

## CHRISTOPHER W. KUZAWA

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**Interests:** Developmental and intergenerational influences on biology and health, epidemiology and statistical methods, the causes of human health disparities, evolutionary medicine, human evolution

### Academic Appointments

- 2013- Professor, Department of Anthropology, Northwestern University  
2005- Faculty Fellow, Institute for Policy Research, Northwestern. Founding member: *Cells 2 Society, the Center on Social Disparities and Health*.  
2008-12 Associate Professor, Department of Anthropology, Northwestern University  
2007-10 Senior Research Fellow, Faculty of Medical & Health Sciences, U of Auckland, New Zealand  
2002-08 Assistant Professor, Department of Anthropology, Northwestern University

### Education

- 2002 NIH Postdoc. Division of Epidemiology, University of Minnesota (Minneapolis).  
2001 Ph.D., Department of Anthropology, Emory University (Atlanta, GA)  
2001 M.S.PH., Epidemiology, Rollins School of Public Health, Emory University  
1993 B.A., Anthropology (*summa cum laude*), University of Colorado (Boulder)

### Academic Honors and Awards

- 2018 Elected member, National Academy of Sciences  
2004, 2007 Elected by students to Faculty Honor Roll for teaching.

### Service

- 2019- Associate Editor, *American Journal of Human Biology*  
2018- Advisory Committee, Directorate for Social, Behavioral and Economic Sciences (SBE), National Science Foundation.  
2016- Co-Director, Health Inequality Network, Human Capital and Economic Opportunity Working Group, U of Chicago.  
Editorial boards: *American Journal of Human Biology*, *Annals of Human Biology*, *Adaptive Physiology and Human Behavior*, *Evolution*, *Medicine and Public Health*

### Active funding (select)

- NSF*, The evolutionary biology of telomeres, Role: Co-I, 7/15/15-6/30/18  
*NSF*, Early environments, epigenetics, and inflammation during pregnancy Role: Co-I, 9/14-8/17  
*NIH (NICHD)*, The price of debt: The unequal burden of financial debt and its impact on health Role: Co-I, 7/1/13-6/30/18

### Completed funding (select)

- NSF*, “Hormonal changes among fathers and their impact on child development and relationship quality”  
Role: PI, 8/1/13-7/31/16  
*NIH(NICHD)*, “Influence of Placental Structure and Function on Birth Weight in the Philippines”  
7/1/10-6/30/12, Role: PI (w/J Rutherford)  
*NSF*, “Collaborative Research: Evolutionary origins of brain energetics and adaptive plasticity of humans”, 9/01/08-08/30/13, Role: Co-PI (Goodman, PI)  
*NSF* Fetal Growth as a Cue of Matrilinial Nutritional History in the Philippines. Role: PI.  
*NSF* Early Life Nutrition, Developmental Plasticity, and Reproductive Ecology in Filipino Males. PI  
*Wenner Gren* Developmental plasticity of male reproductive ecology and life history Role:PI.

**PUBLICATIONS (since 2015)**

- In press Sweet E, **Kuzawa CW**, McDade TW “Short-term lending: Payday loans as risk factors for anxiety, inflammation and poor health” *Social Science Med – Population Health*
- In press Rosenbaum S, Gettler LT, McDade T, Augustin S, & **Kuzawa CW**. Does men’s testosterone ‘rebound’ when dependent children grow up, or when pair bonds end? A test in Cebu, Philippines. *Am J of Hum Biol*.
- In press Rosenbaum S, Gettler LT, McDade TW, Belarmino NM, **Kuzawa CW**, “The effects of collection and storage conditions in the field on salivary testosterone, cortisol, and sIgA values” *Annals Hum Biol*
- In press Thayer ZM, Bechayda SA, **Kuzawa CW**, “Circadian cortisol dynamics across reproductive stages and in relation to breastfeeding in the Philippines” *Am J Hum Biol*
- In press Sarma MS, Kuo PX, Bechayda SA, **Kuzawa CW**, Gettler LT “Exploring the links between early life and young adulthood social experiences and men’s later life psychobiology as fathers” *Physiol Behav*
- In press Tennyson RL, Gettler LT, **Kuzawa CW**, Hayes MG, Agustin SS, Eisenberg DTA, “Lifetime socioeconomic status and early life microbial environments predict adult blood telomere length in the Philippines” *Am J Hum Biol*
- 2018 Ryan CP, Hayes MG, Lee NR, McDade TW, Jones MJ, Kobor MS, **Kuzawa CW**, Eisenberg DTA “Reproduction predicts shorter telomeres and epigenetic age acceleration among young adult women” *Sci Rep*. 2018 Jul 23;8(1):11100
- 2018 Del Giudice M, Hartman S, Martel M, Barrett E, Belsky J, Sangenstedt S, **Kuzawa CW**, “Individual Differences in Developmental Plasticity: A Role for Early Androgens?” *Psychoneuroendocrinology* 90:165-173.
- 2018 **Kuzawa CW** “Which environments matter in studies of early-life developmental plasticity?” *Evol Med Public Health* 2017(1): 188-190.
- 2018 Eisenberg DTA, **Kuzawa CW** “The paternal age at conception effect on offspring telomere length: mechanistic, comparative and adaptive perspectives” *Phil Trans Roy Soc B* 373: 20160442.
- 2018 Kyweluk M, Georgiev A, Borja JB, Gettler LT, **Kuzawa CW**, “Menarcheal timing is accelerated by favorable nutrition but unrelated to developmental cues of mortality or familial instability in Cebu, Philippines” *Evol Hum Behav* 39(1): 76-81.
- 2017 **Kuzawa CW**, Fried RL, Borja JB, McDade TW “Maternal pregnancy C-reactive protein predicts offspring birth size and body composition in metropolitan Cebu, Philippines” *J DOHaD*. 8(6): 674-681.
- 2017 McDade TW, Jones M, Miller G, Borja J, Kobor MS, **Kuzawa CW** “Birth weight and postnatal microbial exposures predict the distribution of peripheral leukocyte subsets in young adults in the Philippines” *J DOHaD*. 11:1-10
- 2017 Müller R, Hanson C, Hanson M, Penkler M, Samaras G, Chiapperino L, Dupré J, Kenney M, **Kuzawa C**, Latimer J, Lloyd S, Lunkes A, Macdonald M, Meloni M, Nerlich B, Panese F, Pickersgill M, Richardson S, Rüegg J, Schmitz S, Stelmach A, Villa PI, “The biosocial genome? Interdisciplinary perspectives on environmental epigenetics, health and society” *EMBO Reports* 18(10):1677-1682.
- 2017 McDade TW, Ryan C, Jones M, MacIsaac JL, Morin AM, Meyer J, Borja J, Miller G, Kobor MS, **Kuzawa CW**, “Social and physical environments early in development

