

CHRISTOPHER N. BALAKRISHNAN

Department of Biology
East Carolina University
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EDUCATION

Ph.D. in Biology, 2005, *Boston University*, advisor: Michael D. Sorenson

B.A. in Biology, 1997, *University Of Pennsylvania*

PROFESSIONAL EXPERIENCE

Associate Professor, 2017 – present, Department of Biology, *East Carolina University*

Assistant Professor, 2012 – 2017, Department of Biology, *East Carolina University*

Postdoctoral Fellow/Research Scientist, 2008 – 2011, Institute for Genomic Biology,
University of Illinois at Urbana-Champaign, mentor: David F. Clayton

Postdoctoral Fellow, 2005-2008. Department of Organismic & Evolutionary Biology,
Museum of Comparative Zoology, *Harvard University*, mentor: Scott V. Edwards

EXTERNAL GRANTS

National Science Foundation DEB 1754406 “Collaborative Research: Comparative Genomics of Host-specific Adaptation and Life History Evolution in Brood Parasitic Birds”. PIs C.N. Balakrishnan (\$169,792), M.D. Sorenson (\$254,163), T. Sackton (\$149,574), J. DaCosta (\$99,106) and W.C. Warren (\$474,816). Active 5/2018 -5/2022.

National Institutes of Health 1R15ES028436-01 “Nutraceutical reduction of endocrine disruption in chemical induced hypospadias” PI K.A. McCoy, Co-I Balakrishnan (\$453,467). Active 3/2018 - 3/2021)

National Science Foundation IOS 1456612 “Collaborative Research: Mechanisms of Behavioral Innovation in Brood Parasitic Birds”. PIs C.N. Balakrishnan (\$390,000), M.E. Hauber (\$330,000). Active 6/2015 -6/2020.

National Science Foundation DEB 1457541 “Research Coordination Network: Enabling Comparative Studies of the Process and Products of Sexual Selection in a Genomic Context”. PI B.A. Loiselle, Co-PIs C.N. Balakrishnan, W.A. Boyle, M. Braun, E.H. DuVal, M. Munoz-Torres, M. Pizo, T.B. Ryder, B. Schlinger, T. Staples, M.S. Webster (\$499,928). Active 3/2015 - 3/2020.

National Institutes of Health 1R15GM109291-01 “The genetic basis for reduced sexual dimorphism in stickleback throat coloration” PI J. McKinnon, Co-Is C.N. Balakrishnan and K. Peichel (\$316,241; \$71,538 supplement awarded 8/2017). 8/2014-3/2019.

National Geographic Society “The Evolution of Mimicry in Brood Parasitic Finches (*Vidua*)”. PI Balakrishnan (\$19,150). 8/2013-8/2016.

National Institutes of Health Challenge Grant, “Neurogenomics of social behavior: songbird models” PI: D.F. Clayton, Key Personnel: C.N. Balakrishnan and S.E. London (\$971,178) 9/09-9/11.

National Science Foundation, Doctoral Dissertation Improvement Grant (\$11,955) 2003-2004.

INTERNAL GRANTS & SMALL AWARDS

Akron Zoo Conservation Fund “The White-winged Wood Duck: Fighting disease to fight extinction” PI Balakrishnan (\$3,750).

East Carolina University Interdisciplinary Research Award “Mechanisms of song variability in the zebra finch model of learned vocal communication” PIs C.N. Balakrishnan & K. Soderstrom (\$15,878)

Society for Systematic Biology Outreach Award (2015) “Teaching evolutionary biology with brood parasitic birds” PI: C.N. Balakrishnan (\$800).

East Carolina University East-West Collaboration Program “Genomic perspectives on the influence of cannabinoid exposure on vocal learning” PIs: C.N. Balakrishnan and K. Soderstrom (2013/2014, \$24,880)

National Evolutionary Synthesis Center (NESCENT) Catalysis Meeting (2013): “Genome enabled research on manakins”, Project Leaders: B. Loiselle, C. Balakrishnan, K. Bostwick, A. Boyle, M. Braun, E. DuVal and B. Schlinger (2013, supported meeting in Durham, NC).

