



# TRN Annual Meeting 2023

<b>March 30, 2023 (all times in EST)</b>		
08:00-08:30am	<i>Registration and light breakfast</i>	
<b>Morning session: Results from the TRN U01 Collaboratory</b>		
<b>Chair: Stacy Drury, MD/PhD</b>		
08:30-08:45am	Introduction to the TRN and collaboratory	Stacy Drury, U24 PI Janine Simmons, NIA Lisbeth Nielsen, NIA Michelle Heacock, NIEHS Max Guo, NIA
08:45-09:45am	Cross method and cross laboratory results	Simon Verhulst, University of Groningen (U24)
09:45-10:00am	Questions/Discussion	
10:00-10:45am	<i>Telomere Length Measurements and Opportunities for Clinical Applications (virtual)</i>	Abraham Aviv, Rutgers (U01 PI) Shahinaz Gadalla, NCI Sharon Savage, NCI
10:45-11:00am	Questions/Discussion	
11:00-11:15am	Coffee Break	
11:15-11:45am	<i>Single telomere length analysis by DNA-array-FISH</i>	Yun-Ling Zheng, Georgetown (U01 PI)
11:45-12:00pm	Questions/Discussion	
12:00-12:30pm	<i>Telomere methodological factors: Lessons from the Contemplative Coping during COVID study</i>	Jue Lin, UCSF (U01 PI) Quinn Conklin, UC Davis
12:30-12:45pm	Questions/Discussion	
12:45-1:30pm	<i>Lunch</i>	Provided by TRN
<b>Keynote: Tracy Woodruff, PhD, MPH</b>		
<b>Chair: John McLachlan, Tulane University (U24)</b>		
1:30-2:15pm	<i>Everywhere all at once, exposure exposures and health effects: identifying exposure priorities to improve health and health equity</i>	Tracy Woodruff, UCSF
2:15-2:30pm	Questions/Discussion	
2:30-3:00pm	<i>Cross-tissue comparison of telomere length and DNA QC metrics across two cohorts</i>	Idan Shalev, Penn State (U01 PI)
3:00-3:15pm	Questions/Discussion	
3:15-3:45pm	<i>Community input regarding next methodological questions for the TRN and recommendations for additional cross laboratory studies</i>	Stacy Drury, U24 PI <b>OPEN FORUM</b>
3:45-4:00pm	Coffee break	
<b>Afternoon Session: Updates on pilot award recipients and flash talks</b>		
<b>Chair: Elissa Epel</b>		
4:00-4:15pm	Outcomes of TRN pilot awards and next steps	Elissa Epel, UCSF (U24)
4:15-4:25pm	<i>Predictors of newborn TL and efforts to define the early life trajectory of TL</i>	Dries Martens*, University of Hasselt
4:25-4:35pm	<i>Joint effects of telomere length and social environment in predicting youth delinquency</i>	Darlene Kertes, University of Florida
4:35-4:45pm	<i>Associations between early life adversities, ambient air pollution, and buccal telomere length in children</i>	Rosemarie de la Rosa*, University of California, Berkeley
4:45-4:55pm	<i>Anti-aging effects of elite football and team handball trainings</i>	Muhammad Asghar*, Lund University
6:00pm	Group Dinner (TBA) and networking	Optional

