

## ACADEMIC APPOINTMENTS

2023-	Associate Professor, School of Life Sciences, Arizona State University
2020-	Faculty, Center for Evolution and Medicine, Arizona State University
2020-	Adjunct Faculty, School of Human Evolution and Social Change, Arizona State University
2021-	Affiliate Faculty, Neurodegenerative Disease Research Center, Arizona State University
2020-2022	Assistant Professor, School of Life Sciences, Arizona State University
2017-2019	Assistant Professor, Department of Psychology, University of Washington.
2019-2019	Adjunct Assistant Professor, Department of Biology, University of Washington.
2017-2019	Research Affiliate, Center for Studies in Demography & Ecology, University of Washington.
2017-2019	Research Affiliate, Washington National Primate Research Center, University of Washington.
2012-2017	Postdoctoral Fellow and Senior Research Scientist, Department of Evolutionary Anthropology, Duke University Population Research Institute, Duke Center for Aging.

## EDUCATION

2012	Ph.D., Psychology, University of Pennsylvania
2008	M.A., Psychology, University of Pennsylvania
2007	B.A., Psychology, University of Pennsylvania

## AWARDS, FELLOWSHIPS, & GRANTS

### *Current*

- NIH “Impacts of hurricanes and social buffering on biological aging in a free-ranging animal model” (R01AG084706). Role: co-PI. 2023-2028
- NIH “Social Modifiers of the Pace of Aging” (R01AG060931). Role: co-PI. 2019-2024
- NSF “Collaborative Research: An integrative approach to understanding variation in patterns of aging in primates” (SBE-2235565). Role: PI 2023-2026
- NSF “Functional genomics of high-altitude adaptation in a nonhuman primate model” (SBE-2010309). Role: PI. 2019-2024
- NIH “Neurogenomics of Vulnerability and Resilience” (R01MH118203). Role: co-I. 2019-2024
- NIH “The Dog Aging Project: Genetic and Environmental Determinants of Healthy Aging in Companion Dogs” (U19AG057377). Role: co-I. 2018-2023

### *Past*

- NIH “Effects of a major natural disaster on the pace of aging in a nonhuman primate model” (R56AG071023). Role: co-PI. 2021-2022
- NIH “Single cell transcriptional and epigenomic atlas of the macaque brain across the lifespan” (U01MH121260). Role: co-PI. 2019-2023
- NIH “Gene regulatory analysis of social integration and resilience during aging” (R00AG051764). Role: PI. 2017-2022
- ASU nominee for Blavatnik Award for Young Scientists (2022)
- NSF “Collaborative Research: Physiological signatures of weaning in a wild primate” (SBE-1723228). Role: PI. 2017-2021

- UW Royal Research Fund. Role: PI. 2018-2019
- UW Student Technology Fee resource grant. Role: PI. 2018
- NIH Pathway to Independence Award (K99AG051764). Role: PI. 2016-2017
- NIA Butler-Williams Scholar, 2016
- NIH Postdoctoral Fellowship Duke Center for Study of Aging (T32AG000029); 2015
- NSF Office of Multidisciplinary Studies Postdoctoral Fellowship (SMA-1306134), \$199,449 direct costs; 2013-2015
- NIH NRSA Postdoctoral Fellowship (F32) – 7<sup>th</sup> percentile – declined for NSF fellowship; 2013
- NIH Postdoctoral Fellowship, Duke University Population Research Institute (T32); 2012-2013
- Animal Behavior Society Allee Competition, best dissertation, Runner-up, 2012
- NSF Graduate Research Fellowship; 2008-2012
- NSF Doctoral Dissertation Improvement Grant in Physical Anthropology, (BCS-0962118); 2010
- L.S.B. Leakey Foundation General Grant; 2010