The University of North Carolina General Administration “High Memory Computing in Support of Bioinformatics at East Carolina University” (2012, \$24,258)

Harvard Museum of Comparative Zoology, Putnam Expedition Grant (2007, \$4,780)

Nuttall Ornithological Club, Charles Blake Fund Grant (2006) (\$2,500)

FELLOWSHIPS & HONORS

Elective Member, American Ornithology Society

Innovation, Entrepreneurship & Engagement Fellowship, East Carolina University, 2016-present

Early Career Award, Thomas Harriot College of Arts & Sciences 2015/2016

Associate Editor, BMC Genomics 2014 - present

National Institutes of Health, Sensory Neuroscience Training Grant 2008-2010


American Ornithologists Union, Postdoctoral Travel Award 2009


Harvard University Certificate for Distinction in Teaching Spring 2007

American Ornithologists Union, Marsha Brady Tucker Travel Award 2004

American Ornithologists Union, Marsha Brady Tucker Travel Award 2003

PUBLICATIONS

1. Lansverk, A.L.*, K. Schroeder*, S.E. London, S.C. Griffith, D.F. Clayton and **C.N. Balakrishnan**. The variability of song variability in wild and domesticated zebra finches *Taeniopygia guttata*. *Under review* (preprint available: [bioRxiv 263913](https://doi.org/10.1101/263913)).
2. Kernbach, M.E., D.J. Newhouse*, J.M. Miller, R.J. Hall, J. Gibbons, J. Oberstaller, D. Selechnik, R. Jiang, T.R. Unnasch, **C.N. Balakrishnan** and L.B. Martin. Light pollution increases west Nile virus competence of a ubiquitous passerine reservoir species. *Under review*.
3. Newhouse, D.J.*, M.B. Serra, E.A. Tuttle, R. Gonser and **C.N. Balakrishnan**. Parent and offspring genotypes influence gene expression in early life. *Under review* (preprint available: [bioRxiv 488684](https://doi.org/10.1101/488684)).
4. Louder M.I.M and **C.N. Balakrishnan**. 2019. "Transcriptome" entry in the Encyclopedia of Animal Cognition and Behavior (J. Vonk and T.K. Shackelford, eds.), *Springer Nature Switzerland*.
5. Horton, B.H., T.B. Ryder, I.T. Moore and **C.N. Balakrishnan**. 2019. Gene expression in the social behavior network of the wire-tailed manakin (*Pipra filicauda*) brain. *Genes, Brains and Behavior*, e12560.
6. Lynch, K.S., L.A. O'Connell, M.I.M. Louder, **C.N. Balakrishnan**, and E.K. Fisher. 2019. Understanding the loss of maternal care in avian brood parasites using preoptic area transcriptome comparisons in brood parasitic and non-parasitic blackbirds. *G3: Genes, Genomes & Genetics* (online early).
7. Hofmeister E.K., **C.N. Balakrishnan** & C.T. Atkinson. Population differences in susceptibility to *Plasmodium relictum* in zebra finches *Taeniopygia guttata*. *Avian Diseases*, Online Early.
8. Louder, M.I.M., M.E. Hauber & **C.N. Balakrishnan**. 2018. Early social experience alters transcriptomic responses to species-specific vocal stimuli in female songbirds. *Brain Behavioural Research* 347, 69-76.
9. Kopp, M., M.S. Servedio, T.C. Mendelson, R.J. Safran, R.L. Rodriguez, E.C. Scordato, L.B. Symes, **C.N. Balakrishnan**, M.E. Hauber, D.M. Zonana, G.S. van Doorn. 2018. Mechanisms of assortative mating in speciation: connecting theory and empirical research. *The American Naturalist* 191(1).
10. Newhouse, D.J.*, E. Hofmeister & **C.N. Balakrishnan**. 2017. Transcriptional response to West Nile virus infection in the zebra finch (*Taeniopygia guttata*). *Royal Society Open Science* 4: 170296.
11. Hofmeister, E., M. Lund, V. Shearn-Boschler & **C.N. Balakrishnan**. 2017. Susceptibility and antibody response of the laboratory model zebra finch (*Taeniopygia guttata*) to West Nile virus. *PLoS One* 12(1): e0167876. doi:10.1371/journal.pone.0167876
12. Davidson, J.D.* & **C.N. Balakrishnan**. 2016. Gene regulatory divergence during speciation in a songbird. *G3: Genes, Genomes & Genetics* 6:1357-1364. 

