<u>Ilana Susie Hairston</u> <u>Curriculum Vitae</u>

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1. Personal Details

Full name: Ilana Susie HairstonWork: Tel Hai Academic College

o Email: hanahai@telhai.ac.il

2. Higher Education

1989-1993 B.A. Tel Aviv University in Psychology and General Arts. Degree received: 1993 1993-M.A. Tel Aviv University in Psychology (Psychobiology). Thesis submitted Oct. 1998 (incomplete) Supervisors: Prof. Joram Feldon; Prof. Ina Weiner 1998-2004 Ph.D. in Neuroscience, Stanford University, Palo Alto, CA Degree received: 2004. Supervisors: Prof. H. Craig Heller; Prof. Robert M. Sapolsky 2004-2005 Postdoctoral fellow, Radiology Department, UCS Supervisor: Prof. Srikantan S. Nagarajan 2005-2007 Postdoctoral fellow, Psychology Department. UC Berkeley Supervisor: Prof. Allison G. Harvey 2008-2008 Postdoctoral fellow, Substance Abuse Research, University of Michigan Supervisors: Prof. Kirk Brower, MD; Prof. Robert Zucker, PHD

• Other Professional Training:

10/2004: Neuroscan School. Neuroscan/Compumedics training. El-Paso, Texas.
 11/2004: EEGLAB, UC San Diego.
 10/2006: Sleep Staging: Alabama School of Sleep Medicine.
 8/2008: Training Course in fMRI, University of Michigan Functional MRI Laboratory, Aug. 2008.
 9/2009: PET Pharamacokinetics Course, University of Michigan, Ann Arbor, June 2009
 2/2010: Freesurfer Workshop, Athinoula & Martinos Center for Biomedical Imaging, MGH

Awards and Honors

2000, Associated Professional Sleep Societies Research Excellence Award in the predoctoral category.
2001, Pre-Doctoral McCormick Travel Award.
2001-2003, Predoctoral NRSA Fellowship (F31), NIMH.
2003, Excellence in Teaching Award, Stanford University, Dep. Biological Science.

Sleep Research Society's Merit Based Trainee Travel Award.
Post-Doctoral Minority Supplement Award.
Post-Doctoral NRSA Fellowship, from The American Psychological Association.
United Negro College Fund-Merck Postdoctoral Fellowship.
Society for Neuroscience Postdoctoral Travel Award (Women in Neuroscience Subcommitee).
Weizmann Institute of Science, Feinberg Postdoctoral Fellowship (declined).
Israel Ministry of Science – Eshkol Fellowship (declined).
Honorable mention National Sleep Foundation (NSF) and the Sleep Research Society (SRS) Young Investigator Conference

3. <u>Academic Appointments and Academic Administrative Positions in Institutions of Higher Education</u>

2009-2011	Research Assistant Professor in Psychiatry, Addiction Research at Univ. of
	Michigan
2011-current	Adjunct Research Assistant Professor in Psychiatry, Addiction Research at
	Univ. of Michigan
2011-2016	Senior Lecturer in Behavioral Sciences at The Academic College of Tel-
	Aviv Yafo
2016-current	Senior Lecturer in Psychology at Tel Hai Academic College

• Grant Review Panel

NIH ad hoc reviewer (R21/U01)
The National Institute for Psychobiology in Israel
Israel-Science Foundation
US-Israel Binational Science Foundation
CDC ad hoc reviewer

• Professional Memberships

1999–present	Sleep Research Society
2011-present	Association for Psychological Science
2011-present	European Sleep Research Society
2012-present	Israeli Society for Biological Psychiatry
2012-present	Association for Psychological Science
2013-present	Israel Sleep Research Society

• Other Professional Activities:

2016-2018	Chief Technical Officer, SleepBetter, InnovaShell Technologies. Ltd.
2017-2018	Editing textbook on Sleep Development, for the Open University
2019-current	Chair of Gender Diversity Unit (AKA, advisor to the College President on Gender equity)

2019-current Organizing committee of the Behavioral Sleep Medicine Training

Course, of the Israeli Sleep Research Society with External Studies of

Tel Aviv University Medical School.

