Idan Shalev, PhD

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Academic Positions:

2020-present: The Pennsylvania State University

Associate Professor (with tenure) – Department of Biobehavioral Health,

The Pennsylvania State University, University Park, PA, USA.

2017- 2020: The Pennsylvania State University

Mark T. Greenberg Early Career Professor for the Study of Children's Health

and Development

2014-2020: The Pennsylvania State University

Assistant Professor – Department of Biobehavioral Health, The Pennsylvania

State University, University Park, PA, USA.

Education

2011-2013: Duke University

Postdoctoral Associate – Department of Psychology and Neuroscience,

Duke University, Durham, NC, USA.

Advisors: Profs. Terrie Moffitt and Avshalom Caspi

2011: National University of Singapore

Research Associate - Department of Psychology, National University of

Singapore, Singapore.

2007-2010: Hebrew University

PhD degree – Department of Neurobiology, Hadassah Medical School,

Hebrew University, Jerusalem, Israel.

Advisor: Prof. Richard Ebstein

2005-2007: Hebrew University

MSc degree (magna cum laude) – Department of Brain and Behavior, Hebrew

University Jerusalem, Israel. Advisor: Prof. Richard Ebstein

2000 -2004: Ben-Gurion University

BSc degree – Department of Biology, Natural Sciences, Ben-Gurion University

of the Negev, Beer-Sheva, Israel.

Membership in Professional Societies

2006- 2011: Israel Society for Biological Psychiatry

2006- 2011: Israel Society for Neuroscience

2010- 2015: Associate Member- European College of Neuropsychopharmacology (ECNP)

2015- 2020: Association for Psychological Science (APS).

2018- present: International Society of Psychoneuroendocrinology

Editorial Duties

2013: Guest Editor: Frontiers in Neuroscience- special issue on Social Hormones and Human Behavior

2018- present: Editorial Board: *Translational Neuroscience*

2021- present: Editorial Board: *Genes*

2022- present: Editorial Board: *Scientific Reports*

Ad Hoc Reviewer

Journals

Ageing Research Reviews, American Journal of Preventive Medicine, Annals of Behavioral Medicine, Annals of Epidemiology, Biodemography and Social Biology, Biological Psychiatry, Biological Psychology, BMC Medical Genetics, BMC Medicine, Brain Behavior and Immunity, Child Abuse & Neglect, Child Development, Child Maltreatment, Clinical Psychological Science, Depression and Anxiety, Development and Psychopathology, Developmental Psychology, European Journal of Personality, Frontiers in Genetics, JAMA Pediatrics, JAMA Psychiatry, Journal of Affective Disorders, Journal of Child Psychology and Psychiatry, Journal of Developmental Origins of Health and Disease, Journal of Nervous and Mental Disease, Journal of Psychiatric Research, Journal of Research on Adolescence, Journal of Visualized Experiments, Mechanisms of Ageing and Development, Molecular Psychiatry, Neurobiology of Aging, Neuroscience & Biobehavioral Reviews, Pediatrics, Philosophical Transactions B, PLoS Medicine, PLoS One, PNAS, Proceedings of the Royal Society B, Psychiatry Research, Psychological Medicine, Psychoneuroendocrinology, Psychosomatic Medicine, Royal Society Open Science, Rejuvenation Research, Scientific Reports, Sleep Health, SSM - Population Health, The American Journal of the Medical Sciences, The American Journal of Psychiatry, The Journal of Clinical Endocrinology & Metabolism, The Journal of Gerontology: Psychological Sciences, The Journal of Pediatrics, The Protein Journal, Translational Psychiatry.

Grants

2013: Social Science Research Institute (SSRI) at Penn State University.

2014: Israel Science Foundation (ISF).

2019-2021: Research Grants Council (RGC) of Hong Kong.

2022: National Institutes of Health (NIH) Special Emphasis Panel (ZRG1 BBBP-R).

2022: National Institutes of Health (NIH) Special Emphasis Panel (ZAG1 ZIJ-2).

Professional Meeting

2014: Review Board Member- International Society for Traumatic Stress Studies (ISTSS): Healing Lives and Communities: Addressing the Effects of Childhood Trauma across the Life Span.

IRB

2017- present: Scientific review panel for the Clinical Research Center (CRC) at Penn State University.

Awards/Honors

- Full member- Sigma Xi, The Scientific Research Honor Society. 2021:
- 2019: Teaching Excellence Award- Department of Biobehavioral Health, College of Health and Human Development, Penn State University.
- Mark T. Greenberg Early Career Professor for the Study of Children's Health and 2017: Development.
- 2016: National Institute on Aging Butler-Williams Scholar.
- 2016: National Institute on Aging Summer Training Course in Experimental Aging Research.
- 2015: Rising Star in the Association for Psychological Science (APS).
- Best poster award- 44th Annual ISPNE Conference, Montreal, Canada. 2014:
- Selected for the Jacobs Foundation Conference 2013 on The Genetic Moderation (and 2013: Mediation) of Intervention Efficacy.
- 2012: Travel award - 102nd Annual Meeting of the American Psychopathological Association (APPA), New-York, USA.
- Travel award The Biology of Prosocial Behavior Emory University, Atlanta, USA. 2011:
- 2011: Finalist, Fulbright Post-Doctoral Fellowships.
- 2011: Israel Society for Biological Psychiatry- Annual Award for Outstanding Research.
- 2010: Travel award- Integrating Cooperation Research across Europe (INCORE) foundation-Budapest, Hungary.
- Travel award- Hebrew University- 7th World Congress on Stress, Leiden, Netherlands. 2010:
- 2010: Travel award- European College of Neuropsychopharmacolog (ECNP) Workshop for Young Scientists in Europe, Nice, France.
- 2010: Travel award- The 3rd German Society for Psychophysiology and its Application Spring School, Dresden, Germany.
- 2009: Travel award- The 2nd German Society for Psychophysiology and its Application Spring School, Dresden, Germany.
- 2007: MSc degree- magna cum laude.

Grants

Active

Award Total Period 2023-2024 \$15,000 Faculty Fellow Veturi (PI)

Pennsylvania State University, Social Science Research Institute

Understanding the genetic basis of sex differences in stress-cognitive decline relationship: a multiomic data driven approach integrating neuroimaging with electronic health record

Role: Mentor

P01 AG003949 Engeland and Graham-Engeland (MPI) 2022-2027 \$2,536,683

National Institute on Aging, NIH

Depression, Inflammation, Biological Age, and Cognitive Function

Role: Co-Investigator

R03 AG071549 Shalev (PI) 2022-2023 \$158,190

National Institute on Aging, NIH

Telomere Length Analysis in the Comprehensive Assessment of Long-term Effects of Reducing Intake of Energy (CALERIETM) Study

Role: Principal-Investigator

R01 NR019610 Garrett-Peters and Shalev (MPI) 2021-2025 \$3,419,993

National Institute of Nursing Research, NIH

Early Life Adversity and the Developmental Programming of Early Childhood Telomere

Biology: A Longitudinal Study of Developmental Context and Behavioral Mediators

Role: Multiple Principal-Investigator

T32 AG049676 Martire (PI)

2021-2025

\$2,163,445

National Institute on Aging, NIH

Psychosocial Determinants and Biological Pathways to Healthy Aging (PATHWAYS)

Role: Co-Investigator

U01 AG073204 Martin and Redman (MPI)

2021-2024

\$1,072,236

National Institute on Aging, NIH

A Planning Project to Pilot Test and Optimize Dietary Approaches to Slow Aging and Design a

Long-Term Trial

Role: Co-Investigator

T32 HD101390 Jackson and Noll (MPI)

2020-2025

\$1,728,321

National Institute of Child Health and Human Development, NIH

Creating the Next Generation of Scholars in Child Maltreatment Science

Role: Co-Investigator

U01 ES030949 Shalev (PI)

2019-2023

\$948,300

National Institute on Aging and National Institute of Environmental Health Sciences, NIH