13. Louder, M.I.M., H.U. Voss, T.J. Manna, S.S. Carryl, S.E. London, **C.N. Balakrishnan** & M.E. Hauber. 2016. Shared neural substrates of species recognition in parental and brood parasitic songbirds. *Neuroscience Letters* 622: 49-54.
14. Hebets, E.A., A.B. Barron, **C.N. Balakrishnan**, M.E. Hauber, P.H. Mason & K.L. Hoke. 2016. A systems approach to animal signaling. *Proceeding of the Royal Society B* 283(1826): 20152889.
15. Tuttle, E.A., A.O. Bergland, M.S. Brewer, D.J. Newhouse*, Z.C. Cheviron, M. Stager. W.C. Warren, R. Gonser, **C.N. Balakrishnan**. 2016. Divergence and functional degradation of a sex chromosome-like supergene. *Current Biology* 26(3):344-350. 

Featured in: *The Molecular Ecologist*, 2016 "Supergenes and sparrows with four sexes"; *Current Biology*, 2016 "Supergenes: The genomic architecture of a bird with four sexes"; *Science*, 2016, "Perspective: Avian Supergenes"
16. Toews, D.P.L, L.Campagna, S.A. Taylor, **C.N. Balakrishnan**, D.T. Baldassarre, P.E. Deane-Coe, M.G. Harvey, D.M. Hooper, D.E. Irwin, C.D. Judy, N. A. Mason, J.E. McCormack, K.G. McCracken, C.H. Oliveros, R.J. Safran, E.S.C. Scordato, K. Faust Stryjewski, A.Tigano, J.A.C. Uy & B.M. Winger. 2016. Genomic approaches to understanding population divergence and speciation in birds. *The Auk: Ornithological Advances*. 133: 13-30.
17. Lansverk, A.L.*, J.B. Dongmo, J.C. Schuetz & **C.N. Balakrishnan**. 2015. Parasitism of the black-crowned waxbill *Estrilda nonnula* by pin-tailed whydahs *Vidua macroura*: implications for coevolution. *Wilson Journal of Ornithology* 127(4):733-739.
18. Newhouse, D.J.* & **C.N. Balakrishnan**. 2015. High MHC diversity despite bottlenecks in wild and domesticated zebra finches. *BMC Evolutionary Biology* 15:256.
19. Singhal, S., E.M. Leffler, K. Sannareddy, I. Turner, O. Venn, D.M. Hooper, A.I. Strand, Q. Li, B. Raney, **C.N. Balakrishnan**, S.C. Griffith, G. McVean, M. Przeworski. 2015. Stable recombination hotspots in birds. *Science* 350: 928-932.

Featured in: *Science*, 2015, "Perspective: Putting the breaks on meiosis"
20. Lin, Y., **C.N. Balakrishnan** & D.F. Clayton. 2014. Functional genomic analysis and neuroanatomical localization of mir-2954, a song responsive, sex-linked microRNA. *Frontiers in Neuroscience* 8:409.
21. **Balakrishnan, C.N.**, M. Mukai, R.A. Gonser, J.C. Wingfield, S.E. London, E.M. Tuttle & D.F. Clayton. 2014. Brain transcriptome sequencing and assembly of three songbird model systems for the study of social behavior. *PeerJ*: e396
-selected as PeerJ "Pick of the Year" 2015
22. Bade L.M*, **C.N. Balakrishnan**, E.M. Pilgrim, S.B. McRae, J.J. Luczkovich. 2014. A genetic technique to identify the diet of cownose rays, *Rhinoptera bonasus*: analysis of shellfish prey items from North Carolina and Virginia. *Environmental Biology of Fishes* 97: 999-1012. DOI: 10.1007/s10641-014-0290-3.

