TELOMERE RESEARCH NETWORK

Request for proposals "Telomere Network Analysis Awards"

For advancing measurement & understanding of telomere length as a measure of exposures

The National Institute on Environmental Sciences and National Institute of Aging have funded a new Telomere Measurement Network. ***Part of the goal of the network is to improve the rigor and reproducibility of measurement of telomere length (TL) in epidemiological studies, and address other challenges in determining the extent to which TL is a sentinel of environmental exposures, psychosocial stress and disease susceptibility***. We also aim to promote a growing collaborative community of interdisciplinary scientists for promoting the science and dialogue on TL as a predictor of health and aging. To learn more about the TRN, see our website (trn.tulane.edu). Toward this, we support pilot projects each year, targeted for postdocs or Early Stage Investigators who will benefit from the network and mentoring.

In 2020, 2021 and 2022, we will support up to **five projects** that address scientific gaps in relation to telomere length as it applies to epidemiological research. The projects can include secondary analyses of large samples (>300) that examine novel questions about the relation between TL and health and/or TL and exposure. The awardees will receive mentorship from telomere measurement experts who are part of the TRN and will also have access to high level statistical consultation as needed. In addition, awardees will receive a $**4,000 honorarium**. Awardees will be expected to present their results in person **(including $800 for travel support**) or by video at the telomere research network (TRN) annual meeting in Durham North Carolina, December 3rd and 4th. These pilot projects are expected to provide investigators with pilot data to support future K or R01 applications that include telomere length with a higher level of scientific rigor and address novel questions. Telomere reporting guidelines related to qPCR are reviewed in this paper https://www.ncbi.nlm.nih.gov/pubmed/30343983. Critical factors for study design should be considered carefully when designing proposal methodology.

In 2020 the pilot projects are focused on a broad conceptualization of the exposome, with a particular interest in relations between exposures and TL across the life span. TL may have unique utility for understanding "exposome" factors given evidence of associations particularly with psychosocial stress but newer data beginning to find links with chemical environmental inputs. Pilot projects should ideally focus on the relation between TL and *a well-defined exposure (e.g. type of stress- psychological, biochemical) intervention, innovative question or study design opportunity, such as measurement in longitudinal studies, changes in early life, intergenerational transmission, changes from interventions, comparisons among well characterized groups sociodemographic and/or genetically/biologically.*

Proposal Guidelines:

Proposals should address a brief background on **what is known and gaps** in relationships among the exposure and telomeres, and how this analysis will address an innovative and important question. Please send ONE PDF of the proposal and your biosketch, as described below:

(1) PROPOSAL:
   a. Specify the aims, hypotheses, and which exposome variables in particular will be used with attention to measurement issues in relation to TL as well as the proposed exposure variable

b. Describe the sample characteristics (sample size must be > 100), methods including sufficient information about the measurement of TL to ensure accuracy.
c. Describe the analytic methods and potential pitfalls
d. Length a maximum of 1000 words (excluding references, figures, tables)

(2) Include the lead investigators biosketch (and a letter of support if a trainee).

Eligibility:

Applicants can be of any career stage, however these awards are particularly fitting for early career researchers (<10 years in faculty position). **Graduate students and post-doctoral scholars may apply in collaboration with a senior mentor in which case the application must include a letter of support from the senior mentor.** Decisions will be based on feasibility (e.g. access to data, experience with proposed analytic method), innovation (e.g. does the project address a critical area of disagreement and/or scientific gap), and appropriate power (e.g. sufficient sample size). Applications can propose utilization of existing data sets that are publicly available or that the applicant has direct access to through other means.

Mentoring and Interim Presentation:

Award winners will present their project ideas to the TRN and advisory committee members and may receive suggestions to optimize and sharpen their questions and analyses. If desired, PI's will be matched with an expert mentor from the TRN as a guide and consultant on their project. Awardees should be prepared to present initial analyses in a December 2020 at the annual TRN meeting. Presentation can be done in person or via videoconferencing. *Upon successful completion of the interim presentation, an honorarium of $4,000 will be provided.*

Time line:

Proposals are due at midnight EST **JULY 20thth** and should be submitted as a single PDF to telomerenetwork@gmail.com. Awards are expected to be announced by June 30th with an expected start date for AUGUST 2020. Award activities are expected to be completed by December 31st 2021.

Contact: Questions should be directed to Dr. Elissa Epel (elissa.epel@ucsf.edu) or Dr. Stacy Drury (sdrury@tulane.edu).

Final proposals should be sent to: telomerenetwork@gmail.com

We need to grow this field and we encourage you to apply!