

Dr. Wendy R Hood
Associate Professor of Biology
Auburn University

Table of Contents

1a. Standard Biographical Data.....	2
1b. Summary of Activities	3
2. Percent Breakdown of Duties	4
3. Honors and Awards	4
4. Scholarly Contributions.....	4
A. Teaching	4
1. Courses taught	4
2. Graduate students whose work has been completed.....	7
3. Graduate students in progress, student awards, and undergraduate and high school research assistants.....	9
4. Courses and curriculum developed.....	18
5. Grants related to teaching.....	20
6. Publications related to teaching.....	21
7. Other contributions to teaching.....	21
8. Teaching philosophy.....	21
B. Research/Creative Work.....	23
1. Books.....	23
2. Article-length publications.....	23
3. Presented papers or lectures	30
4. Exhibitions	38
5. Performances.....	38
6. Patents and inventions.....	38
7. Other research/creative contributions	38
8. Grants and contracts.....	38
9. Scholarly program.....	43
C. Extension	45
D. Service	45
1. University Service	45
5. Grade Distributions in Courses Taught	Error! Bookmark not defined.

1a. Standard Biographical Data

AUBURN UNIVERSITY
Standard Biographical Data
for submission with Promotion/Tenure Review

Name Wendy Renee Hood

Department Biological Sciences College College of Science and Mathematics

Present Rank Associate Professor Years Completed in Present Rank 4.5

Years of Faculty Service at AU 13.5 Years in Faculty Service Elsewhere 5.0

Type of Current Appointment: X Tenured Non-Tenured

Pay Basis: X 9 mo. 12 mo.

Graduate Faculty Status: X Member None Date Awarded: 1/2012

Education: Institution List most recent first.	Degree	Major	Date Awarded
<u>Boston University</u>	<u>PhD</u>	<u>Biology</u>	<u>2001</u>
<u>Boston University</u>	<u>MS</u>	<u>Biology</u>	<u>1998</u>
<u>Boston University</u>	<u>BA</u>	<u>Marine Biology</u>	<u>1993</u>

Professional Experience: Institution Include AU Experience. List most recent first.	Rank	Period of Appointment
<u>Auburn University</u>	<u>Associate Professor</u>	<u>Oct 2016 - Present</u>
<u>Auburn University</u>	<u>Assistant Professor</u>	<u>Jan 2012 – Sept 2016</u>
<u>Auburn University</u>	<u>Assistant Research Professor</u>	<u>Jul 2007 - Dec 2011</u>
<u>Coastal Carolina University</u>	<u>Assistant Professor</u>	<u>Aug 2002 - Jun 2007</u>
<u>Fordham University</u>	<u>Postdoctoral Researcher</u>	<u>Jun 2000 - Jul 2002</u>

I have reviewed (except letters) the contents submitted in the attached dossier:

Signature: _____ Date: _____

1b. Summary of Activities

Abbreviations: **AU** – Auburn University
CCU – Coastal Carolina University

TEACHING (50%)	
Courses Taught while at Auburn <ul style="list-style-type: none"> BIOL 3010 Comparative Anatomy BIOL 4970/7970 <u>Physiological Ecology of Reproduction</u> BIOL 4970/7970 <u>Animal Energetics</u> BIOL 5750/6750 Ornithology BIOL 5760 <u>Mammalogy</u> BIOL 4920 Internship in Biology BIOL 4980 Undergraduate Research BIOL 4997 Honors Thesis New Courses Developed while at Auburn <ul style="list-style-type: none"> See underlined above 	Advising (in Career and while at Auburn) <ul style="list-style-type: none"> PhD Committees <ul style="list-style-type: none"> <i>Completed:</i> <ul style="list-style-type: none"> Total/AU: 3 Chair, 5 Member <i>In progress:</i> <ul style="list-style-type: none"> Total/AU: 5 Chair, 8 Member Masters of Science Committees <ul style="list-style-type: none"> <i>Completed:</i> <ul style="list-style-type: none"> Total: 12 Chair, 9 Member AU: 9 Chair, 8 Member <i>In progress:</i> <ul style="list-style-type: none"> Total/AU: 0 Chair, 0 Member Undergraduate research advisees while at AU <ul style="list-style-type: none"> Total: 309 Independent projects: 22
RESEARCH (45%)	
Research Grants while at Auburn <ul style="list-style-type: none"> Total external awards: \$5,290,325 as PI or co-PI; <i>From:</i> National Science Foundation, National Institutes of Health, Kaytee Pet Products Total internal award: \$949,638 as PI or Col; <i>From:</i> Presidential Award for Interdisciplinary Research; AU-Intramural Grant, Alabama Agricultural Experiment Station Hatch Grant Select Research Awards while at Auburn <ul style="list-style-type: none"> NSF CAREER Award NSF EPSCoR Track II Publications (in Career and while at Auburn) <ul style="list-style-type: none"> Book Chapters: Total = 6, AU = 2 Refereed Journal Articles: Total = 53, AU = 45 Non-peer Reviewed Articles: Total/AU = 1 Citations as of 1/18/21: Total citations = 1029; h-index = 17; i10-index = 27 	Presentations (in Career and while at Auburn) <ul style="list-style-type: none"> Invited lectures: Total = 16, AU = 13 Invited presentations at professional meetings: Total/AU = 4 Presentations at professional meetings: Total = 117, AU = 108 Selected Advisee Awards while at Auburn <ul style="list-style-type: none"> NSF-Postdoctoral Research Fellowship Auburn University Master's Thesis Award NSF-Graduate Research Fellowship Program (outgoing undergrad) Outstanding Oral Presentation, Comparative Nutrition Society Meeting Auburn Graduate School's Outstanding Doctoral Student Award Auburn Mazey Graduate Fellowship for Women in Sciences Best poster, Society for Integrative and Comparative Biology Meeting
SERVICE AND OUTREACH (5%)	
Service at Auburn Reviewer: NSF IOS panel, NSF IOS-CAREER panel, NIH Biomedicine and Agriculture review panel, NSF-Graduate Research Fellowship Research Program panelist, numerous journal articles Elected: President and secretary of the Comparative Nutrition Society Editorial Board: Physiological and Biochemical Zoology, Frontiers in Ecology and Evolution University: NSF-GRFP presentations for Honors college, Green Labs Committee College: Research advisory committee, Biomedical Advisory committee, Science Fair judge Department: Chair BEEC, Chair Diversity, Equity, and Inclusion, Graduate studies, Graduate recruitment, Chair and member 2 faculty searches, chair Aviary committee, Dept awards and Strategic planning committees Outreach at Auburn College: Summer Science Institute, Arboretum Days; Get Under the Surface, Science Cafe Alabama K-12: 7 th and 9 th grade lesson plans prepared associated with CAREER award	