23. **Balakrishnan C.N.**, C. Chapus, M.S. Brewer,* & D.F. Clayton. 2013. Brain transcriptome of the violet-eared waxbill *Uraeginthus granatina* and recent evolution in the songbird genome. *Open Biology* 3(9):130063. doi: 10.1098/rsob.130063
 24. **Balakrishnan, C.N.**, Y. Lin, D.F. Clayton. 2012. RNA-seq transcriptome analysis of male and female zebra finch cell lines. *Genomics* 100:363-369 doi: 10.1016/j.ygeno.2012.08.002
- Publications prior to ECU*
25. Itoh, Y.K., Kampf, **C.N. Balakrishnan** and A.P. Arnold. 2011. Karyotypic polymorphism of the zebra finch Z chromosome. *Chromosoma* 120:255-264. doi: 10.1007/s00412-010-0308-3.
 26. Janes D.E., C. Chapus, Y. Gondo, D.F. Clayton, S. Sinha, C. Blatti, M. Fujita, **C.N. Balakrishnan** and S.V. Edwards. 2011. Reptiles and mammals have differentially retained long non-coding sequences from the amniote ancestor. *Genome Biology and Evolution* 3: 102-113.
 27. Warren et al. 2010 (**C.N Balakrishnan**; author 20 of 84). The genome of a songbird. *Nature* 464: 757-762.
 28. **Balakrishnan, C.N.**, Lee, J. & S.V. Edwards. 2010. Phylogeography and phylogenetics in the nuclear age. Pp. 65-88. In: P.R. and B.R. Grant (eds.) In search of the causes of evolution: from field observations to mechanisms. *Princeton University Press. Princeton, NJ.*
 29. **Balakrishnan, C.N.**, R. Ekblom, R. Godinez, M. Volker, H. Kotkiewicz, H. Westerdahl, D. Burt, T. Graves, D. Griffin, W. Warren and S.V. Edwards. 2010. Gene duplication and fragmentation of the songbird major histocompatibility complex (MHC). *BMC Biology* 8: 29.
 30. Ekblom R., **C.N. Balakrishnan**, T. Burke, J. Slate. 2010. Digital gene expression analysis of the zebra finch genome. *BMC Genomics* 11: 219.
 31. **Balakrishnan, C.N.**, S.V. Edwards & D.F. Clayton. 2010. The zebra finch genome and avian genomics in the wild. *Emu* 110: 233-241.
 32. Nam, K. N., C. Mugal, B. Nabholz, H. Schielzerth, J. Wolf, N. Backström, A. Künstner, **C.N. Balakrishnan**, A. Heger, C. Ponting, D.F. Clayton and H. Ellegren. 2010. Comparative genomics and gene sequence evolution in birds. *Genome Biology* 11: R68.
 33. Künstner, A., J.B. Wolf, N. Backström, O. Whitney, **C.N. Balakrishnan**, L. Day, S.V. Edwards, B.A. Schlinger, R.K. Wilson, E. Jarvis, W.C. Warren and H. Ellegren. 2010. Comparative genomics based on massive parallel transcriptome sequencing reveals patterns of substitution and selection across 10 bird species. *Molecular Ecology* 19: 266-276.
 34. Clayton, D.F., **C.N. Balakrishnan**, & S.E. London. 2009. Integrating genomes, brain and behavior in the study of songbirds. *Current Biology* 19: R865-873.
 35. **Balakrishnan, C.N.** & S.V. Edwards. 2009. Nucleotide variation, linkage disequilibrium and founder-facilitated speciation in wild populations of the zebra finch (*Taeniopygia guttata*). *Genetics* 181: 645-660.