## PUBLICATIONS

### Snyder-Mackler lab members in bold

\*equal contribution

\*\*corresponding

<sup>P</sup>Snyder-Mackler lab postdocs

<sup>G</sup>Snyder-Mackler lab graduate students

<sup>U</sup>Snyder-Mackler lab undergraduate students

<sup>C</sup>Students on which I am a committee member

80. **Chiou KL<sup>\*P</sup>**, Huang X\*, Bohlen MO, Tremblay S, DeCasien AR, O'Day DR, Spurrell CH, Gogate AA, Zintel TM, Cayo Biobank Research Unit, Andrews MG, Martínez MI, Starita LM, Montague MJ, Platt ML\*\*, Shendure J\*\*, **Snyder-Mackler N\*\*** (2023). "A single-cell multi-omic atlas spanning the adult rhesus macaque brain" *Science Advances*. preprint: 10.1101/2022.09.30.510346v1 doi: 10.1126/sciadv.adh1914
79. **Sanchez Rosado MR**, Marzan-Rivera N, **Watowich MM**, Negron-Del Valle AD, Pantoja P, Pavez-Foz MA, Siracusa ER, Cooper EB, Negron-Del Valle JE, Phillips D, Ruiz-Lambides A, Cayo Biobank Research Unit, Martinez MI, Montague MJ, Platt ML, Higham JP, Brent LJJ, Sariol CA, **Snyder-Mackler N\*** (2023). "Immune cell composition varies by age, sex and exposure to social adversity in free-ranging Rhesus Macaques." *GeroScience* preprint: 10.1101/2021.12.06.471383 doi: 10.1007/s11357-023-00962-8
78. Newman LE<sup>\*C</sup>, Testard C\*, DeCasien AR<sup>C</sup>, **Chiou KL<sup>P</sup>**, **Watowich MM<sup>G</sup>**, Janiak MC, Pavez-Fox MA, **Sanchez Rosado MR<sup>G</sup>**, Cooper EB, Costa CE, Petersen RM, Montague MM, Platt ML\*\*, Brent LJJ\*\*, **Snyder-Mackler N\*\***, Higham JP\*\* (2023). "The biology of aging in a social world: insights from free-ranging rhesus macaques" *Neuroscience & Biobehavioral reviews*. preprint: 10.1101/2023.01.28.525893v1, doi: 10.1016/j.neubiorev.2023.105424
77. Jarvey JC, Low BS, Haile AA, **Chiou KL<sup>P</sup>**, **Snyder-Mackler N**, Lu A, Bergman TJ, Beehner JC, Schneider-Crease IS (2023). "Aggression rates increase around seasonally exploited resources in a primarily grass-eating primate." *Behavioral Ecology*, arad079, doi: 10.1093/beheco/arad079
76. **Watowich MM<sup>G</sup>**, **Chiou KL<sup>P</sup>**, Graves B, Montague MJ, Brent LJJ, Higham JP, Horvath JE, Lu A, Martinez MI, Platt ML, Schneider-Crease I, Lea AJ, **Snyder-Mackler N\*\*** (2023). "Best practices for genotype imputation from low-coverage sequencing data in natural populations." *Molecular Ecology Resources*. doi: 10.1111/1755-0998.13854
75. Petersen SM, **Watowich MM<sup>G</sup>**, Renner LM, Martin S, **Offenberg E<sup>U</sup>**, Lea AJ, Montague MJ, Higham JP, **Snyder-Mackler N**, Neuringer M, Ferguson B (2023). "Genetic variants in

melanogenesis proteins TYRP1 and TYR are associated with the golden rhesus macaque phenotype." *G3*. doi: 10.1093/g3journal/jkad168