2. Percent Breakdown of Duties

Allocation of Time:	<u>Activity</u>	<u>Percent</u>
	Teaching	50%
	Research	45%
	Service/Extension	5%

3. Honors and Awards

- 2020, Young Investigator Award, Auburn University College of Sciences and Mathematics
- 2016, Outstanding Graduate Mentor Award, Auburn Univ. Graduate School
- 2013, DBS Nominee Provost's Award for Faculty Excellence in Undergraduate Research Mentoring
- 2012, DBS Nominee Provost's Award for Faculty Excellence in Undergraduate Research Mentoring
- 1998, National Institutes of Health Reproduction Training Fellowship, Boston University

4. Scholarly Contributions

A. Teaching

1. Courses taught

1a. Teaching at Auburn University

(courses <6000 undergraduate level, courses \leq 6000 graduate level)

Semester	BIOL No.	Course	% Taught	Credit Hours		Enrolled
				Class	Lab	
Spring 2021	3010	Comparative Anatomy	100	3	1	58
	4980	Undergraduate Research	100	0	0	28
	7990	Research and Thesis	100	0	0	1
	8990	Research and Dissertation	100	1	0	2
Fall 2020	5760	Mammalogy	100	3	1	37
	6760	Mammalogy	100	3	1	7
	4980	Undergraduate Research	100	2	0	9
	7990	Research and Thesis	100	1	0	0
	8990	Research and Dissertation	100	1-3	0	7
Summer 2020	4980	Undergraduate Research	100	0	2	1
	8990	Research and Dissertation	100	0	1	4
Spring 2020	4980	Undergraduate Research	100	0	2-4	25
	7990	Research and Thesis	100	0	1	1
	8990	Research and Dissertation	100	0	1-3	4
Fall 2019	5760	Mammalogy	100	3	1	38
	6760	Mammalogy	100	3	1	5
	4980	Undergraduate Research	100	2-4	0	25
	7990	Research and Thesis	100	1	0	1
	8990	Research and Dissertation	100	1	0	1
Summer 2019	4980	Undergraduate Research	100	0	2-3	4

	7990	Research and Thesis	100	0	1	2
	8990	Research and Dissertation	100	0	1	3
Spring 2019	7550	Physiological Ecology of Reproduction	50	3	0	11
	4980	Undergraduate Research	100	0	2-4	17
	8990	Research and Dissertation	100	0	3	1
Fall 2018	3010	Comparative Anatomy Lecture	100	3	0	76
	3011	Comparative Anatomy Lab	100	0	1	60
	4980	Undergraduate Research	100	0	2-4	21
	8990	Research and Dissertation	100	0	1-3	2
Summer 2018	4980	Undergraduate Research	100	0	2	2
	7990	Research and Thesis	100	0	1-4	4
	8990	Research and Dissertation	100	0	1	2
Spring 2018	5750	Ornithology	100	3	1	39
	6750	Ornithology	100	3	1	5
	4980	Undergraduate Research	100	0	2-4	14
	7970	Special Topics	100	3	0	1
	7990	Research and Thesis	100	0	1	1
	8990	Research and Dissertation	100	0	1	2
Fall 2017	3010	Comparative Anatomy	100	3	1	91
	4980	Undergraduate Research	100	0	2-4	21
	8990	Research and Dissertation	100	0	3	1
Summer 2017	4980	Undergraduate Research	100	0	2	5
	7990	Research and Thesis	100	0	1	1
	8990	Research and Dissertation	100	0	2	1
Spring 2017	7970	Physiological Ecology of Reproduction	50	3	0	9
	4980	Undergraduate Research	100	0	2-3	19
	7990	Research and Thesis	100	0	1	2
	8990	Research and Dissertation	100	0	1-3	1
Fall 2016	3010	Comparative Anatomy	100	3	1	95
	4980	Undergraduate Research	100	0	2-4	18
	8990	Research and Dissertation	100	0	1-3	2
Summer 2016	4980	Undergraduate Research	100	0	2	3
	7990	Research and Thesis	100	0	1	1
	8990	Research and Dissertation	100	0	1	1
Spring 2016	4970	Animal Energetics	100	2	0	2
	7970	Animal Energetics	100	2	0	10
	4980	Undergraduate Research	100	0	2	1
	7990	Research and Thesis	100	0	1-2	2
	8990	Research and Dissertation	100	0	1	4
Fall 2015	3010	Comparative Anatomy	100	3	1	54
	4980	Undergraduate Research	100	0	2-4	17
	7970	Directed Study in Human Reproduction	100	0	2	1
	7990	Research and Thesis	100	0	1	1
	8990	Research and Dissertation	100	0	2	1
Summer 2015	4980	Undergraduate Research	100	0	2-3	6
	7990	Research and Thesis	100	0	1	1
	8990	Research and Dissertation	100	0	2	1
Spring 2015	4970	Physiological Ecology of Reproduction	50	3	0-1	10
	7970	Physiological Ecology of Reproduction	50	3	0	4
	4980	Undergraduate Research	100	0	2-4	13
	4997	Honors Thesis	100	0	3	1
	7990	Research and Thesis	100	0	1-4	2
Fall 2014	4920	Internship in Biology	100	0	3	1
	4980	Undergraduate Research	100	0	2-3	11
	7990	Research and Thesis	100	0	1	1