\*TRN pilot award recipient



<b>March 31, 2023 (all times in EST)</b>		
08:00-08:30am	<i>Registration and light breakfast</i>	Provided by TRN
<b>Session 1: Novel Method development for TL measurement Chair: Stacy Drury, U24 PI</b>		
08:30-8:45am	NIA/NIEHS Welcome and Introductory Remarks <i>The importance of collaborative science in establishing standards and scientific rigor</i>	Richard Hodes, NIA Richard Woychik, NIEHS
08:45-09:00am	Introduction to method development session and goals	Stacy Drury, PI U24
9:00-9:15am	<i>A novel Metric to Improve Quantification Accuracy and Primer Selection in Quantative Polymerase Chain Reactions (qPCRs)</i>	Eugenia Xu, Princeton University
09:15-09:45am	<i>Nanopore telomere sequencing -NanoTelSeq- enables accurate length measurement of telomeres (virtually)</i>	Riham Smoom, The Hebrew University of Jerusalem
09:45-10:15am	<i>Absolute telomere length quantification with CRISPR-Cas12a</i>	Waylon J. Hastings, Tulane University
10:15-10:45am	<i>Precise measurement of telomere length in T-cell derived extracellular vesicles</i>	Bo Ning, Tulane University
10:45-11:00am	Community input on specific guidelines for methodologic validation of novel telomere measurement assays and approaches for effective implementation of these guidelines through funders, peer review and other dissemination outlets	Stacy Drury, U24 PI <b>OPEN FORUM</b>
11:00-11:15am	<i>Coffee break</i>	
<b>Session 2: Interactive debate about fundamental questions of the role of telomeres as sentinels in human population studies Chair: Simon Verhulst, University of Groningen (U24)</b>		
Panelists: Duncan Baird (Cardiff University), Stacy Drury (U24 PI), Vervan Codd (University of Leicester), Jon Alder (University of Pittsburgh), Patricia Opresko (Organizing participant, University of Pittsburgh)		
11:15-12:45pm	<p>In this modified debate, panelists <b>were assigned</b> by the Chair to present an opinion, either for or against the three statements listed below. These three statements, designed by the TRN organizing committee, were specifically created to instigate dialogue and drive scientific study focused on determining the validity of each statement and/or its counterargument.</p> <p>Panelists agreed to participate and were not permitted to select the position they were supporting.</p> <p>Participants are encouraged, prior to and during the TRN meeting, to consider these statements and the existing data for and against each statement. Specific comments, prior to the meeting, are welcomed on the TRN twitter (@telomerenetwork) or can be sent to the TRN email account "telomerenetwork@gmail.com"</p> <ol style="list-style-type: none"> <li>1. Single measurements of telomere length are meaningless because it is the rate of telomere shortening that is relevant to human health and disease.</li> <li>2. No environmental or psychosocial stress exposure has sufficient effect on telomere length to result in cellular functional or health consequence.</li> <li>3. The association between telomere length and mortality is driven by infectious diseases only.</li> </ol>	<p>Debate structure:</p> <p><u>Panelist:</u> FOR: 3 minutes AGAINST: 3 minutes <u>Panelist Rebuttal</u> FOR rebuttal: 2 minutes (self-response, lifeline (call an expert)) AGAINST: rebuttal, 2 minutes (self-response, lifeline (call an expert))</p> <p><u>Open forum:</u> meeting participants may provide responses, individuals selected by chair and meeting team to present opinion limited to 2 minutes each. 10 minutes total. Chair- closing</p> <p><b>AUDIENCE VOTE</b> (via zoom poll)</p>
12:45-1:30pm	<i>Lunch</i>	Provided by TRN
<b>Session 3: Novel models and the importance of cross species collaboration</b>		



<b>Chair: Stacy Drury, U24 PI</b>		
1:30-1:45pm	<i>Lymphocyte telomere length in a bovine model of parturition and prenatal stress</i>	Tom Welsh, Texas A&M University
1:45-2:00pm	<i>Epigenetic inheritance of a telomere capping defect triggers longevity in C. elegans</i>	Shawn Ahmed, University of North Carolina
<b>Keynote: Martin Picard, PhD</b>		
<b>Chair: Stacy Drury, MD/PhD</b>		
2:00-2:45pm	<i>The energetic cost of telomere maintenance and mitochondria (virtually)</i>	Martin Picard, Columbia University
2:45-3:00pm	Discussion of different models of telomere and mitochondrial interactions, approaches to leverage basic and translational model and their role in aging and disease	Stacy Drury, U24 PI <b>OPEN FORUM</b>
3:00-3:15pm	<i>Coffee break</i>	
<b>Session 4: Open forum: TRN – Next steps and critical gaps</b>		
3:15-4:00pm	Community guidance for the TRN next research and dissemination steps	Stacy Drury, U24 PI <b>OPEN FORUM</b>
4:00pm	Adjourn	