FY2008 to FY 2017, the NIH K99 budget increased 127% while the NIH program-level budget increased 17.3%
- PI's mean funding per year was inversely correlated with time from R00 to R21 or R01

Gillen et al., Acad Med 2024: 99, 70-75

Formal or Flexible approaches?

- Johns Hopkins PSTP for residents and fellows, comprising monthly seminars, annual workshops, mentoring, microgrants for research, and travel funding (Rincon-Torroella et al., Acad Med, in press)
- Research track during residency (e.g. Penn State) with longitudinal exposure under a mentor, including concentrated periods during elective time with continuation as feasible in between
- Faculty Mentoring (FaMe) program at Penn State, including grant-writing workshops, work-in-progress research seminars and mock study sections → substantially increased scholarly output and extramural funding (Dovat et al., Adv Med Ed & Practice, 2022: 3, 1039-1050)



Chat Waterfall

What do you think is the most critical ingredient in developing successful physician-scientists?

Type your response in chat

DO NOT HIT ENTER

until prompted

Watch the waterfall of responses!

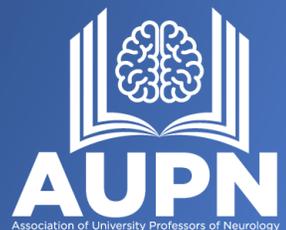


Aaron Nelson, MD
NYU Langone Health

Promoting Research Among Residents & Fellows:

Social Media and Graceful Self-Promotion

Aaron Nelson, MD MBS FAAP FAAN
Director of Epilepsy, Bellevue Hospital Center
Director of Child Neurology Residency, NYU Langone Health
Associate Professor of Neurology, NYU Grossman School of Medicine

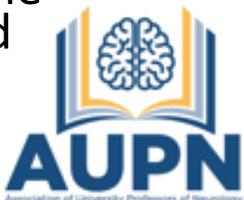


Goals:

- Understand networking as a learned skill to be fostered by leadership in both residents and fellows.
- Learn to help your residents and fellows hone relevant narratives *in a fashion consistent with departmental aims and applicable to a variety of unique settings* for a wide array of potential audiences.
- Discuss pragmatic aspects of various social media tools and platforms including how to best utilize them to reach specific target audiences for maximum desired effect.

Introduction:

- Advancement in medicine hinges on promotion, whether promotion is defined as an increase in pay, title, or responsibility.
- Self-promotion—as well as the promotion of others—is behavior shown (*or action taken*) to attract attention; in this case attention on social media related to medical performance, research, training, or expertise.
- In either scenario, equity (*or lack thereof*) can be a key factor affecting advancement—both from a systems perspective externally as well as from within based on internalized cultural expectations.
- Social media affords a unique opportunity for equity given the low barrier for entry; however, the accessibility and ease of use carry with it the potential for that same low barrier of entry to lead one to fall prey to pitfalls inherent in social media—**and career self-injury as well.**



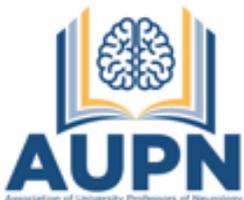
Graceful Self-Promotion:

- We all have varying degrees of baseline socialized and unconscious learning that exerts pressure not to brag or be egocentric.
- Those pressures are often disproportionately applied across race or gender, with wide variations in cultural acceptance by setting and geographic region (amongst various other factors).
- Studies show both over- and under-promoting oneself can have negative effects, particularly for already-marginalized populations.
- In the absence of self-promotion, however, others can miss the opportunity to know your trainees' accomplishments, goals, and whatever else they potentially bring to the table and this can lead to a cascade of downstream missed opportunities for both identification and collaboration.



Graceful Self-Promotion:

- Self promotion need not be “selling oneself” but can be thought of as educating others on passions, accomplishments, and successes.
- It’s a way to connect people who share passions/ interests.
- By sharing, trainees can gain the power to help and advocate for others:
 - Growing their network and working on broader projects in their field.
 - Sharing the accomplishments of others and having them do the same.
 - Taking note of each others’ successes, nominating each other and amplifying each other.
 - Forming alliances and creating a network of people committed to helping each other’s careers.
 - Building momentum—the more one works on this the less work it is—and the more other people can help.



Graceful Self-Promotion:

“But I’m No Good at Promoting Myself...”

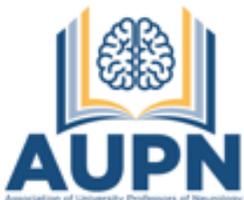
It’s awkward

I’m not a salesperson

I don’t know people in my field

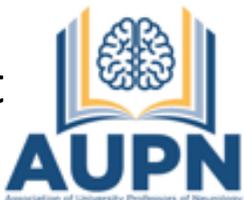
Crafting a Narrative:

- Narratives play an important role in medicine, and are key to graceful self-promotion!
 - A well-crafted narrative can be intertwined even within brief moments of interaction both in-person and online.
 - Many early-career physicians are uncomfortable promoting themselves in the healthcare environment “because of concerns about receiving negative backlash for bragging.”
 - Realize that trainees are “a package of all of their life experiences” with the added value that brings both to you and your organization; a narrative is an effective way to package their value in a meaningful way for others.



Crafting a Narrative:

- There are potential barriers to crafting compelling narratives—which can be overcome:
 - In the United States our culture overall emphasizes individualism; cultures that “emphasize collectivism (eg, East Asia, Scandinavia, Latin America)... associated with modesty and a focus on ‘we,’ may not approve of self-promotion.”
 - Even in parts of the United States, there can be a “focus on women conforming to a ‘modesty norm,’ by which they are socialized to ‘be nice’ and ‘not too demanding,’” with risk of backlash.
 - A carefully-constructed narrative can help overcome or at least partially counteract many of these concerns.



Crafting a Narrative:

Prepare An Elevator Pitch

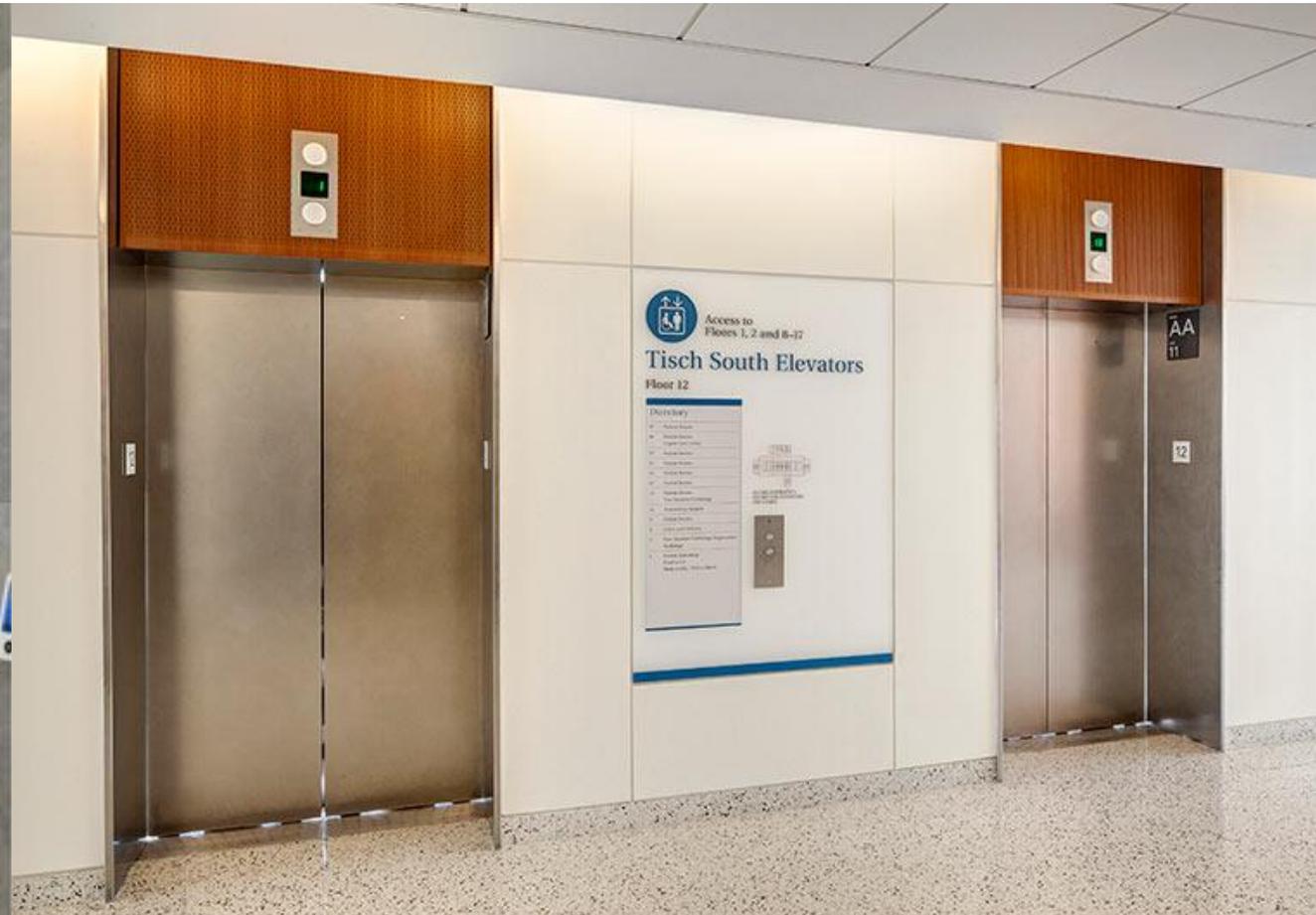
Introduce who you are



Describe what you do

Explain why people should care

3 sentences



Crafting a Narrative:

PAR Statement



Problem: The problem you had to solve



Action: How did you address or solve it



Result : What happened



Be specific and optimally quantitative



Modes of Communication:

- There are lots of ways to communicate; many are right, only a few are wrong...

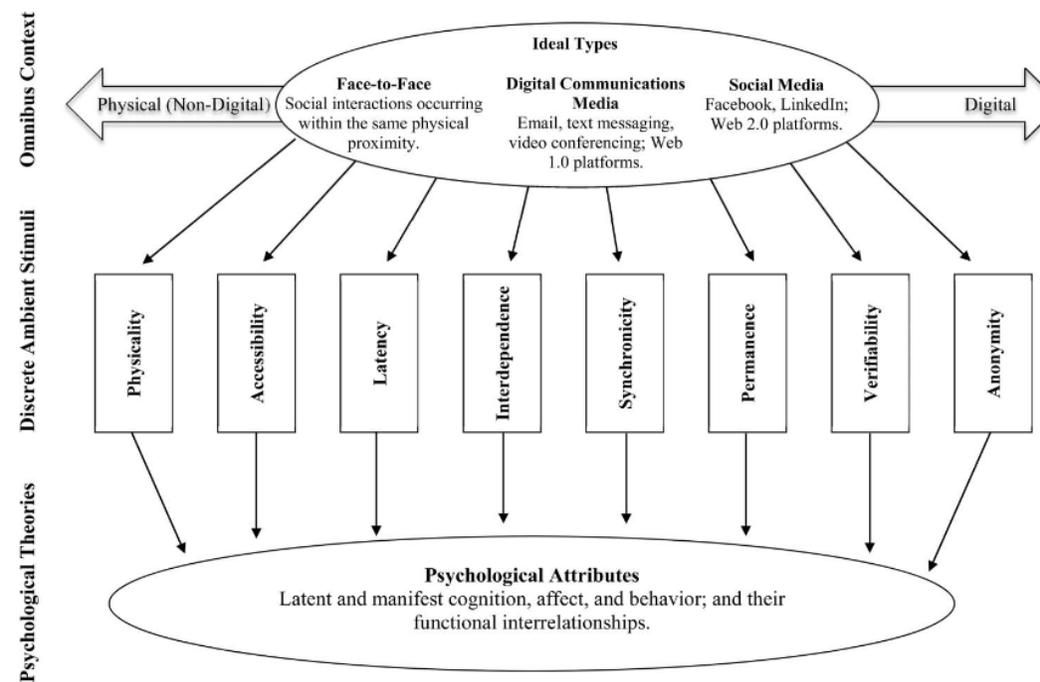


Figure 1. Theoretical framework of social media context.