	8990	Research and Dissertation	100	0	2	1
Summer 2014	4980	Undergraduate Research	100	0	2	2
Spring 2014	5750	Ornithology	100	3	1	48
	6750	Ornithology	100	3	1	6
	4920	Internship in Biology	100	0	3	1
	4970	Mentored Ornithology Teaching	100	0	3	1
	4980	Undergraduate Research	100	0	2-3	13
	4997	Honors Thesis	100	1	3	1
Spring 2104 cont.	7960	Special Problems	100	0	4	1
	7990	Research and Thesis	100	0	4	1
Fall 2013	3010	Comparative Anatomy	100	3	1	93
	4980	Undergraduate Research	100	0	2-4	22
	7960	Special Problems	100	0	4	1
	7990	Research and Thesis	100	0	2	1
Summer 2013	4980	Undergraduate Research	100	0	2-4	1
	4980	Undergraduate Research	100	0	3	3
	4980	Undergraduate Research	100	0	2	2
	7990	Research and Thesis	100	0	1	1
Spring 2013	7970	Repro. Physiology, Ecology & Evolution	50	3	0	2
	4970	Repro. Physiology, Ecology & Evolution	50	3	0	14
	4980	Undergraduate Research	100	0	2	14
	4997	Honors Thesis	100	0	3	1
	7990	Research and Thesis	100	0	3	1
Fall 2012	3010	Comparative Anatomy	100	3	1	94
	4980	Undergraduate Research	100	0	2-4	14
	4997	Honors Thesis	100	0	3	1
	7960	Special Problems	100	0	2	1
	7990	Research and Thesis	100	0	2	1
Summer 2012	4980	Undergraduate Research	100	0	2	2
	8990	Research and Dissertation	100	0	1	1
Spring 2012	4980	Undergraduate Research	100	0	2-3	8
Fall 2011	4980	Undergraduate Research	100	0	2-3	10
Summer 2011	4980	Undergraduate Research	100	0	2	1
Spring 2011	4980	Undergraduate Research	100	0	2-4	6
	4997	Honors Thesis	100	0	3	1
Fall 2010	4980	Undergraduate Research	100	0	2-4	6
Summer 2010	4980	Undergraduate Research	100	0	2	4
Spring 2010	4980	Undergraduate Research	100	0	2-3	9
Fall 2009	4980	Undergraduate Research	100	0	2-4	13
Summer 2009	4980	Undergraduate Research	100	0	2	2
Spring 2009	4980	Undergraduate Research	100	0	2	11
	7990	Research and Thesis	100	0	1	1
Fall 2008	4980	Undergraduate Research	100	0	2-3	10

1b. Teaching at Coastal Carolina University

Semester	Course (all undergraduate unless otherwise noted)	% Taught	Credit Hours	Enrolled
Spring 2007	General Biology	100	3	46
	General Biology	100	3	27
	General Biology	100	3	14
	Vertebrate Sampling and Collection (grad)	100	4	7

Fall 2006	Comparative Vertebrate Anatomy	100	3	15
	Comparative Vertebrate Anatomy Lab	100	1	15
	General Biology	100	3	43
Spring 2006	General Biology	100	3	58
	General Biology	100	3	41
	General Biology	100	3	12
Fall 2005	Comparative Vertebrate Anatomy	100	3	24
	Comparative Vertebrate Anatomy Lab	100	1	24
	General Biology	100	3	50
Summer 2005	Natural History of East Africa	50	4	18
Spring 2005	General Biology	100	3	52
	General Biology	100	3	48
	General Biology	100	3	18
Fall 2004	Comparative Vertebrate Anatomy	100	3	17
	Comparative Vertebrate Anatomy Lab	100	1	17
	Animal Behavior (undergrad & grad)	50	3	18
	Animal Behavior Laboratory (undergrad & grad)	50	1	18
Summer 2004	Reproduction, a Model for Integrating Biol. Disciplines	50	3	6
	Reproduction, a Model for Integrating Biol. Disciplines	50	1	6
	Lab (grad – education program)			
Spring 2004	General Biology	100	3	46
	General Biology	100	3	41
	General Biology	100	3	21
Fall 2003	Comparative Vertebrate Anatomy	100	3	19
	Comparative Vertebrate Anatomy Lab	100	1	19
	General Biology:	100	3	53
Spring 2003	General Biology	100	3	51
	General Biology	100	3	46
	General Biology Lab	100	1	21
	General Biology Lab	100	1	17
Fall 2002	Comparative Vertebrate Anatomy	100	3	20
	Comparative Vertebrate Anatomy Lab	100	1	20
	General Biology	100	3	39

2. Graduate students whose work has been completed

As major professor:

Name	Awarding Univ.	Degree	Grad. Date	Current Position	Role
Victoria Andreassen	AU	MS	8/20	Technician, UGA Poultry Diagnostic Center	Major professor
Title: <i>The persistent effects of stress during lactation on maternal and offspring mitochondria</i>					
Chloe Josefson	AU	PhD	5/20	Post-doc, Univ Idaho	Major professor
Title: <i>Physiological costs of reproduction in female house mice</i>					
Halie Taylor	AU	MS	8/19	Nutritionist, HI	Major professor
Title: <i>Oxidative and endoplasmic reticulum stress in response to reproduction in the female mouse brain</i>					
Noel Park	AU	MS	8/18	PhD student Princeton	Major professor

Title: *Mitochondrial function and oxidative stress in response to induced reactive oxygen species and reproduction*

Alexandra Conte/Santos	AU	MS	8/17	Real Estate Agent, Pelham, AL	Major professor
-------------------------------	----	----	------	-------------------------------	-----------------

Title: *What do we really know about oxidative stress? Facing the problems with current oxidative stress studies in passerine birds*

Matthew Warren	AU	MS	8/16	PhD student NCSU	Major professor
-----------------------	----	----	------	------------------	-----------------

Title: *Effects of dietary protein on fecal and milk microbiota*

Chih-Wei Chen	AU	MS	8/15	PhD student Univ. of Illinois.	Major professor
----------------------	----	----	------	--------------------------------	-----------------

Title: *The impact of maternal protein intake and litter size on organ and stress axis development in the house mouse (Mus musculus)*

Annelise Mowry	AU	MS	8/15	Research Scientist; Stim Labs, GA	Major professor
-----------------------	----	----	------	-----------------------------------	-----------------

Title: *Energetic tradeoffs between reproduction and longevity in the house mouse (Mus musculus)*

Aubrey Sirman	AU	MS	8/14	PhD, ND State Univ.	Major professor
----------------------	----	----	------	---------------------	-----------------

Title: *The developmental environment and metabolism in the house mouse (Mus musculus)*

Maria Costantini	AU	MS	8/13	PhD student U Hawaii	Co-major prof.
-------------------------	----	----	------	----------------------	----------------

