RESEARCH DEVELOPMENT CORE (RDC)

Directors: **Julie Andersen (Buck Institute) and Kelvin Davies (Leonard Davis School, USC)**

(1) Provides access to the USC-Buck NSC Resource Cores (RCs) in support of new research initiatives.

(2) Primarily focused on junior faculty and investigators new to the aging field, especially from institutions that lack aging programs.

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Employs three primary mechanisms to achieve this goal:

(1) Provides support for pilot projects to address proof-of-concept and feasibility analyses, develop innovative models for Geroscience research, and to advance novel uses for pre-existing technologies currently within the USC-Buck NSC RCs and across existing USC-Buck facilities.

(2) Implements a voucher program providing discounted or free access to cutting-edge technologies available at USC and the Buck within the RCs.

(3) Research sabbaticals in Aging/Geroscience

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Research Sabbaticals in Aging.

Research sabbaticals in aging allow scientists, senior post-doctoral researchers, or junior faculty from any academic institution in the United States to spend a period of time directly interacting with Buck and USC faculty and research staff. This may be a short as a few weeks, in order to learn the basics of important research models, or an extended research sabbatical to advance a novel project and foster new collaborative approaches. The goal is to foster a new generation of Geroscientists comfortable working in interdisciplinary teams. These awards follow the format and expectations outlined for the P&F grants except the awardees are embedded in a laboratory and/or Geroscience Technology Core (GTC) at USC or the Buck for a period from two weeks up to six months. The trainees will attend weekly seminars and meet with speakers one-on-one, as well as at lunches and dinners at both campuses. The trainees will be asked to present their ideas and data at internal research seminars and group meetings on both campuses. Financial support from the RDC can be used to support travel and accommodation costs, and supply and reagent expenses associated with the project. Participants may propose to spend time at one or both institutions.

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Applications approved from round #1

Last Name	First Name	Internal/External	Institution	Title	Pilot/Voucher	Amount Requested	NSC-Core
January 2021 Applications							
Soukas	Alexander	External	MGH	Sgk3 associations with aging-related metabolic phenotypes	Pilot	$ 12,000.00	USC-GTASC
Turner	Christian	Internal	USC	Neuropeptide profiling of SKN-1gf mutants	Voucher	$ 7,500.00	Buck-GTC (Garrison)
Li	Jingjing	External	UCSF	Construct a deep convolutional neural network to computationally assign cell ages to replicative old yeast cells	Pilot	$ 20,000.00	Buck-GTC (Zhou)
Winer	Dan	Internal	Buck	The effects of mechanical tension on cell senescence and its secretory phenotypes	Pilot	$ 16,998.00	Buck-CSBC
Moore	Darcie	External	Wisconsin-Madison	Uncovering the role of intermediate filaments in stress and aging using C. elegans	Pilot	$ 20,000.00	Buck-GTC (Garrison)
Chanfreau	Guillaume	External	UCLA	Splicing factor PRPF8 and degenerative disease phenotypes	Pilot	$ 12,000.00	USC-GTASC
Lithgow	Gordon	Internal	Buck	Analysis of polymorphisms in candidate human kinases for association with longevity and chronic neurological diseases	Pilot	$ 12,000.00	USC-GTASC
Stuhr/Curran	Nicole/Sean	Internal	USC	Mass spec profiling of bacterial diets fed to C. elegans (6 microbial extracts - 4 biological replicates = 24 samples, $300 each)	Voucher	$ 7,200.00	Buck-CSBC
Vinceguerra/Nhan	Manlio/James	Internal	USC/ICRS-visiting scholar	Compound Screening in C. elegans for improved healthspan	Voucher	$ 8,450.00	USC-GTC (Curran)
Dang	Weiwei	External	Baylor	Genetic association with Alzheimer disease and neurological outcomes	Pilot	$ 12,000.00	USC-GTASC
Clayton	Zachary	External	Colorado-Boulder	Using chip cytometry-based digital spatial profiling to elucidate novel mechanisms underlyingaortic stiffening with aging	Pilot	$ 15,000.00	Buck-GTC (Melov)
Preapproved from proposal submission							
Benayoun	Berenice	Internal	USC	Characterizing the transposon-induced secretome in human fibroblasts	Voucher	$ 9,600.00	Buck-CSBC
Villa/Curran	Osvaldo/Sean	Internal	USC	Defining Aldh4a1 variants in muscle health of normal adult aging	Voucher	$ 4,078.00	USC-GTASC
Newman	John	Internal	Buck	HMGCS2 in Human Metabolism and Health	Pilot	$ 12,000.00	USC-GTASC

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How to apply:

(1) Contact Core Leaders to discuss feasibility of potential project.

(2) Submit official application through the NSC website at https://uscbucknsc.org. Administrative questions including budget can be directed to Kira Harvath at the Buck (Kharvath@buckinstitute.org).