

**BIOGRAPHICAL SKETCH**

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NAME: Chandra Ann Reynolds

eRA COMMONS USER NAME (credential, e.g., agency login): creynolds

POSITION TITLE: Professor of Psychology

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
University of California, Irvine	BA	1988	Psychology
University of Southern California	MA, PhD	1991, 1994	Developmental Psych.
University of Colorado, Boulder	Postdoctoral	1994-5	Behavioral Genetics
University of Southern California	Postdoctoral	1996-7	Gerontology

**A. Personal Statement**

With a background in lifespan development and quantitative behavioral genetics, I have applied complex longitudinal and quantitative genetic models to understand variations in cognitive aging, health and longevity. I have led multi-site collaborative efforts (AG28555), considering direct and indirect impacts of genes in the cholesterol pathway on intermediate lipid biomarkers and ultimate behavioral and clinical cognitive phenotypes measured in Swedish case-control and four related twin samples (GENDER, OCTO-Twin, SATSA and Harmony). I have led projects on childhood and social factors that predict life course patterns of health, well-being, and longevity (AG02700; Terman Life Cycle Study) and as co-investigator examined early life factors on longitudinal cognitive, health and well-being profiles into early adulthood (HD010333; Colorado Adoption Project). I am a co-Investigator and site PI for the *Gene-Environment Interplay of Social Contexts and Aging-Related Outcomes* (AG037985; IGEMS consortia). I am a co-investigator on the VETSA Longitudinal Twin Study of Cognition and Aging (VETSA 3) (AG018386; Kremen, Lyons, MPis). I serve as contact PI of the MPI project *Colorado Adoption/Twin study of Lifespan behavioral development and cognitive aging*, CATSLife (AG046938; Reynolds, Wadsworth, MPis), that is evaluating the unique saliency of early childhood factors to adult cognitive and physical functioning and change versus proximal influences and innovations that emerge across development.

**B. Positions and Employment**

1992 Visiting Researcher, Karolinska Institute, Stockholm  
1997-2000 Research Assistant Professor/Research Associate, University of Southern California  
2001-2006 Assistant Professor: University of California, Riverside  
2006-2011 Associate Professor: University of California, Riverside  
2011-present Professor: University of California, Riverside

**Honors**

1997 Los Angeles Alzheimer's Association, Turken Scholarship Award recipient  
2003 Faculty of the Year, UC Riverside Psychology Department  
2012 PhD *honoris causa*, Jönköping University, Sweden

## **Professional and Policy**

2007-2013 NIH Peer Review Committees:

1. BGES panel member: 10/09 to 06/13 (*ad hoc*: 10/07, 02/08)
2. SEP panel member: *ad hoc* 01/09
3. NIA P01 panel member: *ad hoc* 10/11, 06/12

- 2007 Invited participant: *The 5th annual Chicago Conference on Biomarker Collection in Population-Based Health and Aging Research*, co-sponsored by NIA and the Chicago Center on Demography and Economics of Aging. Talk entitled: 'Cognitive Aging in the SATSA study'
- 2007 Invited participant, NIA's 'Planning Meeting for the Genetics of Alzheimer's Disease'.
- 2010 Invited presenter and panel participant--National Academy of Sciences & National Institute on Aging: "Using GWAS to Explore Fundamental Questions about Aging in the Health and Retirement Study (HRS) Sample".
- 2012 Invited presenter and panel participant-- Institute of Gerontology, Jönköping University, Sweden: Workshop on "Ageing – Living Conditions and Health"
- 2013 Invited sub-committee participant -- National Advisory Council on Aging (NACA) review of the NIA's BSR section: "Behavioral and Social Aspects of the Genetics of Aging"

