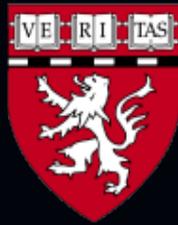# Building a Research Education Component for the Mass ADRC

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OVERVIEW

- **Big picture**

- **Trainees**

- **Training elements**

- **Exchange program**

- **Pipeline program**

Big picture

A"T32 lite," offering a year of the formal training elements without the stipend, so overlaid on existing formal and informal training programs (postdoc, clinical fellowship, pilot grant, K)

Modeled on local MD-PhD program, we select and foster a cohort of trainees each year:

"REC Scholars" (n=5) receive training plus $5K and travel to ADC meetings

"REC Affiliates" (n~5) receive training only

Others in local environment also can attend and benefit from REC programs

New this year, so a work in progress

REC Scholars & affiliates

Formal application in spring, runs July-June

Two clinical "Growdon fellows" plus 3 others selected from local labs, quantitative program, and clinical research groups

Scholars typically more junior, citizen/green card holder; this year two clinical fellows (on doing lab research, one clinical), neuropath junior faculty, lab postdoc, and sociologist with minority fellowship in ORE core

Affiliates include electric engineer and pilot grant awardee, epidemiology post doc, computer science post doc , junior faculty in sleep research

Training Elements

Work with primary mentor on mentored research project(s)

Secondary mentor in a complementary field

Lecture series in our memory clinic conference slot: AD bootcamp in summer, rest interspersed

Immersive experiences: clinic, research cohort visits, consensus conference, clinico-path conference, brain cutting, lab visits, community recruiting events and talks

Modular research training opportunities

Speaking and networking opportunities

Evening career development and social events

Formal career development plan 2x/year

Core Seminars   *(*RCR)*

Core Seminars	(*RCR)
Syndromic and etiologic diagnosis of AD/ADRD	Models of AD/ADRD pathophysiology
Non-AD dementias	Vascular cognitive impairment and mixed pathology
Imaging and biomarkers and clinical disease	Standard and novel cognitive testing
Pathologic diagnosis quantitative measures	Limitations of clinico-pathologic diagnosis
AD/ADRD genetics and 'omics	Laboratory approaches to AD/ADRD
Approaches to clinical trials	Drug development for AD/ADRD: bench to FDA
Longitudinal cognition and other challenges	Big data approaches to understanding AD/ADRD
Grants and philanthropic support for AD/ADRD research	*Challenges in recruitment in aging populations and how to increase diversity
*Special issues in rigorous analyses of data for AD/ADRD (age, education, longitudinal change)	*Team science, data sharing, and public databases in AD/ADRD
*Special issues in human subjects for AD/ADRD (impaired decision-making, over 90 and HIPAA)	*Challenges in disclosing biomarker and genetic data in the research setting

Research opportunities

Preclinical AD
FTD
LBD and Parkinson's' disease
Vascular cognitive impairment and cerebral amyloid angiopathy
Neuropsychological evaluation and sensitive cognitive markers
Behavioral measures and markers
AD/ADRD/Aging neuroimaging
AD/ADRC Biomarkers
AD/ADRD clinical trials / prevention trials
Longitudinal clinical research on AD/ADRD
Longitudinal epidemiologic studies in AD/ADRD
Resilience
AD/ADRD neuropathology, brain banking, and neuroanatomy
AD/ADRD pathophysiology and drug development
AD/ADRD genetics
Animal models of AD/ADRD
Laboratory models of AD/ADRD
Omics and Molecular strategies
Sampling and analysis of EHR data for AD/ADRD
Disparities in AD/ADRD

Additional training and exchange program

A broad range of training resources for career development, RCR, and clinical research methods available through Harvard's CTSA, HSPH, and hospital-based programs

For more specialized training, have multiple research groups plus affiliated programs (e.g., Martinos Center for Biomedical Imaging, HSPH) to offer modular training to our own and others' trainees

Encourage modular structure to facilitate exchange

Formal exchange in place with UCSF, proposed for NYU, hope to extend throughout ADRC network

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Pipeline programs

To ensure strong URM representation, investing in pipeline programs

Piggy-backing on existing programs for URM college students at Mass General and Harvard Medical Schoo/TH Chan School of Public Health, but with specific funding for AD-related research

Plan to start next summer

Aware that may not have specific yield for MADRC, but hope to contribute to overall pool of qualified and interested trainees through early engagement