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Education

- 2017-2019 **NIH NRSA Post-doctoral Fellow**
- 2016- **Post-doctoral Researcher**, Perry Lab, Penn State University
- 2015-2016 **Post-doctoral Researcher**, Besansky Lab, University of Notre Dame
- 2009-2015 **Ph.D.** Physical Anthropology, New York University
- 2011 **M.A.** Physical Anthropology, New York University
- 2005-2009 **B.A.** Anthropology, New York University

Publications

Bergey, C. M., Lukindu, M., Wiltshire, R. M., Fontaine, M. C., Kayondo, J., and Besansky, N. J. (Submitted; Preprint available). Assessing connectivity despite high diversity in island populations of the malaria mosquito *Anopheles gambiae*.

Harrison, G. F., Sanz, J., Boulais, J., Mina, M. J., Grenier, J. C., Leng, Y., Dumaine, A., Yotova, V., **Bergey, C. M.**, Elledge, S. J., Schurr, E., Quintana-Murci, L., Perry, G. H., and Barreiro, L. B. (Submitted; Preprint available). Natural selection has contributed to functional immune response differences between human hunter-gatherers and agriculturalists.

Jolly, C. J., Bergman, T. J., **Bergey, C. M.**, Mann, J. J., and Phillips-Conroy, J. E. (Submitted). Species-specific male mating strategies match CSF monoamine metabolite levels in wild hybrid baboons.

2018 Rogers, J. *et al* (including **Bergey, C. M.**) (Accepted; in press). The comparative genomics, epigenomics and complex population history of *Papio* baboons. *Science Advances*.

Bergey, C. M., Lopez, M., Harrison, G. F., Patin, E., Cohen, J. A., Quintana-Murci, L., Barreiro, L. B., and Perry, G. H. (2018). Polygenic adaptation and convergent evolution on growth and cardiac genetic pathways in African and Asian rainforest hunter-gatherers. *Proceedings of the National Academy of Sciences*.

Wiltshire, R. M., **Bergey, C. M.**, Kayondo, J. K., Birungi, J., Mukwaya, L. G., Emrich, S. J., Besansky, N. J., and Collins, F. H. (2018). Reduced-representation sequencing identifies small effective population sizes of *Anopheles gambiae* in the north-western Lake Victoria basin, Uganda. *Malaria Journal*, 17(285).

- Lukindu, M., **Bergey, C. M.**, Wiltshire, R. M., Small, S., Bourke, B., Kayondo, J. K., and Besansky, N. J. (2018). Spatio-temporal genetic structure of *Anopheles gambiae* in the Northwestern Lake Victoria Basin, Uganda: implications for genetic control trials in malaria endemic regions. *Parasites & Vectors*, 11(246).
- Chiou, K. L.* and **Bergey, C. M.*** (2018). Methylation-based enrichment facilitates low-cost, noninvasive genomic scale sequencing of populations from feces. ***Contributed equally.** *Scientific Reports*, 8(1975).
- 2017 Miles, A. *et al* (including **Bergey, C. M.**) (2017). Genetic diversity of the African malaria vector *Anopheles gambiae*. *Nature*, 552, 96-100.
- 2016 **Bergey, C. M.**, Phillips-Conroy, J. E., Disotell, T. R., and Jolly, C. J. (2016). Dopamine pathway is highly diverged in primate species that differ markedly in social behavior. *Proceedings of the National Academy of Sciences*, 113(22):6178–6181
- 2015 Burrell, A. S., Disotell, T. R., and **Bergey, C. M.** (2015). The use of museum specimens with high-throughput DNA sequencers. *Journal of Human Evolution*, 79:35–44
- 2014 Pozzi, L., **Bergey, C. M.**, and Burrell, A. S. (2014). The use (and misuse) of phylogenetic trees in comparative behavioral analyses. *International Journal of Primatology*, 35(1):32–54
- 2013 **Bergey, C. M.**, Watkins, A. M., and Arora, P. S. (2013). HippDB: a database of readily targeted helical protein-protein interactions. *Bioinformatics*, 29(21):2806–2807
- Bergey, C. M.**, Pozzi, L., Disotell, T. R., and Burrell, A. S. (2013). A new method for genome-wide marker development and genotyping holds great promise for molecular primatology. *International Journal of Primatology*, 34(2):303–314
- 2012 Pickett, S. B., **Bergey, C. M.**, and Di Fiore, A. (2012). A metagenomic study of primate insect diet diversity. *American Journal of Primatology*, 74(7):622–631
- 2011 **Bergey, C. M.** (2011). AluHunter: a database of potentially polymorphic Alu insertions for use in primate phylogeny and population genetics. *Bioinformatics*, 27(20):2924–2925
- Jolly, C. J., Burrell, A. S., Phillips-Conroy, J. E., **Bergey, C. M.**, and Rogers, J. (2011). Kinda baboons (*Papio kindae*) and grayfoot chacma baboons (*P. ursinus griseipes*) hybridize in the Kafue river valley, Zambia. *American Journal of Primatology*, 73(3):291–303
- 2010 Hodgson, J. A., **Bergey, C. M.**, and Disotell, T. R. (2010). Neandertal genome: the ins and outs of African genetic diversity. *Current Biology*, 20(12):R517–519