## **Selected peer-reviewed publications (in chronological order, last 3 years)**

- Reynolds, C. A., \*Zavala, C., Gatz, M., \*Vie, L., Johansson, B., Malmberg, B., Ingelsson, E., Prince, J. A., & Pedersen, N. L. (2013). Sortilin receptor 1 predicts longitudinal cognitive change. *Neurobiology of Aging*. doi: <http://dx.doi.org/10.1016/j.neurobiolaging.2012.12.006>
- Pedersen, N. L., Christensen, K., Dahl, A. K., Finkel, D., Franz, C. E., Gatz, M., Horwitz, B. N., Johansson, B., Johnson, W., Kremen, W. S., Lyons, M. J., Malmberg, B., McGue, M., Neiderhiser, J. M., Petersen, I., & Reynolds, C. A. (2013). IGEMS: the consortium on Interplay of Genes and Environment across Multiple Studies. *Twin Research and Human Genetics: the official journal of the International Society for Twin Studies*, 16(1), 481-489. doi: 10.1017/thg.2012.110
- Dahl, A. K., & Reynolds, C. A. (2013). Accuracy of recalled body weight--a study with 20-years of follow-up. *Obesity*, 21(6), 1293-1298. doi:10.1002/oby.20299
- Song, C., Pedersen, N. L., Reynolds, C. A., Sabater-Lleal, M., Kanoni, S., Willenborg, C., Syvanen, A. C., Watkins, H., Hamsten, A., Prince, J. A., & Ingelsson, E. (2013). Genetic variants from lipid-related pathways and risk for incident myocardial infarction. *PLoS one*, 8(3), e60454.
- Finkel, D., Reynolds, C. A., Emery, C. F., & Pedersen, N. L. (2013). Genetic and environmental variation in lung function drives subsequent variation in aging of fluid intelligence. *Behavior Genetics*, 43(4), 274-285.
- Dahl, A.K., Reynolds, C.A., Fall, T., Magnusson, P.K.E., & Pedersen, N.L. (2014) Multifactorial Analysis of Changes in Body Mass Index across the Adult Life Course – A Study with 65 Years of Follow-up. *International Journal of Obesity*, 38(8), 1133-41. doi: 10.1038/ijo.2013.204.
- Duggan, K. A., Reynolds, C. A., Kern, M. L., & Friedman, H. S. (2014, March 3). Childhood Sleep Duration and Lifelong Mortality Risk. *Health Psychology*, 33(10), 1195-1203. <http://dx.doi.org/10.1037/hea0000078>
- Horwitz, B. N., Reynolds, C. A., Neiderhiser, J. M., & Charles, S. T. (2014). Friend support and psychological distress in a U.S. adult twin sample. *Personal Relationships*, 21(4), 570-582.
- Tucker-Drob, E. M., Reynolds, C. A., Finkel, D., & Pedersen, N. L. (2014). Shared and unique genetic and environmental influences on aging-related changes in multiple cognitive abilities. *Dev Psychol*, 50(1), 152-166. doi: 10.1037/a0032468
- Horwitz, B. N., Reynolds, C. A., & Charles, S. T. (2015). Understanding Associations among Family Support, Friend Support, and Psychological Distress. *Pers Relatsh*, 22(1), 79-91. doi:10.1111/pere.12063
- Karlsson, I. K., Bennet, A. M., Ploner, A., Andersson, T. M., Reynolds, C. A., Gatz, M., & Pedersen, N. L. (2015). Apolipoprotein E epsilon4 genotype and the temporal relationship between depression and dementia. *Neurobiol Aging*, 36(4), 1751-1756. doi:10.1016/j.neurobiolaging.2015.01.008
- Luong, G., Charles, S. T., Rook, K. S., Reynolds, C. A., & Gatz, M. (2015). Age differences and longitudinal change in the effects of data collection mode on self-reports of psychosocial functioning. *Psychol Aging*, 30(1), 106-119. doi:10.1037/a0038502
- Sternang, O., Reynolds, C. A., Finkel, D., Ernsth-Bravell, M., Pedersen, N. L., & Dahl Aslan, A. K. (2015). Factors associated with grip strength decline in older adults. *Age Ageing*, 44(2), 269-274. doi:10.1093/ageing/afu170

- Sternang, O., Reynolds, C. A., Finkel, D., Ernsth-Bravell, M., Pedersen, N. L., & Dahl Aslan, A. K. (2015). Grip Strength and Cognitive Abilities: Associations in Old Age. *J Gerontol B Psychol Sci Soc Sci*. doi:10.1093/geronb/gbv017 [Epub ahead of print]
- Arden, R., Luciano, M., Deary, I. J., Reynolds, C. A., Pedersen, N. L., Plassman, B. L., McGue, M., Christensen, K., & Visscher, P. M. (2015, in press). The association between intelligence and lifespan is mostly genetic. *Int J Epidemiol*. doi:10.1093/ije/dyv112 [Epub ahead of print]
- Gatz, M., Reynolds, C. A., Finkel, D., Hahn, C. J., Zhou, Y., Zavala, C. (2015). Data Harmonization in Aging Research: Not so Fast. *Experimental Aging Research*, 41(5), 475-95.
- Petkus, A. J., Reynolds, C. A., Wetherell, J. L., Kremen, W. S., Pedersen, N. L., & Gatz, M. (2015, in press). Anxiety is associated with increased risk of dementia in older Swedish twins. *Alzheimers Dement*. pii: S1552-5260(15)02914-3. doi: 10.1016/j.jalz.2015.09.008. [Epub ahead of print]
- Horwitz, B. N., Reynolds, C. A., Walum, H., Ganiban, J., Spotts, E. L., Reiss, D., Lichtenstein, P., & Neiderhiser, J. M. (2016). Understanding The Role of Mate Selection Processes in Couples' Pair-Bonding Behavior. *Behav Genet*, 46(1), 143-149. doi:10.1007/s10519-015-9766-y
- Petersen, I., Pedersen, N. L., Rantanen, T., Kremen, W. S., Johnson, W., Panizzon, M. S., Christiansen, L., Franz, C. E., McGue, M., Christensen, K., Hamdi, N. R., Krueger, R. F., & Reynolds, C. (2016). GxE Interaction Influences Trajectories of Hand Grip Strength. *Behav Genet*, 46(1), 20-30. doi:10.1007/s10519-015-9736-4
- Beam, C. R., Emery, R. E., Reynolds, C. A., Gatz, M., Turkheimer, E., & Pedersen, N. L. (2016). Widowhood and the Stability of Late Life Depressive Symptomatology in the Swedish Adoption Twin Study of Aging. *Behav Genet*, 46(1), 100-113. doi:10.1007/s10519-015-9733-7
- Reynolds, C. A., Gatz, M., Christensen, K., Christiansen, L., Dahl Aslan, A. K., Kaprio, J., Korhonen, T., Kremen, W. S., Krueger, R., McGue, M., Neiderhiser, J. M., Pedersen, N. L., & consortium, I. (2016). Gene-Environment Interplay in Physical, Psychological, and Cognitive Domains in Mid to Late Adulthood: Is APOE a Variability Gene? *Behav Genet*, 46(1), 4-19. doi:10.1007/s10519-015-9761-3

