

## GRADUATED ARCS (...continued)

### PROTEIN TRAFFICKING AND NEURODEGENERATIVE DISEASES (2009-2021)

Dr. Lindsay Farrer (farrer@bu.edu) [into a Program in Personalized Medicine]

### MOLECULAR, BIOMECHANICAL AND GENETIC MECHANISMS OF ARTERIAL STIFFNESS (2010-2016)

Drs. Richard A. Cohen, Kathleen Morgan (kmorgan@bu.edu) and Francesca Seta (setaf@bu.edu) [into a Research Core]

### CALCIUM HOMEOSTASIS IN HEALTH AND DISEASE (2010-2014)

Drs. Victoria Bolotina (bolotina@bu.edu) and Mike Kirber (mkirber@bu.edu) [into Parkinson's Disease Initiative]

### NANOTHERANOSTIC PLATFORMS FOR CANCER AND VASCULAR DISEASE (2011-2015)

Drs. Victoria Herrera (vherrera@bu.edu), Joyce Wong (jywong@bu.edu), Mark Grinstaff (mgrin@bu.edu), and Karl Karlson (karl.karlson@bmc.org) [into a Nanomed Program]

### METABOLIC DISEASES AND INSULIN RESISTANCE: STUDIES IN PATIENTS UNDERGOING BARIATRIC SURGERY (2012-2015)

Drs. Neil Ruderman, Caroline Apovian (capovian@bu.edu) and Konstantin Kandror (kkandror@bu.edu)

### COMPUTATIONAL GENOMIC MODELS OF ENVIRONMENTAL & CHEMICAL CARCINOGENICITY (2012-2015)

Drs. Stefano Monti (smonti@bu.edu) and David Sherr (dsherr@bu.edu) [into a CTSI program]

### ETIOLOGY AND PATHOGENESIS OF ORAL CANCER (2014-2016)

Drs. Maria Kukuruzinska (mkukuruz@bu.edu), Avrum Spira (aspira@bu.edu) and Maria Trojanowska (trojanme@bu.edu)

### SYSTEMS BIOLOGY APPROACHES TO MICROBIOME RESEARCH (2015-2019) – Formalized BU-supported Microbiome Program (2019)

Drs. Daniel Segrè (dsegre@bu.edu) and Evan Johnson (wej@bu.edu)

### TOBACCO REGULATORY SCIENCE (2017-2021)

Drs. Jessica Fetterman (jefetter@bu.edu), Naomi Hamburg (nhamburg@bu.edu), Andrew Stokes (acstokes@bu.edu) and Stine Grodal (grodal@bu.edu)

## Examples of Institutional Initiatives

The Evans Center co-developed with the Nanoscience Center RFAs in Nanomedicine

The Evans Center co-developed with the Nanoscience and Cancer Centers the R25 NCI-funded training program in Nanomedicine (2010-2015)

The Evans Center co-developed with the Department of Biochemistry Institutional Interdisciplinary Thematic Seminars  
Evans Center-initiated new interdisciplinary graduate courses (Biological Core Technologies; Nanomedicine)

Evans Center-initiated Masters Programs (Biological Core Technologies; Nanomedicine)

## xpected Achievements of ARCs

Reasonable expectation of continued programmatic growth, and a plan for inclusive and open exchange of ideas

Extramural grant funding obtained following establishment of the ARC, particularly co-PI RO1 grants

Successful implementation of a structure to support predoctoral and postdoctoral training in content area

- Structure and content should complement and not overlap or compete with existing university entities
- Scientific incubator for basic discoveries with potential application via the CTSI to translational research
- Successful ARCs could eventually gain a status of a program or center

## Expected Support by the Evans Center

- Grant Support for each ARC for 1-3 years, pending annual review
- Travel Awards to present (preferably as a talk) ARC work in meetings
- Funds for annual mini-symposia and periodic seminars to enhance knowledge and collaborations
- Administrative Support with regard to ARC budget management, symposia, web site update, etc.
- Administrative Support with preparation of large institutional grants
- Research and educational support to DOM graduate programs

## Major Goals of the Evans Center and the ARCs

- Form ARCs, each consisting of an assembly of investigators, including an ARC director, who focus on a research theme, explored with the aid of different disciplines and technologies to advance Research and Discovery as it applies to Disease States
- Enhance the educational mission at graduate and postgraduate programs
- Assist in envisioning and developing current and new institutional research fields, such as *Center for Multiscale and Translational Mechanobiology (CMTM)*, begun in winter 2019
- Reach out to The Clinical and Translational Science Institute (CTSI) and other centers for further research and core development
- Provide an opportunity for faculty at BU to become Evans Center members (regardless of ARC's affiliation) and to benefit from ongoing seminars, mini-symposia, immediate knowledge of and access to data-bases and reagents generated by ARCs etc.