Abstracts

- 2018 **Bergey, C. M.**, Lopez, M., Harrison, G. F., Patin, E., Cohen, J. A., Quintana-Murci, L., Barreiro, L. B., and Perry, G. H. (2018). Convergent selection on growth- and cardiac-related pathways in African and Asian rainforest hunter-gatherers. *American Journal of Physical Anthropology*, 165:26.
- Burrell, A. S., Janiak, M. C., Disotell, T. R., and **Bergey, C. M.** (2018). Development of a taxonomically dense genomic database of anthropoid primate genomes. *American Journal of Physical Anthropology*, 165:204.
- Perry, G. H., **Bergey, C. M.**, Johnson, S., Koenig, A., Sullivan, A., Boufana, B., Craig, P., Castillo, Y., Mahanty, S., and Garcia, H. (2018). Human tapeworm functional and evolutionary genomic adaptations to cooking-related heat stress. *American Journal of Physical Anthropology*, 165:119.
- Chiou, K. L., **Bergey, C. M.**, Disotell, T. R., Rogers, J., Jolly, C. J., and Phillips-Conroy, J. E. (2018). Genome-wide signatures of differential introgression in a Zambian baboon hybrid zone. *American Journal of Physical Anthropology*, 165:48.
- 2017 **Bergey, C. M.**, Burrell, A. S., and Tosi, A. J. (2017). Evidence of frequent hybridization in guenons (tribe Cercopithecini) from phylogeny with genome-wide markers. *American Journal of Physical Anthropology*, 162(Suppl. 64):119
- Tosi, A. J., **Bergey, C. M.**, and Burrell, A. S. (2017). Ancient hybridization between *Papio* and *Theropithecus* detected at a non-coding region of the X-chromosome. *American Journal of Physical Anthropology*, 162(Suppl. 64):384
- White, J. D., Zaidi, A. A., **Bergey, C. M.**, Gonzalez-Zarzar, T., Claes, P., and Shriver, M. D. (2017). Deflating the “Good Genes Hypothesis”: Asymmetry may not be an honest indicator of genetic quality in humans. *American Journal of Physical Anthropology*, 162(Suppl. 64):408
- 2016 **Bergey, C. M.**, Phillips-Conroy, J. E., Disotell, T. R., and Jolly, C. J. (2016). Neurophysiological differences between hamadryas and anubis baboons are maintained by natural selection. In *American Journal of Physical Anthropology*, volume 159, pages 92–93
- 2015 **Bergey, C. M.** (2015). An efficient novel technique for genotyping MHC-DRB exon 2 in primates. (Abstract). *American Journal of Physical Anthropology*, 156(Suppl. 60):84
- Burrell, A. S., Disotell, T. R., Haueisen, S., and **Bergey, C. M.** (2015). High-throughput restriction site associated DNA sequencing (RAD-Seq) for genomic studies of primates using museum specimens. (Abstract). *American Journal of Physical Anthropology*, 156(Suppl. 60):96