Title: *The effect of male plumage coloration on parental effort in Eastern Bluebirds (Sialia sialia)*

Amy Skibiel	AU	PhD	8/12	Assist. Prof. U Idaho	Major professor
--------------------	----	-----	------	-----------------------	-----------------

Title: *The evolution of milk composition and lactation strategy of the Columbian ground squirrel*

Christina Schmidt	AU	PhD	12/11	Assist. Prof. Wells College	Major professor
--------------------------	----	-----	-------	-----------------------------	-----------------

Title: *The effects of dietary and skeletal calcium availability on reproductive performance of mammals*

Travis Scott	CCU	MS	1/09	Environmental Consultant	Major professor
---------------------	-----	----	------	--------------------------	-----------------

Title: *Bat species richness and edge habitat use on a coastal island in South Carolina*

Ed Parsons	CCU	MS	11/08	Curator, Ripley's Aquarium	Major professor
-------------------	-----	----	-------	----------------------------	-----------------

Title: *Algae consumption and coloration in bluegill sunfish*

Mario Lawrence	CCU	MS	6/08	Director, Catocin Zoo	Major professor
-----------------------	-----	----	------	-----------------------	-----------------

Title: *Abundance, richness, and habitat preferences of small mammals on Spring Island, SC*

As a committee member:

Name	Awarding Univ.	Degree	Grad. Date	Current Position	Role
Roy Ge	AU	Ph.D.	8/18	Museum position China	Committee member
Aundrea Westfall	AU	M.S.	8/18	PhD student U. Texas	Committee member
Hayden Hyatt	AU	Ph.D.	8/17	Post-doc U Florida	Committee member
Eliana Stillion	AU	MS-NT	8/16	Nurse	Committee member
Kristin Rubach	AU	M.S.	5/16	Applying for Vet School	Committee member
Samuel Hirt	AU	Ph.D.	12/15	Faculty Southern Virginia Univ.	Committee member
Lydia Moore	AU	M.S.	8/12	PhD student AU Biol Sci	Committee member
Jeff Daniel	AU	MS-NT	8/12	Post-doc U Michigan	Committee member

Rain Fu	AU	MS	8/12	PhD student AU Pharmacy	Committee member
Nandini Rajamani	AU	PhD	8/11	Biologist, Indiabioscience	Committee member
Lelas 'Ches' Smith	AU	MS	6/11	Instructor, NW-Shoals Community College	Committee member
Kristal Huggins	AU	MS	8/08	Instructor, Xavier Univ.	Committee member
Roy McClements	U Sydney	PhD	6/07	Deceased	External examiner

3. Graduate students in progress, student awards, and undergraduate and high school research assistants

3a. Graduate Students in progress

As major professor:

Name	Awarding Univ.	Degree	Start Date	Est. Compl.	Current status	Role
Emma Rhodes	AU	PhD	8/20	5/24	Continuing student	Major professor
Kaylene Yamata	AU	PhD	8/18	5/22	Continuing student	Major professor
Shelby Zikeli	AU	PhD	8/18	5/22	Continuing student	Major professor
Ashley Williams	AU	PhD	8/17	5/22	Continuing student	Major professor
Kyle Heine	AU	PhD	8/17	5/21	Continuing student	Major professor

As a committee member:

Name	Awarding Univ.	Degree	Start Date	Est. Compl.	Current status	Role
Natalia Rivera Rincon	AU	PhD	8/20	5/22	Continuing student	Committee member
Jake Botello	AU	PhD	8/18	5/22	Continuing student	Committee member
Zheren Ou	AU	PhD	8/19	5/23	Continuing student	Committee member
Tori Coutts	AU	PhD	8/19	5/23	Continuing student	Committee member
Hailey Parry	AU	PhD	8/17	8/21	Continuing student	Committee member
Catrice Hixon	AU	PhD	8/17	5/21	Continuing student	Committee member
Abby Beatty	AU	PhD	PhD	5/21	Continuing student	Committee member
Jenna Pruet	AU	PhD	8/16	5/20	Continuing student	Committee member

3b. Graduate student honors / awards while under my direction

Auburn University:

Kyle Heine	Kenneth Ottis Distinguished Graduate Student (2019)
Kyle Heine	American Microscopical Society Student Research Fellowship (2019)
Alexandra Conte	Sigma Xi Grant-in-Aid of Research (2017)
Noel Park	Sigma Xi Grant-in-Aid of Research (2017)
	UAB Center for Exercise Medicine 5th Annual Symposium Best Poster, UAB (2017)
Chloe Josefson	National Science Foundation Postdoctoral Research Fellowships in Biology (2019)
	Kenneth Ottis Distinguished Graduate Student (2019)
	Society of Integrative and Comparative Biology, Grant in Aid (2017)
Matthew Warren	American Society of Mammalogist, Grant-in-Aid of Research (2015)
	Best oral presentation, Minorities in Agriculture, Natural Resources, and Related Sciences (2015)
	Sigma Xi Grant-in-Aid of Research (2014)

Chih-Wei Chen	Auburn Graduate School Thesis Research Award (2014)
Annelise Mowry	Auburn Graduate School Master's Thesis Award (2015) Cellular and Molecular Biology Graduate Fellow (2013-2014) American Society of Mammalogist, Grant-in-Aid of Research (2014) Alabama Academy of Sciences Grant (2014)
Alexandra Bentz	Cellular and Molecular Biology Graduate Fellow (2012-2013) National Science Foundation Graduate Research Fellowship Program (2013) North American Bluebird Society Research Society (2013)
Aubrey Sirman	Cellular and Molecular Biology Peaks of Excellence Research Fellowship (2013) Cellular and Molecular Biology Peaks of Excellence Research Fellowship (2014) American Society of Mammalogist, Grant-in-Aid of Research (2014) Alabama Academy of Sciences Grant (2014) Auburn Graduate School Thesis Research Award (2014)
Amy Skibiel	Auburn Graduate School Dissertation Research Award (2011) Student marshal at graduation, College of Graduate Studies (2012) Cellular and Molecular Biology Peaks of Excellence Research Fellowship (2012) Kenneth Ottis Distinguished Graduate Fellowship (2012) 2nd Place Oral Presentation, AU Graduate Scholars Forum (2011) Best Poster, Society of Integrative and Comparative Biology (2011) Mazey Graduate Fellowship for Women in Science (2010) Margaret McNeal Arant Memorial Award in Zoology (2009) Graduate School's Outstanding Doctoral Student Award (2009) Biological Sciences Graduate Teaching Assistant Award (2008)
Christina Schmidt	Auburn Graduate School Dissertation Research Award (2010) Society of Integrative and Comparative Biology, Grant in Aid (2010) Outstanding Oral Presentation, Comparative Nutrition Soc (2010) 2nd Place Oral Presentation, AU Graduate Scholars Forum (2010) Honorable mention-poster, Soc. for Integrative and Comparative Biology (2009) American Society of Mammalogist, Grant-in-Aid of Research (2009) Alabama Commission on Higher Education Scholarship (2008-2009) American Society of Mammalogist, Grant-in-Aid of Research (2008)