The Comparability and Reproducibility of Telomere Length Measurements for Population-based Studies

Role: Principal-Investigator

P50 HD089922 Noll (PI)

2017-2023

\$8,037,839

National Institute of Child Health and Human Development, NIH

NIH CAPSTONE Center for Multidisciplinary Research and Training in Child Abuse and

Neglect

Role: Co-Investigator

Pending

Award Total

R01 Oxford, Shalev and Dow-Smith (MPI)

2023-2028

\$3,200,927

National Institute of Nursing Research, NIH

The impact of stress and caregiver sensitivity on infant cellular aging in a population of under-

resourced families: A randomized controlled trial

Role: Multiple Principal-Investigator

R25 Berish (PI)

2023-2026

\$804,283

National Institute on Aging, NIH

Translating Geroscience to health science students in Pennsylvania: Disseminating Geroscience and strengthening the connection between science and practice across the developmental continuum

Role: Co-Investigator

P50 HD089922 Noll (PI) 2023-2028 \$8,885,070

National Institute of Child Health and Human Development, NIH

Penn State University's Translational Center for Child Maltreatment Studies (TCCMS)

Role: Co-Investigator

R03 Harrington (PI)

National Institute on Aging, NIH

The role of loneliness in cognitive decline and risk for dementia

Role: Co-Investigator

R01 Shalev and Hall (MPI) \$4,082,014

\$158,189

National Institute of Diabetes and Digestive and Kidney Diseases, NIH

A Longitudinal Multi-Omics Study of Obesity in a High-Risk Cohort: Examining Mechanisms of Biological Aging, Transcriptomics and Metabolomics in Obesity Prediction

Role: Principal-Investigator

S10 Showalter (PI) \$1,999,227

National Institute of General Medical Sciences, NIH

Bruker AVANCE NEO 500 MHz NMR Spectrometer with TXO Cryoprobe and SampleCase

Role: Co-Investigator

R01 Pérez-Edgar, Buss & LoBue (MPI) \$6,630,342

National Institute of Mental Health, NIH

Emerging Relations between Attention and Negative Affect in the First Two Years of Life

Role: Co-Investigator

Completed

Seed Grant Gould (PI) Period Award Total 2021 \$13,131

Pennsylvania State University, Biobehavioral Health

Adolescent Social Stress and Telomere Length: Developing a Mouse Model

Role: Co-Investigator

R21 AG055621 Shalev (PI) 2018-2021 \$435,324

National Institute on Aging, NIH

Temporal Genomics Mechanisms Underlying Disease and Aging

Role: Principal-Investigator

R03 HD099372 Bernard and Dagan (MPI) 2019-2021 \$159,500

National Institute of Child Health and Human Development, NIH

Examining Mechanistic Links Between Maternal Attachment Representations and Young

Children's Telomere Length

Role: Consultant

Internal Grant Warshel (PI) 2019-2021 \$15,000

Pennsylvania State University, Rock Ethics Institute

Children, Youth, and Media in International and Global Conflict Zones

Role: Co-Investigator

T32 AG049676 Almeida (PI) 2016-2021 \$1,334,159
National Institute on Aging, NIH
Psychosocial Determinants and Biological Pathways to Healthy Aging (PATHWAYS)
Role: Co-Investigator

 Seed Grant
 Shalev (PI)
 2020
 \$13,587

Pennsylvania State University, Biobehavioral Health

The Impact of Child Maltreatment on Biological Aging: A Multi-Omics Approach

Role: Principal-Investigator

Seed Grant Shalev (PI) 2019 \$14,784

Pennsylvania State University, Biobehavioral Health

Integrating Dynamic Cellular Mechanisms with Momentary Assessments of Emotions

Role: Principal-Investigator

Seed Grant Shalev (PI) 2018 \$4,500

Pennsylvania State University, Biobehavioral Health

Transcriptomic and Metabolomics Analysis among Victims of Child Maltreatment

Role: Principal-Investigator

R21 AG054846 Belsky (PI) 2018-2020 \$238,500

National Institute on Aging, NIH

A Pilot Study to Advance Translation of Molecular Signatures of Biological Aging

Role: Consultant

Seed Grant Shalev (PI) 2016-2018 \$62,773

Pennsylvania State University, Clinical and Translational Science Institute

Early-Life Adversity and Gene Expression Response to Acute Psychological Stress

Role: Principal-Investigator

Faculty Fellow Shalev (PI) 2016 \$15,000

Pennsylvania State University, Social Science Research Institute

Integrating Dynamic Biological Mechanisms with Daily Momentary Assessments to investigate Biological Embedding of Early-Life Adversity

Role: Principal-Investigator

Other Shalev (PI) 2016 \$7,500

Pennsylvania State University, College of Health and Human Development

Teaching Release to Support Grant Writing

Role: Principal-Investigator

Sara van Dam Foundation Beijers (PI) 2015-2017 \$178,030

Pennsylvania State University, Clinical and Translational Science Institute

Biological Embedding of Early-Life Experiences: How Early-Life Experiences Impact Childhood

Development and Can Accelerate Aging

Role: Co-Investigator

Seed Grant Chang (PI) 2015-2016 \$77,905

Pennsylvania State University, Clinical and Translational Science Institute

Complex Interactions of Behavior, Genes, and Environment in the Multi-System Characterization of the Effects of Sleep Loss on Health, Cardio-Metabolic Disease Risk, Cognition, and the Epigenome

Role: Co-Investigator

Seed Grant Shalev (PI) 2014-2015 \$26,278

Pennsylvania State University, Social Science Research Institute

Intergenerational Transmission of Trauma? Testing Cellular Aging in Mothers Exposed to Sexual Abuse and Their Children

Role: Principal-Investigator

Manuscripts under Review (#denotes graduate or undergraduate mentee)

Apsley AT*, Ye Q*, Etzel L*, Hastings WJ*, Wolf S*, **Shalev I**. Reliability Measurements for DNA Methylation Study Designs. *Patterns*

Lin J, Verhulst S, Alonso CF, Dagnall C, Gadalla S, Hastings WJ, Lai TP, **Shalev I**, Wang Y, Zheng YL, Epel E, Drury S for the Telomere Research Network. Effects of DNA extraction, DNA integrity, and laboratory on the precision of qPCR-based telomere length measurement - a multi-lab impartial study and systematic review. *PLoS One*. https://www.biorxiv.org/content/10.1101/2022.12.14.520438v1

Apsley AT[#], Etzel L[#], Hastings WJ[#], Heim CM, Noll JG, O'Donnell KJ, Schreier HMC, Shenk CE, Ye Q[#], **Shalev I**. Investigating the Effects of Maltreatment and Acute Stress on the Concordance of Blood and DNA Methylation Methods of Estimating Immune Cell Proportions. *Clinical Epigenetics*. https://doi.org/10.21203/rs.3.rs-2043165/v1

Butzin-Dozier Z, Mertens AN, Tan S, Granger DA, Pitchik HO, Il'yasova D, Tofail F, Rahman MZ, Spasojevic I, Li A, **Shalev I**, Ali S, Arnold BF, Kim L, Karim MR, Shahriar S, Famida SL, Shuman G, Shoab AK, Akther S, Hossen MS, Mutsuddi P, Rahman M, Unicomb L, Das KK, Yan L, Meyer A, Kariger P, Stewart CP, Hubbard A, Naved RT, Parvin K, Al Mamun MM, Luby SP, Colford Jr. JM, Fernald LCH, Lin A. Stress Biomarkers and Developmental Impairment in Young Children. *eLife*

Lin A, Mertens AN, Rahman MZ, Tan S, Il'yasova D, Spasojevic I, Ali S, Stewart CP, Fernald LCH, Kim L, Yan L, Meyer A, Karim MR, Shahriar S, Shuman G, Arnold BF, Hubbard A, Famida SL, Akther S, Hossen MS, Mutsuddi P, Shoab AK, **Shalev I**, Rahman M, Unicomb L, Heaney CD, Kariger P, Colford Jr. JM, Luby SP, Granger DA. A randomized trial of water, sanitation, handwashing and nutritional interventions on stress and epigenetic programming in children in Bangladesh. (https://www.medrxiv.org/content/10.1101/2021.11.24.21266798v1). *Nature Human Behaviour*

<u>Publications</u> (*denotes postdoc, graduate or undergraduate mentee)

Google Scholar Citations: 6881 h-index: 31 i10-index: 40

61. Waziry R, Ryan CP, Corcoran DL, Huffman KM, Kobor MS, Kothari M, Graf GH, Kraus VB, Kraus WE, Lin DTS, Pieper CF, Ramaker ME, Bhapkar M, Das SK, Ferrucci L, Hastings WJ*, Kebbe M, Parker DC, Racette SB, **Shalev I**, Schilling B, Belsky DW (2022).