- Haueisen, S., **Bergey, C. M.**, Disotell, T. R., and Burrell, A. S. (2015). The impact of past climate cycles on the paleodemography of East African ungulates as inferred from genomic RAD-Seq data. (Abstract). *American Journal of Physical Anthropology*, 156(Suppl. 60):161
- 2014 **Bergey, C. M.**, Phillips-Conroy, J. E., Disotell, T. R., and Jolly, C. J. (2014). Hybrid zone genomics: The structure of a baboon contact zone inferred from RAD tags. (Abstract). *American Journal of Physical Anthropology*, 153(Suppl. 58):76–77
- Matthews, L. C., Le, M. D., López, E. H., **Bergey, C. M.**, Sterling, E. J., and Blair, M. E. (2014). Species identification and evolutionary history of slow lorises (genus *Nycticebus*) as inferred from nuclear introns. (Abstract). *American Journal of Physical Anthropology*, 153(Suppl. 58):178–179
- 2013 Burrell, A. S., Jolly, C. J., **Bergey, C. M.**, Phillips-Conroy, J. E., Rogers, J., and Disotell, T. R. (2013). Kinda baboons in phylogenetic and paleogeographic perspective. (Abstract). *American Journal of Physical Anthropology*, 150(Suppl. 56):74
- 2012 **Bergey, C. M.** and Raaum, R. L. (2012). A test of cross-species exome sequencing in the rhesus macaque (*Macaca mulatta*). (Abstract). *American Journal of Physical Anthropology*, 147(Suppl. 54):97
- 2010 **Bergey, C. M.** (2010). AluHunter: A new computer program for large-scale identification of Alu-elements for use in primate phylogeny. (Abstract). *American Journal of Physical Anthropology*, 141(Suppl. 50):66
- Canedo, A. P., Burrell, A. S., Jagoda, E., **Bergey, C. M.**, Tosi, A. J., and Disotell, T. R. (2010). Phylogenetic relationships of the mangabeys inferred from analyses of multiple independent loci. (Abstract). *American Journal of Physical Anthropology*, 141(Suppl. 50):76
- Jolly, C. J., Phillips-Conroy, J. E., Burrell, A. S., **Bergey, C. M.**, Larney, E., and Disotell, T. R. (2010). The circle is unbroken: hybridization occurs between Kinda and chacma baboons in the Kafue Valley, Zambia. (Abstract). *American Journal of Physical Anthropology*, 141(Suppl. 50):136
- 2009 **Bergey, C. M.**, Jolly, C. J., Phillips-Conroy, J. E., Burrell, A. S., and Disotell, T. R. (2009). Mitochondrial population structure of a baboon contact zone. (Abstract). *American Journal of Physical Anthropology*, Suppl. 48(138):89
- 2008 **Bergey, C. M.** and Patel, E. R. (2008). A Preliminary Vocal Repertoire of the Greater Bamboo Lemur (*Prolemur simus*): Classification and Contexts. *Nexus*, 1(1):69–84

Unpublished Conference Presentations

- 2018 **Bergey, C. M.**, Johnson, S. M., Koenig, A., Sullivan, A. S., Boufana, B., Craig, P. S., Castillo, Y., Mahanty, S., Garcia, H. H., and Perry, G. H. Genomic phylogeny of human- and non-human-infective tapeworms in genus *Taenia*. 67th Annual Meeting of the American Society of Tropical Medicine and Hygiene. New Orleans, LA.
- Fontaine, M. C., Labbe, F., **Bergey, C. M.**, Love, R. R., Waterhouse, R. M., Kayondo, J. K., Birungi, K. N., Balyesima, V., Townson, H., Besansky, N. J. Evolution of salt-water tolerant species in the *Anopheles gambiae* complex from a comparative genomic perspective. Evolution Conference 2018. Montpellier, France.
- 2017 **Bergey, C. M.**, Lukindu, M., Wiltshire, R. M., Kayondo, J., and Besansky, N. J. Structure of selected variation in *Anopheles gambiae* on Lake Victoria islands and implications for genetic control field trials. 66th Annual Meeting of the American Society of Tropical Medicine and Hygiene. Baltimore, MD.
- Lukindu, M., **Bergey, C. M.**, Kayondo, J., Wiltshire, R. M., and Besansky, N. J. Spatio-temporal genetic structure of *Anopheles gambiae* in the Northwestern Lake Victoria Basin, Uganda; implications for genetic control trials in malaria endemic regions. 66th Annual Meeting of the American Society of Tropical Medicine and Hygiene. Baltimore, MD.
- 2016 **Bergey, C. M.**, Phillips-Conroy, J. E., Disotell, T. R., and Jolly, C. J. Serotonin-related genes and pathways display outlier patterns of introgression in a baboon hybrid zone. XXVI Congress of the International Primatological Society. Chicago, IL.
- Bergey, C. M.** and Chiou, K. L. An inexpensive methylation-based enrichment methods enables genomic-scale population-level genotypes of animals from their feces. XXVI Congress of the International Primatological Society. Chicago, IL.
- Burrell, A. S., Disotell, T. R., and **Bergey, C. M.**. Patterns of past admixture in *Papio* inferred from RAD-seq data. XXVI Congress of the International Primatological Society. Chicago, IL.
- 2015 Burrell, A. S., Disotell, T. R., Hauelsen, S., and **Bergey, C. M.** Using museum specimens for genomic analyses of primates. Nor'Eastern Primate Ecology, Evolution, and Biology Group. New Brunswick, NJ.
- 2014 Burrell, A. S., Disotell, T. R., Jolly, C. J., and **Bergey C. M.** A phylogenomic approach to understanding the diversification of common baboons. XXV Congress of the International Primatological Society. Hanoi, Vietnam.

Current and Completed Grants

Mindlin Foundation “One Tweet, One Percent” Award for “Wilderness First Responder training for biological fieldwork” (MF19-1T1P05) - \$4,000 (2019).