74. Patterson SK\*, Petersen RM, Brent LJJ, **Snyder-Mackler N**, Lea AJ, Higham JP (2023). "Natural animal populations as models for understanding early life adversity effects on aging." *Integrative and Comparative Biology*, accepted.
73. Shively CA, Frye BM, Negrey JD, **Johnson CSC**<sup>G</sup>, Sutphen CL, Molina AJA, Yadav H, **Snyder-Mackler N**, Register TC (2023). "The Interactive Effects of Psychosocial Stress and Diet Composition on Health in Primates." *Neuroscience & Biobehavioral Reviews* doi: 10.1016/j.neubiorev.2023.105320
72. Fernandes AG, Alexopoulos P, Burgos-Rodriguez A, Martinez MI, Cayo Biobank Research Unit, Ghassibi M, Leskov I, Brent LJJ, **Snyder-Mackler N**, Danias J, Wollstein G, Higham JP, Melin AD (2023). "Age-related differences in ocular features of a naturalistic free-ranging population of rhesus macaques." *Investigative Ophthalmology and Visual Science*, 64:7 doi: 10.1167/iovs.64.7.3
71. Prater KE, Green KJ, Mamde S, Sun W, Cochois A, Smith CL, **Chiou KL**<sup>P</sup>, Heath L, Rose SE, Wiley J, Keene CD, Kwon RY, **Snyder-Mackler N**, Blue E, Logsdon B, Young JE, Shojaie A, Garden GA, Jayadev S (2023). "Human microglia show unique transcriptional changes in Alzheimer's disease." *Nature Aging*. doi: 10.1038/s43587-023-00424-y
70. **McCoy BM**<sup>G</sup>, **Brassington L**<sup>G</sup>, Jin K, Dobby GA, Shrager S, Collins D, Dunbar M, Dog Aging Project Consortium, **Snyder-Mackler N**<sup>\*\*</sup> (2023). "Social determinants of health and disease in companion dogs: A cohort study from the Dog Aging Project" *Evolution, Medicine, and Public Health*. preprint: 10.1101/2022.04.08.487645 doi: 10.1093/emph/eoad011
69. DeLacey PM<sup>C</sup>, Sen S<sup>C</sup>, Schneider-Crease I, **Chiou KL**<sup>P</sup>, Lemma A, Ayele F, Haile A, Lu A, Bergman TJ, Beehner JC, **Snyder-Mackler N**<sup>\*\*</sup> (2023). "Vascularization underlies differences in sexually selected skin coloration in a wild primate." *Molecular Ecology*. preprint: 10.22541/au.167359516.63326414/v1, doi: 10.1111/mec.17026
68. Siracusa ER, Pereira AS, Bohr Brask J, Negron-Del Valle JE, Phillips D, Cayo Biobank Research Unit, Platt ML, Higham JP, **Snyder-Mackler N**, Brent LJJ (2023). "Ageing in a collective: The impact of ageing individuals on social network structure." *Philosophical Transactions of the Royal Society B*, 78:20220061. preprint: 10.1101/2022.08.10.503309; doi: 10.1098/rstb.2022.0061
67. **Chiou KL**<sup>P</sup>, DeCasien AR, Rees KP, Testard C, Spurrell CH, Gogate AA, Pliner HA, Tremblay S, **Mercer A**<sup>U</sup>, Whalen CJ, Negron-Del Valle JE, Janiak MC, Bauman Surratt S, González O, Compo NR, Stock MK, Ruiz-Lambides AV, Martínez MI, Cayo Biobank Research Unit, Wilson MA, Melin AD, Antòn SC, Walker CS, Sallet J, Newbern JM, Starita LM, Shendure J, Higham JP, Brent LJJ, Montague MJ, Platt ML, **Snyder-Mackler N**<sup>\*\*</sup> (2022). "Multiregion transcriptomic profiling of the primate brain reveals signatures of aging and the social environment." *Nature Neuroscience*. doi: 10.1038/s41593-022-01197-0
66. Schneider-Crease I, Feder JA, **Baniel A**<sup>P</sup>, McCann C, Haile AA, Abebe B, Fitzgerald L, Gomery MA, Simberloff RA, Petrie ZL, Gabriel P, Dorny P, Fashing PJ, Nguyen N, Bergman TJ, Beehner JC, **Snyder-Mackler N**, Lu A (2022). "Urinary neopterin reflects immunological variation associated with age, helminth parasitism, and the microbiome in a wild primate." *Scientific Reports*. doi: 10.1038/s41598-022-25298-9
65. Pavez-Fox MA, Kimock CM, Rivera-Barreto N, Negron-Del Valle JE, Phillips D, Ruiz-Lambides A, **Snyder-Mackler N**, Higham JP, Siracusa ER, Brent LJJ (2022). "Reduced injury risk links sociality to survival in a group-living primate" *iScience*. doi: 10.1016/j.isci.2022.105454.
64. Siracusa ER, Negron-Del Valle JE, Phillips D, Platt ML, Higham JP, **Snyder-Mackler N**, Brent LJJ (2022). "Within-individual changes reveal increasing social selectivity with age in rhesus macaques." *Proceedings of the National Academy of Sciences*. preprint: 10.1101/2022.05.31.494118; doi: 10.1073/pnas.2209180119
63. Cooper EC, **Watowich MM**<sup>G</sup>, Beeby N, Whalen C, Montague MJ, Brent LJJ, **Snyder-Mackler N**, Higham J (2022). "Concentrations of urinary neopterin, but not suPAR, positively correlate with age in rhesus macaques." *Frontiers in Ecology and Evolution*, doi: 10.3389/fevo.2022.1007052.