- predict DNA methylation of inflammatory genes in young adulthood” *Proc Nat Acad Sci* 114(29): 7611-16.
- 2017 Georgiev AV, Ryan CP, Borja JB, **Kuzawa CW**, “Is early postnatal growth velocity, a proxy of minipubertal androgen action, related to adult second-to-fourth digit (2D: 4D) ratios in men? A test in Cebu, Philippines”. *Am J Hum Biol* 29(6):e23047.
- 2017 Anton S, **Kuzawa CW**, “Early Homo, plasticity, and the extended evolutionary synthesis” *Interface Focus* 7(5):20170004
- 2017 Fried RL, Mayol NL, McDade TW, **Kuzawa CW** “Maternal metabolic adaptations to pregnancy among young women in Cebu, Philippines” *Am J Hum Biol* 29(5).
- 2017 Georgiev AV, Ryan CP, Gettler LT, McDade TW, **Kuzawa CW**, “Second-to-fourth digit ratio (2D:4D) is unrelated to measures of somatic reproductive effort among young men from Cebu, The Philippines” *Amer J Phys Anthropol* 163(3):437-445
- 2017 Eisenberg DTAE, Hayes MG, **Kuzawa CW** “Early life infection, but not breastfeeding, predicts adult blood telomere lengths in the Philippines” *Am J Hum Biol* 29(4).
- 2017 Ryan CP, McDade TW, Gettler LT, Eisenberg DT, Rzhetskaya M, Hayes MG, **Kuzawa CW**, “Androgen receptor CAG repeat polymorphism and hypothalamic-pituitary-gonadal function in Filipino young adult males” *Amer J Hum Biol* 29(1)
- 2017 Ryan CP, Georgiev AV, McDade TW, Gettler LT, Eisenberg DT, Rzhetskaya M, Hayes MG, **Kuzawa CW**, “Androgen receptor polyglutamine repeat length (AR-CAGn) modulates the effect of testosterone on androgen-associated somatic traits in Filipino young adult men” *Amer J Phys Anthropol* 163(2): 317-327
- 2017 Bethancourt HJ, Kratz M, Beresford SA, Hayes MG, **Kuzawa CW**, Duazo PL, Borja JB, Eisenberg DT, “No association between blood telomere length and longitudinally assessed diet or adiposity in a young adult Filipino population” *Eur J Nutr* 56(1):295-308.
- 2017 Gettler LT, Ryan CP, Eisenberg DT, Rzhetskaya M, Hayes MG, Feranil AB, Bechayda SA, **Kuzawa CW**, “The role of testosterone in coordinating male life history strategies: The moderating effects of the androgen receptor CAG repeat polymorphism” *Horm Behav* 87:164-175.
- 2016 **Kuzawa CW**, Georgiev AV, McDade TW, Agustin Bechayda S, Gettler LT “Is there a testosterone awakening response in humans?” *Adap Hum Behav Physiol* 2(2):166-83.
- 2016 McDade Tw, Borja JB, Largado F, Adair LS, **Kuzawa CW**. “Adiposity and chronic inflammation in young women predict inflammation during normal pregnancy in the Philippines” *J Nutr* 146(2):353-7.
- 2016 Georgiev A, **Kuzawa CW**, McDade TW, “Early developmental exposures shape trade-offs between acquired and innate immunity in humans” *Evol Med Public Health* 2016(1):256-69.
- 2016 Lipovich L, Hou ZC, Jia H, Sinkler C, McGowen M, Sterner KN, Weckle A, Sugalski AB, Pipes L, Gatti DL, Mason CE, Sherwood CC, Hof PR, **Kuzawa CW**, Grossman LI, Goodman M, Wildman DE, “High-throughput RNA sequencing reveals structural differences of orthologous brain-expressed genes between western lowland gorillas and humans”. *J Comp Neurol* 524(2):288-308.
- 2016 McDade TW, Georgiev A, **Kuzawa CW**, “Trade-offs between acquired and innate immune defenses in humans” *Evol Med Public Health* 2016(1):1-16.
- 2015 Workman M, McDade T, Adair L, **Kuzawa C**, “Slow early growers have more muscle in relation to adult activity: Evidence from Cebu, Philippines” *Eur J Clin Nutr* 69(12):1350-5.