- Effect of long-term caloric restriction on DNA methylation measures of biological aging in healthy adults: CALERIETM Trial analysis. https://www.medrxiv.org/content/10.1101/2021.09.21.21263912v1. *Nature Aging* (in press)
- 60. Etzel L*, Apsley AT*, Mattern BC*, Hastings WJ*, Heller T*, Ram N, Siegel SR, **Shalev I** (2022). Immune cell dynamics in response to an acute laboratory stressor: A within-person between-group analysis of the biological impact of early life adversity. *Stress*. Nov ;25(1):347-356. doi: 10.1080/10253890.2022.2148100. PMCID: PMC9704543.
- 59. Bolhuis E, Belsky J, Frankenhuis WE, **Shalev I**, Hastings WJ^{#,} Tollenaar MS, O'Donnell KG, McGill MG, Pokhvisneva I, Lin DTS, MacIsaac JL, Kobor MS, de Weerth C, Beijers R (2022). Attachment insecurity and the biological embedding of reproductive strategies: Investigating the role of cellular aging. *Biological Psychology*. Nov;175:108446. doi.org/10.1016/j.biopsycho.2022.108446. PMID: 36272562.
- 58. Beijers R, Thije IT, Bolhuis E, O'Donnell KJ, Tollenaar MS, **Shalev I**, Hastings WJ[#], MacIsaac J, D Lin, M Meaney, M Kobor, Belsky J, de Weerth C (2022). Cumulative risk exposure and child cellular aging in a Dutch community sample. *Psychophysiology*. 2;e14205. https://doi.org/10.1111/psyp.14205. PMID: 36323627
- 57. Armstrong ND, Irvin MR, Haley WE, Blinka MD, Mukaz DK, Patki A, Siegel SR, **Shalev I**, Durda P, Mathias RA, Walston JD, Roth DL (2022). Telomere shortening and the transition to family caregiving in the Reasons for Geographic and Racial Differences in Stroke (REGARDS) Study. *PLoS One*. Jun 3;17(6):e0268689. doi: 10.1371/journal.pone.0268689. PMCID: PMC9165822.
- 56. Etzel L[#], Hastings WJ[#], Hall MA, Heim CM, Meaney MJ, Noll JG, O'Donnell KJ, Pokhvisneva I, Rose EJ, Schreier HMC, Shenk CE, **Shalev I** (2022). Obesity and accelerated epigenetic aging in a high-risk cohort of children. *Scientific Reports*. May 18;12(1):8328. doi.org/10.1038/s41598-022-11562-5. PMCID: PMC9117197.
- 55. Haag AC, Cha CB, Noll JG, Gee DG, Shenk CE, Schreier HMC, Heim CM, **Shalev I**, Rose EJ, Jorgensen A, Bonanno GA (2022). The Flexible Regulation of Emotional Expression Scale for Youth (FREE-Y): Adaptation and validation across a varied sample of children and adolescents. *Assessment*. May 5;10731911221090465. doi: 10.1177/10731911221090465. PMID: 35510578.
- 54. Hastings WJ[#], Etzel L[#], Heim CM, Noll JG, Rose EJ, Schreier HMC, Shenk CE, Tang X, **Shalev I** (2022). Comparing qPCR and DNA methylation-based measurements of telomere length in a high-risk pediatric cohort. *Aging (Albany NY)*. Jan 24;14(2):660-677. doi.org/10.18632/aging.203849. PMCID: PMC8833135.
- 53. Azulay H, Guy N, **Shalev I**, Pertzov Y, Israel S (2021). Social evaluation under stress: Does acute stress affect social attributions and eye gaze? *Comprehensive Psychoneuroendocrinology*. Oct 14;8:100093. doi.org/10.1016/j.cpnec.2021.100093. PMCID: PMC9216653.

- 52. Hastings WJ[#], Eisenberg DTA, **Shalev I** (2021). Impact of amplification efficiency approaches on telomere length measurement via qPCR. *Frontiers in Genetics*. Sep 17;12:728603. doi: 10.3389/fgene.2021.728603. PMCID: PMC8484782.
- 51. Hastings WJ*, Almeida DM, **Shalev I** (2021). Conceptual and analytical overlap between allostatic load and systemic biological aging measures: Analyses from the National Survey of Midlife Development in the United States. *The Journals of Gerontology: Series A.* Jun 1;77(6):1179-1188. doi: 10.1093/gerona/glab187. PMCID: PMC9159656.
- 50. Li JC, Hall MA, **Shalev I**, Schreier HMC, Zarzar TG, Marcovici I, Putnam FW, Noll JG (2021). Hypothalamic-pituitary-adrenal axis attenuation and obesity risk in sexually abused females. *Psychoneuroendocrinology*. Jul;129:105254. doi: 10.1016/j.psyneuen.2021.105254. PMCID: PMC8217375.
- 49. Schreier HMC, Heim CM, Rose EJ, **Shalev I**, Shenk CE, Noll JG (2021). Assembling a cohort for in-depth, longitudinal assessments of the biological embedding of child maltreatment: Methods, complexities, and lessons learned. *Development and Psychopathology*. May;33(2):394-408. doi: 10.1017/S0954579420001510. PMCID: PMC8177053.
- 48. Tollenaar MS, Beijers R, Garg E, Nguyen TT, Lin DT, MacIsaac JL, **Shalev I**, Kobor MS, Meaney MJ, O'Donnell KJ, de Weerth C (2021). Internalizing symptoms associate with the pace of epigenetic aging in childhood. *Biological Psychology*. Feb;159:108021. doi: 10.1016/j.biopsycho.2021.108021. PMID: 33460784.
- 47. Hastings WJ*, Eisenberg DTA, **Shalev I** (2020). Uninterruptible power source improves precision of telomere length measurement via qPCR. *Experimental Results*. 1:e52. doi: https://doi.org/10.1017/exp.2020.58. PMCID: PMC7954403.
- 46. Etzel L[#], Hastings WJ[#], Mattern BC[#], Oxford ML, Heim C, Putnam FW, Noll JG, **Shalev I**. (2020). Intergenerational transmission of childhood trauma? Testing cellular aging in mothers exposed to sexual abuse and their children. *Psychoneuroendocrinology*. Oct;120:104781. doi: 10.1016/j.psyneuen.2020.104781. PMCID: PMC1605503.
- 45. **Shalev I**, Hastings WJ*, Etzel L*, Israel S, Russell MA, Hendrick KA*, Zinobile M, Siegel SR. (2020). Investigating the impact of early-life adversity on physiological, immune, and gene expression responses to acute stress: A pilot feasibility study. *PLoS One*. Apr 3;15(4):e0221310. doi: 10.1371/journal.pone.0221310. PMCID: PMC7122782.
- 44. Beijers R, Hartman S, **Shalev I**, Hastings WJ*, Mattern B*, de Weerth C, Belsky J. (2020). Testing three hypotheses about effects of sensitive—insensitive parenting on telomeres. *Developmental Psychology*. Feb;56(2):237-250. doi: 10.1037/dev0000879. PMCID: PMC7391860.
- 43. Beijers R, Daehn D, **Shalev I**, Belsky J, de Weerth C. (2020). Biological embedding of maternal postpartum depressive symptoms: The potential role of cortisol and telomere length. *Biological Psychology*. Feb;150:107809. doi: 10.1016/j.biopsycho.2019.107809. PMID: 31734351.