2020-current Consultant at MyAir.ai

4. Supervision of Graduate Students

2010-2011	Nasreen Z Akbar, postdoctoral student, University of Michigan
2012-2013	Mor Sackler, Academic College of Tel Aviv Yafo
2013-2014	Eden Ron, Academic College of Tel Aviv Yafo
	Avital Sach-Levi, Academic College of Tel Aviv Yafo
	Lior Pereg, Academic College of Tel Aviv Yafo
2014-2015	Dana Tamir, Academic College of Tel Aviv Yafo
	Yaara Tivon, Academic College of Tel Aviv Yafo
	Tal Solnik, Academic College of Tel Aviv Yafo
	Roni Shpitlani, Academic College of Tel Aviv Yafo
2015-2016	Maya Zeltzer, Academic College of Tel Aviv Yafo
	Itamar Schwartz, Academic College of Tel Aviv Yafo
	Tamar Lehman, Academic College of Tel Aviv Yafo
	Chen Assis, Academic College of Tel Aviv Yafo
2017-	Noa Silberberg, Tel Hai Academic College
2018-2020	Barak Buganim, Tel Hai Academic College
2018-	Rivka Landsman, Tel Hai Academic College
2019-	Dana Zelinger, Tel Hai Academic College

2013-2015:

5. <u>Research Support</u>		
Predoctoral NRSA Fellowship (F31), NIMH: Sleep and Adult		
Neurogenesis.		
The American Psychological Association, Postdoctoral NRSA:		
Cognitive processing during sleep in primary insomnia: Linking the		
physiological and psychological aspects of the hyperarousal hypothesis.		
UNCF-Merck Postdoctoral Fellowship: Sensory Gating During Sleep in		
Primary Insomnia.		
University of Michigan, Addiction Research Center Postdoctoral		
Training Fellowship (T32)		
Sleep Disturbance in Children and Risk for Future Drinking		
(co-investigator); MICHR/CTSA Pilot Collaborative Grant Program for		
Translational and Clinical Research \$25,000		
Family Study of Risk for Alcoholism over the Life Course (5-R37-AA-		
007065-24) – Minority Supplement		
Using odorants to treat sleep apnea and snoring (co-investigator),		
Johnson & Johnson Medical Device Grants, \$25,000.		
Brain Endophenotypes Modulating Drug Abuse Risk (3-R01-DA-		

making - Internal Research Grant, Academic College of Tel-Aviv Yafo 50,000 NIS

027261-02-S1) – Administrative Supplement

Combined effects of sleep restriction and affect on multi-modal decision

2014-2015 The inter-relationship between parent-infant bonding and infant sleep: A longitudinal study. - Internal Research Grant, Academic College of Tel-Aviv Yafo, 12,500 NIS 2019-2020 Combined Effects of Sleep Restriction and Affect on Multi-Modal Decision-Making, 30,000 NIS. Learning to Not Feel Pain: The Role of Sleep-Dependent Extinction as a 2021-2022 Model for the Chronification of Pain, Co-PI: Prof. Irit Weissman-Fogel; \$10,000, Joint venture Haifa University and Tel-Hai Academic College. Parents' Childbirth PTSD and infant's socio-emotional development: Pending mediation of parenting and moderation of infant's temperament and sleep; Co-PI: Dr. Jonathan Handlezalts; CO-I: Prof. Maria Muzik. BSF-2020035

