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# GLOBAL AGING E-BRIEF

Newsletter from the Global Aging Community Initiative

## Global Aging Community Initiative Update

The last six months have been very eventful at the Global Aging and Community Initiative. Here are some of the happenings. In July of this year, it was announced that Dr. Zachary Zimmer, Director of the Initiative, successfully renewed his Tier 1 Canada Research Chair in Global Aging and Community at Mount Saint Vincent University. The Canada Research Chair is a highly competitive position, and this renewal is a testament to the prolific and valuable research taking place at GACI. Dr. Zimmer was subsequently a guest on local CTV News where he was interviewed by news anchor Bruce Frisko. The two spoke about the current state of population aging in Canada and around the world and some of the related challenges.

GACI Research Associate, Sara Hamm, defended her Master's thesis, "Understanding the Current University Context for Graduate Students With Mental Health Challenges," in the department of Health Promotions at Dalhousie University. Sara is currently working with several GACI research colleagues on studies related to the Vietnam Health and Aging Study (VHAS): Dr. Deborah Norris, Professor in Family Studies and Gerontology at Mount Saint Vincent University, Dr. Bussarawan Teerawichitchainan "Puk", Associate Professor

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The Global Aging and Community Initiative (GACI) is a research organization at Mount Saint Vincent University (MSVU), located within the Nova Scotia Center on Aging. It is directed by Dr. Zachary Zimmer, a Tier 1 Canada Research Chair and Professor of Family Studies and Gerontology. The GACI aims to create knowledge on issues related to the quality of life of older persons worldwide through collaborative research across a broad global scientific community. GACI is currently working on a number of research projects focusing on the health and well-being of older persons in different areas around the world. We currently list 32 collaborators from eight countries.

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Pictured below: VHAS  
Dissemination and Working  
Group meeting in Hanoi, Vietnam  
in July 2023.



# Collaborator Profile: Dr. Rob Tennyson

## Will epigenetic clocks reveal what makes humans thrive?

His early work focused on psychosocial stress, but in a few short years Rob Tennyson broadened his research focus to include aging as a whole. Today, he's a biological anthropologist working on the Vietnam Health and Aging Study (VHAS) investigating how exposure to war impacts biological aging in Vietnamese survivors of the American War in Vietnam.

"In early 2024, I will begin working with epigenetic clocks to conduct multiple analyses of war exposure, health behaviours, and epigenetic aging," he says. Epigenetic clocks are computational tools that use patterns of DNA methylation across a genome to predict health and aging outcomes. "I hope to use some well-established clocks developed by other teams as well as building measures specific to the VHAS cohort in order to improve its specificity."

The new year is just weeks away and while Rob can't wait to start research using the epigenetic clocks at the moment he's creating measures of inflamm-aging and other multivariate measures of aging both as outcome variables and as



outcome variables and as mediators to connect war exposure to cognitive and subjective health outcomes.

It was in graduate school, while working on how psychosocial stress impacted telomeres - the protective caps at the ends of our chromosomes that shorten with oxidative stress, cellular division, and aging more broadly, when Rob realized the importance of telomeres. As telomeres shorten, our functioning and health decline.

If you look at the trajectory of Rob's studies, first graduating with a BA in Human Evolutionary Biology from Harvard College in 2010 to completing a PhD in Biological Anthropology from the University of

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"Humans thrive around the globe and, unfortunately, we have likely misunderstood much of our biology by assuming a "one-size-fits-all" approach to aging and the impacts of adversity on our bodies," says Rob.



# Research Update:

## Vietnam Health and Aging Study Dissemination Seminar Results

In July a dissemination seminar, reporting on results from the first wave of the Vietnam Health and Aging Study (VHAS), was held in Hanoi, Vietnam. The Vietnam Health and Aging Study is one of the key studies in which the GACI is involved. “It was conceived by an international team of scientists to document the long-term social and health impacts of the American War on the Vietnamese population, to explore the social, psychological, and biological mechanisms through which exposure to war in lower- and middle-income countries influences health and aging, and to provide a data resource for scholars to investigate the global disease burden associated with armed conflict, in particular through population-level exposure to war stressors and military participation” (quoted from page six of the report). The Principal Investigator of the study is Dr. Kim Korinek of the University of Utah, with several Co-PIs, including Dr. Zachary Zimmer, Director of GACI and professor in Family Studies and Gerontology at Mount Saint Vincent University.

The report examines a number of topics that are key areas of inquiry of VHAS. All of the areas delve into the impacts of war and war trauma on certain outcomes. These include results from biomarker data collection, socioeconomic conditions of Vietnamese, migration histories, fertility, physical health, functional health and frailty, posttraumatic stress disorder and psychological distress and cognitive impairment, among other areas. The report concludes with lessons for policymakers and practitioners. There are several results of note, as cited in the report: VHAS also has shed light on differences in health outcomes across those that served in the formal military, in the militia and as civilians. While many of the effects are negative, there are also certain social and psychological benefits associated with war exposure. Notably, service in the formal military may offer resilience or buffer against late-life health decline. Wartime military also enables older Vietnamese to broaden and diversify their social networks and enhance social participation later in life.