Coastal Carolina University:

M. Edward Parsons	Best poster, Comparative Nutrition Society (2006)
--------------------------	---

3c. Graduate Committees outside Auburn (External Examiner)

None at this time (see completed for prior students)

3d. Undergraduate research students at Auburn University

Dates completing research in my lab, name, current position. Students in bold completed an independent project; all others participated in ongoing projects.

- Spring 2021, Alex Merchlinsky – Current AU student
- Spring 2021, Amanda Assad – Current AU student
- Spring 2021, Callie Pike – Current AU student
- Spring 2021, Caroline Silva – Current AU student
- Spring 2021, Christian Just – Current AU student
- Spring 2021, Dylan Ogle – Current AU student
- Spring 2021, Emilee Hale – Current AU student
- Spring 2021, Eric Ausborn – Current AU student
- Spring 2021, Han Xiao – Current AU student

- Spring 2021, Hannah Eubanks – Current AU student
- Spring 2021, Kathryn Mussell – Current AU student
- Spring 2021, Katrina Messinger – Current AU student
- Spring 2021, Lindsey Goodwin – Current AU student
- Spring 2021, Mary Wells – Current AU student
- Spring 2021, Nikki Gassman – Current AU student
- Spring 2021, Payton Brewer – Current AU student
- Spring 2021, Raul Quebrado – Current AU student
- Spring 2021, Ray Cooper – Current AU student
- Spring 2021, Riley Conolley – Current AU student
- Spring 2021, Will Windham – Current AU student
- Fall 2020-current, Chloe Waites – Current AU student
- Fall 2020-current, Bennett Skiff – Current AU student
- Fall 2020-current, Kruthi Gopal – Current AU student
- Fall 2020-current, Brooke Bengert – Current AU student
- Spring-Summer 2020, Kayln Anderson– AU graduate
- Spring 2020-current, Kamryn Clark–current AU student
- Spring 2020-current, Lindsay Guy–current AU student
- Spring 2020-current, Caitlin McIlwain– AU graduate
- Spring 2020, Mackenzie Neth– AU graduate
- Spring 2020-current, James Pittman–current AU student
- Spring 2020, Gracie Price– AU graduate
- Spring 2020, Rachel Sewell– AU graduate
- Spring 2020, Kayla Shoaff– AU graduate
- Fall 2019-current, Jack Fain–current AU student
- Fall 2019- Spring 2020, Tommy Creech– AU graduate
- Fall 2019-Fall 2020, Alec Dupont–current AU student
- Fall 2019- Spring 2020, Danielle Baer– AU graduate
- Fall 2019- Spring 2020, Presley Styles– AU graduate
- Summer 2019-Fall 2019, James Accord– AU graduate
- Summer 2019- Spring 2020, Stephanie Barth-current AU student
- Summer 2019-Peyton Campbell-AU graduate
- Summer 2019- Spring 2020. Juan Coba–current AU student
- Summer 2019- Spring 2020, Peter Doan–current AU student
- Summer 2019- Spring 2020, Chad Johndrow–current AU student
- Summer 2019-Katherine Dixon– AU graduate
- Summer 2019- Spring 2020, Hannah Kirby– AU graduate
- Summer 2019-Spring 2020, Hannah Meade– AU graduate
- Summer 2019- Spring 2020, Shelby Meyer– AU graduate
- Summer 2019-Fall 2019, Kelsey Miller– AU graduate
- Summer 2019-Spring 2020, Jada Nix–current AU student
- Summer 2019- Spring 2020, Rachel Payton– AU graduate
- Summer 2019- Spring 2020, Rachel Sewell– AU graduate
- Spring 2019- Spring 2020, Matt Holley– AU graduate
- Spring 2019- Spring 2020, Haley Kirby– AU graduate
- **Spring 2019-Summer 2020, Erin LaGrone**–current AU student
- Spring 2019- Spring 2020, Spring Li– AU graduate
- Spring 2019-Spring 2020, Carolyn McArdle–current AU student
- Spring 2019, Hunter Richardson–AU graduate
- Spring 2019, Kody Strohmeyer–AU graduate
- Fall 2018, Trey Adkins – AU graduate
- Fall 2018-Spring 2019, Virginia Allison – current AU student
- Fall 2018-Fall 2019, Deel Amrit – current AU student