- 42. Hastings WJ*, **Shalev I**, Belsky DW. (2019). Comparability of biological aging measures in the National Health and Nutrition Examination Study, 1999—2002. *Psychoneuroendocrinology*. Aug;106:171-178. doi: 10.1016/j.psyneuen.2019.03.012. PMCID: PMC6599717.
- 41. Bloch B, Levin R, Vadas L, **Shalev I**, Israel S, Uzefovsky F, Granot R, Bachner-Melman R, Reshef A, Ebstein RP, Kremer I. (2019). Sex-specific effect of intranasal vasopressin, but not oxytocin, on emotional recognition and perception in schizophrenia patients. *Israel Journal of Psychiatry*, *56*(1), 21-25.
- 40. Hastings WJ[#], Chang A-M, Ebstein RP, **Shalev I**. (2018). Neuroendocrine stress response is moderated by sex and sex hormone receptor polymorphisms. *Hormones and Behavior*. Nov;106:74-80. doi: 10.1016/j.yhbeh.2018.10.002. PMCID: PMC6324727.
- 39. Zhong Z*, **Shalev I***, Koh D, Ebstein RP, Chew SH. (2018). Competitiveness and stress. *International Economic Review*, *59*(3), 1263-1281. Available at SSRN: http://ssrn.com/abstract=2717459 or https://doi.org/10.1111/iere.12303. *These authors contributed equally to this work.
- 38. Belsky DW, Huffman KM, Peiper KF, **Shalev I**, Kraus WE. (2018). Change in the rate of biological aging in response to caloric restriction: CALERIE Biobank analysis. *The Journals of Gerontology: Series A*. Dec 12;73(1):4-10. doi: 10.1093/gerona/glx096. PMCID: PMC5861848.
- 37. Hastings WJ*, **Shalev I**, Belsky DW. (2017). Translating measures of biological aging to test effectiveness of geroprotective interventions: what can we learn from research on telomeres?. *Frontiers in Genetics*. Nov 22;8:164. doi: 10.3389/fgene.2017.00164. PMCID: PMC5702647.
- 36. Brody GH, Yu T, **Shalev I**. (2017). Risky family processes prospectively forecast shorter telomere length mediated through negative emotions. *Health Psychology*. May;36(5):438-444. doi: 10.1037/hea0000443. PMCID: PMC5398935.
- 35. Noll JG, Trickett PK, Long JD, Negriff S, Susman EJ, **Shalev I**, Li JC, Putnam FW. (2017). Childhood sexual abuse and early timing of puberty. *Journal of Adolescent Health*. Jan;60(1):65-71. doi: 10.1016/j.jadohealth.2016.09.008. PMID: 27836531.
- 34. Belsky J*, **Shalev I***. (2016). Contextual adversity, telomere erosion, pubertal development, and health: Two models of accelerated aging, or one?. *Development and Psychopathology*. Nov;28(4pt2):1367-1383. doi: 10.1017/S0954579416000900. PMID: 27688015 *These authors contributed equally to this work.
- 33. **Shalev I**, Heim CM, Noll JG. (2016). Child maltreatment as a root cause of mortality disparities: a call for rigorous science to mobilize public investment in prevention and treatment. *JAMA Psychiatry*. Sep 1;73(9):897-8. doi: 10.1001/jamapsychiatry.2016.1748. PMID: 27552469.

- 32. **Shalev I**, Belsky J. (2016). Early-life stress and reproductive cost: A two-hit developmental model of accelerated aging?. *Medical Hypotheses*. May;90:41-7. doi: 10.1016/j.mehy.2016.03.002. PMID: 27063083.
- 31. Yim OS, Zhang X, **Shalev I**, Monakhov M, Zhong S, Chew SH, Lai PS, Ebstein RP. (2016). Delay discounting, genetic sensitivity, and leukocyte telomere length. *Proceedings of the National Academy of Sciences*. Mar 8;113(10):2780-5. doi: 10.1073/pnas.1514351113. PMCID: PMC4790989.
- 30. Thomson WM, Zeng J, Broadbent JM, Foster Page LA, **Shalev I**, Moffitt TE. Caspi A, Braithwaite AW, Poulton R. (2016). Telomere length and periodontal attachment loss: a prospective cohort study. *Journal of Clinical Periodontology*. Feb;43(2):121-7. doi: 10.1111/jcpe.12499. PMCID: PMC4775379.
- 29. Sugden K, Danese A, **Shalev I**, Williams BS, Caspi A. (2015). Blood substrate collection and handling procedures under pseudo-field conditions: evaluation of suitability for inflammatory biomarker measurement. *Biodemography and Social Biology*, *61*(3), 273-284. doi: 10.1080/19485565.2015.1062717. PMCID: PMC4699675.
- 28. Uzefovsky F, **Shalev I**, Israel S, Edelman S, Raz Y, Mankuta D, Knafo A, Ebstein RP. (2015). Oxytocin receptor and vasopressin receptor 1a genes are respectively associated with emotional and cognitive empathy. *Hormones and Behavior*. Jan;67:60-5. doi: 10.1016/j.yhbeh.2014.11.007. PMID: 25476609.
- 27. Shalev I, Caspi A, Ambler A, Belsky DW, Chapple S, Cohen HJ, Israel S, Poulton R, Ramrakha S, Rivera CD, Sugden K, Williams B, Wolke D, Moffitt TE. (2014). Perinatal complications and aging indicators by midlife. *Pediatrics*. Nov;134(5):e1315-23. doi: 10.1542/peds.2014-1669. PMCID: PMC4210799.
 *Commentary by Alan Guttmacher, director of NICHD, "The Child Is Father of the Man, and Mother of the Woman". *Pediatrics*. 2014 Oct. doi: 10.1542/peds.2014-2646.
- 26. Zozulinsky P, Greenbaum L, Brande-Eilat N, Braun Y, **Shalev I**, Tomer R. (2014). Dopamine system genes are associated with orienting bias among healthy individuals. *Neuropsychologia*. Sep;62:48-54. doi: 10.1016/j.neuropsychologia.2014.07.005. PMID: 25038551.
- 25. Belsky DW, **Shalev I**, Sears MR, Hancox RJ, Harrington H, Houts RM, Moffitt TE, Sugden K, Williams B, Poulton R, Caspi A. (2014). Is chronic asthma associated with shorter leukocyte telomere length at midlife?. *American Journal of Respiratory and Critical Care Medicine*. Aug 15;190(4):384-91. doi: 10.1164/rccm.201402-0370OC. PMCID: PMC4214127.
 - *Editorial by Stefano Guerra. New Asthma Biomarkers: Shorter Telomeres, Longer Disease? *American Journal of Respiratory and Critical Care Medicine*, 190(4):356-358, 2014.

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- 21. Klaus-Grawe Think Tank 2012. (2013). Childhood exposure to violence and lifelong health: Clinical intervention science and stress-biology research join forces. *Development and Psychopathology*. Nov;25(4 Pt 2):1619-34. doi: 10.1017/S0954579413000801. PMCID: PMC3869039.
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 *These authors contributed equally and are listed in alphabetical order.

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- 16. Shalev I, Moffitt TE, Wong TY, Meier MH, Houts RM, Ding J, Cheung CYL, Ikram MK, Caspi A, Poulton R. (2013). Retinal vessel caliber and lifelong neuropsychological functioning: retinal imaging as an investigative tool for cognitive epidemiology. *Psychological Science*. Jul 1;24(7):1198-207. doi: 10.1177/0956797612470959. PMCID: PMC3713191.