36. **Balakrishnan, C.N.**, K.M. Sefc & M.D. Sorenson. 2009. Incomplete reproductive isolation following host shift in brood parasitic indigobirds. *Proceedings of the Royal Society, Series B* 276: 219-228.
37. **Balakrishnan, C.N.** and M.D. Sorenson. 2007. Dispersal ecology versus host specialization as determinants of ectoparasite distribution in brood parasitic indigobirds and their estrildid finch hosts. *Molecular Ecology* 16: 217-229.
38. **Balakrishnan, C.N.** and M.D. Sorenson. 2006. Premating reproductive isolation among sympatric indigobird species and host races. *Behavioral Ecology* 17: 473-478.
 Featured In: *Science*, 2006, "Speciation Standing In Place"
39. Edwards, S.V., S.B. Kingan, J.D. Calkins, **C.N. Balakrishnan**, W.B. Jennings, W.J. Swanson, M.D. Sorenson. 2005. Speciation in birds: Genes, geography, and sexual selection. *Proceedings of the National Academy of Sciences USA* 102: 6550-6557.
40. Payne, R.B., C.R. Barlow, **C.N. Balakrishnan**, M.D. Sorenson. 2005. Song mimicry by brood-parasitic indigobirds *Vidua camerunensis* of Black-bellied Firefinch *Lagonosticta rara* and other finches in West Africa. *Ibis* 147: 130-143.
41. Sorenson M.D., **C.N. Balakrishnan**, and R.B. Payne. 2004. Clade-limited colonization in brood parasitic finches (*Vidua* spp.). *Systematic Biology* 53(1): 140-153.
42. **Balakrishnan, C.N.**, S.L. Monfort, A. Gaur, L. Singh, M.D. Sorenson. 2003. Phylogeography and conservation genetics of the Eld's deer (*Cervus eldi*). *Molecular Ecology* 12:1-10.
43. Ayyanathan, K., W. J. Fredericks, C. Berking, M. Herlyn, **C. Balakrishnan**, E. Gunter, F. J. Rauscher, III. 2000. Hormone-dependent tumor regression *in vivo* by an inducible transcriptional repressor directed at the PAX3-FKHR oncogene. *Cancer Research* 60 (20): 5803-5814.
44. Rauscher III, F.J., J. F. Morris, W. J. Fredericks, J. L. Guisa, **C. Balakrishnan**, M. Jost, M. Heerlyn, and U. Rodeck. 1998. Characterization of monoclonal antibodies directed to the amino terminus of the WT-1 Wilms Tumor suppressor protein. *Hybridoma* 17: 191-197.

TEACHING EXPERIENCE

East Carolina University:

Biological Evolution (BIOL3620), Fall 2013, Spring 2015,2016,

Genome Evolution (BIOL4240), *Evolution of Genes and Genomes* (BIOL7240), Spring 2012-2014,

Next Generation Sequencing Methods and Data Analysis (BIOL6220), Spring 2013-2017, 2019

Advances in Ecology (BIOL6250), Fall 2014-2016.

University of Illinois: *Social Dynamics in Natural Populations* (MCB 493), Spring 2011

Ornithology (IB 462), Spring 2010, 2011 (guest lectures on Speciation & Phylogenetics)

Harvard University: *Dinosaurs and Their Relatives* (SB57), Teaching Fellow, Spring 2007

Genetics, Genomics and Evolution (LS1B), Teaching Fellow, Spring 2006

Boston University: *Evolution* (BI 504), Teaching Fellow, Spring 2001; *Introductory Biology I Lab* (BI107), Teaching Fellow, Fall 1999 and Head Teaching Fellow, 2000; *Introductory Biology II Lab* (BI108), Teaching Fellow, Spring 2000, 2001, 2003 and Summer 2000

Smithsonian Institution, Conservation & Research Center, Field Instructor/Teaching Assistant: *GIS & Remote Sensing for Wildlife Managers*, Spring 1999, *Field Techniques in Conservation Biology* (BIOL 456, University of Pennsylvania), Fall 1998