- 2015 Gettler LT, McDade TW, Bragg JM, Feranil AB, **Kuzawa CW**, “Developmental energetics, sibling death, and parental instability as predictors of maturational tempo and life history scheduling in males from Cebu, Philippines” *Am J Physiol Anthropol* 158:175-84
- 2015 Gettler LT, McDade TW, Agustin SS, Feranil AB, **Kuzawa CW**, “Longitudinal perspectives on fathers' residence status, time allocation, and testosterone in the Philippines” *Adapt Hum Behav Physiol* 1:124-149.
- 2015 Eisenberg DTAE, **Kuzawa CW**, Hayes MG “Improving qPCR telomere length assays: Controlling for well position effects increases statistical power” *Am J Hum Biol* 27(4): 570-5.
- 2015 DeSantis AS, **Kuzawa CW**, Adam EK “Developmental origins of flatter cortisol rhythms: Socioeconomic status and adult cortisol” *Am J Hum Biol* 27(4): 458-67.
- 2015 Quinn EA, Largado F, Borja JB, **Kuzawa CW**, “Maternal characteristics associated with milk leptin content in a sample of Filipino women and associations with infant weight for age” *J Hum Lactation* 31(2):273-81.
- 2015 Thayer ZM, **Kuzawa CW** “Ethnic discrimination predicts poor self-rated health and cortisol in pregnancy: Insights from New Zealand” *Soc Sci Med* 128: 36-42.
- 2015 McDade TW, Borja JB, **Kuzawa CW**, Perez TL, Adair LS. “C-reactive protein response to influenza vaccination as a model of mild inflammatory stimulation in the Philippines.” *Vaccine*. 21;33(17):2004-8
- 2015 Addo OY, Stein AD, Fall CHD, Gigante DP, Guntupalli AM, Horta BL, **Kuzawa CW**, Lee N, Norris SA, Osmond C, Prabhakaran P, Richter LM, Sachdev HPS, Martorell R, on behalf of the COHORTS Group. “Parental childhood growth and offspring birth weight: pooled analyses from four birth cohorts in low and middle income countries” *Am J Hum Biol* 27(1):99-105.

**Public lectures, plenaries and seminars (select recent)**

- 2018 Seminar, University of Michigan, Center for Child Growth and Development, Oct 30
- 2018 Keynote speaker, International Society for Evolution, Medicine and Public Health, Park City Utah, Aug 3.
- 2018 Invited speaker, National Academy of Sciences Expert Meeting “Using Longitudinal Studies of Younger Cohorts for Aging Research”, Washington DC, June 25-26.
- 2018 Neurobiology Interdisciplinary Talk Series, Lurie Children’s Hospital, Chicago, Jan 9.
- 2018 Invited Lecture, College de France, June 11
- 2017 “State of the art” plenary, Midwest Society for Pediatric Research, Chicago, Oct 13
- 2017 Seminar, Depts. of Psychology and Anthropology, U of New Mexico, Albuquerque, NM, Oct 6.
- 2017 Seminar, Dept. of Anthropology, Dartmouth, Hanover NH, Sept 29
- 2017 Invited Lecture, “Plasticity and its Limits”, Technical University of Munich, Germany.
- 2016 Seminar, Dept. of Evolutionary Anthropology, Duke University, Durham, Sept 16
- 2016 Seminar, Center for Behavior, Evolution and Culture & Institute for Society & Genetics, UCLA, Los Angeles, March 28

**Student Advising: Undergraduate senior and honors research theses advised: ~30**

*Current Advisees (Chair):* Ruby Fried, Calen Ryan, Andy Kim, Jake Aronoff, Haley Ragsdale

*Former Advisees (Chair):* Dan Eisenberg (Assoc Prof U Wash Seattle), Lee Gettler (Asst Prof Notre Dame), Zaneta Thayer (Asst Prof UC Dartmouth), Elizabeth Quinn (Assoc Prof Wash U, St Louis)

*Post-Doc Advisees:* Julienne Rutherford (U Illinois Chicago), Megan Workman (Pima College), Alexander Georgiev (Bangor University, Wales); Stacy Rosenbaum (current).