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 - *These authors contributed equally to this work.
- 14. **Shalev I.** (2012). Early life stress and telomere length: investigating the connection and possible mechanisms: a critical survey of the evidence base, research methodology and basic biology. *Bioessays*. Nov;34(11):943-52. doi: 10.1002/bies.201200084. PMCID: PMC3557830.
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- 13. **Shalev I,** Moffitt TE, Sugden K, Williams B, Houts RM, Danese A, Mill J, Arseneault L, Caspi A. (2013). Exposure to violence during childhood is associated with telomere erosion from 5 to 10 years of age: a longitudinal study. *Molecular Psychiatry*. May;18(5):576-81. doi: 10.1038/mp.2012.32. PMCID: PMC3616159.
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 - * The study appeared on the cover page of *USA Today*, and in countless media outlets including; *Science, Time Magazine, Los Angeles Times, Smithsonian* and *Der Spiegel*, among others.
- 12. Uzefovsky F, **Shalev I**, Israel S, Knafo A, Ebstein RP. (2012). Vasopressin selectively impairs emotion recognition in men. *Psychoneuroendocrinology*. Apr;37(4):576-580. doi: 10.1016/j.psyneuen.2011.07.018. PMID: 21856082.
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Books

Noll JG and **Shalev I** (Eds.). (2018). *The biology of early life stress: understanding child maltreatment and trauma*. Springer International Publishing. ISSN 2509-7156. ISBN 978-3-319-72588-8. DOI: 10.1007/978-3-319-72589-5.

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Book Chapters

Etzel LC[#] and **Shalev** I. (2021). Effects of psychological stress on telomeres as genome regulators. In *Handbook of Stress Volume 4: Stress Genetics, Epigenetics, Genomics*. Ed. George Fink (pp. 109-117). Academic Press.

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- Levin R., Edelman S., **Shalev I**., Ebstein RP., Heresco-Levy U. (2010). The role of oxytocin in schizophrenia, anxiety and mood disorders: concepts and mechanisms. In *Brain Protection in Schizophrenia, Mood and Cognitive Disorders* (pp. 611-635). Springer, Dordrecht.
- **Shalev I.**, Lerer E., Israel S., Uzefovsky F., Gritsenko I., Mankuta D., Kaitz M. and Ebstein R.P. (2009). Individual differences in reactivity to social stress in the laboratory and its mediation by common genetic polymorphisms. In *Stress-From Molecules to Behavior: A Comprehensive Analysis of the Neurobiology of Stress Responses*, (pp. 93-116). Wiley-Blackwell.
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Encyclopedia Entries

- **Shalev I**. & Hastings WJ[#]. (2018). Telomere. In Bornstein MH (Gen Ed). *The SAGE Encyclopedia of Lifespan Human Development*. SAGE Publications. DOI: http://dx.doi.org/10.4135/9781506307633.n822
- **Shalev I.** & Hastings WJ[#]. (2018). Psychological Stress and Cellular Aging. *In Oxford Research Encyclopedia of Psychology*. Ed. Oliver Braddick. New York: Oxford University Press. DOI: 10.1093/acrefore/9780190236557.013.131.
- Oral Presentations (Professional Meetings) (#denotes graduate or undergraduate mentee) Hastings WJ, Fox N, Heim CM, Nelson C, Noll JG, Schreier HMC, Shenk CE, Zeanah C, Drury SS, **Shalev I.** Investigating Biological Aging and Pubertal Development in Two High-Risk Pediatric Cohorts. *Society for Research in Child Development (SRCD)*. Utah, UT, USA. March 2023 (forthcoming).
- Apsley AT[#], Lee SA, Bhat AC, Almeida DM, **Shalev I**. Affective Reactivity to Daily Stressors and Immune Gene Expression in the MIDUS Study. *The Gerontological Society of America* (GSA) 2022 Annual Scientific Meeting. Indianapolis, IN, November 2022
- **Shalev I**. Examining DNA integrity and QC metrics across multiple tissues. *NIH Telomere Research Network Annual Meeting*. New-Orleans, LA, December 2021
- **Shalev I**. Testing the Impact of DNA integrity Across Multiple Tissues on Telomere Length Measurements via qPCR. 54th Annual Meeting of the International Society for Developmental Psychobiology (ISDP). Virtual, November 2021

- **Shalev I**. Impact of cell type on DNA integrity, and efficiency approach and uninterruptible power supply on qPCR estimates. *NIH Telomere Research Network Annual Meeting*. Virtual, December 2020
- Hastings WJ[#] and **Shalev I**. Uninterruptible Power Supply Improves Precision of Telomere Length Measurement via qPCR. *The Gerontological Society of America (GSA) 2020 Annual Scientific Meeting*. Virtual, November 2020
- Hastings WJ[#] and **Shalev I**. Allostatic Load and Biological Aging Indicators in The MIDUS National Survey. *The Gerontological Society of America (GSA) 2020 Annual Scientific Meeting*. Virtual, November 2020
- **Shalev I**. Intergenerational Transmission of Childhood Trauma? Testing Cellular Aging in Mothers Exposed to Sexual Abuse and Their Children. *American Academy of Child and Adolescent Psychiatry (AACAP) Annual Meeting*, Virtual, October 2020.
- **Shalev I**. The Comparability and Reproducibility of Telomere Length Measurements for Population-based Studies. *NIH Telomere Research Network Kick Off Meeting*. Bethesda, MD, December 2019
- Etzel L*, & **Shalev I.** Modeling the Age-Varying Link between Cytomegalovirus Infection and Telomere Length in a Nationally Representative Sample of US Adults. *Diversity in Telomere Dynamics*, University of Glasgow, Edinburgh, Scotland. October 2019
- Hastings WJ[#], Belsky D, **Shalev I**. Comparability of Biological Aging Measures in the National Health and Nutrition Examination Study, 1999-2002. *49th Annual ISPNE Conference*. Milan, Italy, August 2019.
- **Shalev I.** Telomere length and its relevance to CALERIE. 2018 CALERIE Research Network Workshop: Facilitating CALERIE-Based Ancillary Studies. Chicago, IL, USA. August 2018.
- **Shalev I.** Biological Embedding of Early-Life Adversity: Challenges and Opportunities. *Child Abuse and Trauma New frontiers in science, practice, and prevention*. The University of Texas, Tyler, Texas, USA. April 2018.
- **Shalev I.** Biological Embedding of Early-Life Adversity: Challenges and Opportunities. *Cognitive, Affective, and Social Processes in Health Research (CASPHR) Workshop on "Health Impacts of Adversity, Vulnerability and Resilience"*. National Cancer Institute, Rockville, Maryland, USA. November 2017.
- **Shalev I,** Noll JG. Early Timing of Puberty for Sexually Abused Females. *American Academy of Child and Adolescent Psychiatry (AACAP) 64th Annual Meeting*. Washington, DC, USA, October 2017.
- **Shalev I.** Lessons for Development of Biomarkers of Aging from Telomere Research. *National Institute of Environmental Health Sciences and National Institute on Aging: Telomeres as Sentinels for Environmental Exposures, Psychosocial Stress, and Disease Susceptibility.* Research Triangle Park, NC, USA, September 2017.