## Evans Fellows Awardees



Dr. Tamar Aprahamian (2013), Dr. Gyungah Jun (2013)  
Dr. Marc Liesa, Dr. Cesar Sommer and Dr. Francesca Seta (2014)

## Research Collaborators Awards



Shelley Russek (2021)	Jessica Fetterman (2020)
Rhoda Au (2019)	Vijaya Kolachalama (2020)
Irving Bigio (2018)	Kathleen Morgan (2018)
Bob Varelas (2018)	Belinda Borrelli (2017)
Daniel Segrè (2017)	Maria Kukuruzinska (2016)
Carmela Abraham (2015)	Konstantin Kandror (2015)
Bela Suki (2015)	Louis Gerstenfeld (2014)
Mark Grinstaff (2014)	Barbara Nikolajczyk (2014)
Donald Hess (2013)	Karl Karlson (2013)
Kathleen Morgan (2013)	Noyan Gokce (2012)
Gary F. Mitchell (2012)	Paul Pilch (2012)
Joyce Wong (2012)	Mario Cabodi (2011)
Bennett Goldberg (2011)	

## Outstanding Mentors Recognition

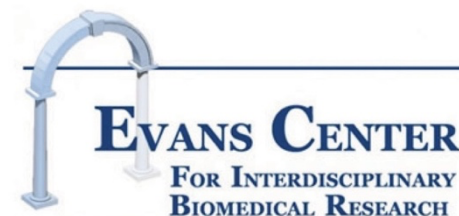


Richard A. Cohen and Bennett Goldberg (2016)

## ARC Leadership Award

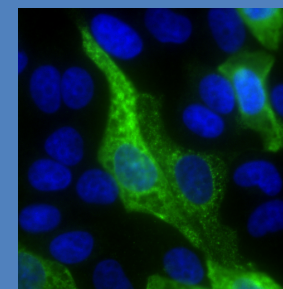


Lindsay Farrer (2020)



BU IBRO

BU Interdisciplinary Biomedical Research Office  
creating and connecting research



Cell Culture of SARS-CoV-2-infected cells

(COVID-19 ARC, E. Mühlberger)





## MISSION

Founded in March 2009, under the leadership of Dr. Katya Ravid, the goal of the ECIBR and IBRO is to promote growth and discovery in emerging interdisciplinary biomedical research and educational areas by providing faculty affiliated with the Department of Medicine (DOM) and with various schools, departments and centers at Boston University (BU) a dynamic, interdisciplinary organizational structure, which allows investigators with different areas of expertise to collectively address mechanisms of disease, and to facilitate new training opportunities.

See our following publications:  
[pubmed/28445220](#); [pubmed/23874035](#); [pubmed/23269301](#);  
[pubmed/28720207](#)

## ADDITIONAL INFORMATION

Dr. Katya Ravid  
 Founding Director, Evans Center IBR & IBRO

Ms. Robin MacDonald  
 Executive Assistant  
[remac@bu.edu](mailto:remac@bu.edu)

[bumc.bu.edu/evanscenteribr](http://bumc.bu.edu/evanscenteribr)  
[www.bu.edu/research/ibro](http://www.bu.edu/research/ibro)  
 Boston University School of Medicine



## Affinity Research Collaboratives (ARCs)

Faculty affiliated with the Evans Center hold academic appointments with different departments. The Center provides opportunities for collaborations within Affinity Research Collaboratives (ARCs) organized around foci of common research interests. The extraordinary strength in biomedical and physical sciences at Boston University, and the support and development of the ARCs create opportunities for new interdisciplinary approaches to both research and training in biomedical research.