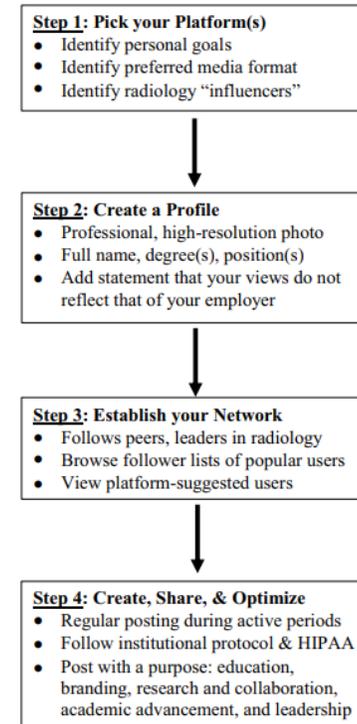
Modes of Communication:

- First you have to pick one (or a few) primary platforms...

Table 1 Overview of select social media platforms, ordered by number of monthly active users

Platform	Monthly active users (millions)	Description & unique features	Radiology publications
Facebook	2701 [51]	Mixed media platform used for information sharing. Facebook Groups facilitate community building among like-minded individuals. The most widely used social media application in the United States	[6, 7, 48, 49, 52–60]
YouTube	2000 [51]	Video-based platform, with option to include supporting text. Aggregates users' videos into easily digestible playlists, libraries, and channels	[6, 7, 61–68]
WhatsApp	2000 [51]	Messaging-based platform allowing for encrypted communication through text, images, voice, or video	[27–31]
Instagram	1158 [51]	Image- and video-based platform, with text captions and overlay. Numerous image-modification features including filters. Instagram Stories allows creation of posts vanishing in 24 h	[7, 38, 57, 69]
TikTok	689 [51]	Video-based platform with optional overlaid text and special effects. Proprietary machine learning algorithm tailors user video feed. The most rapidly growing social media application worldwide	[50]
SnapChat	433 [51]	Platform with video- and image-based content available for a short time before becoming inaccessible. Newer functions include "Stories" (24 h of chronological content) and "Discover" (ad-supported short-form content)	[32]
Reddit	430 [51]	Text-based discussion board, with option to include supporting images. Voting ("up" or "down") dictates content priority	[101]
Pinterest	416 [51]	Content sharing service enabling information discovery through "pins" (uploaded or linked images or videos) posted on user-generated "boards". Users can follow one another and share ("re-pin") other users' pins	[26]
Twitter	353 [51]	Text-based microblogging platform, with option to include supporting images and videos. "Tweet chats" facilitate interactive hashtag-designated discussions	[6, 7, 35, 36, 46, 56–58, 63, 68, 70–95]
LinkedIn	260 [51]	Professional platform predominantly utilized to connect with other professionals and highlight work-related achievements and articles. The connect, group, and interest functions facilitate interactions	[6, 7, 56, 58, 70]
ResearchGate	17 [96]	Research-focused professional platform utilized to showcase and identify research. Discussion boards allow direct communication with researchers around the world. Job postings also available	N/A
Doximity	1 [97]	Physician-focused professional platform predominantly used to share medical news, connect with colleagues, advertise job postings, and access training program rankings. Doximity Dialer allows for encrypted, HIPAA-compliant voice and video communication with patients and colleagues	[54, 98–100]

Stepwise Approach to Individual Social Media Use



Appendix: Social Media Research

- Quantitative Data (numeric metrics)**
- Profile popularity (e.g. followers)
 - Post engagement (e.g. likes)
 - Median as measure of center

- Qualitative Data (multimedia, text)**
- Create non-redundant coding system from a random sample
 - Properly vet coding system for bias
 - Code entire sample: a) by all members, or b) split amongst members (with κ)

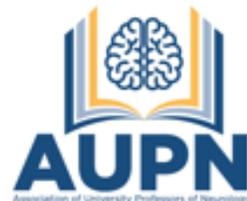


Fig. 1 Stepwise approach to social media and online research. *HIPAA* Health Insurance Portability and Accountability Act, κ kappa coefficient (for inter-rater reliability)

Modes of Communication:

- Where to begin to engage on social media?

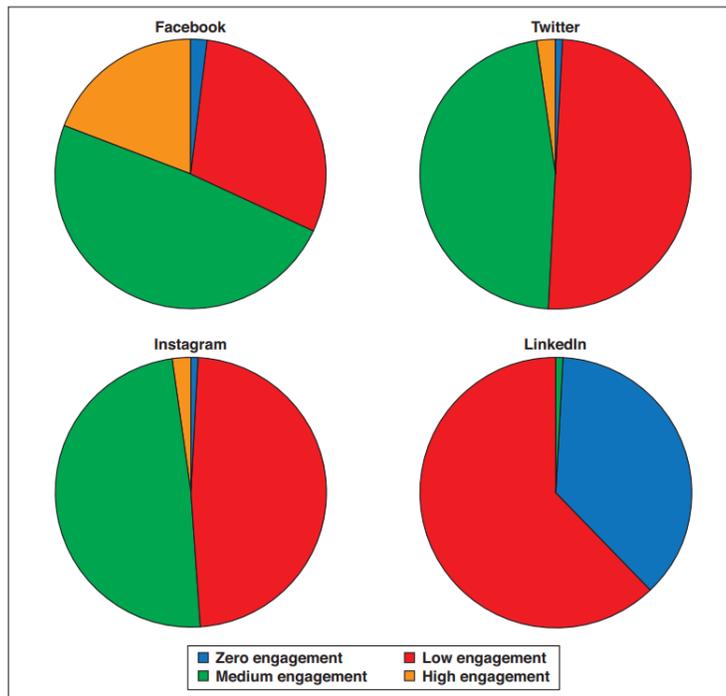


Fig. 4—Chart shows level of audience engagement (total number of likes, comments, and shares) in social media platforms in neurology.

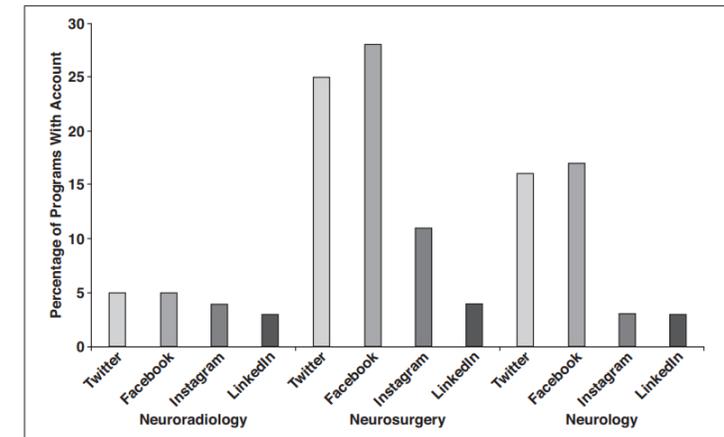


Fig. 1—Chart shows neurology, neurosurgery, and neurology social media engagement of all 75 programs.

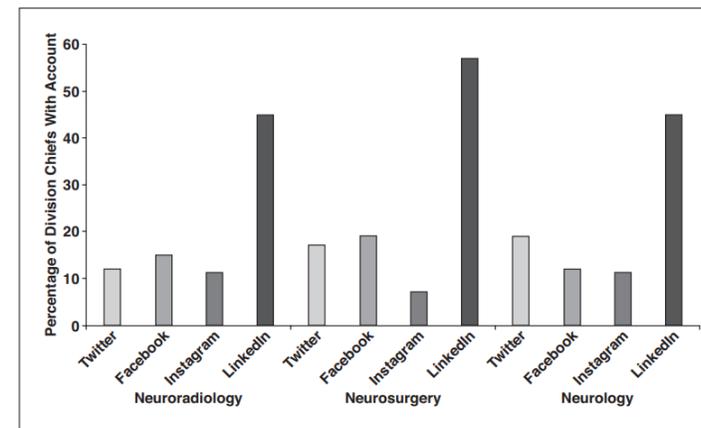
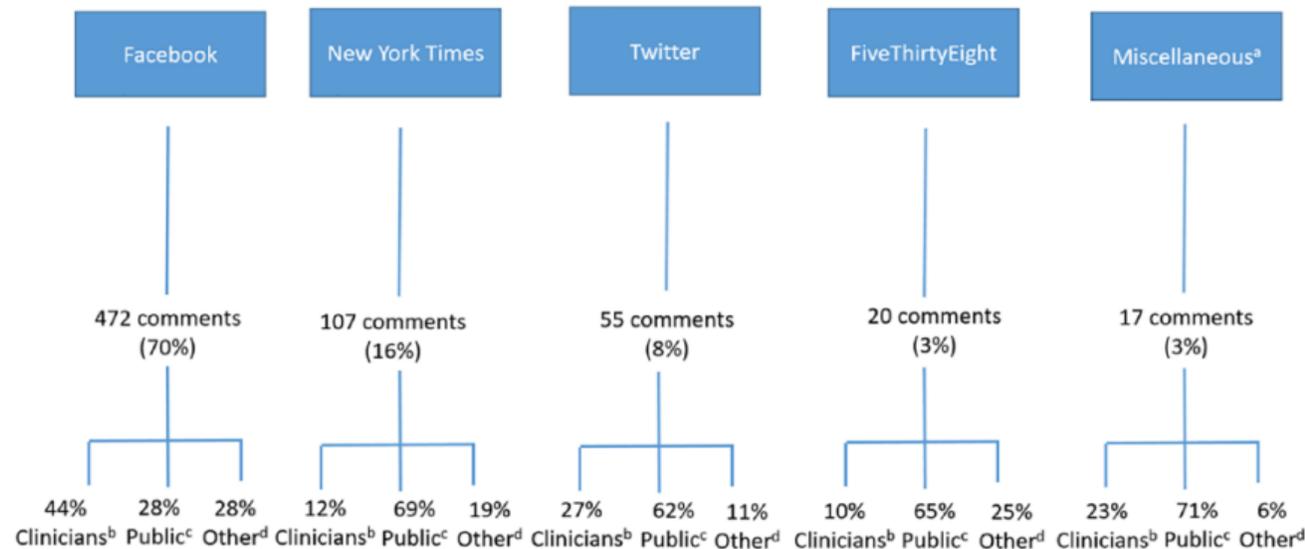


Fig. 2—Chart shows neurology, neurosurgery, and neurology division chief social media engagement of all 75 programs.