- **Shalev I.** Biological Embedding of Early-Life Adversity: Challenges and Opportunities. *Inaugural Program for Translational Research on Adversity and Neurodevelopment (P-TRAN)* 2017 Symposium. University Park, PA, USA. May 2017.
- **Shalev I.,** Hastings WJ, Siegel S. Early-Life Adversity is Associated with Differential Gene Expression Response to Acute Psychological Stress. *46th Annual ISPNE Conference*. Miami, USA, September 2016.
- **Shalev I.** Perinatal Complications Predict Subjective and Objective Aging Indicators by Midlife. *Pediatric Research Day.* Penn State Hershey, PA, USA. May 2016.
- **Shalev I.** Early-life adversity and telomere erosion: Evidence from two longitudinal studies. *Penn State's Fourth Annual Conference on Child Protection and Well-Being*. University Park, PA, USA. September 2015.
- Belsky J and **Shalev. I.** Contextual Adversity, Telomere Erosion, Pubertal Development and Health: Two Models of Accelerated Aging—or One? *Epigenetics: Development, Psychopathology, Resilience, and Preventive Intervention*. Minneapolis, MN, USA. May 2015.
- **Shalev I.** Perinatal Complications Predict Subjective and Objective Aging Indicators by Midlife. *Society for Research in Child Development (SRCD)*. Philadelphia, PA, USA. March 2015.
- **Shalev I.** Early life stress, mental health and telomere erosion: Evidence from two longitudinal studies. *Diversity in Telomere Dynamics workshop*. Drymen, Scotland, November 2014.
- **Shalev I.** Jacobs Foundation Conference. *The Genetic Moderation (and Mediation) of Intervention Efficacy*. Marbach Castle, Germany, April 2013.
- **Shalev I**, Moffitt TE, Caspi A. Exposure to violence during childhood is associated with telomere erosion from 5 to 10 years of age: a longitudinal study. *42nd Annual ISPNE Conference*. New York, USA, September 2012. (Presented in a symposium chaired by Nobel laureate Elizabeth Blackburn)
- **Shalev I**, Moffitt TE, Caspi A. Psychobiological effects of juvenile violence exposure: effects on telomere erosion. *The 3rd Klaus-Grawe-Think-Tank-Meeting (KGTM2012)*. Zuoz, Switzerland, June 2012.
- **Shalev I**. Exposure to violence during childhood is associated with telomere erosion from 5 to 10 years of age: a longitudinal study. *Duke University Population Research Institute (DuPRI)*, Duke University, USA. February 2012.
- **Shalev I**, Israel S, Uzefovsky F, Gritsenko I, Kaitz M, Ebstein RP. Intranasal administration of arginine vasopressin enhances salivary cortisol rise following social stress (Trier Social Stress Test). *40th Annual ISPNE Conference*. San-Francisco, USA, July 2009.
- **Shalev I**, Israel S, Uzefovsky F, Gritsenko I, Kaitz M, Ebstein RP. Intranasal administration of arginine vasopressin enhances salivary cortisol rise following social stress (Trier Social Stress Test). *The 2nd DGPA Spring School*, Dresden, Germany, March 2009.

- **Shalev I**, Israel S, Uzefovsky F, Gritsenko I, Kaitz M, Ebstein RP. Intranasal administration of arginine vasopressin enhances salivary cortisol rise following social stress (Trier Social Stress Test). *13th annual meeting of the Israel Society for Biological Psychiatry*. Hagoshrim, Israel, March 2009. (Published as abstract in: Israel Journal of Psychiatry 2008;46:Sup 1, p.34)
- **Shalev I.,** Lerer E, Gritsenko I, Kaitz M, and Ebstein RP. BDNF Val66Met polymorphism modulates HPA axis reactivity to psychological stress. *39th Annual ISPNE Conference*. Dresden, Germany, July 2008.
- **Shalev I,** Lerer E, Gritsenko I, Kaitz M, and Ebstein RP. BDNF Val66Met polymorphism modulates HPA axis reactivity to psychological stress differently in adults and young men and women. *12th annual meeting of the Israel Society for Biological Psychiatry*. Kfar Giladi, Israel, March 2008. (Published as abstract in: Israel Journal of Psychiatry 2008;45:Sup 1, p.14)
- **Shalev I,** Gritsenko I, Nemanov L, Kaitz M, and Ebstein RP. HPA axis reactivity measured by changes in salivary cortisol levels in the Trier Social Stress Test (TSST) in past and never smokers: Effect of genotype. 11th annual meeting of the Israel Society for Biological Psychiatry. Kfar Giladi, Israel, March 2007. (Published as abstract in: Israel Journal of Psychiatry 2007;44:Sup 1, p.14)
- **Shalev I**, Levin R, Lerer E, Heled E, Cohen L, Raz Y, Hoffine D and Ebstein RP. Association between the Rey-Osterrieth complex figure task scores with catechol-O-Methyltransferase (COMT), dopamine D4 receptor (DRD4) and synaptosomal-associated protein (SNAP25). *15th annual meeting of the Israel Society for Neuroscience*. Eilat, Israel, December 2006. (Published as abstract in: Neural Plasticity 2006: vol 1, p.89)
- **Shalev I**, Levin R, Lerer E, Heled E, Cohen L, Raz Y, Hoffine D and Ebstein RP. Association between the Rey-Osterrieth complex figure task scores with catechol-O-Methyltransferase (COMT), dopamine D4 receptor (DRD4) and synaptosomal-associated protein (SNAP25). *10th annual meeting of the Israel Society for Biological Psychiatry*. Hagoshrim, Israel, March 2006. (Published as abstract in: Israel Journal of Psychiatry 2006;45:Sup 1, p.14)
- <u>Posters (Professional Meetings) (#denotes graduate or undergraduate mentee)</u>
 Etzel L#, Apsley AT#, **Shalev I.** Impact of Early Life Adversity on Gene Expression Related to Leukocyte Trafficking and Proliferation: A Cluster-Based Analysis across an Acute Stressor. *The Pennsylvania State University Research Symposium*. University Park, PA, USA. December 2022
- Etzel L[#], Schmid L, **Shalev I**, Garrett-Peters P. Impact of prenatal stress and psychosocial resilience on prenatal inflammation. *55th Annual Meeting of the International Society for Developmental Psychobiology (ISDP)*. San Diego CA, USA. November 2022.
- Ye Q[#], Apsley AT[#], Hastings WJ[#], Etzel L[#], Wolf S[#], Walker C[#], Kozlosky J[#], **Shalev I**. Telomere length and chronological age across the human lifespan: A systematic review and meta-analysis across 743,019 participants in 414 studies. *52nd Annual ISPNE Conference*. Chicago IL, USA, September 2022.
- Hastings WJ*, Asghar M, Belsky DW, Carroll J, Hägg S, Justice J, Kiecolt-Glaser J, Lustig AJ, Pierce B, Rehkopf D, Ryan C, **Shalev I**. A Critical Appraisal of Telomeres for Studies of Human

- Aging. Cold Spring Harbor Laboratory, Telomeres & Telomerase. Virtual meeting, December 2021.
- Etzel LC*, Lanza S, **Shalev I**. Intergenerational Transmission of Trauma? Testing cellular aging in mothers exposed to sexual abuse and their children. *The Gerontological Society of America* (GSA) 2020 Annual Scientific Meeting. Virtual meeting, November 2020
- Etzel LC[#], Lanza S, **Shalev I**. Modeling the Age-Varying Link between Smoking and Telomere Length in a Large Sample of US Adults. *48th Annual ISPNE Conference*. Irvine CA, USA, September 2018.
- Hastings WJ[#], Belsky D, **Shalev I**. Comparing Measures of Biological Age on Morbidity and Functional Outcomes in a Nationally Representative Sample of US Adults. *48th Annual ISPNE Conference*. Irvine CA, USA, September 2018.
- Hastings WJ[#], Siegel S, **Shalev I**. Early-Life Adversity is Associated with Diverse Dimensions of Cellular and Neuroendocrine Stress Responses. 33rd *Annual Graduate Exhibition*. Penn State, State College, USA, March 2018.
- Hastings WJ[#], Siegel S, **Shalev I**. Differential CD8+ response to stress is moderated by exposure to early-life adversity. *46*th *Annual ISPNE Conference*. Miami, USA, September 2016.
- **Shalev I**, Caspi A, Moffitt TE. Perinatal Complications Predict Subjective and Objective Aging Indicators by Midlife. *44th Annual ISPNE Conference*. Montreal, Canada, August 2014.
- **Shalev I**, Caspi A, Moffitt TE. Perinatal Complications Predict Subjective and Objective Aging Indicators by Midlife. *104rd Annual Meeting of the American Psychopathological Association (APPA)*, New-York, USA, March 2014.
- **Shalev I**, Moffitt TE, Caspi A. Stress-related disorders and leukocyte telomere length: a prospective longitudinal study of four decades. *103rd Annual Meeting of the American Psychopathological Association (APPA)*, New-York, USA, March 2013.
- **Shalev I**, Moffitt TE, Sugden K, Williams B, Houts RM, Danese A, Mill J, Arseneault L, Caspi A. Exposure to violence during childhood is associated with telomere erosion from 5 to 10 years of age: a longitudinal study. 24th Annual Convention of the Association for Psychological Science (APS), Chicago, USA, May 2012.
- **Shalev I**, Moffitt TE, Sugden K, Williams B, Houts RM, Danese A, Mill J, Arseneault L, Caspi A. Exposure to violence during childhood is associated with telomere erosion from 5 to 10 years of age: a longitudinal study. *102nd Annual Meeting of the American Psychopathological Association (APPA)*, New-York, USA, March 2012.
- **Shalev I**, Israel S, Uzefovsky F, Gritsenko I, Kaitz M, Ebstein RP. Vasopressin needs an audience: neuropeptide elicited stress responses are contingent upon perceived social evaluative threats. *The biology of prosocial behavior*, Emory University, Atlanta, USA, October 2011.