The report that was distributed at the seminar in Hanoi is evidence of the complexity of the long-term impacts of war. GACI continues to be involved in VHAS and hopes to continue its study into the future. The report can be downloaded here: [https://vhas.utah.edu/\\_resources/documents/vhas-dissemination-report-2023.pdf](https://vhas.utah.edu/_resources/documents/vhas-dissemination-report-2023.pdf).

**Vietnamese surveyed in VHAS faced numerous traumatizing events as youths during wartime. These include direct exposure to combat violence, witnessing death and suffering, experiencing war-related death of family members, and enduring malevolent conditions of war, such as food shortages, mortal fear, and living under the threat of bombing. Exposure to these events appears to be significantly related to a number of health outcomes such as frailty and psychological well-being.**

## Collaborator Profile continued

Washington in 2022, while also finishing a Graduate Certificate in Demographic Methods from the Center for the Study of Demography and Ecology at the University of Washington, it's easy to see he's always seeking to understand the biological aspects of human evolution on the grand scale.

While research is a fundamental part of his life he's also an avid homemade beer/kombucha brewer. Prioritizing time with his partner and his dog, Frank, while hiking, doing yoga and lifting weights are all part of his everyday routine. To unwind from this heavy research, Rob enjoys reading and watching science fiction.

## GACI Update continued

in Sociology at the National University of Singapore, and Dr. Kim Korinek of the Asia Center and Professor in Sociology, University of Utah. Together with these researchers, Sara is making progress across several key areas of VHAs and is also taking responsibility for data management of the project.

The VHAs held a dissemination seminar in Hanoi, Vietnam in July of this year. The seminar, hosted by the Hanoi Medical University, had more than 40 participants. More details about this event can be found in the research update section of the current newsletter.

A number of key publications from GACI associates came out over the last number of months including, "The association between cognitive ability and opioid prescribing in vulnerable older adults with chronic pain in ambulatory care: A secondary data analysis using Medicare Expenditure Panel Survey" in BMC Medicine, lead author Ulrike Muench of University of California, San Francisco.

Finally, GACI welcomes Kuy Kakada, a PhD candidate at Washington University in St. Louis, as a new collaborator. Mr. Kakada is working together with Drs. Zimmer and Korinek on VHAs data, studying the psychological impact of losing a child in the context of war.

**Pictured front row (l-r: Dr. Zachary Zimmer and Dr. Kim Korinek, Director, Asia Center, Asian Studies Program & Professor, Sociology Department, University of Utah who participated in the VHAs Dissemination and Working Group meeting which met in Hanoi, Vietnam.**



## SELECTED PUBLICATIONS

- Kim Korinek, Bassarawan Teerawichitchainan, Zachary Zimmer, Yvette Young, Toan Khan Tran and Minh Nguyen. 20232. Vietnam Health and Aging Study Wave 1 Report: Early-Life War Exposure and Late-Life Health. University of Utah. <https://scholarbank.nus.edu.sg/handle/10635/243037>
- Norris D., Schwartz K., Eichler M., Tam-Seto L., Mahar A., Smith Evans K., Cramm H. (2022). A qualitative study of the capabilities of family members of veterans living with operational stress injuries. *Family Relations*, 72(5). doi: 10.1111/fare.12801
- Norris D., Smith-Evans K., Tam-Seto L., Cramm H. (2022). A post-traumatic growth perspective on PTSD: The case of military veterans and their partners. *Military Behavioral Health*, 10(2), 134-143. <https://www.tandfonline.com/doi/abs/10.1080/21635781.2022.2098885>
- Kyeezu Kim, Brian T. Joyce, Drew R. Nannini, Yinan Zheng, Penny Gordon-Larsen, James M. Shikany, Donald M. Lloyd-Jones, Ming Hu, Mark J. Nieuwenhuijsen, Douglas E. Vaughan, Kai Zhang, Lifang Hou. Inequalities in urban greenness and epigenetic aging: Different associations by race and neighborhood socioeconomic status. *SCIENCE ADVANCES*. 28 Jun 2023, Vol 9, Issue 26. DOI: 10.1126/sciadv.adf8140
- Fennell, Gillian, Mireille Jacobson, and Hanna Grol-Prokopczyk. Forthcoming. "Predictors of Multi-Wave Opioid Use among Older American Adults." *Innovation in Aging* (forthcoming)
- Anna Zajacova, Alvaro Pereira Filho, Merita Limani, Hanna Grol-Prokopczyk, Zachary Zimmer, Dmitry Scherbakov, Roger B Fillingim, Mark D Hayward, Ian Gilron, Gary J Macfarlane, Self-reported pain treatment practices among U.S. and Canadian adults: Findings from a population survey, *Innovation in Aging*, 2023;, igad103, <https://doi.org/10.1093/geroni/igad103>