62. **Baniel A<sup>P</sup>**, Petrullo L, **Mercer A<sup>U</sup>**, Reitsema L, **Sams S**, Beehner JC, Bergman TJ, **Snyder-Mackler N<sup>\*</sup>**, Lu A<sup>\*</sup> (2022). "Maternal effects on early-life gut microbiome maturation in a wild nonhuman primate." *Current Biology*, in press. preprint doi: [10.1101/2021.11.06.467515v1](https://doi.org/10.1101/2021.11.06.467515v1)
61. **Johnson CSC<sup>G</sup>**, Frye BM, Register TC, **Snyder-Mackler N**, Shively CA (2022). "Mediterranean Diet Reduces Social Isolation and Anxiety in Adult Female Nonhuman Primates." *Nutrients*, 14(14), 2852; doi: 10.3390/nu14142852.
60. Morrill K, Hekman J, Li X, McClure J, Logan B, Goodman L, Gao M, Dong Y, Alonso M, Carmichael E, **Snyder-Mackler N**, Alonso J, Noh HJ, Johnson J, Koltookian M, Lieu C, Megquier K, Swofford R, Turner-Maier J, White ME, Weng Z, Colubri A, Genereux DP, Lord KA, Karlsson EK (2022). "Ancestry-inclusive dog genomics challenges popular breed stereotypes." *Science*. doi: 10.1126/science.abk0639
59. Feder J, Beehner JC, **Baniel A<sup>P</sup>**, Bergman TJ, **Snyder-Mackler N**, Lu A (2022) "Social drivers of maturation age in female geladas." *Behavioral Ecology*, doi: 10.1093/beheco/amac028.
58. Testard C, Brent L<sup>JN</sup>, Andersson J, **Chiou KL<sup>P</sup>**, Negron-Del Valle JE, DeCasien AR, Acevedo-Ithier A, Stock MK, Antón SC, Gonzalez O, Walker CS, Foxlet S, Compo NR, Bauman S, Ruiz-Lambides AV, Martinez MI, Skene JHP, Horvath JE, Cayo Biobank Research Unit, Higham JP, Miller K, **Snyder-Mackler N**, Montague MJ, Platt ML, Sallet J (2022). "Social connections predict brain structure in a multidimensional free-ranging primate society." *Science Advances*. doi: 10.1126/science.abe5794
57. **Chiou KL<sup>P</sup>**, Janiak MC, **Schneider-Crease I<sup>P</sup>**, Sen S<sup>C</sup>, Ayele Ferehiwot, Chuma IS, Knauf S, Lemma A, Signore AV, D'Ippolito AM, Abebe B, Haile AA, Kebede F, Fashing PJ, Nguyen N, McCann C, Houck ML, Wall JD, Burrell AS, Bergey CM, Rogers J, Phillips-Conroy JE, Jolly CJ, Melin AD, Storz JF, Lu A, Beehner JC, Bergman TJ, **Snyder-Mackler N<sup>\*\*</sup>** (2022). "Genomic signatures of high-altitude adaptation and chromosomal polymorphism in geladas." *Nature Ecology and Evolution*. doi: 10.1038/s41559-022-01703-4.
56. Sloan E, Beehner JC, Bergman TJ, Lu A, **Snyder-Mackler N**, Jacquemyn H (2022) "Effects of climate variability on the demography of wild geladas." *Ecology and Evolution*. doi: 10.1002/ece3.8759.
55. DeLacey PM<sup>C</sup>, Perlman RF, Sen S<sup>C</sup>, **Schneider-Crease I<sup>P</sup>**, **Chiou KL<sup>P</sup>**, Lemma A, Ayele F, Higham JP, Lu A, **Snyder-Mackler N**, Beehner JC, Bergman TJ (2022). "Assessing male gelada chest patches: color measurement and physiological mechanisms." *Mammalian Biology*, doi: 10.1007/s42991-021-00211-5.
54. Siracusa E, Higham JP, **Snyder-Mackler N**, Brent L<sup>JN</sup> (2022). "Social ageing: Exploring the drivers of late-life changes in social behaviour in mammals." *Biology Letters*. doi: 10.1098/rsbl.2021.0643.
53. Petrullo L<sup>C</sup>, **Baniel A<sup>P</sup>**, Jorgensen MJ, **Sams S**, **Snyder-Mackler N**, Lu A (2022). "The early life microbiota mediates maternal effects on offspring growth in a nonhuman primate." *iScience*, doi: 10.1016/j.isci.2022.103948.
52. **Watowich MM<sup>G</sup>**, **Chiou KL<sup>P</sup>**, Montague MJ, Cayo Biobank Research Unit, Simons ND, Horvath JE, Ruiz-Lambides A, Martinez MI, Higham JP, Brent L<sup>JN</sup>, Platt ML, **Snyder-Mackler N<sup>\*\*</sup>** (2022). "Natural disaster and immunological aging in a nonhuman primate." *Proceedings of the National Academy of Sciences*. doi: 10.1073/pnas.2121663119.
51. **Snyder-Mackler N<sup>\*\*</sup>**, Snyder-Mackler L (2021). "Holistic Rehabilitation: Biological Embedding of Social Adversity and its Health Implications." *Physical Therapy Journal*, p245, doi: 10.1093/ptj/p245
50. Ruple A, MacLean E, **Snyder-Mackler N**, Creevy KE, Promislow D (2021). "Dog Models of Aging" *Annual Reviews of Animal Biosciences*, 2022:10, doi: 10.1146/annurev-animal-051021-080937
49. **Schneider-Crease I<sup>P</sup>**, Blackwell AD, Kraft TS, Thompson ME, Suarez IM, Cummings DK, Stieglitz J, **Snyder-Mackler N**, Gurven M, Kaplan H, Trumble BC (2021). "Helminth infection is associated with dampened cytokine responses to viral and bacterial stimulations in Tsimane hunger-horticulturalists" *Evolutionary Medicine and Public Health* doi: 10.1093/emph/eoab035