INVITED LECTURES

Kansas State University, Division of Biology, Spring 2019

University of Virginia, Fall 2018

University of North Carolina, Chapel Hill, Biology Department, Spring 2018

Smithsonian Institution, National Museum of Natural History, Fall 2017

Georgia Tech, Department of Biology, Fall 2017

Virginia Tech, Department of Biology, Fall 2017

Uppsala University, Department of Evolutionary Biology, Spring 2017

University of Nebraska Lincoln, Lamb Lecture (student invited), Spring 2017

University of California Berkeley, Museum of Vertebrate Zoology, Fall 2016

University of British Columbia, Department of Biology, Fall 2016

Society for Molecular Biology and Evolution, Gold Coast, Australia 2016

Avian Model Systems 9, Taipei, Taiwan 2016

Oklahoma State University, Department of Biology 2015

University of Wisconsin, Madison, J.F. Crow Institute for the Study of Evolution, Darwin Day 2014

East Carolina University, Department of Pharmacology and Toxicology, 2014

College of Charleston, Department of Biology 2014

Smithsonian Conservation Biology Institute 2012

North Carolina State University, Department of Biology 2012

University of North Carolina Asheville, Department of Biology 2012

St. Louis University, Department of Biology, 2011

Indiana State University, Department of Biology, Darwin Keynote and Tri-Beta invited speaker, 2011

Boston University, Biology Department, 2011

University of Southern California, Department of Molecular & Computational Biology, 2010

East Carolina University, Department of Biology 2010

Black Hills State University, Biology Department, 2010

University of Pennsylvania, Department of Biology, 2010

Ohio State University, Evolution, Ecology and Organismal Biology Department, 2009

University of Wyoming, Biology Department, 2008

Black Hills State University, Biology Department, 2008

University of Illinois, Population Ecology, Evolution and Conservation Department, 2008

Case Western Reserve University, Biology Department, 2008

Cornell University, Laboratory of Ornithology, 2007

Philadelphia Academy of Natural Sciences, 2007

Smithsonian Institution, National Museum of Natural History, Genetics Program, 2007

Willamette University, Biology Department, 2007

University Of Illinois, Institute for Genomic Biology, 2007

PRESENTATIONS AT PROFESSIONAL MEETINGS

(last 5 years, presenter in bold)

Lansverk, A, P. Bolton, K. Schroeder, S. London. D. Clayton, S. Griffith, **C.**

Balakrishnan. Genetic and behavioral divergence among zebra finch populations. Songbird and Animal Communication Meeting. Millbrook , NY 2018

Louder, M.I.M, M.E. Hauber, M.S. Brewer, C. Spottiswoode, M.D. Sorenson, C.N.

Balakrishnan. Genomic mechanisms for convergence in the recurrent evolution of avian brood parasitism. International Ornithological Congress, Vancouver, Canada 2018

Newhouse DJ, Barcelo-Serra M, Gonser R, Tuttle E, Balakrishnan C. Transcriptomic impacts of parental care in white-throated sparrow (*Zonotrichia albicollis*) nestlings. International Ornithological Congress, Vancouver, Canada 2018

Newsome, W.B., **J. McKinnon,** C.N. Balakrishnan. Gene expression and reduced sexual dimorphism in threespine stickleback throat coloration. European Society for Evolutionary Biology, Groningen, Netherlands 2017

Louder, M.I.M, M.E. Hauber, M.S. Brewer, C. Spottiswoode, M.D. Sorenson, C.N.

Balakrishnan. Genomic mechanisms for convergence in the recurrent evolution of avian brood parasitism. American Ornithology Society, Canadian Society for Ornithology, Lansing, MI 2017

Newhouse DJ, Barcelo-Serra M, Gonser R, Tuttle E, Balakrishnan C. Transcriptomic impacts of parental care in white-throated sparrow (*Zonotrichia albicollis*) nestlings. American Ornithology Society, Canadian Society for Ornithology, Lansing, MI 2017

Lansverk, A.L, M.S. Brewer, D.F. Clayton, S.C. Griffith, **C.N. Balakrishnan.** Behavioral and genetic consequences of domestication in zebra finches. American Ornithology Society, Canadian Society for Ornithology, Lansing, MI 2017

Louder, M.I.M, M.E. Hauber, M.S. Brewer, C. Spottiswoode, M.D. Sorenson, **C.N.**