- Fall 2018, Jakeiia Bedgood – AU graduate
- **Fall 2018-Spring 2020, JB Chang – current AU student**
- Fall 2018-Spring 2020, LouAnn Crosby – Hood lab technician
- Fall 2018-Spring 2019, Nate Dennis– AU graduate
- Fall 2018- Spring 2019, Kelly Dorsey – AU graduate
- Fall 2018, Brittany Gamble – AU graduate
- Fall 2018- Spring 2019, Jean Jiang – current AU student.
- Fall 2018, Bryanna Meredith – AU graduate
- Fall 2018-Spring 2020, Virginia Nisbet – current AU student
- Fall 2018-Fall 2019, Nick Owings – AU graduate
- Fall 2018- Spring 2019, Ben Pollock – AU graduate
- Fall 2018-Spring 2019, Mason Rajan – AU graduate
- Fall 2018- Spring 2020, Mary Alice Strohmeyer – AU graduate
- Fall 2018-Spring 2019, Julia Wright – AU graduate
- Spring 2018- Spring 2019, Jacob Abraham – AU graduate
- Spring 2018- Spring 2019, Breanna Caldwell – AU graduate
- Spring-Fall 2018, Elizabeth Clark – AU graduate
- Spring 2018-Spring 2019, Kelly Dorsey – AU graduate
- Spring 2018, Jack Harmon – AU graduate
- Spring 2018- Spring 2019, Daniel Jung – AU graduate
- Spring 2018, Taylor Parsons – AU graduate
- Spring 2018-Spring 2019, Victoria Tucker– AU graduate
- Spring-Summer 2018, Julia Watson– AU graduate
- Fall 2017, Josh Anderson –AU graduate
- Fall 2017-Spring 2018, Kirkland Bradshaw – Medical School
- Fall 2017-Spring 2018, Rachel Castor - AU graduate
- Fall 2017-Spring 2018, Catherine Christian - AU graduate
- Fall 2017, Fall 2018, Abria Grimmer – AU graduate
- Fall 2017, Nnedi Obichi – AU graduate
- Fall 2017, Claire Smith – AU graduate
- Summer 2017- Spring 2019, Kaytlyn Carter – AU graduate
- Summer 2017-Spring 2018, Jordan Marques – Medical school
- Summer 2017-Fall 2018, Jerry Garcia Medrano – AU graduate
- Summer 2017, Fall 2018, Meg McCalley – AU graduate
- Summer 2017-Fall 2017, Doyeon Park – AU graduate
- Summer-Fall 2017, Marina Stewart – AU graduate
- Summer 2017, Niamke Skropshire-Boykin – AU graduate
- Spring 2017-Summer 2017, Will Laidig – AU graduate
- Spring 2017, Drew Dispennette – AU graduate
- Spring 2017, Ashley Chapman – AU graduate
- Spring-Fall 2017, Coleman Churitch – AU graduate
- Spring 2017- Spring 2019, Jake Dennis – AU graduate
- Spring 2017-Fall 2017, Tajnea Foster – AU graduate
- Spring-Summer 2017, Peter Gacek – AU graduate
- Spring 2017, Sarah Hayward – AU graduate
- Spring 2017, Alex Henderson – current AU student
- Spring 2017, Shelly Jones – current AU student
- Spring 2017, Abby Kushner – AU graduate
- Spring 2017-Fall 2017, Hannah Lester – AU graduate
- Spring 2017, Myles McAtee – AU graduate student
- Spring 2017-Summer 2017, Sarah Payne – AU graduate
- Spring 2017, Jake Picicci – AU graduate
- Spring 2017-Spring 2017, Angelica Thompson – AU graduate

- Fall 2016-Fall 2017, Megan Baggett – AU graduate
- **Fall 2016- Spring 2018, Rachel Heard – AU graduate**
- Fall 2016, Jessica Hicks – AU graduate
- Fall 2016, Lauren Leigh – AU graduate
- **Fall 2016, Sam Lubor – Medical School**
- Fall 2016-Spring 2017, Alex Patrick – AU graduate
- Fall 2016-Spring 2017, Thomas Rosandich – AU graduate
- Summer 2016, Scott Buksa – AU graduate
- **Summer 2016-current, Kayla Frey – Medical School**
- Summer 2016, Taylor Gilliland – AU graduate
- Summer 2016-Spring 2017, Greg Goodreau – AU graduate
- Summer 2016-Spring 2017, Scott McClure – AU graduate
- Summer 2016-Spring 2017, Sam Motz – AU graduate
- Summer 2016-Fall 2016, Sachin Sinha – AU graduate
- Summer 2016- Fall 2017, Caroline Richardson – Medical school
- Summer 2016, David Rohlfis – AU graduate
- Summer 2016, Ken Thompson – AU graduate
- Summer 2016, Zac Wood – AU graduate
- Summer 2016, Riley Woodruff – AU graduate
- **Summer 2016-Summer 2017, Mary Kash – AU graduate**
- Summer 2016, Rachel Heard – current AU student
- Summer 2016-Fall 2016, Catherine Tran – Pharmacy school
- Summer 2016, Jessica Hicks – current AU student
- Spring-Fall 2016, Kristian Duraski – current AU student
- Spring 2016, Sinyeong Kim – AU graduate
- Spring 2016-Fall 2016, Ryan Meacham – AU graduate
- Fall 2015-Fall 2016, Candace Clemmons – Med school
- Fall 2015, Kyung Jun Kim – AU graduate
- Fall 2015, Lauren Miele – AU graduate, applying to medical school
- Fall 2015- Spring 2016, Ellen Rawls – AU graduate
- Fall 2015- Spring 2016, Megan Smith – AU graduate
- Fall 2015-Fall 2016, Jessica Sun – AU graduate
- Fall 2015-Spring 2016, Halie Taylor –Nutritionist
- Summer-Fall 2015, Noelle Ahmed – AU graduate
- Summer 2015-Fall 2015, Baylee Carmichael – AU graduate
- Summer 2015 Christian Foster – AU graduate
- Summer 2015-Fall 2016, Lexie Gibson – AU graduate
- Summer 2015, Shannon Guin – AU graduate, applied to PA school
- Summer 2015-Spring 2016, Amanda Hallman – AU graduate
- Summer-Fall 2015, Rachel Hinlo – AU graduate
- Summer 2015, Kelsey Hobbs – AU graduate
- Summer 2015, Jonathan Hull – AU graduate
- **Summer 2015-current, Christine Kallenberg – AU graduate**
- Summer-Fall 2015, Alisha Kerkin – AU graduate
- Summer-Fall 2015, Kandice Larrimore –Physician's assistant
- Summer 2015-Spring 2016, Austin Meadows – AU graduate
- Summer-Fall 2015, Sara Odom –AU Biology grad student
- Summer 2015, Evan Underwood – AU graduate
- **Spring 2015-Fall 2017, Adam Brasher –Peace Corp**
- Spring 2015, Nolin Connell – Dentist
- Spring 2015, Dallas Garst – AU graduate
- Spring-Fall 2015, DeErra Locklin – AU graduate
- Spring-Fall 2015, Cheyenne Redus – AU graduate