48. Pavez-Fox MA, Negron-Del Valle JE, Thompson IJ, Walker CS, Bauman SE, Gonzalez O, Compo N, Ruiz-Lambides A, Martinez MI, Platt ML, Montague MJ, Higham JP, **Snyder-Mackler N**, Brent LJN (2021). "Sociality predicts individual variation in the immunity of free-ranging rhesus macaques." *Physiology and Behavior* 241:113560. doi:10.1016/j.physbeh.2021.113560.
47. **Johnson CSC<sup>G</sup>**, Shively CA, Michalson KT, Lea AJ, DeBo RJ, Howard TD, Hawkins GA, Appt SE, Liu Y, McCall CE, Herrington D, Register TC\*\*, **Snyder-Mackler N\*\*** (2021). "Divergent effects of Western and Mediterranean diets on behavior and monocyte polarization." *eLife*, 10:e68293 doi: 10.7554/eLife.68293.
46. Miller CM, **Snyder-Mackler N**, Nguyen N, Fashing PJ, Tung J, Wroblewski EE, Gustison ML, Wilson ML (2021). "Extragroup paternity in gelada monkeys, *Theropithecus gelada*, at Guassa, Ethiopia and a comparison with other primates." *Animal Behaviour*, doi: 10.1016/j.anbehav.2021.05.008.
45. Tinsley Johnson E\*<sup>C</sup>, Feder JA\*, Bergman TJ, Lu A, **Snyder-Mackler N\*\***, Beehner JC\*\* (2021). "The Goldilocks Effect: Female geladas in mid-sized groups have higher fitness." *Proceedings of the Royal Society B*, doi: 10.1098/rspb.2021.0820.3.
44. Testard C, Larson SM, **Watowich MM<sup>G</sup>**, Kaplinsky CH, Bernau A, Faulder M, Marshall HH, Lehmann J, Ruiz-Lambides A, Higham JP, Montague MJ, **Snyder-Mackler N**, Platt ML, Brent LJN (2021). "Rhesus macaques build new social connections after a natural disaster." *Current Biology*. doi: 10.1016/j.cub.2021.03.029
43. **Baniel A<sup>P</sup>**, Amato KR, Beehner JC, Bergman TJ, **Mercer A<sup>U</sup>**, Perlman RF, Petruzzo L<sup>C</sup>, Reitsema L, **Sams SN**, Lu A, **Snyder-Mackler N\*\*** (2021). "Seasonal shifts in the gut microbiome indicate plastic responses to diet in wild geladas." *Microbiome*, 9:26. doi: 10.1186/s40168-020-00977-9.
42. Shively CA, Appt SE, Chen H, Day SM, Shaltout HA, Silverstein-Meltzer MG, **Snyder-Mackler N**, Uberseder B, Vitolins MZ, Register TC (2020). "Mediterranean diet, stress resilience, and aging in a nonhuman primate." *Neurobiology of Stress*, doi: 10.1016/j.ynstr.2020.100254
41. Lu A, Feder JA, **Snyder-Mackler N**, Bergman TJ, Beehner JC (2020). "Male-mediated maturation in a wild primate." *Current Biology*, doi: 10.1016/j.cub.2020.10.003 42.
40. **Chiou KL<sup>P</sup>**, Montague MJ, Goldman EA, **Watowich MM<sup>G</sup>**, **Sams SN**, Song J, Horvath JE, Sterner KN, Ruiz-Lambides AV, Martinez MI, Higham JP, Brent LJN, Platt ML, **Snyder-Mackler N\*\*** (2020). "Rhesus macaques as a tractable physiological model of human ageing." *Philosophical Transactions of the Royal Society B*, 367:11. doi: 10.1098/rstb.2019.0612.
39. Emery Thompson M, Rosati AG, **Snyder-Mackler N** (2020). "Insights from evolutionarily relevant models of human ageing." *Philosophical Transactions of the Royal Society B*, 367:11. doi: 10.1098/rstb.2019.0605.
38. Gnanadesikan GE, Hare B, **Snyder-Mackler N**, MacLean EL (2020). "Estimating the heritability of cognitive traits across dog breeds reveals highly heritable inhibitory control and communication factors." *Animal Cognition*, doi: 10.1007/s10071-020-01400-4.
37. Gnanadesikan GE, Hare B, **Snyder-Mackler N**, Call J, Kaminski J, Miklosi A, MacLean EL (2020). "Breed differences in dog cognition associated with brain-expressed genes and neurological functions." *Integrative & Comparative Biology*, doi: 10.1093/icb/icaa112.
36. **Snyder-Mackler N**, Burger JR, Gaydosh L, Belsky D, Noppert GA, Campos FA, Bartolomucci A, Yang YC, Aiello AE, O'Rand A, Mullan Harris K, Shively CA, Albert SC, Tung J (2020). "Social determinants of health and survival in humans and other animals." *Science*, doi: 10.1126/science.aax9553.
35. **Schneider-Crease I<sup>P</sup>**, Beehner JC, Bergman T, Gomery M, **Koklic L<sup>U</sup>**, Lu A, **Snyder-Mackler N** (2020). "Ecology eclipses phylogeny as a major driver of nematode parasite community structure in a graminivorous primate." *Functional Ecology*, doi: 10.1111/1365-2435.13603.
34. **Watowich MM<sup>G</sup>**, MacLean EL, Hare B, Call J, Kaminski J, Miklósi A, **Snyder-Mackler N\*\*** (2020). "Age influences domestic dog cognitive performance independent of average breed