Modes of Communication:

- Where to begin to engage on social media?

Figure 1. Prevalence of comments from clinicians and the public across social media platforms, August 4, 2016, to September 21, 2017 ($n = 671$). ^a “Miscellaneous” comprises comments from LinkedIn, Reddit, and DentaTown. ^b “Clinician” is defined as that classified as a “4” (definitely yes) or “3” (probably yes) for the category “Was the comment written by a dental professional?” in Table 1. ^c A member of the general public is defined as that classified as a “2” (probably no) or “1” (definitely no) for the category “Was the comment written by a dental professional?” in Table 1. ^d “Other” is defined as that classified as a “5” (written by a health professional in a field other than dentistry) or “0” (can’t tell) for the category “Was the comment written by a dental professional?” in Table 1.



Modes of Communication:

- How and when do departments and training programs engage on social media?

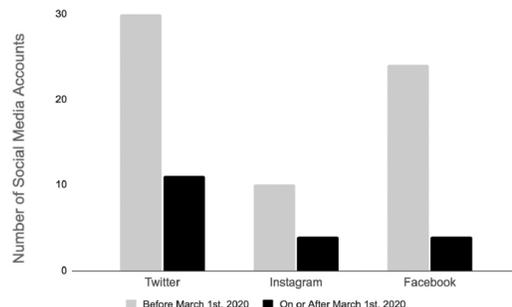


Fig. 2. Date of Department Social Media Account Foundation.

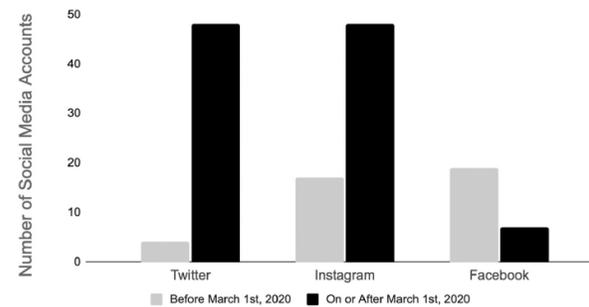


Fig. 1. Date of Residency Program Social Media Account Foundation.

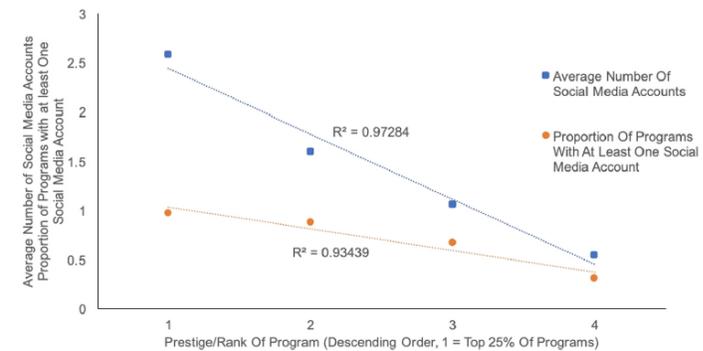


Fig. 3. Program quartile vs. presence and average number of social media accounts.

Table 1

Number of programs that announced virtual events on each platform.

	Residency Website	Twitter	Instagram	Facebook
Programs with Virtual Events	14 (8.8%)	51 (32.1%)	50 (31.4%)	19 (11.9%)

Modes of Communication:

- What gets audience engagement and participation on social media?

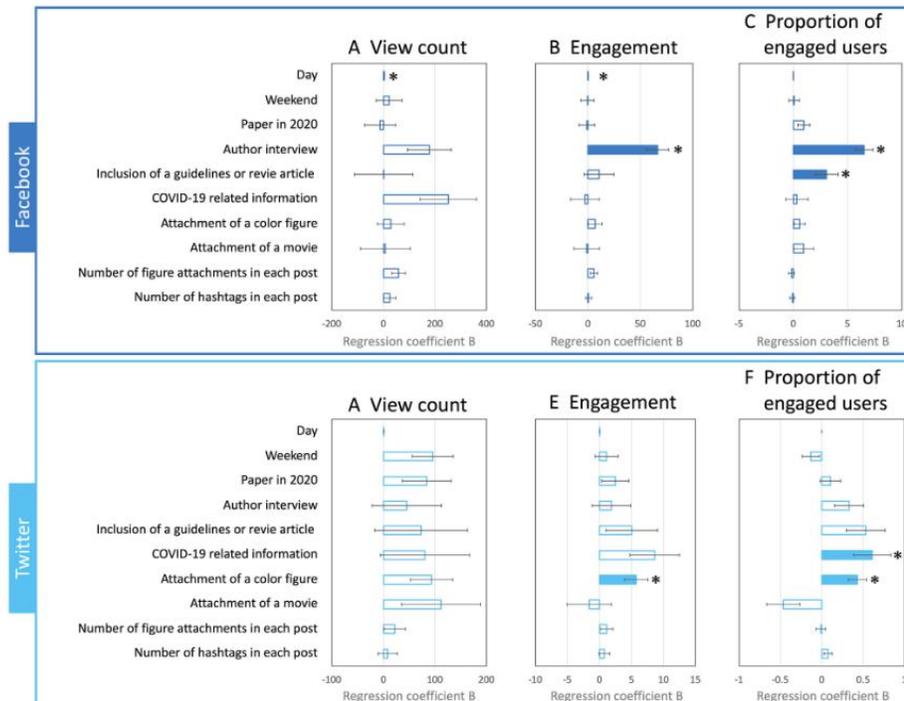
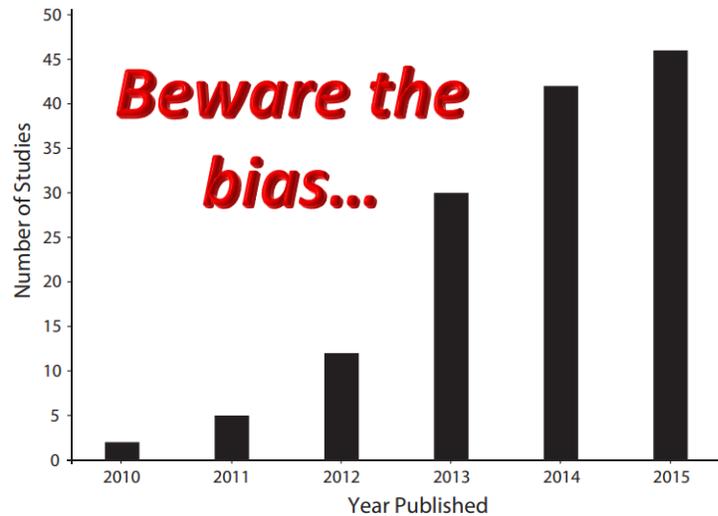


Fig. 1. Factors associated with increased view counts, engaged users, and proportion of engaged users. (A-C) Our Facebook page. (D-F) Our Twitter page. (A and D): Association with increased view counts. (B and E): Association with increased engagements (i.e., link clicks). (C and F): Association with an increased proportion of engaged users among those who received/viewed a post. The horizontal axis: mean regression coefficient B (with standard error bar) on multivariate regression analysis. *Bars filled with blue colors: uncorrected $p < 0.0083$, which survived the Bonferroni correction. COVID-19: Coronavirus disease 2019.

Social Media Research:

- There are lots of ways to mine social media data for research beyond simple surveys:



Note. This figure shows the number of articles in this systematic review published each year from 2010 to 2015. The x-axis shows each year that an inclusion article was published. The y-axis demonstrates the number of studies in each publication year.

FIGURE 1—Publication Date of Included Articles

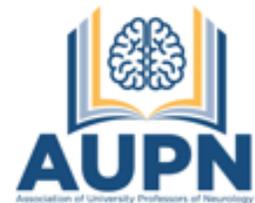
TABLE 3—Most Common Research Fields for Included Articles: 2010–2015

Research Field	Articles, No. (%)	Research Topics
Public health	30 (22)	Affordable Care Act, health organizations, obesity, pet exposure, sexual health, transgender health, vaccination
Infectious disease	27 (20)	Antibiotics, cholera, Ebola, enterohemorrhagic <i>Escherichia coli</i> , HIV, influenza, measles, sexually transmitted infections
Behavioral medicine	24 (18)	Nutrition, physical activity, sleep disorders, smoking, weight loss
Psychiatry	15 (11)	Anorexia, bipolar disorder, depression, drug abuse, emotions, marijuana, mental health, obsessive-compulsive disease, schizophrenia, stimulant use, suicide
Neurology	9 (7)	Concussion, deafness, dementia, epilepsy, migraine, multiple sclerosis
Oncology	6 (4)	Cancer
Obstetrics and gynecology	5 (4)	Prenatal health, breastfeeding, cancer, polycystic ovarian syndrome
Dentistry	4 (3)	Dental pain, orthodontics
Pharmacy	4 (3)	Adverse drug reactions, online pharmaceutical presence
Emergency medicine	3 (2)	Asthma, cardiac arrest, emergency medical services
Pediatrics	2 (1)	Pediatric obesity, health literacy
Endocrinology	2 (1)	Diabetes
Allergy and immunology	1 (1)	Allergy
Anesthesia	1 (1)	Pain
Cardiology	1 (1)	Heart disease mortality
Hematology	1 (1)	Stem cell
Radiology	1 (1)	Radiation

TABLE 1—Frequency of Use of Different Metadata Elements That Can Be Extracted From Twitter in Included Articles: 2010–2015

Data	Articles, No. (%)
Explicit data about user	
Twitter handle	6 (4)
Language	0 (0)
Time zone	4 (3)
Location	12 (9)
Date account created	5 (4)
User profile (free text)	5 (4)
User profile photo	2 (1)
Total number of tweets	11 (8)
Number of followers	26 (19)
Number following	6 (4)
Extractable data about user	
Age	1 (1)
Gender	5 (4)
Marital status	1 (1)
Political party	0 (0)
Race/ethnicity	1 (1)
Occupation	5 (4)
Interests	0 (0)
Religion	0 (0)
Income	1 (1)
Mood	1 (1)
Disease state	5 (4)
Network	5 (4)
Explicit data from tweet	
140 characters	112 (82)
#hashtag	13 (9)
URL	6 (4)
Geotag	28 (20)
Application used to send tweet	2 (1)
Number of retweets	12 (9)
Number of favorites	1 (1)
Linked images	2 (1)
User mentions	3 (2)
Time and date of tweet	19 (14)
Extractable data about tweet	
Content	77 (55)
Sentiment	21 (15)
Image analysis	1 (1)
Language	4 (3)

Note. URL = uniform resource locator.



Social Media Research:

- Data can be collected passively, actively, or aggregated through a variety of means...

Table 1
Summary of Social Media and Internet-based Approaches to Surveillance or Epidemiologic Research.