6. Selected Participation in Conferences

- Nagarajan SS, McGonigle DJ, Sekihara K, Hairston IS. (2004) Training induced plasticity in auditory cortex. BIOMAG, August 8–12.
- Hairston IS, Pasley B, Harvey AG. (2006) The role of changes in local CBF in the effects of sleep deprivation on the BOLD response. Sleep 29: Abstract supplement #0030.
- Hairston IS, Conroy DA, Yau W, Samudra P, Cummiford C, Zucker RA, Zubieta J-K, Heitzeg MM (2010) Sleep Patterns and Plasticity in Pre-Adolescent Children Of Alcoholics 16th Annual Meeting of the Organization for Human Brain Mapping, Barcelona Spain #275 WTh-AM.
- Hairston, I., Cummiford, C. M., Conroy, D. A., Samudra, P. G., Zucker, R. A., Zubieta, J. K., & Heitzeg, M. M. (2012). Sleep Shapes The Brain: A Potential Mechanistic Role For Sleep In Mediating Risk In Children Of Alcoholics. Alcoholism: Clinical & Experimental Research, 36, 67A.
- Perl, O., Plotkin, A., Weissbrod, A., Oksenberg, A., Vander, T., Hairston, I., Sobel, N. (2012), An odor-dispensing device for the treatment of sleep apnea. J Mol Neurosci 51, 1–135 (2013). https://doi.org/10.1007/s12031-012-9923-1.
- Hairston, IS, Bergman, O., Sach-Levi A., Pereg Ben-Shitrit, L., Ron, E., Cohen-Zion M. Autonomic Changes After Sleep Restriction Evidence of an Allostatic Mechanism. 29th Annual Meeting of the Association of Professional Sleep Societies, June 2015, Seattle.
- Handelzalts, JE, Molmen Lichter, M, Hairston, IS and Levy, S. (2019) Neuroticism and optimism associations with postpartum bonding-pathways through postpartum depression and PTSD. 39th Annual Society for Reproductive and Infant Psychology Conference at City University London, September 2019.
- Hairston, IS and Cohen-Zion M., Autonomic Responses to Emotional Stimuli While Sleep Deprived: Evidence of an Adaptive Mechanism. International Society for Affective Disorders (ISAD) London, UK, November, 2019.
- Eva Kimel, Dafna Ben Zion, Anat Prior, Ilana Hairston, Tali Bitan; Sleep Dependent Consolidation in Language Learning among Adults with and without Dyslexia – A Sandbox Submission. Society for the Neurobiology of Language (SNL), Virtual meeting, October 2021.

7. Publications

• Peer Reviewed Publications

- 1. Weiner I, Feldon J, Tarrasch R, **Hairston IS**, Joel D. (1998) Fimbria-fornix cut affects spontaneous activity, two-way avoidance and delayed non-matching to sample, but not latent inhibition. Behav Brain Res. 96: 59.
- 2. Weiner I, **Hairston IS**, Shayit M, Feldman G, Joel D, and Feldon J. (1998) Strain differences in latent inhibition. Psychobiology, 26: 57-64
- 3. **Hairston IS**, Ruby NF, Brooke S, Peyron C, Denning DP, Heller HC, Sapolsky RM. (2001) Sleep deprivation elevates plasma corticosterone levels in neonatal rats. Neurosci Lett, 23: 315(1-2): 29-32.
- **4. Hairston IS**, Peyron C, Denning DP, Ruby NF, Flores J, Sapolsky RM, Heller HC, O'Hara BF. (2003) Sleep deprivation effects on growth factor expression in neonatal rats: A potential role for BDNF in the mediation of delta power. J Neurophysiol. 91: 1586–1595, 2004
- **5.** Lazarov O, Robinson J, Tang Y-P, **Hairston IS**, Korade-Mirnics Z, Lee VM-Y, Hersh LB, Sapolsky RM, Sisodia SS. (2005) Environmental enrichment reduces A□ levels and amyloid deposition in transgenic mice. Cell, 120: 701-715.PMID: 15766532
- 6. **Hairston IS**, Little MTM, Scanlon M, Palmer TD, Sapolsky RM, Heller HC. (2005) Sleep restriction suppresses neurogenesis induced by hippocampus-dependent learning. J. Neurophys. 94: 4224-4233. PMID: 16014798
- **7. Hairston IS**, Nagarajan SS. (2007) Neural mechanisms of the time-order error: an MEG study. J Cogn Neurosci. 19(7): 1163-174. PMID: 17583992
- **8.** Hairston IS, Talbot LS, Gruber J, Eidelman P, Harvey AG. (2010) Sensory gating in primary insomnia. Eur J Neurosci. 31(11): 2112-2121. PMID: 20529120
- **9.** Talbot LS, **Hairston IS**, Eidelman P, Gruber J, Harvey AG. (2009) The effect of mood on sleep onset latency and REM sleep in inter-episode bipolar disorder. J Abnorm Psychol. 2009 Aug; 118(3): 448-58. PMID: 19685943
- 10. Eidelman P, Talbot LS, Gruber J, **Hairston IS,** Harvey AG. (2010) Sleep Architecture as Correlate and Predictor of Symptoms and Impairment in Inter-episode Bipolar Disorder: Taking on the Challenge of Medication Effects. J Sleep Res 19(4): 519-524. PMID: 20408930
- 11. **Hairston IS**, Waxler E, Seng JS, Fezzey AG, Rosenblum KL, Muzik M (2011). The Role of Infant Sleep in Intergenerational Transmission of Trauma. Sleep 34(10): 1373-83. PMID: 21966069
- **12.** Talbot LS, Stone S, Gruber J, **Hairston IS**, Eidelman P, Harvey, AG (2011) Test of the bidirectional association between sleep and mood in bipolar disorder and insomnia, J Abnorm Psychol, 121(1):39-50. PMID: 21842957
- 13. Conroy, DA, **Hairston, IS**, Arnedt, JT, Hoffmann, RF, Armitage, R, Brower, KJ (2012) Dim light melatonin onset in alcohol-dependent men and women compared to healthy controls. Chronobiology International, 29(1): 35-42, PMID 22217099.