lifespan." *Animal Cognition*, doi: 10.1007/s10071-020-01400-4.

33. Amato KR, Kuthyar S, Ekanayake-Weber M, Salmi R, **Snyder-Mackler N**, Wijayathunga L, Vandercone R, Lu A (2020). "Gut Microbiome, Diet, and Conservation of Endangered Langurs in Sri Lanka." *Biotropica*, doi: 10.1111/btp.12805.
32. Ellis S, **Snyder-Mackler N**, Ruiz-Lambides A, Platt ML, Brent LJJ (2019). "Deconstructing sociality: the types of social connections that predict longevity in a group-living primate." *Proceedings of the Royal Society B: Biological Sciences*, doi: 10.1098/rspb.2019.1991.
31. Fisher J, Higham JP, Alberts SC, Barrett L, Beehner JC, Bergman TJ, Carter AJ, Collins A, Elton S, Fagot J, Ferreira da Silva MJ, Hammerschmidt K, Henzi P, Jolly CJ, Knauf S, Kopp GH, Dogers J, Roos C, Ross C, Seyfarth RM, Silk J, **Snyder-Mackler N**, Staedele V, Swedell L, Wilson ML, Zinner D (2019). "Insights into the evolution of social systems and species from baboon studies." *eLife*, 8:e50989. doi: 10.7554/eLife.50989.
30. **Schneider-Crease I<sup>P</sup>**, **Chiou KL<sup>P</sup>**, **Snyder-Mackler N**, Bergman TJ, Beehner JC, Lu A (2019). "Beyond infant death: the hidden costs of male immigration in geladas." *Animal Behaviour*, doi:10.1016/j.anbehav.2019.11.010.
29. Sanz J, Maurizio PL, **Snyder-Mackler N**, Simons ND, Voyles TP, Kohn JN, Michopoulos V, Wilson ME, Tung J\*, Barreiro LB\* (2019). "Social history and exposure to pathogen signals modulate social status effects on gene regulation in rhesus macaques." *Proceedings of the National Academy of Sciences*, doi:10.1073/pnas.1820846116.
28. MacLean E\*, **Snyder-Mackler N\***, vonHoldt B, Serpell J (2019). "Highly heritable and functionally relevant breed differences in dog behavior." *Proceedings of the Royal Society B: Biological Sciences*, doi: 10.1098/rspb.2019.0716.
27. Lu A, Petrullo L<sup>C</sup>, Carrera S, Feder J, **Schneider-Crease I<sup>P</sup>**, **Snyder-Mackler N** (2019). "Developmental Responses to Early-Life Adversity: Evolutionary and Mechanistic Perspectives." *Evolutionary Anthropology*, doi:10.1002/evan.21791.
26. Petrullo L<sup>C</sup>, Jorgensen MJ, **Snyder-Mackler N**, Lu A (2019). "Composition and stability of the vervet monkey milk microbiome." *American Journal of Primatology*. e22982. doi: 10.1002/ajp.22982.
25. Debray R\*<sup>U</sup>, **Snyder-Mackler N\***, Kohn JN, Wilson ME, Barreiro LB, Tung J (2019). "Social affiliation predicts mitochondrial DNA copy number in rhesus macaques." *Biology Letters*. 15, 1. doi: 10.1098/rsbl.2018.0643.
24. **Snyder-Mackler N**, Sanz J, Kohn JN, Voyles TN, Pique-Regi R, Wilson ME, Barreiro LB, Tung J (2019). "Social status alters chromatin accessibility and the gene regulatory response to glucocorticoid stimulation in rhesus macaques." *Proceedings of the National Academy of Sciences*. 10.1073/pnas.1811758115.
23. **Snyder-Mackler N\*** & Lea AJ\* (2018). "Functional genomic insights into the environmental determinants of mammalian fitness." *Current Opinion in Genetics & Development*. doi:10.1016/j.gde.2018.08.001.
22. Ramos-Fernandez G, King AJ, Beehner JC, Bergman TJ, Crofoot MC, Di Fiore A, Lehmann J, Schaffner CM, **Snyder-Mackler N**, Zuberbühler K, Aureli F, Boye D (2018). "Quantifying uncertainty due to fission–fusion dynamics as a component of social complexity." *Proceedings of the Royal Society B: Biological Sciences*. doi: 10.1098/rspb.2018.0532.
21. Madlon-Kay S, Montague MJ, Brent LJJ, Ellis S, Zhong B, **Snyder-Mackler N**, Horvath JE, Skene JHP, Platt ML (2018). Weak effects of common genetic variation in oxytocin and vasopressin receptor genes on rhesus macaque social behavior. *American Journal of Primatology*. doi:10.1002/ajp.22873.
20. Tinsley Johnson E<sup>C</sup>, **Snyder-Mackler N**, Lu A, Bergman TJ, Beehner JC (2018). Social and ecological drivers of reproductive seasonality in geladas. *Behavioral Ecology*. 29:3, 574–588. doi: 10.1093/beheco/ary008.
19. **Schneider-Crease I<sup>P</sup>**, Griffin RG, Gomery MA, Dorny P, Noh JC, Handali S, Chastain HM,