Method	Example Topics Studied	Strengths	Weaknesses
Active Data Collection			
Crowdsourcing	Infectious disease: influenza; malaria; dengue Non-infectious disease: cancer; asthma Health behavior/environment: availability of tobacco; cost of diverted prescriptions	Cost-effective; easy recruitment; geographical diversity; access to some hidden/rare subpopulations; research-driven data	Underrepresentation of people of color; volunteer bias; requirement for internet access; poor sustained participant engagement
Online Recruitment	Infectious disease: respiratory infection Non-infectious disease: respiratory distress; diabetes	Access to previously unreachable population; research-driven data	Volunteer bias; requirement for internet access;
Passive Data Collection			
Internet Search Query	Infectious disease: influenza; dengue fever; malaria; listeria; HIV; norovirus; hepatitis; tuberculosis; Non-infectious disease: cancer; multiple sclerosis Mental health: depression; anxiety; suicide Health behavior/environment: availability of tobacco; vaccination; drug use; preconception care	Low cost; some support for real-time validity	Questionable validity; poor sustained predictive ability; limited ability to control for confounders
Media Reports	Infectious disease: H1N1 Health behavior/environment: drowning; sudden cardiac death Mortality data	Real-time availability; curated databases searchable by disease, location, source, and date	Resource intensive collection of reports by individuals; potential bias due to media sensitivity
Internet death notices		High correspondence to death records; nearly real-time data availability	Only applicable to mortality research
Forums	Infectious disease: foodborne illness Non-infectious disease: diabetes	Low cost	Limited information; potential lack of generalizability
Restaurant reviews	Infectious disease: foodborne illness	Low cost; real-time data availability	Potential confounding
Flexible or Combined Approaches			
Twitter	Infectious disease: influenza; H1N1; Middle East Respiratory Syndrome Coronavirus Health behavior/environment: e-cigarettes; dental pain; cardiac arrest; drug use; suicide; vaccination	Low cost; large number of observations; real-time data availability	Potentially missing covariates; potentially limited generalizability to overall population
Facebook	Health behavior/environment: obesity; general physical health; autism; water fluoride Mental health: autism; depression; alcohol abuse	Low cost; large number of observations; real-time data availability	Potentially missing covariates; potentially limited generalizability to overall population

Social Media Research:

- The Association of Internet Researchers suggests researchers engaging in internet-based research consider several ethical questions before beginning a study (Buchanan, 2004).
 - How are the researchers accessing the participant/data and what expectations are established by the method (e.g., social media site, blog, forum)?
 - Who is creating the data and what vulnerabilities may exist that create an obligation for the researcher to protect the data?
 - Should the researcher obtain informed consent and how should it be collected?
 - How will the data be used and could these uses create new or additional risks for participants?

In addition to these basic guidelines, a recent update to the recommendations from the Association of Internet Researchers suggests researchers consider several additional questions (Markham & Buchanan, 2012).

- What is the primary purpose of the study?
- How are data managed, stored, and analyzed during the study?
- How are findings presented?
- Who might be harmed or benefit from this study?

Research Promotion:

- There is solid evidence that research promotion on social media has a significant impact:



Fig. (3). Social Media for Academic Research: the Why and How?

Research Promotion:

- There is solid evidence that research promotion on social media has a significant impact:

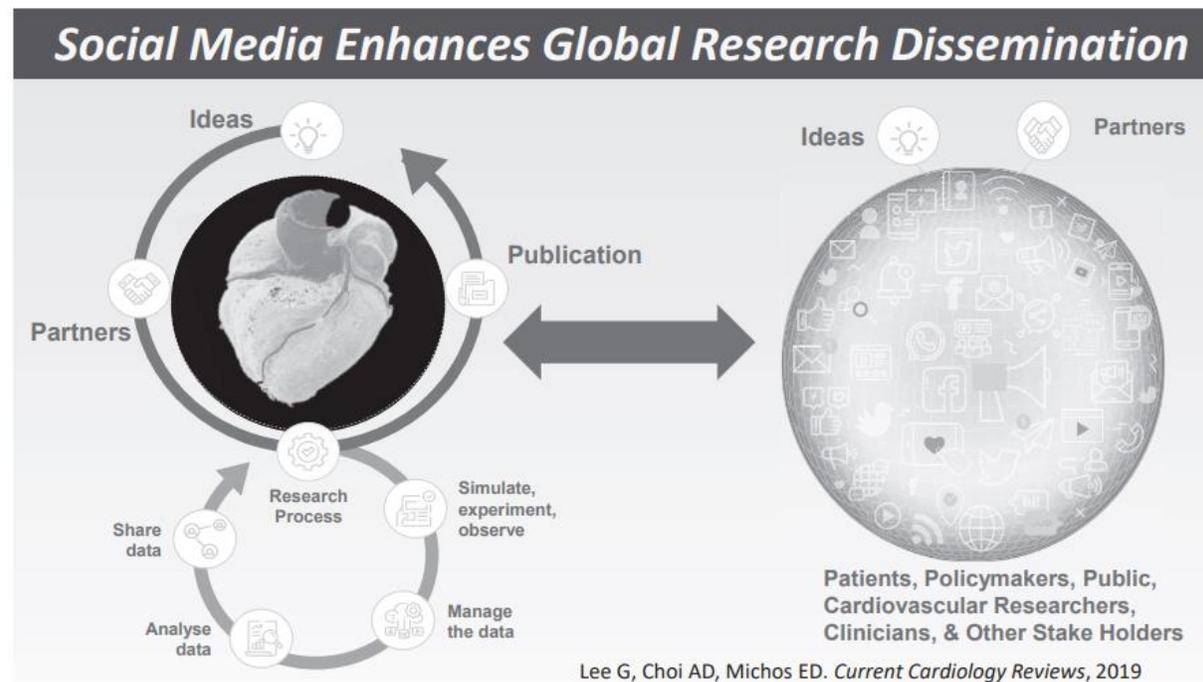


Fig. (1). Mechanisms to enhance global research dissemination through the use of Social Media. (A higher resolution / colour version of this figure is available in the electronic copy of the article).

Research Promotion:

- There is solid evidence that research promotion on social media has a significant impact:

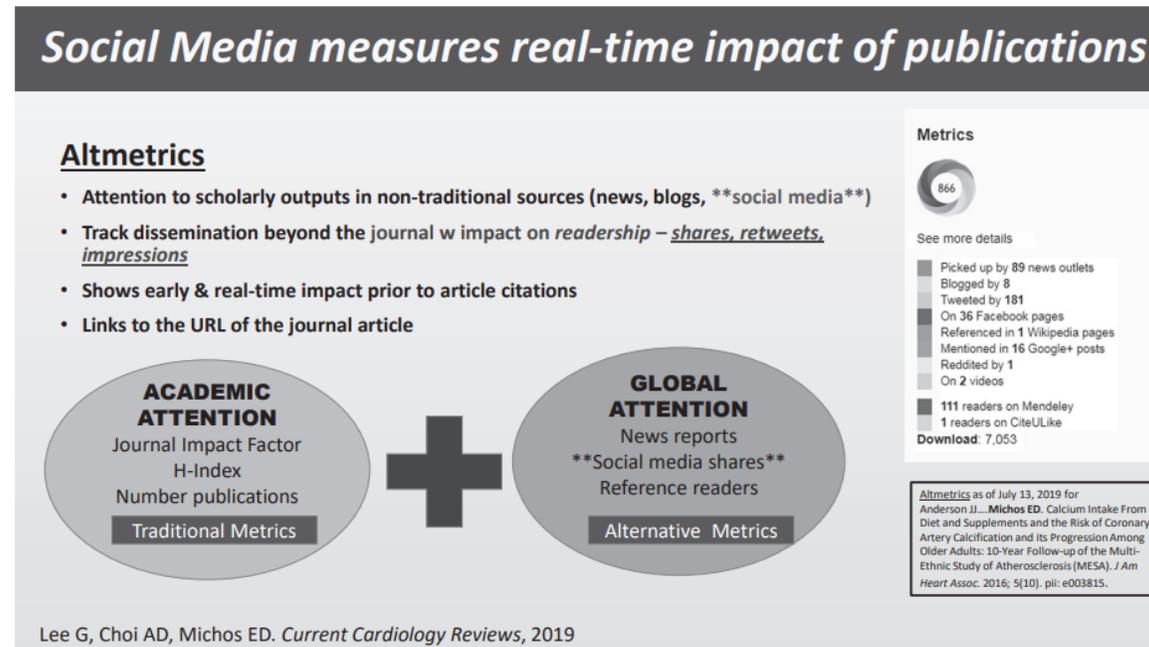


Fig. (2). Altmetric score, a non-traditional bibliometric, measures a publication’s real-time global impact. (A higher resolution / colour version of this figure is available in the electronic copy of the article).

Social Media 101:

- So you've picked a platform?



- Create a username:

- Aim for something unique and memorable.
- It should not have random or extraneous numbers.
- Make it appropriate in multiple—including professional—settings.
- It should stand the test of time (not include transient information) and not be easily aged out of.

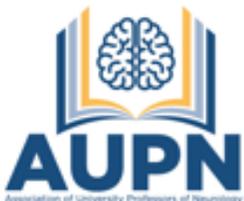
- Create a profile:

- Use a modern, high-resolution picture.
- Include relevant tags, links to websites, alternate accounts.
- Make sure the advice is identified as your own—not your employer's, your institution's etc...
- If you post about medical topics, make it clear your words do not constitute clinical advice for individuals.



- Start posting:

- Start off posting based on whatever type of online persona you are personally aiming for.
- Some begin with tutorials / education or a schtick to build a following.
- Others focus on networking and mutual promotion.



Social Media 101:

- So you've picked a platform?



- Create a username:

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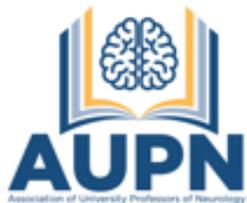
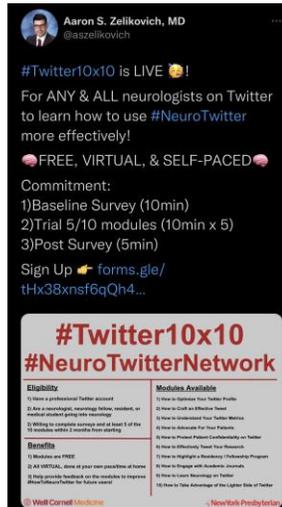
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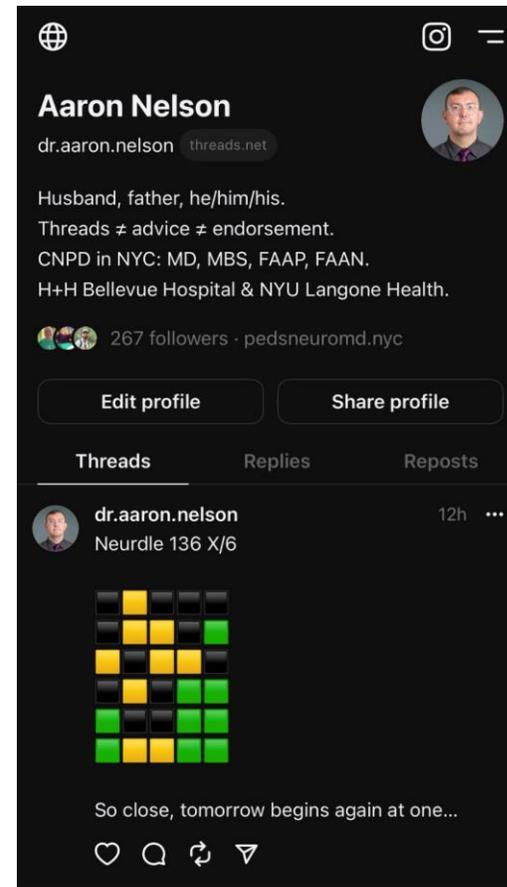
- Start posting:

- Start off posting based on whatever type of online persona you are personally aiming for.
- Some begin with tutorials / education or a schtick to build a following.
- Others focus on networking and mutual promotion.