Shalev I, Israel S, Uzefovsky F, Gritsenko I, Kaitz M, Ebstein RP. Arginine vasopressin enhances acute stress response in social encounters. *7th World Congress on Stress*, Leiden, Netherlands, August 2010.

Shalev I, Israel S, Uzefovsky F, Gritsenko I, Kaitz M, Ebstein RP. Arginine vasopressin enhances acute stress response in social encounters. *The 3nd DGPA Spring School*, Dresden, Germany, March 2010.

Shalev I, Israel S, Uzefovsky F, Gritsenko I, Kaitz M, Ebstein RP. Intranasal administration of arginine vasopressin enhances acute stress response in social encounters. Nice, France, March 2010. (Citation: European Neuropsychopharmacology. *The Journal of the European College of Neuropsychopharmacology* Volume 20 (2010) Supplement 1, Page S54).

Shalev I, Meron Y, Laibe G, Lerer E, Laiba E, Raz Y, Israel S, Bachner-Melman R, Uzefovsky F, Dina C, Kaitz M and Ebstein RP. The role of BDNF Val66Met and stress response in smoking cessation in young women. *16th annual meeting of the Israel Society for Neuroscience*. Eilat, Israel, November 2007. (Published as abstract in: Neural Plasticity 2007, p.99).

Ebstein RP, **Shalev I**, Kaitz M, Meron Y, Uzefovsky F. The role of BDNF Val66Met and stress response in smoking cessation in young women. *15th World Congress on Psychiatric Genetics*. New York, USA, October 2007. (Published as abstract in: WCPG 2007, p.55).

Invited workshops

November 2021: CALERIE Research Network Workshop. Virtual.

August 2018: CALERIE Research Network Workshop: Facilitating CALERIE-Based Ancillary Studies. Chicago, IL, USA.

November 2017: Cognitive, Affective, and Social Processes in Health Research (CASPHR) Workshop on "Health Impacts of Adversity, Vulnerability and Resilience". National Cancer Institute, Rockville, Maryland, USA.

September 2017: National Institute of Environmental Health Sciences and National Institute on Aging: Telomeres as Sentinels for Environmental Exposures, Psychosocial Stress, and Disease Susceptibility. Research Triangle Park, NC, USA.

November 2014: *Diversity in Telomere Dynamics Conference*. Drymen, Scotland.

July 2014: *Social and Behavioral Epigenetics workshop* sponsored by the Biotechnology and Biological Sciences Research Council and the Economic and Social Science Research Council of the UK, and the US National Science Foundation and National Institutes of Health. Washington DC.

Invited/Guest Lectures

April 2022: Biopsychosocial Consequences of Early-Life Adversity: New Insights from the Science of Aging. Keynote lecture, The Laurel Highlands Conference, Saint Francis University, Loretto, PA.

February 2022: *Biological Aging Clocks* (BBH 597). Penn State University.

January 2022: *Biological Embedding of Early-Life Adversity: Challenges and Opportunities.* Barnard Center lecture series, University of Washington, Seattle, WA.

October 2021: *Orientation to the Biobehavioral Health Graduate Program- Writing for Publication* (BBH 597). Penn State University.

May 2021: *Biological embedding of early life trauma*. T32 Child Maltreatment ProSem. Penn State University.

March 2021: Biobehavioral Aspects of Stress (BBH 432). Penn State University.

October 2020: Orientation to the Biobehavioral Health Graduate Program- Writing for Publication (BBH 597). Penn State University.

April 2020: *Intro to Child Maltreatment and Advocacy Studies* (CMAS 258). Penn State University.

December 2019: *Pathways T32 colloquium lecture*. Center for Healthy Aging, Penn State University.

November 2019: *Biobehavioral Aspects of Stress* (BBH 432). Penn State University.

October 2019: *Orientation to the Biobehavioral Health Graduate Program* (BBH 597). Penn State University.

March 2019: Intro to Child Maltreatment and Advocacy Studies (CMAS 258). Penn State University.

March 2019: Biobehavioral Aspects of Stress (BBH 432). Penn State University.

October 2018: *Intro to Child Maltreatment and Advocacy Studies* (CMAS 258). Penn State University.

October 2018: Biobehavioral Aspects of Stress (BBH 432). Penn State University.

October 2018: *Orientation to the Biobehavioral Health Graduate Program* (BBH 597). Penn State University.

April 2018: Stress and Aging: A Lifespan Perspective, Saint Francis University, Loretto, PA.

October 2017: *Intro to Child Maltreatment and Advocacy Studies* (CMAS 258). Penn State University.

November 2016: *Interdisciplinary Integration in Biobehavioral Health* (BBH 311). Penn State University.

October 2016: Healthy People Penn State Research Conference and Expo, Penn State University.

October 2016: Biobehavioral Aspects of Stress (BBH 432). Penn State University.

February 2016: *Interdisciplinary Integration in Biobehavioral Health* (BBH 311). Penn State University.

October 2015: Healthy People Penn State Research Conference and Expo, Penn State University.

October 2015: Child Maltreatment and Advocacy Studies (HDFS). Penn State University.

October 2015: *Noll Seminar Lecture Series*, Telomeres and Aging: A Lifespan Perspective. Penn State University.

March 2015: *Interdisciplinary Integration in Biobehavioral Health* (BBH 311). Penn State University.

February 2015: Developmental and Health Genetics (BBH 410). Penn State University.

February 2015: *ProSem in Developmental Psychology* (Psychology). Penn State University.

January 2015: *Scientific Basis of Exercise for Older Adults* (Kinesiology 481W). Penn State University.

November 2014: *The Bio-Psycho-Social-Societal Consequences of Child Maltreatment* (HDFS 597c). Penn State University.

October 2014: *Interdisciplinary Integration in Biobehavioral Health* (BBH 311). Penn State University.

October 2014: *Child Maltreatment Prevention, Intervention, and Legal Issues* (HDFS 452). Penn State University.

October 2014: Healthy People Penn State Research Conference and Expo, Penn State University.

September 2014: Special Interest Group meeting. Center for Healthy Aging, Penn State University.

June 2014: Stress and telomere biology across the lifespan. Tel-Aviv University, Israel.

March 2014: *Interdisciplinary Integration in Biobehavioral Health* (BBH 311). Penn State University.

March 2014: Biobehavioral Aspects of Stress (BBH 432). Penn State University.

February 2014: *The Bio-Psycho-Social-Societal Consequences of Child Maltreatment* (HDFS 597c). Penn State University.