- Spring 2015-current, Kelly Brook Wilson – current AU student
- Fall 2014, Patrick Campbell – AU graduate, Military Medical School
- Fall 2104, Eric Keeler – AU graduate
- Fall 2014-Spring 2015, John Dasher - UAB med school
- Summer-Fall 2014, Taylor Hall – Applying to vet school
- **Summer 2014, Zac Hassler – Auburn vet school**
- Summer 2014, Logan Howell – AU graduate
- Summer 2014-Spring 2015, Victoria Lam – Graduate student in mathematics
- Summer 2014, Spring 2015 Adam Lucy –UAB med school
- Summer 2014-Spring 2015, Leah Morris – AU graduate
- Summer 2014, Alan Webster – Chiropractor
- Spring-Fall 2014, Alexa Cox – AU graduate
- Spring-Fall 2014, Dylan Hooks –U Kentucky med school
- Spring 2014, Katie Pottinger – AU graduate, Philadelphia College of Osteopathic Medicine
- Spring 2014, D'Ambria Williams –AU master's program
- Fall 2013, Becca Beacham – Clinical lab technician
- Fall 2013-Summer 2014, Max Keeling – Physician assistant
- Fall 2013, Mandy Kerr – Medical school
- Fall 2013-Spring 2015, Mallory Mathews –Auburn vet school
- Fall 2013-Spring 2015, Lexie Powers –UAB med school
- Fall 2013, Cara Sake – AU graduate
- Fall 2013–Spring 2015, Graham Skelton –NIH intern
- **Fall 2013-Spring 2016, Emily Welling – MS College of Charleston**
- Summer 2013-Spring 2014, Lauren Barkley – AU graduate
- Summer-Fall 2013, Donarius Burr – Grad school higher ed administration.
- Summer-Fall 2013, Kelsey Cardinal –works for DC lobbyist
- Summer 2013-Fall 2014, Rebecca Chazanoff – Physician
- Summer 2013, Symone Crusoe – AU graduate
- **Summer 2013-Fall 2014, Zach Donoviel – Hood lab technician, Med school, TX**
- Summer 2013-Spring 2014, Danielle Gadzala, – AU graduate
- Summer 2013, Amy Henderson– AU graduate
- Summer 2013, Michael Hallman – AU graduate
- **Summer 2013-Summer 2014, Michael Hobensack – AU graduate, Physician**
- Summer-Fall 2013, Sam Khair – AU graduate, AU MS-non-thesis
- Summer 2013-Spring 2015, TJ Langlois – AU graduate, Veterinarian
- **Summer 2013-Spring 2014, May Moran Poundstone – AU graduate, med school UAB**
- Summer 2013-Spring 2014, Lauren Rambo – AU graduate, wildlife
- Summer 2013, Catherine Root – AU graduate, art major
- Summer 2013, Spring 2014, Zach Stephens – AU graduate, AU MS-non-thesis
- **Summer 2013-Spring 2015, Nikki Wyatt – AU graduate, Auburn med school**
- Spring 2013, Alex Bartholomew – AU graduate
- Spring 2013, Natalie Burns - AU graduate
- Spring 2013, Katie Cramer - AU graduate
- Spring 2013, Jamie Lawson- AU pharmacy school
- Spring 2013-Fall 2016, Sarah Machado- AU graduate
- Spring 2013, Clark McLemore - Dental school
- Spring 2013-Spring 2014, Sarah Whitmore- Nursing school
- Spring 2013, AJ Young - AU graduate, pre-vet
- Fall 2012-Spring 2013, Molly King- Optometrist
- Fall 2012-Spring 2013, Stephanie Mitchell – AU graduate
- Fall 2012-Spring 2013, Lillie Mortz - AU graduate
- Fall 2012, Cameroun Thomas– AU graduate, applying to pharmacy school
- Summer 2012, Austin Baker – Dental school

- Summer 2012, Mitchell Brannon, Grad school
- Summer 2012, Spring 2013, Brent Bottenfield – AU graduate, grad school AU electrical engineering
- Summer 2012, Elizabeth Davies – AU graduate, applying to med school
- Summer 2012-Spring 2014, Ashley DeAtley - Veterinarian
- Summer 2012, Julie Downs - AU graduate, applying to graduate school
- Summer 2012, Becca Goad – AU graduate
- Summer-Fall 2012, Ian Kim – AU graduate
- Summer 2012, Sarah Catherine Purvis – AU graduate
- **Summer 2012-Spring 2014, Mark Sadler - AU graduate, Veterinarian**
- Summer 2012, Liz Swartout –UAB med school
- Summer 2012, Carroll Anna Troy – AU graduate
- Summer 2012, Roxanne Weaver - AU graduate
- Spring 2012, Spring 2013, Alycia Baggett - COSAM-IT
- Spring 2012, Chloe Nichols – AU graduate
- Spring-Fall 2012, Eric Nolin - AU graduate
- Spring 2012, Fall 2012, Caleb Babington - Lab technician
- Spring 2012, Laura Canther – AU graduate
- Spring-Summer 2012, Derek Dean – AU graduate
- Spring 2012, Candice Dunning – AU graduate
- Spring 2012, Cassi Fahey - Accountant
- Spring 2012, Cory Groover - AU graduate student
- Spring 2012-Fall 2013, Brittany Moorer – State park ranger
- Spring 2012, Ashley Nut - AU student, U Penn med school
- Spring 2012, Fall 2012, Amelia Plemons - AU graduate
- Spring 2012, Nataly Prince – AU graduate
- Spring 2012, David Seay – AU graduate
- Spring 2012, Meghan Sparkman - Vet school
- Fall 2011, Emily Dugger – AU graduate
- Fall 2011, Meaghan Gade – Grad school John Carroll University
- **Fall 2011-Spring 2013, Frances Humes –MS Auburn biology**
- Fall 2011, Neila Nicholson – AU graduate
- Fall 2011-Fall 2012, Shawn Smith – **PhD wildlife**
- **Summer 2011-Spring 2012, Andrew Arnold – MS Old Dominion Univ**
- Summer 2011, Chandler Brooks – MS, teacher at private high school.
- Summer 2011, Tim Helm –Lab technician
- Summer 2011, Sydney Holmberg – Chemist, CDC, Atlanta
- Summer-Fall 2011, Daniel Johnson, AU graduate
- Summer-Spring 2011, Walker Price – Spring 2011, Wildlife technician
- **Summer 2011-Spring 2012, AJ Pate – MS Tulane Univ**
- Summer-Fall 2011, Stephen Stuart - AU graduate,
- Spring 2011, Katie Harper- AU graduate
- Spring-Summer 2011, Lyndsey Johnson - AU graduate,
- **Spring 2011-Spring 2013, Alaina Lamb – Field technician**
- Spring 2011, Jake McNeal – AU graduate
- Spring 2011, Dragos Rezeanu - Med school UAB
- **Fall 2010-Spring 2011, Lauren Downing - Auburn vet school technician**
- Fall 2010- Spring 2011, Sarah Hand – AU pharmacy
- Fall 2010, Jordan Parker – AU graduate
- Summer-Fall 2010, Lisa Blumoehr - AU graduate
- Summer 2010-Spring 2011, Louise Latham – AU graduate
- Summer-Fall 2010, Matthew Metcalf - MS student Florida Gulf Coast Univ
- Summer-Fall 2010, Skaterika Pointer - AU graduate
- Summer-Fall 2010, Lauren Scruggs - AU graduate,