Social Media 101:

- Don't miss the next best thing...



Final Thoughts:



- Don't make it all about you or your brand(s).
- Avoid thoughtless posts you may regret.
- Amplify your allies as they do you.
- Post judiciously—and edit.
- Timing is key.

Before you...



THINK!

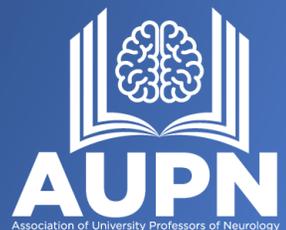
T = Is it True?
H = Is it Helpful?
I = Is it Inspiring?
N = Is it Necessary?
K = Is it Kind?

Promoting Research Among Residents & Fellows:

Social Media and Graceful Self-Promotion

Thanks!

Aaron Nelson, MD MBS FAAP FAAN
Director of Epilepsy, Bellevue Hospital Center
Director of Child Neurology Residency, NYU Langone Health
Associate Professor of Neurology, NYU Grossman School of Medicine





Mitchell S. Elkind, MD
Columbia University/
American Heart Assn.

Brain Health Research Funding Opportunities from the American Heart Association/ American Stroke Association

Mitchell Elkind, MD, MS, FAAN, FAHA
Chief Clinical Science Officer, AHA
Professor of Neurology and Epidemiology,
Columbia University

AUPN Meeting May 3, 2024



American
Heart
Association.



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BRIEF OVERVIEW

- **Who is the AHA/ASA?**
- **Where is the AHA/ASA Going?**
- **Grant Funding Opportunities at AHA/ASA**
 - Across the career stage
 - Application expectations and timelines
 - The peer review process
- **Service and Career Development Opportunities**



**American
Heart
Association.**



**American
Stroke
Association.**

*A division of the
American Heart Association.*

Who we are

The American Heart Association is America's oldest and largest voluntary health organization dedicated to fighting heart disease and stroke.

The American Stroke Association was created in 1998 as a division of the AHA to elevate the association's work on stroke.

Our Mission

To be a relentless force for a world of longer, healthier lives.

ASA: 25 Years of Progress



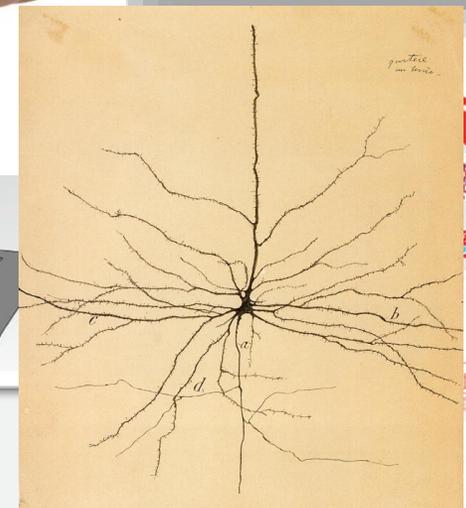
- In the 25 years since the ASA division was formed in 1998, we:
- funded more than **\$520 million** in stroke related research
 - **awarded 3,000+ stroke-related research grants.**
 - **2,600+ hospitals enrolled** in Get With The Guidelines® -Stroke.
 - Quality stroke care access for **86% of ischemic stroke patients.**
 - **8 million** stroke patients entered into Get With The Guidelines-Stroke.
 - More than **1,300 registered stroke support groups** for survivors and caregivers.
 - **Tens of thousands** of patients helped through the Stroke Warmline & Support Network
 - **68% of U.S. adults** know at least 1 stroke warning sign
 - F.A.S.T. awareness increases 4x since 2013
 - Stroke declines from nation's 3rd to 5th leading cause of death



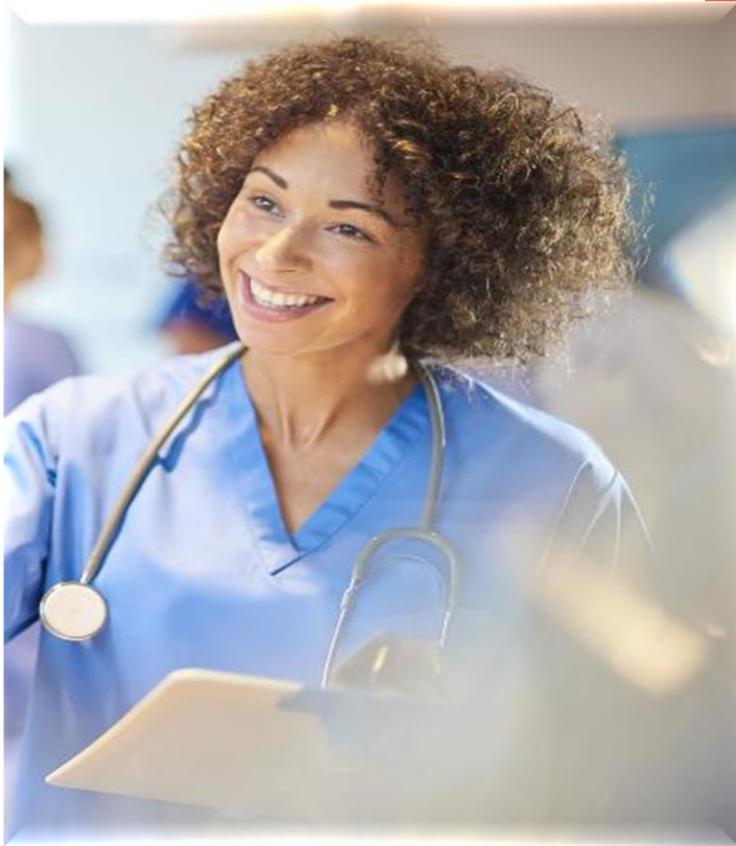


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100th anniversary 2024!



RESEARCH: The Foundation of our Work



- **\$5.7 billion since 1949**
- **1,700 active awards**
- **> \$470 million committed**
- **> 2200 volunteer reviewers in 2022-23**
- **> 3,750 proposals in 2022-23**
- **> 850 awards in 2022-23**



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AHA 12 RESEARCH ESSENTIAL ELEMENTS

Develop innovative research models which integrate research values and fund highly meritorious or “best” research.

Fund both investigator-initiated and strategically-focused research, including implementation research.

Support all areas of cardiovascular, cerebrovascular and brain health research, with a focus on overall health and well-being **across the lifespan** that drives to AHA’s 2024 goals and overall mission.

Identify key questions, that if answered, could provide extraordinary impact in science and toward mission.

Ensure a focus on diverse populations in both the makeup of the investigators we support, and the participant populations of AHA-funded research.

Provide programs which in addition to supporting the pursuit of the research in question also facilitate expansion of investigator skills.

Focus on funding outstanding individuals, not just projects.

Clearly define and report research and translationally-oriented outcomes to all stakeholders.

Assure that best practices are used for all governance and operational guidelines.

Assure that all stakeholders – researchers, donors, lay volunteers – are involved in research activities.

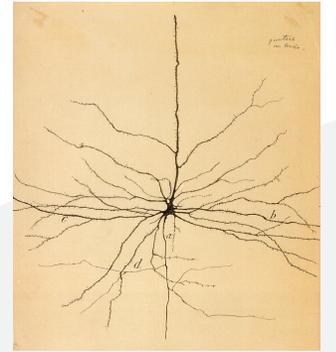
Fund research which provides a return on investment which can be funneled back into more research.

Expand collaboration to leverage research dollars and outcomes.



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AHA/ASA Brain Health activities



Annual Statistical Update: New chapter on Brain Health added 2022

AHA/ASA Presidential Advisory: Defining Optimal Brain Health (Gorelick et al. Stroke 2017)

Scientific Statement: A Primary Care Agenda for Brain Health (Lazar et al. Stroke 2022)

Advocacy

...Currently Funded Programs:

- Strategically Focused Research Networks
 - Health Technology and Innovation: *Integrated Digital Technology Platform for Optimization of Precision Brain Health (PI Au, BU)*
 - Science of Increasing Diversity in Clinical Trials: *Alzheimer's Trial Recruitment Innovation Lab (ATRIL) (PI Raman, USC)*
 - Biologic Pathways of Chronic Psychosocial Stressors on Cardiovascular Health
- ASA/Bugher Foundation awards
- AHA/Paul G. Allen Frontiers Group initiative in brain health and cognitive impairment
- Data science initiative: Migraine and cardiovascular disease





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AHA RESEARCH AWARDS



- open to all academic and health professionals
- broadening our reach – engineers, psychologists, computer scientists, etc.
- clinical, translational, population, behavioral, and basic science
- strongly encourage applications by women, those from groups under-represented in research, those with non-traditional career trajectories
- strong interest in health equity, social determinants of health, structural racism
- Research across the lifespan

RESEARCH PROGRAM OFFERINGS FY24-25

Program	Description/Target	Award Amount	Duration
Institutional Undergraduate Student Award	To institutions that can offer a meaningful research experience to undergraduate college students.	Total Award Amount: \$160,000 Sept 11th, 2024	3 Years Jan 1 start
AHA Predoctoral Fellowship	Enhances the training of promising students in pre-doctoral or clinical health professional degree training programs and who intend careers as scientists, clinician-scientists, or related careers. Supports non-citizen, non green card holders.	Total Award Amount: Approx. \$70,000 for 2 years Mirrors NIH Scale Sept 4th, 2024	1 or 2 Years Jan 1 start (flexibility)
AHA Postdoctoral Fellowship	Enhances the training of postdoctoral applicants who are not yet independent. The applicant must be embedded in an appropriate investigative group with the mentorship, support, and relevant scientific guidance of a research mentor. Supports non-citizen, non green card holders.	Total Award Amount: Approx. \$150,000 for 2 years Mirrors NIH Scale Sept 5th, 2024	1 or 2 Years Jan 1 start (flexibility)

RESEARCH PROGRAM OFFERINGS FY24-25

Program	Description/Target	Award Amount	Duration
Research Supplement to Promote Diversity in Science	<p>Under the mentorship of a current AHA awardee, this mechanism supports predoctoral and postdoctoral fellows from underrepresented groups in science.</p> <p><i>Broadened eligibility as of 2023</i></p>	<p>Total Award Amount: matches NIH scales as per other AHA fellowships</p> <p>Feb 6th, 2025</p>	<p>1 or 2 Years</p> <p>April 1 start</p>
Career Development Award	<p>Highly promising investigators who are newly in or are transitioning into their first non-training position (must have faculty/staff appointment at time of award activation).</p>	<p>Total Award Amount: \$231,000</p> <p>Dec 5th, 2024</p>	<p>3 Years</p> <p>April 1 start</p>
AHA Institutional Research Enhancement Award (AIREA)	<p>Supports researchers at institutions that have not been major recipients of NIH support. Goals: support meritorious research; expose students to research; enhance research environment.</p>	<p>Total Award Amount: \$154,000</p> <p>Sept 12th, 2024</p>	<p>2 Years</p>



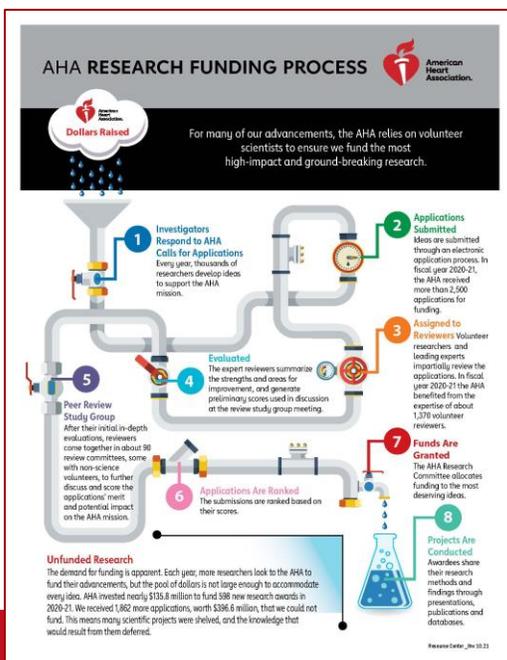
OPTIMIZE YOUR CHANCE OF FUNDING

Application Resources

<https://professional.heart.org/en/research-programs/application-information#resources>

Internal and external tools: Fact sheets, articles, videos, online tools

- AHA Research Application & Award Process
- Step-by-step application instructions
- Lay summary
- Career development plan
- Biosketch
- Writing a proposal
- Peer Review & scoring





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MUST BE A MEMBER TO APPLY

- All applicants -- including predoctoral and postdoctoral fellows -- must be an American Heart Association professional member (memberships start at \$109).
- Applicants may renew or join membership during the application process
- Join or renew by phone at 800-787-8984 (inside US) or 301-223-2307 (outside US)

There is a 3-5 day waiting period to process membership, so do not wait until the application deadline to renew or join.