#### **Complete List of Published Work in MyBibliography:**

[http://www.ncbi.nlm.nih.gov/sites/myncbi/1x\\_pryu6Jl457/bibliographahy/48112169/public/?sort=date&direction=descending](http://www.ncbi.nlm.nih.gov/sites/myncbi/1x_pryu6Jl457/bibliographahy/48112169/public/?sort=date&direction=descending)

### **C. Research Support**

#### Ongoing Research Support

**The VETSA Longitudinal Twin Study of Cognition and Aging (VETSA 3)** (Kremen, Lyons, MPIs)  
R01 AG018386 09/01/15-05/31/19

The proposed 4-year VETSA 3 project will provide a follow-up to the earlier VETSA waves to determine optimal MCI definitions and early identification, patterns of cognitive change from midlife to early old age to characterize heterogeneity across outcomes, and factors associated with resilience, e.g., little or no cognitive impairment despite high polygenic risk scores or blood-based biomarker risk factors.

Role: Co-Investigator and Site PI

**Colorado Adoption/Twin Study of Lifespan behavioral development & cognitive aging (CATSLife)** (Reynolds, Wadsworth, MPIs)

1R01AG046938A1

06/01/2015-02/31/2019

The goals of the MPI project is to conduct a genetically sensitive study of individual differences in behavioral and cognitive change at the cusp of middle adulthood, in 1600 participants studied almost yearly from birth to early adulthood; map individual differences in growth and maintenance of cognitive abilities; evaluate and trace measured physical factors and health behaviors, biochemical markers and measured genetic pathways important to sustaining cognitive performance; and track measured environmental factors that might decrease, sustain or boost cognitive performance.

Role: PI (contact) [co-PI's: Reynolds, Wadsworth]

**The Pharmacological Enhancement of Sleep for Memory Improvement** (Mednick, PI)

R01AG0466460

1/01/2014-12/31/2019

The project is devoted to examining the role of pharmacologically targeted sleep features on memory performance changes in individuals, including older adults. I serve as a co-I to the project, particularly aim 3,

which will extend the examination of pharmacologically targeted sleep features on declarative and non-declarative memory consolidation in older adults.

Role: Co-investigator

**Strategies for Navigating Uncertainty** (Sweeny, PI)

NSF 1251672

04/01/2013-03/31/2016

The primary goals of the proposed research are to better understand the experience of waiting, the identify the processes by which people manage uncertainty, and to reveal the uncertainty navigation strategies that are most effective, both for managing anxiety during a waiting period and for maximizing benefit and minimizing harm upon learning the uncertain news.

Role: Collaborator

**Gene-Environment Interplay of Social Contexts and Aging-Related Outcomes** (Pedersen, PI)

R01 AG037985

9/15/2010 – 5/31/2015, Extension to 5/31/2016

A consortium of longitudinal twin studies will explore the basis for the association of social factors and aging outcomes. The resulting analysis of the combined data from over 16,000 participants aims to understand why early life adversity, social factors such as isolation and loneliness are associated with diverse outcomes including mortality, and physical, emotional and cognitive health.

Role: Co-investigator (PI on UCR subcontract)

**Settings for Success among Emancipating Foster Youth: Youth and Workers in Communication and Collaboration** (Yates, PI)

WT grant foundation

07/01/2012-06/30/2017

The project examines the transition to adulthood among 400 emancipated foster youth as they come of age on opposite sides of a shifting California policy (AB12). The primary aim of the proposed study is to evaluate communication processes between social service workers and emancipating foster youth as they respond to and reflect state-wide child welfare policy and county-specific resource availability and organization, and as they influence foster youth adjustment trajectories across the transition to adulthood.

Role: Consultant