### Joining an ARC

- Investigators from all over BU are encouraged to form or join an ARC, which consists of several investigators, including from DOM;
- The ARC selects its own Director;
- Most ARCs are initiated by the faculty, and at times by the Evans Center's Director;
- A review panel prioritizes the ARC proposal based upon uniqueness of the opportunity, scientific quality and promise;
- Joining an ARC after it has been formed is also possible, in consultation with the ARC and Evans Center's directors;
- Joining multiple ARCs is allowed

## Evans Center Metrics: November 2009 - June 2022 (Note the high % of funding)

22 ARCs	Publications (Co-PIs)	Grants (Co-Investigators)		Presentations at Meetings	Core Participants*	# Trainees participating in ARC projects	
		Applied	Funded (R01, R21, U01 or PPG, etc.)			Pre	Post
<b>TOTALS</b>	<b>1,020</b>	<b>735</b>	<b>586</b>	<b>773</b>	<b>267</b>	<b>261</b>	<b>198</b>

↙ Total number of ARC members from across campuses is 377; 24 from other institutions

\* Core participants include ARC funded members, while the total number of ARC members of Evans Center members is greater.  
 See: Ravid, K... Coleman, D. (2013) J. Academic Medicine 88(2):179-184.

## CURRENT (2022) ARCS (ARC DIRECTORS)

A MULTI-DISCIPLINARY PROGRAM TO IDENTIFY PREDICTORS OF EFFICACY AND RESISTANCE TO CANCER CHECKPOINT INHIBITION (PIPER-C ARC) (2021-present)  
 Drs. Matthew Kulke ([Matthew.Kulke@bmc.org](mailto:Matthew.Kulke@bmc.org)), Evan Johnson ([wej@bu.edu](mailto:wej@bu.edu)), David Sherr ([dsherr@bu.edu](mailto:dsherr@bu.edu)), and Gerald Denis ([gdenis@bu.edu](mailto:gdenis@bu.edu))

## RESPIRATORY VIRUSES: A FOCUS ON COVID-19

(2020-present)  
 Drs. Markus Bosmann ([mbosmann@bu.edu](mailto:mbosmann@bu.edu)) and Mohsan Saeed ([msaeed1@bu.edu](mailto:msaeed1@bu.edu))

## ARC Programs (ongoing ARC activities)

THROMBOSIS TO HEMOSTASIS IN HEALTH AND DISEASE (2014-2017, 2018-present)

Drs. Vipul Chitalia ([vichital@bu.edu](mailto:vichital@bu.edu)) and Katya Ravid ([kravid@bu.edu](mailto:kravid@bu.edu))

MOBILE and ELECTRONIC HEALTH (2015-2019, 2020-present)

Drs. Belinda Borrelli ([belindab@bu.edu](mailto:belindab@bu.edu)) and Lisa Quintiliani (Lisa.  
[Quintiliani@bmc.org](mailto:Quintiliani@bmc.org))

PRECISION MEDICINE FOR ALZHEIMER DISEASE AND RELATED DISORDERS (2015-2019, 2020-present)

Drs. Rhoda Au ([rhodaau@bu.edu](mailto:rhodaau@bu.edu)), Alice Cronin-Golomb ([alicecg@bu.edu](mailto:alicecg@bu.edu)) and Lindsay Farrer ([farrer@bu.edu](mailto:farrer@bu.edu))

CONNECTING TISSUES AND INVESTIGATORS (Fibrosis ARC) (2017-2020, 2021-present)

Drs. Maria Trojanowska ([trojanme@bu.edu](mailto:trojanme@bu.edu)), Irving Bigio ([bigio@bu.edu](mailto:bigio@bu.edu)) and Bob Varelas ([xvarelas@bu.edu](mailto:xvarelas@bu.edu))

## GRADUATED ARCS (into BU programs, center, research assemblies)

REGENERATIVE MEDICINE: iPS Cell Bank (2009-2013)\*\*  
 CENTER FOR REGENERATIVE MEDICINE

\*\*Drs. Darrell N. Kotton ([dkotton@bu.edu](mailto:dkotton@bu.edu)), Gustavo Mostoslavsky ([gmostosl@bu.edu](mailto:gmostosl@bu.edu)), and George Murphy ([gjmurphy@bu.edu](mailto:gjmurphy@bu.edu))

MITOCHONDRIAL ARC: MITOCHONDRIA IN HEALTH AND DISEASE (2009-2014)

Drs. Orian Shirihai and Andrea Havasi ([ahavasi@bu.edu](mailto:ahavasi@bu.edu))

SEX DIFFERENCES IN ADIPOSE TISSUE BIOLOGY AND RELATED METABOLIC DISEASES (2009-2015)

Drs. Susan Fried and Paul Pilch [co-supports BNORC programs]