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The Peer Review Process

Assigned to committee, reviewers (3)

NIH-style review, NIH scoring

- Mix of face-to-face and teleconference
- Triage process
- Review criteria (general)
 - The science: Innovation, Impact, Significance, Approach, Investigator, Environment
 - Fellowships/Career Development Awards: 1) the Applicant; 2) Sponsor/Training Plan and Environment; 3) the Proposal
 - Lay summary now part of scoring



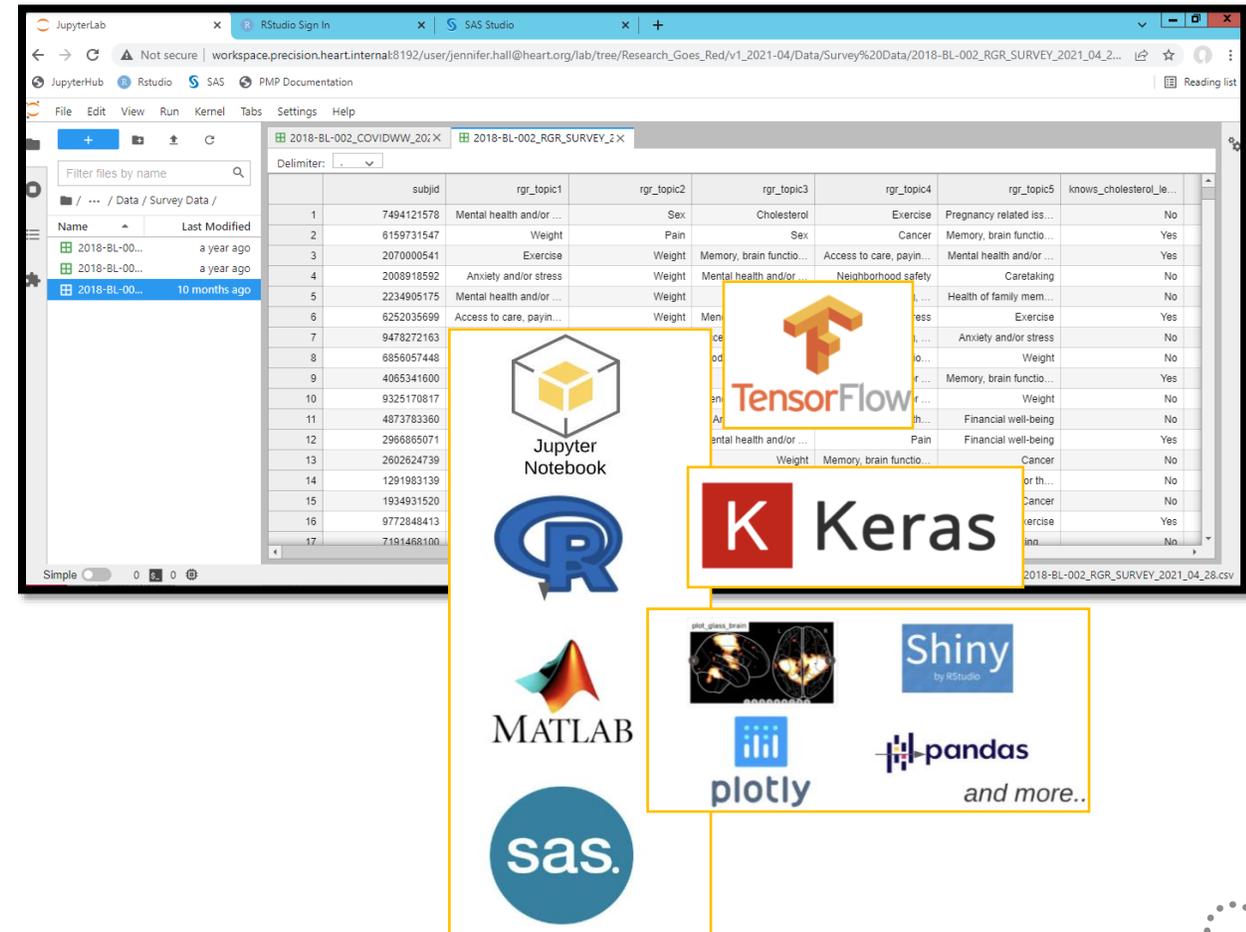
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Peer Review Opportunities – *AHA-Funded* Postdoctoral Fellows

- 2nd year postdoctoral fellows eligible
 - Approval of sponsor
 - Training sessions
-
- One specifically for fellows, one attended by all reviewers
 - Assigned up to 3 grants (Fellowship applications currently)
 - Prepare full written critiques and assign preliminary scores (won't submit final scores)

Precision Medicine Platform

- Highly secure cloud computing (AWS) workspaces equipped with analytical tools
- Analysis tools include R, Python, SAS and more
- Teams can easily collaborate; view the same data and code
- Publish notebooks to share with the research community



The image shows a JupyterLab interface with a data table and several tool logos. The data table has columns for subject ID, various topics, and binary outcomes. The logos include Jupyter Notebook, TensorFlow, Keras, MATLAB, SAS, Shiny, plotly, and pandas.

	subjid	rgr_topic1	rgr_topic2	rgr_topic3	rgr_topic4	rgr_topic5	knows_cholesterol_je...
1	7494121578	Mental health and/or ...	Sex	Cholesterol	Exercise	Pregnancy related iss...	No
2	6159731547	Weight	Pain	Sex	Cancer	Memory, brain functio...	Yes
3	2070000541	Exercise	Weight	Memory, brain functio...	Access to care, payin...	Mental health and/or ...	Yes
4	2008918592	Anxiety and/or stress	Weight	Mental health and/or ...	Neighborhood safety	Caretaking	No
5	2234905175	Mental health and/or ...	Weight	Men...	Health of family mem...	Exercise	No
6	6252035699	Access to care, payin...	Weight	Men...	ess	Anxiety and/or stress	Yes
7	9478272163		od			Weight	No
8	6856057448					Memory, brain functio...	Yes
9	4065341600					Weight	No
10	9325170817					Financial well-being	No
11	4873783360					Pain	Yes
12	2966895071					Memory, brain functio...	No
13	2602624739					Cancer	No
14	1291983139					or th...	No
15	1934931520					Cancer	Yes
16	9772848413					exercise	Yes
17	7191468100					no...	No

Logos shown: Jupyter Notebook, TensorFlow, Keras, MATLAB, SAS, Shiny, plotly, pandas and more..





Explore & Request Datasets

<https://precision.heart.org/request>

- In addition to the cloud-computing workspaces, researchers have the option to request datasets that are then delivered right to their workspace.
- **AHA datasets & documentation – Get With The Guidelines, Research Goes Red**
 - *Access granted to those with an accepted research proposal and executed NDA-DUA*
- Other third-party datasets available
- Bring your own data (BYOD) – self-service upload from the portal into your workspace

The screenshot shows the 'Explore Datasets and Request a Workspace' page. It features a grid of dataset cards, each with a title, contributor, date range, data category, sub-category, level, and number of records. A 'Request Selected Dataset(s)' button is visible in the top right corner.

Explore Datasets and Request a Workspace Request Selected Dataset(s)

The Precision Medicine Platform serves as a data marketplace where you can find and request datasets and access them in a secure workspace—a cloud based virtual environment—to conduct research, perform analyses, or build analytic pipelines and tools. On this page you can request a workspace and datasets. [Click here for more information.](#)

Select datasets below to add to your workspace

Dataset Title	Contributor	Date Range	Data Category	Sub Category	Level	No. of Records
Stroke	AHA	2003 - 2021	Patient / Disease Regist...	Observational	Individual	7,407,555
Heart Failure	AHA	2005 - 2021	Patient / Disease Regist...	Observational	Individual	2,240,357
Resuscitation	AHA	2000 - 2021	Patient / Disease Regist...	Observational	Individual	1,273,435
AirB	AHA	2013 - 2021	Patient / Disease Regist...	Observational	Individual	125,767
Coronary Artery Disease	AHA	2015 - 2021	Patient / Disease Regist...	Observational	Individual	436,644
COVID-19 CVD Registry	AHA	2020 - 2022	Patient / Disease Regist...	Observational	Individual	47,000

FOCUSED RESEARCH PROGRAMS



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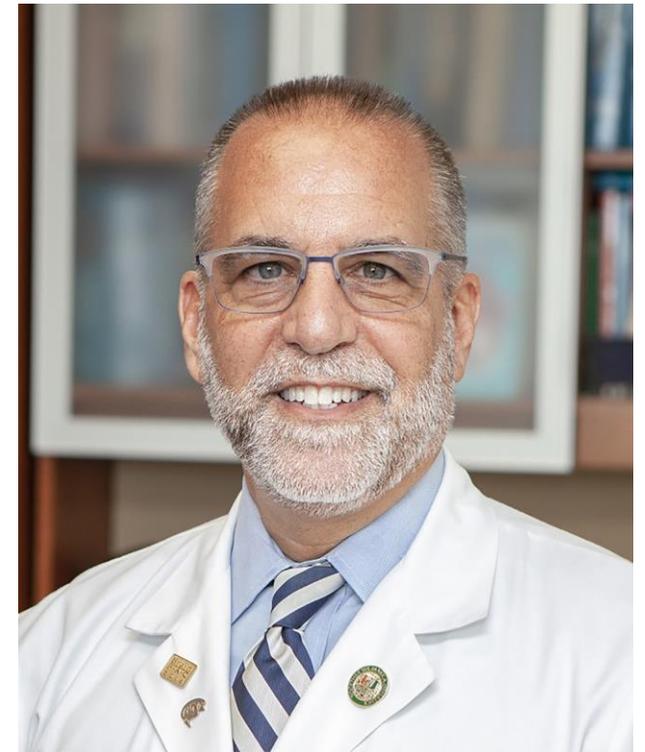
Ralph L. Sacco Scholars Program