NIH F32 NRSA Postdoctoral Fellowship for “Functional genomics of growth hormone response in a natural human model for short stature with comparisons to other populations and species” (1 F32 GM125228-01A1) - (2017-2019).

NSF Senior Research Award for “The evolutionary mechanics of hybridization across a primate radiation: a case study of the Cercopithecini” (BCS1717188) - co-PI with Anthony J. Tosi and Andrew S. Burrell (2017-2020).

NSF Senior Research Award for “The evolution of the anthropoid genome” (BCS1640500) - co-PI with Andrew S. Burrell and Todd R. Disotell - (2017-2019).

NGS Discovery Project Grand Prize, NGX Bio for whole genome sequencing from noninvasive samples - with Kenneth L. Chiou - \$5,000 (2016).

Lewis and Clark Fund for Exploration and Field Research Grant for study of tsetse fly population genomics in Zambia - \$4,400 (2015).

Wenner-Gren Foundation Dissertation Fieldwork Grant for study of introgression and demography of baboons in Awash, Ethiopia - \$7,996 (2013).

NSF Doctoral Dissertation Improvement Grant for study of MHC introgression across the baboon hybrid zone in Awash, Ethiopia - \$31,226 (2013).

NYU Sokol Travel / Research Award to survey and sample primates in a proposed national park in the TL2 region of the Democratic Republic of the Congo - \$3,000 (2012).

Explorer’s Club Exploration Fund Grant for travel to trap and sample Kinda baboons (*Papio kindae*) in Kafue National Park, Zambia - \$2,500 (2011).

NSF GRFP Travel Grant for Zambia baboon trip (above) - \$1,000 (2011).

NSF Graduate Research Fellowship (2009-2012).

NYU MacCracken Fellowship (2012-2015).

NYU Dean’s Undergraduate Research Fund Grant for travel to meeting of the American Association of Physical Anthropologists to present hybrid baboon research - \$595 (2008).

NYU Dean’s Undergraduate Research Fund Grant for expenses relating to acoustic study of greater bamboo lemurs (*Prolemur simus*) in Madagascar - \$2,000 (2008).

NSF Research Experience for Undergraduates Grant for population genetic study of blue monkeys (*Cercopithecus mitis stuhlmanni*) - \$3,000 (2007).

NYU Dean’s Undergraduate Research Fund Grant for blue monkey study (above) - \$975 (2007).

Invited Lectures

February 26, 2018: American Museum of Natural History. “Evolutionary genomics of mosquitoes in marginal habitats (and implications for malaria)”

March 2, 2017: New York Institute of Technology. “Practical results: applying population genomics of humans and disease vectors to improve health”

September 23, 2015: Florida Atlantic University. “Monkeys and Mosquitoes: Population genomics of our close relatives and an important disease vector.”

Peer Reviews Completed

Twenty-four peer reviews contributed for the following journals: *American Journal of Physical Anthropology*, *American Journal of Primatology*, *Axios Review*, *Bioinformatics*, *Folia Primatologica*, *Frontiers in Zoology*, *Molecular Ecology*, *Molecular Ecology Resources*, *Plos One*, and *Proceedings of the National Academy of Sciences*.

Professional Memberships

Sigma Xi, American Association of Physical Anthropologists, American Association of Anthropological Genetics, American Society of Tropical Medicine and Hygiene, International Primatological Society

Teaching Experience

- Summer 2017: **Curriculum developer, Instructor** for two week RNA-seq workshop. Taught methods for transcriptome analysis to students from Universidad Peruana Cayetano Heredia in Lima, Peru.
- 2014-2015: **Curriculum developer** for “BridgeUp: STEM” at the American Museum of Natural History. Two courses for female low-income New York City youth to explore computer science and bioinformatics using the museum’s scientific datasets.
- 2009-2012: **Curriculum developer, Instructor** for “Harlem Children’s Society Bioinformatics Class.” Summer-long course on bioinformatics computer programming for New York City public high school students.
- Spring 2012: **Course assistant** for “Topical Seminar: Phylogenetic Methods.” (Prof. Todd Disotell) Department of Anthropology, New York University.
- Fall 2011: **Teaching assistant** for “Human Evolution.” (Prof. Susan Antón) Department of Anthropology, New York University.

Field Experience

- Summer 2015: Mosquito (*Anopheles gambiae sensu lato*) sampling for whole genome sequencing. Ssesse Islands, Uganda.
- Summer 2012: Primate surveying and sampling in a proposed national park. TL2 region of the Democratic Republic of Congo.
- Summer 2011: Biological sampling of the Kinda baboon. Kafue National Park, Zambia.
- Fall 2007 & Summer 2008: Research into acoustic communication of the critically endangered greater bamboo lemur. Ranomafana National Park, Madagascar.