Teaching (The Pennsylvania State University, University Park, PA) 2021 **BBH 501** Biobehavioral Systems in Health and Development: Theory and Processes (Fall) Professor (**37.5 hours**; 10 graduate students) 2020 **BBH 501** Biobehavioral Systems in Health and Development: Theory and Processes (Fall) Professor (37.5 hours; 6 graduate students) 2019 **BBH 432** Biobehavioral Aspects of Stress (Spring) Professor (**37.5 hours**; 71 undergraduate students) 2018 **BBH 497** Biobehavioral Aspects of Aging (Fall) Professor (**37.5 hours**; 13 undergraduate and graduate students) 2017 **BBH 432** Biobehavioral Aspects of Stress (Fall) Professor (**37.5 hours**; 66 undergraduate students) **BBH 432** Biobehavioral Aspects of Stress (Spring) Professor (37.5 hours; 75 undergraduate and graduate students) **BBH 497** Biobehavioral Aspects of Aging (Spring) Professor (37.5 hours; 23 undergraduate and graduate students) 2016 **BBH 432** Biobehavioral Aspects of Stress (Fall) Professor (**37.5 hours**; 48 undergraduate students) **BBH 432** Biobehavioral Aspects of Stress (Spring) Professor (**37.5 hours**; 79 undergraduate students) 2015 **BBH 432** Biobehavioral Aspects of Stress (Fall) Professor (**37.5 hours**; 135 undergraduate students) **BBH 432** Biobehavioral Aspects of Stress (Spring) Professor (**37.5 hours**; 112 undergraduate students) 2014 **BBH 432** Biobehavioral Aspects of Stress (Fall)

Professor (**37.5 hours**; 97 undergraduate students)

BBH 597C Stress and Health Across the Lifespan: Stress and Cellular Aging (Fall) Professor (**12.5 hours**; 4 graduate students)

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University	Service

2022-present:	Steering Committee Member: Geroscience and Dementia Prevention Consortium
2021-present:	Search Committee Member: Environmental Health Sciences Program in the
	College of Health and Human Development
2021-2022:	Search Committee Member: College of Health and Human Development
	Assistant Dean for Operations Search
2020-2021:	Search Committee Chair: Biobehavioral Health – Precision Population Health
2020-2022:	Committee Chair: Advancing Academics of Color – Outreach Subcommittee
	Child Maltreatment Solutions Network
2019-2020:	Search Committee Member: Biobehavioral Health – Edna Bennett Pierce
	Endowed Professorship of Caring and Compassion in Adulthood and Aging
2017-2022:	Committee Member: Biobehavioral Health Research Committee
2016-2019:	Committee Member: Biobehavioral Health Graduate Program
2014-2015:	Search Committee Member: Biobehavioral Health – Third Child Maltreatment
	Network Position
2013-2014:	Search Committee Member: Biobehavioral Health – Second Child Maltreatment
	Network Position

PhD Students Supervised

2021 - present Quanteng Ye- Ad	lvisor Biobehavioral Health
2021 - present Abner Apsley- A	dvisor Molecular, Cellular, and Integrative Biosciences
2017 - 2022 Laura Etzel- Adv	visor Biobehavioral Health
2015 - 2020 Waylon Hastings	s- Advisor Biobehavioral Health
2016 - 2018 Rachel Koffer- C	Co-advisor Health and Human Development

Awards Students Received

Waylon Hastings:	2021: National	Institute on	Aging Bu	tler-Williams Scholar	
	2020 NIII I	ъ	1 37	1 75 . 4 1 . 4	

2020: NIH Telomere Research Network Data Analysis Award

2019-2020: Biobehavioral Health Hintz Endowment Award, Penn State 2018-2019: Biobehavioral Health Hintz Endowment Award, Penn State

2018-2019: NIA Pathways T32 Training Program

2016: Psychoneuroendocrinology Graduate Student Travel Award 2015-2017: University Distinguished Graduate Fellowship, Penn State

Laura Etzel: 2022: International Society for Developmental Psychobiology Travel Award

2021-2022: Britton Graduate Fellowship, Center for Healthy Aging, Penn State

2020-2021: Biobehavioral Health Hintz Endowment Award, Penn State 2019-2020: Elizabeth J. Susman Enhancement Fund Award, Penn State

2019-2020: NIA Pathways T32 Training Program

2018-2019: Biobehavioral Health Graduate Student Travel Award, Penn State

2017-2018: University Distinguished Graduate Fellowship, Penn State

Qiaofeng Ye: 2020-2021: University Distinguished Graduate Fellowship, Penn State

2020-2021: Fund for Excellence in Graduate Recruitment, Penn State

Abner Apsley: 2022-2023: College of Health and Human Development Interdisciplinary

graduate student grant

2021-2022: NIA Pathways T32 Training Program

Media

June 2022: NYTimes interview- immune aging

https://www.nytimes.com/2022/06/17/well/mind/stress-aging-immune-system.html

August 2020: Molecular stress indicator not observed in survivors of child sexual abuse

February 2019: Researcher to study how adversity can lead to susceptibility to disease

July 2017: Shalev named Mark T. Greenberg Early Career Professor

May 2017: <u>Study Analysis Shows Cutting Calories Might Slow Biological Aging</u> Change in the Rate of Biological Aging in Response to Caloric Restriction: CALERIE Biobank Analysis. *J Gerontol A Biol Sci Med Sci*. DOI: https://doi.org/10.1093/gerona/glx096

August 2016: Child Maltreatment as a Root Cause of Mortality Disparities (<u>editorial</u>). 2016, JAMA Psychiatry. <u>HealthDay</u>, <u>Science Daily</u>.

February 2016: Delay discounting, genetic sensitivity, and leukocyte telomere length. <u>Daily Mail, Telegraph, Yahoo News</u>

December 2015: The Association for Psychological Science (APS) named <u>Idan Shalev as a 'Rising Star'</u> in their list of outstanding international psychological scientists.

March 2015: NBC News- Interview on lifestyle factors and telomere length.

November 2014: Observer - Association for Psychological Science: <u>The Long and the Short of It:</u> <u>Chronic Stress Measured at the Cellular Level</u>

May 2014: Observer - Association for Psychological Science: <u>Eye-Tuned: Integrative science</u> opens a new window into the mind

January 2014: PSU ComRadio interview: New faculty member focuses on stress and its effects on aging.

January 2014: Penn State Daily Newswire: New faculty member focuses on stress and its effects on aging

November 2013: The Philadelphia Inquirer interview: The Network on Child Protection and Well-Being, The Pennsylvania State University.

July 2013: WPSU Radio interview: The Network on Child Protection and Well-Being, The Pennsylvania State University.

June 2013: NBC Radio interview: Blood Vessels in the Eye Linked with IQ, Cognitive Function.

June 2013: APS press release: <u>Blood Vessels in the Eye Linked with IQ, Cognitive Function</u> http://www.sciencedaily.com/releases/2013/06/130603135533.htm

December 2012: America Now Video - Child abuse accelerates aging process

July 2012: Media panel discussant at the meeting of the American Genetic Association, Durham, NC, USA.

May 2012: 24th Annual Convention of the Association for Psychological Science (APS), Chicago, USA. <u>Convention Video Blog: Violence Exposure During Childhood Is Associated With Telomere Erosion (http://www.youtube.com/watch?v=eGTE1BLQx8g)</u>

April 2012: Exposure to Violence during Childhood is Associated with Telomere Erosion from 5 to 10 Years of Age: A Longitudinal Study. <u>USA Today</u>, <u>Science Daily</u>, <u>WebMD</u>, <u>LiveScience</u>, <u>Science</u>, <u>Time Magazine</u>, <u>Los Angeles Times</u>, <u>Smithsonian</u>, <u>Der Spiegel</u>, <u>Giornalettismo</u>

July 2009: TV appearance on Israel Channel 2 "<u>How Men and Women Cope Differently with Stress Traced to Genetic Differences</u>" (In Hebrew). http://www.sciencedaily.com/releases/2009/04/090405185031.htm