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- Two-year postdoctoral fellowship for research on the prevention of brain disease and/or work focused on maintaining a healthy brain across the lifespan. **Proposal deadline: Tuesday, April 9**
- *Jointly funded by American Academy of Neurology and American Heart Association through a generous bequest from Dr. Sacco's estate*

<https://professional.heart.org/en/research-programs/aha-funding-opportunities/sacco-scholars>



AHA's Second Century of Science Initiative

Clinical Fellow Research Education Program

Pilot program for
cardiology and vascular
neurology fellows to attend
and present at an AHA
scientific meeting, plus
related training and
experience

Applications due Feb 8

Up to **\$52,500**
over three years

AHA's Second Century Early Faculty Independence Award

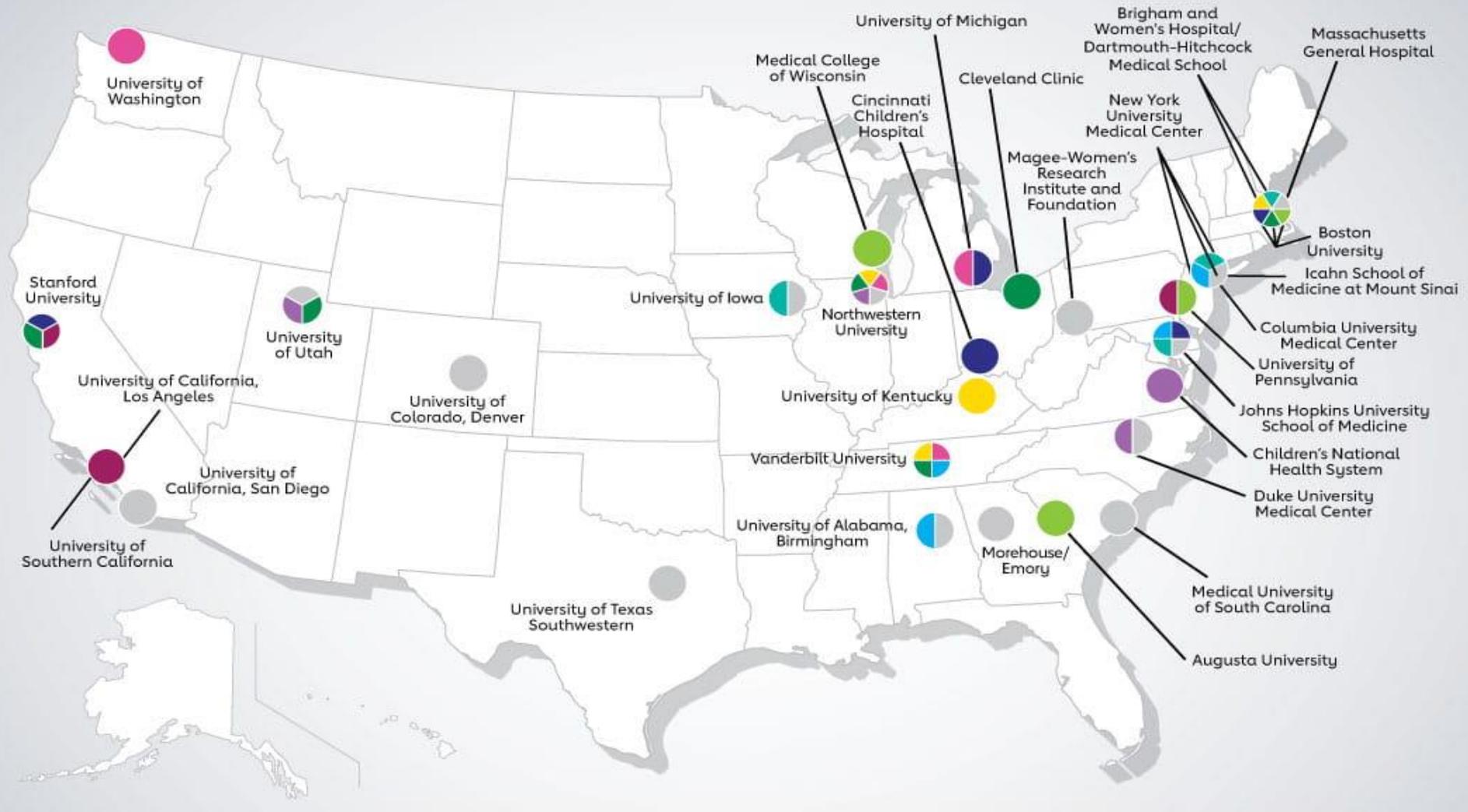
For highly promising early
career investigators in
critical, emerging areas of
research

**Pre-proposal deadline
passed**

\$300,000
over three years



STRATEGICALLY FOCUSED RESEARCH NETWORKS



**Awarded 2023:
Mechanism(s) of
psychosocial stress
and cardiovascular
disease**

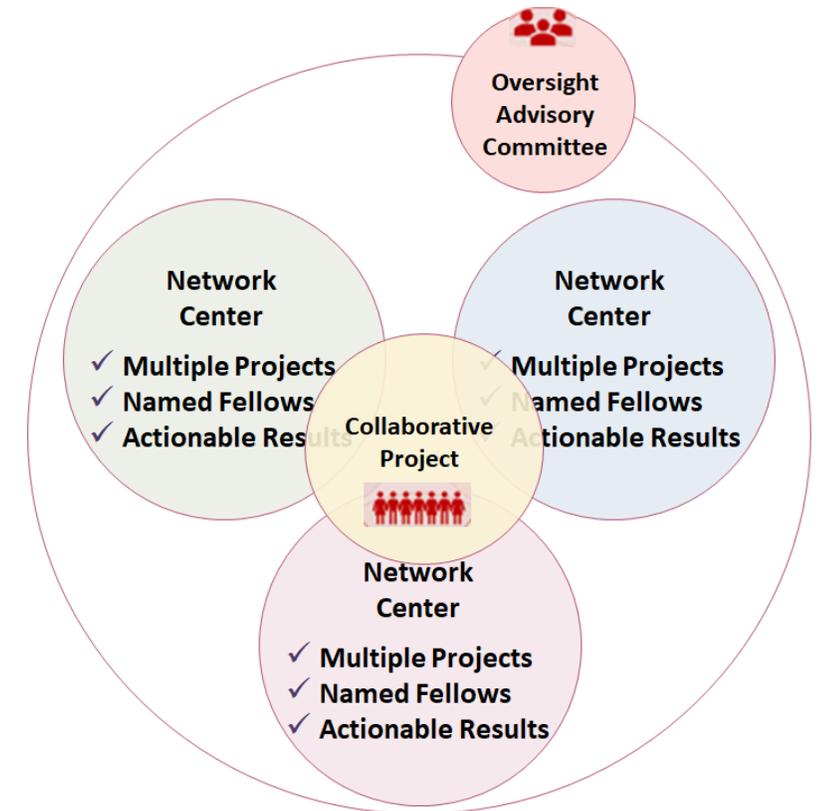
**Bugher V:
Hemorrhagic
Stroke Network**



- | | | | |
|--|--|--|---|
| ● Obesity | ● Atrial Fibrillation | ● Health Technologies & Innovation | ● Networks Completed: |
| ● Children's | ● Arrhythmias & Sudden Cardiac Death | ● Disparities in Cardio-Oncology | Prevention |
| ● Vascular Disease | ● Cardiometabolic Health | ● Diversity in Clinical Trials | Hypertension |
| | | | Disparities in CVD & Stroke |
| | | | Go Red For Women |
| | | | Heart Failure |

New SFRN - Inflammation in Cardiac and Neurovascular Disease

- \$15M to fund three Centers
 - Each with three projects
- Inter-center collaborative projects
- Peer review completed





HEALTH EQUITY RESEARCH NETWORKS

The RESTORE Network: Addressing Social Determinants of Health to Prevent Hypertension



NEXT HERN:
Improving access
to care and other
health inequities
in rural America

The P3 EQUATE Network: Pregnancy, Postpartum, and Postnatal Health (P3): Enhancing Quality and Access to Achieve Equitable Maternal and Infant Health





New Health Equity Research Network (HERN) for spring 2024

- **Topic: Community-driven research approaches to improve public health**
 - \$20 million initiative
 - Co-funded by the Robert Wood Johnson Foundation
 - Fund three research teams or “Hubs”, each with multiple projects
 - Each Hub comprises a Community-based organization and an Academic Institution partner working together
 - Fund one Community Engagement Resource Center (overall coordinating center)

Timeline:	Request for Proposals published Feb 2 nd
Pre-proposals due March 26 th , 28 th	Full submissions due late May 14 th , 16 th
Peer review (two phases) June	July 1 start date



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Health Care  Food™

**Anchor support from The Rockefeller Foundation
With additional support from Kroger, Walmart, KP, and
others**

Mitchell Elkind, MD, MS

Chief Clinical Science Officer, AHA

Staff Lead

Kevin Volpp, MD, PhD

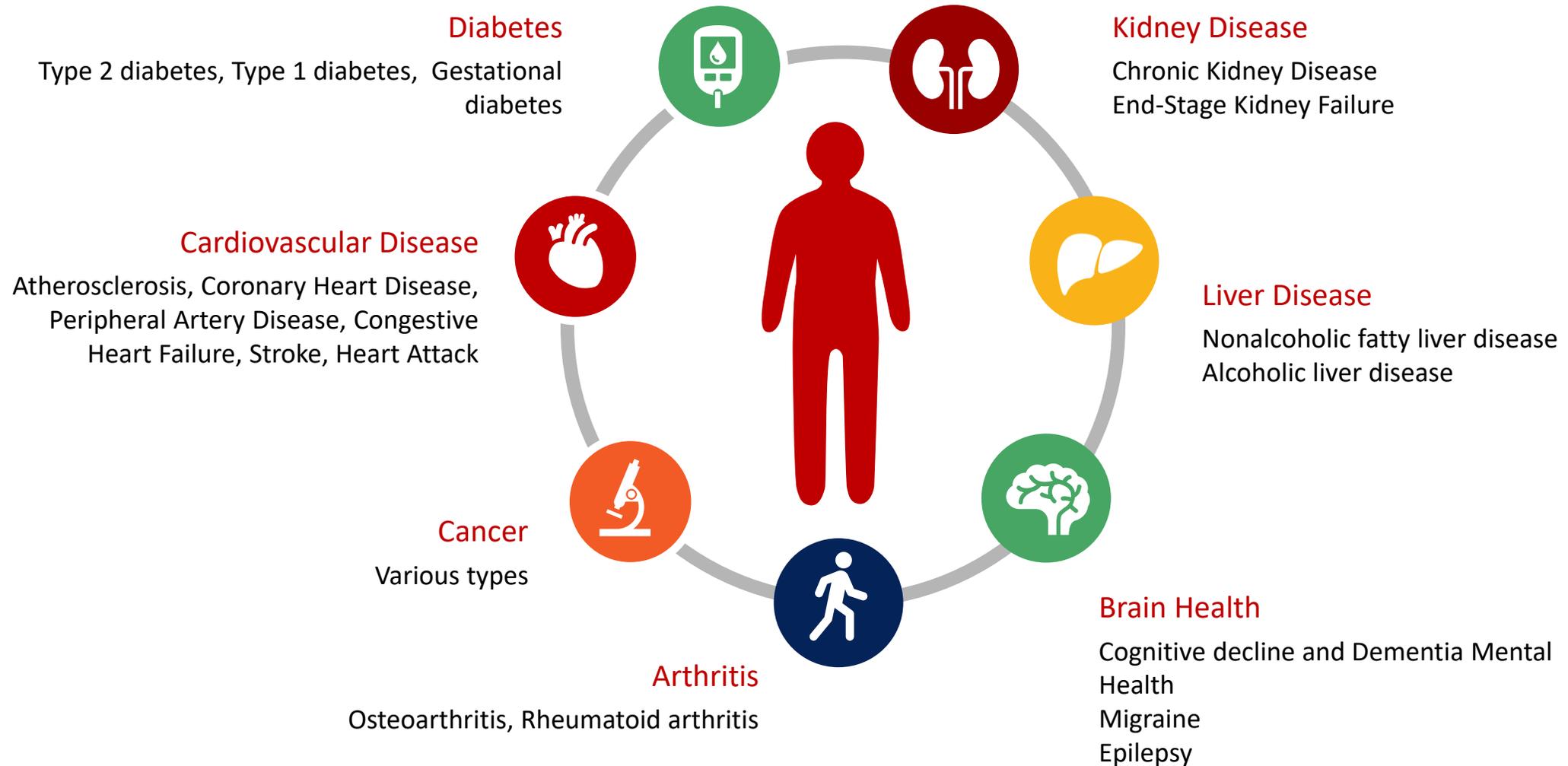
Director, Penn Center for Health Incentives and Behavioral
Economics

