

EDITORIAL

Announcement: Gregory F. Ball wins the 2024 Donald S. Farner Medal for Excellence in Research in the Field of Avian Endocrinology

The International Symposium on Avian Endocrinology (ISAE) has met every 4 years since the late 70s, with the exception that the 2020 meeting was postponed to 2022 due to the Covid-19 pandemic. The 2024 meeting, 13th of the series, took place in April 2024 in Meerut near Delhi in India. One highlight of this meeting is always the announcement of the new winner of the Donald S. Farner Medal for Excellence in Research in the Field of Avian Endocrinology. I am delighted to announce that the Medal was awarded this year to my colleague and friend Dr. Gregory Francis Ball, currently professor in the department of Psychology at the University of Maryland, College Park, MD, USA (Figure 1).

Gregory Ball (Greg for his friends) trained with famous ethologists or behavioral endocrinologists including Rae Silver, Mei Cheng, Colin Beer, John Wingfield, Bruce McEwen, and Peter Marler. He earned a BA in psychology from Columbia University and a PhD in psychobiology from the Institute of Animal Behavior at Rutgers University. He completed his postdoctoral work at Rockefeller University where he did work in the field and in laboratory on wild bird populations. He held faculty appointments at Rockefeller University, Boston College, and, for nearly 24 years, at Johns Hopkins University. He has been at the University of Maryland, College Park, since 2014.

Greg and his trainees performed a number of foundational studies and helped drive a number of impactful projects, all devoted to the analysis of hormones, brain, and behavior in birds. To just list a few of his major contributions:

1. As a postdoc, he conducted studies with John Wingfield that contributed to the establishment of the “challenge hypothesis,” a prominent theory in behavioral endocrinology.
2. With Peter Marler, he studied the hormonal basis of song learning and clarified the role of androgens and estrogens in this process.
3. He established how steroid hormones regulate defined neurotransmitter systems in relation to the seasonal control of song behavior in songbirds.
4. He demonstrated how steroid hormones independently regulate motivational and performance aspects of birdsong production via action on different parts of a complex brain circuit.
5. He was one of the first scientists to link motivational neural systems with the system controlling song production and song learning.

6. He directed comparative studies of sex differences in the song system and established how behavioral variation relates to brain variation among a diverse set of songbird species.
7. He conducted comparative studies of chemical neuroanatomy in birds that provided part of the foundation for the re-evaluation of theories of brain evolution, especially as it relates to avian species.
8. He steered comparative studies of GnRH seasonal plasticity in songbirds, cloned the gene for GnRH-I in songbirds, and established for the first time when the GnRH neuronal system is down-regulated and then upregulated by photoperiod over the course of the seasons.
9. He has also instigated studies to study comprehensively the mechanisms of song production and perception in female songbirds.

Most of this research was carried out in collaboration with a large number of PhD students and postdocs for whom Greg was an outstanding mentor. This is namely attested by the observation that many of them have to this date found tenured or tenure-track jobs in the academic world. This includes 10 graduate students (Dan Bernard, *McGill Univ. CA*; Joe Casto, *Illinois State Univ.*; Tyler Stevenson, *Glasgow Univ. UK*; Melvin Rouse, *Puget Sound Univ.*; Onur Iylicki, *Yale School of Medicine*; Beau Alward, *UCLA*; Karyn Frick, *Univ. of Wisconsin*; Scott MacDougall-Shackleton, *Western Univ. CA*; Tim Gentner, *UCSD*; Chelsea Haakenson, *NIH*) and 10 postdocs (Tom Hahn, *UCDavis*; Lauren Ritters, *Univ. of Wisconsin*; George Bentley, *UC Berkeley*; Catherine Auger, *Univ. of Wisconsin*; Donna Maney, *Emory*; Keith Sockman, *Univ. of North Carolina*; Charlotte Cornil, *Univ. of Liege BE*; Kathleen Lynch, *Hofstra Univ.*; Farah Madison, *Univ. of Wisconsin*; Nora Prior, *Cornell Univ.*; and Karan Odom, *University of the Pacific*). Other more recent trainees are still on their way. This clearly demonstrates the huge influence that Greg Ball had and still has on avian endocrinology.

In collaboration with Jacques Balthazart and Charlotte Cornil at the University of Liege, he also established how testosterone acting via estrogenic metabolites regulates the appetitive and consummatory aspects of male sexual behavior in quail, demonstrating how steroid hormone action modulates these behaviors via action on different parts of the circuit, sometimes via membrane-initiated “non-genomic” actions.

Recently, he has been studying the perception of song in collaboration with his colleague at the University of Maryland, Robert Dooling, discovering that songbirds can perceive acoustic fine structure.



FIGURE 1 Presentation of the Donald S. Farner Medal to Dr. Gregory Ball by Simone Meddle, President of the ISAE 2024 meeting in Meerut, India.



FIGURE 2 Photo of three Farner Medal winners who were present at the ISAE 2024. From left to right: Jacques Balthazart (Farner Medal 2016), Greg Ball (Farner Medal 2024), and John Wingfield (Farner Medal 1996).

As a result, Greg published across his career over 350 papers, reviews, and commentaries, much of the work focusing on the neural mechanisms associated with plasticity, learning, behavior, and reproduction in birds. These papers have now received over 27,000 citations according to Google scholar (H index 85). He was funded by NIH and/or NSF grants during most of his career.

Greg has also been an exceptional mentor. He supervised the work of 29 predoctoral and postdoctoral trainees including 16 women and three members of underrepresented minorities. Among them, a large number occupy tenured or tenure-track academic positions. These trainees have together published over 1500 scientific papers that have attracted more than 66,000 citations. This clearly illustrates the large influence that Greg had on the field of avian endocrinology.

Several of these past trainees (Farah Madison, Scott MacDougall-Shackleton, and Tyler Stevenson) were actually present at this last ISAE in India.

And to complete the picture, Greg has also during the past two decades been an active University administrator. He served as Dean of Research and Graduate Education (2008–2010) and Vice Dean for Science and Research (2010–2014) both at the Krieger School of Arts and Sciences at Johns Hopkins University. Then he moved to the University of Maryland to become Dean of the College of Behavioral and Social Sciences in 2014, where he served for nearly 8 years. And in January 2022, he was appointed as Vice President for Research at both the University of Maryland, College Park, and the University of Maryland, Baltimore. He has thus had an impact

on science and career development well beyond the boundaries of our field.

Greg's accomplished career has already received a number of accolades. He is a fellow of the American Ornithological Society, the American Psychological Association, and the American Psychological Society. He was elected a Fellow of the American Association for the Advancement of Science in 2014. In 2023, he received two major awards recognizing the overall excellence of his entire scientific career: the Lehrman Award of the Society for Behavioral Neuroendocrinology and the Coues award of the American Ornithological Society.

Based on these outstanding achievements and dedication to avian endocrinology, it was thus fully appropriate to award him the Donald S. Farner Medal during the last ISAE in India, where he could be congratulated by his past trainees attending the meeting and two of his colleagues and friends who were previously awarded this Medal (Figure 2).

AUTHOR CONTRIBUTIONS

Jacques Balthazart: Conceptualization; writing – original draft; writing – review and editing.

CONFLICT OF INTEREST

The author declares no conflicts of interest.

PEER REVIEW

The peer review history for this article is available at <https://www.webofscience.com/api/gateway/wos/peer-review/10.1111/jne.13436>.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

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