Balakrishnan. Genomic perspectives on the origin of brood parasitism. Society for the Study of Evolution, Portland, OR 2017

- Newsome, W.B., **J. McKinnon**, C.N. Balakrishnan. Gene expression and reduced sexual dimorphism in threespine stickleback throat coloration. Society for the Study of Evolution, Portland, OR 2017
- Louder, M.I.M., M.E. Hauber, M.S. Brewer, C. Spottiswoode, M.D. Sorenson, **C.N. Balakrishnan**. Genomic perspectives on the origin of brood parasitism. Winter Animal Behavior Conference, Steamboat CO 2017
- Balakrishnan, C.N.** Speciation and domestication in the zebra finch. Society for Molecular Biology and Evolution, Gold Coast, Australia 2016.
- Balakrishnan, C.N.**, A. Bergland, R. Gonser, W. Warren, D. Newhouse, E. Tuttle. Divergence and degradation of a sex chromosome-like supergene. Avian Model Systems 9, Taipei, Taiwan, 2016.
- Balakrishnan, C.N.**, A. Bergland, R. Gonser, W. Warren, D. Newhouse, E. Tuttle. Divergence and degradation of a sex chromosome-like supergene. Society for Integrative and Comparative Biology, Portland, OR 2016
- Louder, M.I.M.**, H.U. Voss, T.J. Manna, S.S. Carryl, S.E. London, C.N. Balakrishnan & M.E. Hauber. Shared neural substrates of species recognition in parental and brood parasitic songbirds Society for Integrative and Comparative Biology, Portland, OR 2016.
- Newhouse, D.**, E. Hofmeister, C. Balakrishnan. The songbird transcriptome response to west nile virus infection. American Ornithologists Union, Cooper Ornithological Society. Norman, OK, 2015.
- Newsome, W.B.** Jeffrey S. McKinnon, Christopher Balakrishnan. Gene Expression and the Evolution of Reduced Sexual Dimorphism in a Threespine Stickleback Color Trait. International Conference on Stickleback Behavior and Evolution, Stony Brook, New York, 2015
- Hebets, E.**, A. Barron, C. Balakrishnan, M. Hauber, K. Hoke. Communication goes multidisciplinary: a systems approach to animal signaling. Animal Behavior Society. Anchorage, AK, 2015.
- DaCosta, J.**, C. Balakrishnan, J. Dongmo, M. Sorenson. ddRAD-seq analyses of population structure in brood parasitic indigobirds (*Vidua spp.*). American Society of Naturalists, Society for the Study of Evolution, Society of Systematic Biologists. Raleigh, NC, 2014.
- Balakrishnan, C.**, A. Bergland, R. Gonser, W. Warren, D. Newhouse, E. Tuttle. Whole Genome Sequence of the Behaviorally Polymorphic White-Throated Sparrow 1: Population Genomics. American Society of Naturalists, Society for the Study of Evolution, Society of Systematic Biologists. Raleigh, NC, 2014.
- Tuttle, E.**, M. Korody, T. Lear, R. Gonser, M. Houck, O. Ryder, M. Romanov, C. Balakrishnan, A. Bergland, W. Warren. Whole Genome Sequence of the Behaviorally Polymorphic White-Throated Sparrow 1: Mapping Genes for Socio-Genomics.

American Society of Naturalists, Society for the Study of Evolution, Society of Systematic Biologists. Raleigh, NC, 2014.

Davidson, J. and C. Balakrishnan. Towards and avian model for speciation genomics: gene expression divergence in zebra finches (*Taeniopygia guttata*). American Society of Naturalists, Society for the Study of Evolution, Society of Systematic Biologists. Raleigh, NC, 2014.

Lansverk, A. .C. Balakrishnan, D. Newhouse, M. Sorenson and M. Brewer. Accelerated evolution in brood parasitic finches: demography or selection? American Society of Naturalists, Society for the Study of Evolution, Society of Systematic Biologists. Raleigh, NC, 2014.

Newhouse, D. and C.N. Balakrishnan. 2013. MHC polymorphism and divergence in wild and domesticated zebra finches (*Taeniopygia guttata*). American Society of Naturalists, Society for the Study of Evolution, Society of Systematic Biologists. Raleigh, NC, 2014.