- 14. Arzi, A, Shedlesky, L, Ben-Shaul, M, Nasser, K, Oksenberg, A, **Hairston, IS**, & Sobel, N (2012). Humans can learn new information during sleep. Nature neuroscience, 15: 1460-65. doi:10.1038/nn.3193
- 15. Conroy DA, **Hairston IS**, Zucker RA and Heitzeg MM. (2015) Sleep Patterns in Children of Alcoholics and the Relationship with Parental Reports. Austin J Sleep Disord. 2: 1-9.
- 16. **Hairston IS**, Conroy DA, Heitzeg MM, Akbar, NZ, Brower, KJ, Zucker RA. (2016) Sleep Mediates the Link Between Resiliency and Behavioral Problems in Children at High and Low Risk for Alcoholism, Journal of sleep Research, 25: 341-349.
- 17. Perl, O, Arzi, A, Sela, L, Secundo, L, Holtzman, Y, Samnon, P, Oksenberg, A, Sobel N, and **Hairston IS 2016**. Odors Enhance Slow-Wave Activity in Non-Rapid Eye Movement Sleep, J Neurophysiol, 115(5), 2294-2302
- 18. **Hairston IS** and Shpitalni R. (2016) Procrastination is Linked with Insomnia Symptoms: The Moderating Role of Morningness-Eveningness, Personality and Individual Differences 101: 50-56.
- 19. **Hairston IS**, Deviri D, Solnik-Melino T, Handlezalts JE (2016) Maternal depressed mood moderates the impact of infant sleep on mother—infant bonding, Archives of Women's Mental Health, 19: 1029-1039
- **20.** Soehner AM, Kaplan KA, Saletin J, Talbot LS, **Hairston IS**, Gruber J, Eidelman P, Walker MP, Harvey AG. (2017) You'll feel better in the morning: Slow wave activity and overnight mood regulation in interepisode bipolar disorder. Psychological Medicine, 48: 249-260.
- 21. **Hairston, IS**, Handelzalts, JE; Assis, C., Kovo, M. (2017) Postpartum bonding difficulties and adult attachment styles: The mediating role of postpartum depression and childbirth-related PTSD. Infant Mental Health Journal: 198-208.
- **22. Hairston, IS**, Handelzalts, JE, & Matatyahu, A. (2018). Construct Validity and Psychometric Properties of the Hebrew Version of the City Birth Trauma Scale. Frontiers in psychology, 9, 1726.
- **23. Hairston, IS**; Handelzalts, JE; Lehmen-Inbar, T and Kovo, M. (2019). Mother-Infant Bonding is not Associated with Feeding Type: A Community Study Sample. BMC Pregnancy and Childbirth, 19 (#125)
- **24.** Handelzalts, JE; **Hairston, IS**, Muzik, M; Matityahu, A & Levy S. (2019) A paradoxical role of childbirth-related PTSD symptoms in the association between personality factors and mother-infant bonding: A cross-sectional study. Psychological Trauma: Theory, Research, Practice, and Policy (Oct 28, 2019)
- 25. **Hairston, IS**; Cohen-Zion, M (2020) Sleep Restriction Alters Physiological and Emotional Responses to Emotion Induction. Experimental Physiology, 105(12), 2207-2215.
- 26. Handelzalts, JE; Levy, S; Molmen-Lichter, M; **Hairston, IS**; Krissi, H; Wiznitzer, A; Peled, Y. (2021) Attachment styles and maternal sense of competence: The moderated-mediation effects of rooming-in and maternal psychopathology. Journal of Child and Family Studies. Accepted.