- Wilkins PP, Nunn CL, **Snyder-Mackler N**, Beehner JC, Bergman TJ (2017) "Identifying wildlife reservoirs of neglected taeniid tapeworms: Non-invasive diagnosis of endemic *Taenia serialis* infection in a wild primate population" *PLoS Neglected Tropical Diseases*, doi: 10.1371/journal.pntd.0005709.
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## PREPRINTS

Newman LE\*, Testard C\*, DeCasien AR, Chiou KL, Watowich MM, Janiak MC, Pavez-Fox MA, Sanchez Rosado MR, Cooper EB, Costa CE, Petersen RM, Montague MM, Platt ML\*\*, Brent LJN\*\*, Snyder-Mackler N\*\*, Higham JP.\*\* (2022). “The biology of aging in a social world: insights from free-ranging rhesus macaques” *bioRxiv* doi: 10.1101/2023.01.28.525893v1

Chiou KL\*, Huang X\*, Bohlen MO, Tremblay S, O’Day DR, Spurrell CH, Gogate AA, Zintel TM, Cayo Biobank Research Unit, Andrews MG, Martínez MI, Starita LM, Montague MJ, Platt ML\*\*, Shendure J\*\*, Snyder-Mackler N\*\* (2022). “A single-cell multi-omic atlas spanning the adult rhesus macaque brain” *bioRxiv* doi: 10.1101/2022.09.30.510346v1

DeCasien AR\*, Chiou KL\*, Testard C, Mercer A, Negrón-Del Valle JE, Bauman Surratt SE, González O, Stock MK, Ruiz-Lambides AV, Martínez MI, Cayo Biobank Research Unit, Antón SC, Walker CS, Sallet J, Wilson MA, Brent LJN, Montague MJ, Sherwood CC, Platt ML, Higham JP\*\*, Snyder-Mackler N\*\* (2022). “Evolutionary and biomedical implications of sex differences in the primate brain transcriptome” *bioRxiv* doi: 10.1101/2022.10.03.510711

Sanchez Rosado MR, Marzan-Rivera N, Watowich MM, Pantoja P, Pavez-Fox MA, Siracusa ER, Negrón-Del Valle JE, Phillips D, Ruiz-Lambides A, Cayo Biobank Research Unit, Martinez MI, Montague MJ, Platt ML, Higham JP, Brent LJN, Sariol CA, Snyder-Mackler N\* (2021). “Age, sex, and social environmental effects on immune cell composition in a free-ranging non-human primate.” *bioRxiv* doi: 10.1101/2021.12.06.471383

## INVITED COMMENTARIES

Belsky D and **Snyder-Mackler N** (2017). Invited Commentary: Integrating Genomics and Social Epidemiology—Analysis of Late-Life Low Socioeconomic Status and the Conserved Transcriptional Response to Adversity. *American Journal of Epidemiology*, doi: 10.1093/aje/kwx145.