Newhouse, D. and C.N. Balakrishnan. 2013. MHC Class I variation in wild and domesticated zebra finches (*Taeniopygia guttata*). South Eastern Population Ecology and Evolutionary Genetics Meeting. Pembroke, Virginia.

Bade, L. C.N. Balakrishnan, S.B. McRae, J. Luczkovich. 2013. A genetic technique to identify the diet of cownose rays, *Rhinoptera bonasus*: analysis of shellfish prey items from North Carolina and Virginia. *American Society of Ichthyologists and Herpetologists*. Albuquerque, New Mexico.

DEPARTMENTAL & UNIVERSITY SERVICE

University: Faculty Senate (current)

Department: Personnel Committee (current), Executive Committee (2015-2017), Behavioral Mechanisms search committee (2013), Fisheries Biology search committee (2016), Graduate committee (2012-2014), Website revision committee (2015), Genomics Core Facility steering committee (2014-present).

Thesis committee: Bade (2013), Cagle (2013), Colts (2013-2014), Clauser (2014-2015), Davidson (2013-2015)*, Denney (2014, Indiana State), Foote (2014-2016)*, Hasan (2016-2017), Newhouse (2013-2014)*, Newsome (2014-2016), Schroeder (2015-2018), Williams (2016-2017), Yoshioka (2014-2015)

Dissertation committees: Brooks (2017-present), Callaway (Indiana State, current), Chen (2013-2016), Cohen (2017-current) Driver*, (2017-current), Foote* (2017-current), Garrison (2017-present) Newhouse* (2014-current), Lansverk* (2012-2017), Twing (2012-2014).

*denotes committee chair

PROFESSIONAL SERVICE & OUTREACH

Nerd Nite: Founder (www.nerdnite.com)

Nerd Nite is an informal lecture series geared towards general audiences. Founded in Boston in 2003, Nerd Nite has spread to over one hundred cities around the world.

Selected Press Coverage: *Nova Next*, 8 January 2014, "Science is everywhere, but are we smarter for it?"; *New York Times*, 5 January 2012, "Continuing education, at the bar"; *New York Times*, 1 June 2008, "Where nerds rule the night"; *Popular Science (Popsci.com)*, 1 April 2008, "Driving intellect and quenching thirst"; *Reuters*, 12 June 2007, "New York City geeks revel in uncoolness at 'nerd nite'"; *Boston Globe*, 18 April 2005, "At some local nightspots, nerds rule"

Society Memberships: Association of Field Ornithologists, American Ornithology Society (Committee on Diversity & Inclusivity, member), Genetics Society of America, Sigma Xi, Society for the Study of Evolution, Society for Integrative and Comparative Biology.

Manuscript Review: *Acta Theriologica*, *Behavioural Brain Research*, *Behavioral Ecology*, *Biochemical Genetics*, *Bioscience*, *Biological Journal of the Linnean Society*, *BMC Evolutionary Biology*, *Conservation Genetics*, *Current Biology*, *Ecosphere*, *Emu*, *Evolution*, *Evolutionary Biology*, *Genome Biology and Evolution*, *Genome Research*, *Journal of Heredity*, *Molecular Biology and Evolution*, *Molecular Ecology*, *PLoS Genetics*, *Proceedings of the National Academy of Sciences*, and *Proceedings of the Royal Society Series B*.

Proposal Review: Graduate Women In Science (GWIS), National Geographic Society, National Science Foundation, Council for Earth and Life Sciences (Netherlands), Swiss National Science Foundation.

Undergraduate mentoring: Dacey Mercer (Boston University), Justin Cooper (Boston University), Pallavi Joshi (Boston University), Nancy Chen (Harvard), Evin Nembhard (Harvard), Xiajuan Zheng (Harvard), Abigail McEwen (Illinois), Shaivya Pathak (ECU), Melissa Bujnis (ECU), Julia Horiates (ECU), Gregory Myers (ECU), Michael Dozier (ECU).