Scientific Lead



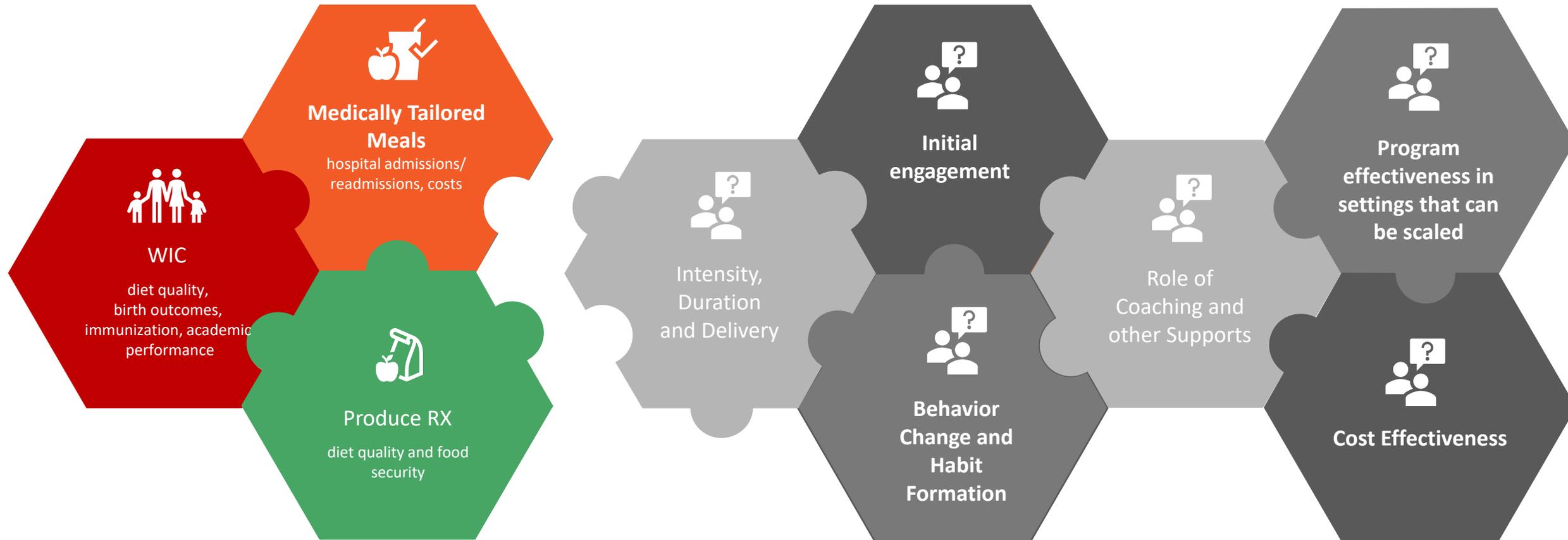
<https://healthcarexfood.org>

Food Is Central To Health Outcomes



STRENGTHENING THE EVIDENCE

The Food Is Medicine Initiative will build on existing evidence:



Existing Evidence

Gaps in Evidence to Address

Strategy: Make a lot of small bets before making big bets

Driving food system transformation at the intersection of health care

2023

Platform Development and Short-Term Pilots

Planning



Choose initial partners, plan platform design and testing.

Trial platforms and data repository development; human-centered design, focus on implementation science with many small trials.

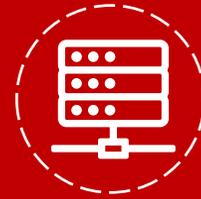
Component Testing and Intervention Refinement



De-risk larger-scale trials through rapid cycle testing of efficacy in changing initial and short-term behavior.

2027

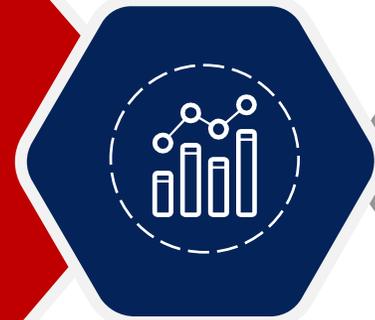
Definitive Trials



Definitive trials of different interventions in different populations with a focus on effectiveness, cost effectiveness, scalability.

2032

Implementation & Dissemination



Work with public and private payers and health systems on coverage possibilities.

SUCCESS

Food Is Medicine programs as covered benefit in multiple plans.

START



GRANT DEADLINES FALL 2023

Program

Proposals Due

Predoctoral Fellowship

Sept 4th, 2024

Postdoctoral Fellowship

Sept 5th, 2024

Institutional Undergraduate Student Award

Sept 11th, 2024

AHA Institutional Research Enhancement Award

Sept 12th, 2024 Career

Development Award

Dec 5th, 2024

Other programs in late Fall and Early 2024: subscribe to Research Insider, watch the website

<https://professional.heart.org/en/research-programs/aha-funding-opportunities>



<https://professional.heart.org/en/research-programs>

QUESTIONS?

.....

Mitchell.Elkind@heart.org

Glenn.Dillon@heart.org





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FEATURES OF ALL AHA AWARDS

- Fully transferrable
- Straightforward re-budgeting
-
- Strategically Focused Research Network personnel and Health Equity Research Network personnel may hold individual AHA awards



Questions on the PMP?

- Visit precision.heart.org to register and request a workspace
- pmp@heart.org
- Holly Picotte
- Program Director, Data Solutions
- holly.picotte@heart.org



RESEARCH PROGRAM OFFERINGS FY24-25

Program	Description/Target	Award Amount	Duration
Innovative Project Award	High risk/high reward type projects. <i>Preliminary data is not accepted.</i> However, a solid rationale for the work must be provided.	Total Award Amount: \$200,000 Deadline: TBD	2 Years
Transformational Project Award	Supports next logical step of an investigator's previous work. Should be suggestive of a high probability of success in new avenue; should include preliminary data.	Total Award Amount: \$300,000 Deadline: TBD	3 Years
Collaborative Sciences Award	Two or more primary investigators from disparate disciplines to work on a project that is achievable only with combined efforts. <ul style="list-style-type: none">At least one investigator at early or mid-career stage	Total Award Amount: \$750,000 Deadline: TBD	3 Years

RESEARCH PROGRAM OFFERINGS FY23-24, FY24-25

Program	Description/Target	Award Amount	Duration
Established Investigator Award	Mid-career investigators (Associate Professors) with great promise, established records, demonstrated commitment.	Total Award Amount: \$400,000 Deadline: TBD	5 Years
Merit Award	Exceptional scientists with established track records, who propose novel approaches to major research challenges, potential for high impact.	Total Award Amount: \$1,000,000 Deadline: TBD	5 Years

TBD equates to late 2024, early 2025

CAREER DEVELOPMENT/SERVICE OPPORTUNITIES



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New Awardee Alumni Network

Researchers
 **Heart**
The Network of AHA/ASA Awardees



Researchers at Heart Program Overview

- **Researchers at Heart: The network of AHA/ASA Awardees** was designed to provide resources, programs, and communications intended to keep AHA-funded investigators close to the AHA throughout their careers.
- Alumni to engage in professional opportunities, promote & share research, connect on LinkedIn, and engage with AHA locally.

SUCCESSFUL LAUNCH AT SCIENTIFIC SESSIONS 2023



- Reception for **Researchers at Heart Program** successfully launched at Scientific Sessions November 2023
- Brought together 200+ researchers, past and present, to be celebrated
- Presence at ISC and AHA specialty conferences through 2024 for Welcome Packet pickup & recognition

Research Alumni Web Features

<https://professional.heart.org/en/research-programs/researchers-at-heart>

- Welcome Awardees – Awardee Policies, Promotional Toolkit, How to Talk About Your Research
- AHA Professional Opportunities – “Job board” of AHA national and local activities needing awardee/researcher support
- See Your Profile – Professional Heart Daily profile; ability to update



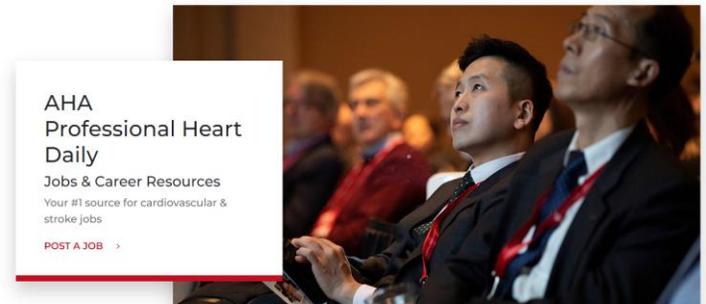
How to Talk About Your AHA Funded Research

Congratulations on your award!

One of the biggest obstacles we face as scientists is being able to convey the importance of our work outside of our circle.

This video will help you with insights, tips, and exercises on how to talk about what you're doing with those in other professions and specialties.

[How to Talk about your AHA research with Non Scientists >](#)



AHA Professional Heart Daily

Jobs & Career Resources

Your #1 source for cardiovascular & stroke jobs

[POST A JOB >](#)

PEER REVIEW



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Consider Becoming an AHA Peer Reviewer

JOIN OUR TEAM

- All ranks
 - Basic, clinical and population research expertise
 - Research experience needed (funding, publication record)
-
- Excellent experience
 - Scientifically stimulating, see the newest science, important academic service, meet new investigators, establish new collaborations, potential leadership opportunity



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The Peer Review Process

- Lay summary now part of scoring
- Normalized priority and percentile scores
- See website for specifics for every program



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Peer Reviewer Home Page

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Peer Review Contact

- peerreview@heart.org

Thank you for attending today's webinar!



We kindly request that you complete the evaluation so we can continue providing relevant programming to our members.

Webinar Evaluation: <https://www.surveymonkey.com/r/2024SpringChairs>