**Snyder-Mackler N** and Tung J (2017) “Vasopressin and the neurogenetics of parental care” *Neuron*, 94:1, 9–11, doi: 10.1016/j.neuron.2017.06.027.

[Google Scholar Profile](#)

[NCBI My Bibliography](#)

## MENTORING

Postdoctoral Researchers

- Kenny Chiou; NIH T32 fellow in the Shock Center for the Biology of Aging (2017-)
  - K99/R00 Awardee



- India Schneider-Crease; NSF SBE postdoctoral fellow (2017-2022)
  - NSF SBE Postdoctoral Fellow
  - TT Asst Prof at ASU
- Alice Baniel (2018-2022)
- Trisha Zintel (2020-2022)
  - Biostatistician/Data Engineer at Sage Bionetworks (Seattle, WA)

#### PhD Students

- Corbin Johnson (University of Washington; 2017-2022)
- Marina Watowich (University of Washington; 2017-2022)
  - NIH F31/NRSA Fellow (2022)
  - Diana Jacobs Kalman/AFAR Scholarships for Research in the Biology of Aging Awardee
- Brianah McCoy (Arizona State University; 2021-present)
  - NSF GRFP Fellow (2021-)
- Mitchell Sanchez Rosado (University of Puerto Rico; 2019-present)
  - NIH Diversity Supplement Awardee (2020-2022)
- Kelsi Watkins (Arizona State University; 2022-present)
- Brooklynn Scott (Arizona State University; 2023-present)
  - NSF GRFP Fellow (2023-)
- Cameron Kelsey (Arizona State University; 2023-present)

#### MS Students

- Layla Brassington (Arizona State University, MsC, 2021-2022)

#### Graduate Committees (University, degree, graduation year)

- Dominic Saiz (Arizona State University, PhD, in progress)
- Glenda Ramirez (Arizona State University, PhD, in progress)
- Sharmi Sen (University of Michigan, PhD, 2023)
- Patricia DeLacey (University of Michigan, PhD, 2023)
- Mollie Peters (Arizona State University, PhD, in progress)
- Laura Newman (New York University, PhD, in progress)
- Christina Costa (New York University, PhD, in progress)
- Joey Orton (Arizona State University, MSc, 2022)
- Alexandra DeCasien (New York University, PhD, 2021)
- Kelly Jin (University of Washington, PhD, 2020)
- Lauren Petrullo (Stony Brook University, PhD, 2020)

#### Undergraduate students (University, years in lab)

- Isabella Ford (Arizona State University, 2021-)
- Ritika Anand (Arizona State University, Barrett Honors, 2021-)
- Kate Nelson (Arizona State University, 2021-)
- Spencer Green (Arizona State University, Barrett Honors, 2020-2023)
  - TGen Helios Scholar (2021)
- Jalen Nix (Arizona State University, 2021)
- Isabella Moya (Arizona State University, Barrett Honors, 2021-)
  - SOLS Medical Microbiology Student of the Year (2022)
  - Dr. Harry Gilbert and Doris Lorraine Crecelius Scholarship (2022)
- Aliya Kammerer (Arizona State University, Barrett Honors, 2021)
- Yasmine Salehi (Arizona State University, Barrett Honors, 2021-2023)
- Faiyaj Murshed (Arizona State University, 2021-2022)
- Garrett Maag (Arizona State University, 2020-2021)
  - SOLUR program Scholar
- Layla Brassington (Arizona State University, 2020-2021)

- Emma Offenberg (Stanford University, 2020-2021)
- Matthew Harrington (University of Washington, Honors, 2017-2018)
- Abigail Lam (University of Washington, Honors, 2018)
- Lia Koklic (University of Washington, Honors, 2018-2019)
- Grace De Castro (University of Washington, 2018-2019)
  - Beacon Lab & Field Award (2019)

#### [NSF Research Experience for Undergraduates](#) (2021-)

My lab runs a 10-week NSF-funded Research Experience for Undergraduates (REU). We recruit, train, and pay students from underrepresented backgrounds in the sciences (URM, disabled, LBGTQIA+) to gain research experience in genomics and bioinformatics.

- 2021 cohort: Jazmine Harvey (Sacramento State University); Taliana Tudryn (Durham Community College/ NC State); Brian Graves (UC Davis); Nat Finnegan (UC Davis); Gabi Dugan (Virginia Tech)
- 2022 cohort: Andrea Negron (U Puerto Rico- Humacao); Amy Longtin (George Washington University); Alice Mongane (Carleton College)
- 2023 cohort: Claire Cheng (U Georgia); Jess Neumaier (ASU); Melia Menke (ASU); Elizabeth Wright (U Florida)