Book chapters and reviews:

Reviews

- 1. **Hairston IS**, Knight RT. (2004) Sleep on it. Nature, 430 (6995): 27–28
- **2. Hairston IS.** (2012) Sleep and Hazardous Drinking in the Elderly: A Clarion Call for Increased Clinical and Translational Research. J Addict Res Ther, 3:3

Book Chapters

- Harvey IG, Hairston IS, Gershon A, Gruber JL. (2008) Special considerations for treatment of insomnia. In: Ed. CA Kushida, Handbook of Sleep Disorders, pp. 117-127. 2nd edition. Taylor and Francis Group
- **2.** Harvey IG, **Hairston IS**, Gruber J, and Gershon A (2008) Anxiety and Sleep. In: MM Antony and MB Stein, Oxford Handbook of Anxiety and Related Disorders, pp. 611-623. Oxford University Press.
- Hairston IS. (2008) Sleep and neurogenesis New opportunity or more of the same?
 In: Ed. M. P. Klausen, Neurogenesis Research Advances, pp. 11-65. Nova Science Publishers.
- **4. Hairston IS,** Akbar NZ, and Conroy DA. (2013) Insomnia Due to Drug or Substance Abuse and Dependence. In: Kushida C. (ed.) The Encyclopedia of Sleep, vol. 2, pp. 229–235. Waltham, MA: Academic Press
- **5. Hairston IS** (2014) Sleep and Addictions: Linking Sleep Regulation with the Genesis of Addictive Behavior, in Watson, R (ed): Modulation of Sleep by Obesity, Diabetes, Age, and Diet, pp. 341-347. Elsevier: Academic Press
- **6.** Perl, O, Arzi A, **Hairston IS** and Sobel N. (2017) Sleep and Smell, in: (ed.) Büttner, A: Springer Handbook on Odor, pp. 861-880, Springer International Publishing, Switzerland.
- **7. Hairston IS** (2020) Sleep and Addictions: Linking Sleep Regulation with the Genesis of Addictive Behavior, in Watson, R (ed): Modulation of Sleep by Obesity, Diabetes, Age, and Diet, 2nd Edition, Elsevier: Academic Press
- 8. Hadler NL, **Hairston IS** and Conroy DA (2021) Insomnia due to drug or substance abuse and dependence, Reference Module in Neuroscience and Biobehavioral Psychology, Elsevier https://doi.org/10.1016/B978-0-12-822963-7.00014-1.

• Articles submitted / under review

1. Infant Sleep Problems and Perceived Temperament in the First Year of Life, Association with Maternal Factors. **Hairston, IS**, Majilevich, E, Handelzalts, JE.

• In preparation

♦ Rumination and Emotion Regulation Strategies Effects on Sleep Quaity.

♦ Hairston I.S. and Kuperstein-Hadar N, Gender and Ethnicity effects on identification of facial expressions: Validation of an Israeli facial expression dataset. (article in Hebrew, submitted).

• Technical Publications

1. Hairston IS (2018). The Use of WatchPAT for Home Sleep Testing Assessment of Sleep-Related Disordered Breathing (SDB) in Heart Disease Patients - Clinical & Operational Benefits. (https://bit.ly/2pKjCfl)