- Spring 2010, Sarah Bragg - UAB med school
- Fall 2009-Fall 2010 Jamaricus Barbers - Lab technologist
- Fall 2009-Spring 2010, Morgan Chatham - AU graduate
- Fall 2009-Fall 2010, Allison Chambers - AU graduate
- Fall 2009-Spring 2010, Joseph Coffman - Medical school
- Fall 2009, Lindsey Harris – AU graduate, pre-dental
- Fall 2009-Fall 2012, Miranda Reich – MS Auburn biology
- Fall 2009-Fall 2010, Amanda Tidwell - AU graduate
- Fall 2009, Kathryn Watson - AU graduate
- Summer 2009, Malory Chambers - AU graduate
- Summer 2009-Spring 2010, Tracie Donaldson - Engineer
- Summer 2009, Paul Gresham - AU graduate
- Summer 2009-Spring 2010, Rachel Gulley – Alabama Coast Zoo
- Summer 2009, Kathryn McMillian - Nursing school, AU Montgomery
- Summer 2009, Paige Monifore - AU graduate
- Summer 2009, Avery Travis - AU graduate
- Summer 2009, Abby Weems - AU graduate
- Spring 2009, Cassandra Bohlman – AU graduate
- Spring 2009, Carrie Gentry – AU graduate
- Spring 2009, Carrie Ingram –Med school at UAB
- Spring 2009, Hayley Kateon – transferred to Southern Alabama University
- Spring 2009-Spring 2010, Morgan Luger – Pharmacist
- Spring 2009, Christopher Newton – AU graduate
- Spring 2009, Evelyn Wong – AU graduate
- Fall 2008-Spring 2009, Michael Drake – Vet school, St. George's Univ, Grenada
- Fall 2008-Spring 2010, Kasey Gardner –Physician
- Fall 2008, Kathryn Jeffreys –PhD program at UAB
- Fall 2008-Spring 2010, Carolyn Kuhn –Physician
- Fall 2008-Spring 2009, Mary Kate Markham – Optometry school, Nova SE Univ
- Fall 2008, Christina Robinson – transferred to Univ of Alabama
- Summer 2008, Laura Ellsaesser –Veterinarian
- Summer 2008, Robyn Farmer – AU graduate
- Summer 2008, Elizabeth Hartline – AU graduate
- **Summer 2008-Summer 2010, Tia Filhiol –MS U Tennessee**
- **Summer 2008-Spring 2011, Matthew Ramirez –Post-doc Univ Rhode Island**

3e. Undergraduate research students at Coastal Carolina University

Dates completing research in my lab, name, current position.

- 2006-2007, Stephanie George – MS in fisheries
- 2006-2007, Genevieve Evans – MS Central Connecticut State Univ.
- 2006, Melissa Oliver – CCU graduate
- 2005-2006, Sean Farmer – pharmaceutical sales, SC
- 2005, Justin Chastain – pharmaceutical sales, SC
- 2005-2006, Robbie Clifton – Pharmacist
- 2005, Lindsey Kozlowski – Pharmacist
- 2004-2006, Julie Polly – CCU graduate
- 2004, Emily Marcus – lab manager, Bimini Biological Field Station.
- 2004, Elizabeth Dukes – Master's program in biology
- 2003, Elizabeth Shaw – Veterinary school, National University, Ireland
- 2003-2005, Amanda Melinchuk – Dept. of Conservation and Recreation, MA
- 2003, Laura Mello – Nursing school

- 2003, Amanda DeGrendele – Dental hygienist, CA
- 2002-2004, Susan Yackey – Vet tech, SC

3f. High school research students at Auburn University

Dates completing research in my lab, name, current position.

- Summer-Fall 2014, John Chapman, Auburn High School graduate
- Summer 2008-Spring 2009, Bryan Lee – Undergrad MIT

3g. Undergraduate honors and awards while under my direction

Auburn University:

Erin Lagrone	Undergraduate Research Fellowship (summer 2020)
Sam Lubor	Undergraduate Research Fellowship (2018-2019)
Rachel Heard	Sigma Xi Grant-in-aid (2017)
Kayla Frey	Undergraduate Research Fellowship (2017-2018)
Mary Kash	CMB Undergraduate Summer Research Scholar (2017)
Christine Kallenberg	Undergraduate Research Fellowship (2016-2017)
Adam Brasher	CMB Undergraduate Summer Research Scholar (2016)
Emily Welling	CMB Undergraduate Summer Research Scholar (2015)
Zachary Donoviel	Undergraduate Research Fellowship (Fall 2014) AU Biology Fund for Excellence
Nicole Wyatt	CMB Undergraduate Summer Research Scholar (2014)
Mark Sadler	COSAM undergraduate research fellow (2013-2014)
May Morgan Poundstone	AL Alliance for Students with Disabilities in STEM fellowship (2013)
Michael Hobensack	AU Biology Fund for Excellence
Ian Kim	AL Alliance for Students with Disabilities in STEM fellowship (2012)
Matthew Ramirez	National Science Foundation Graduate Research Fellowship Program (2012-2015) (prepared at Auburn, Oregon State holds award) AU Biology Fund for Excellence CMB Undergraduate Summer Research Scholar (2010)
Tia Filhiol	2 nd place oral presentation, AU Undergrad Research Forum (2010) OVPR Undergraduate Research Fellowship (2009)

3h. Others supervised

Name	Inst.	Position	Year	Current position
LouAnn Crosby	AU	Lab technician	2020+	Current
Kang (Jeff) Yap	AU	Post-doctoral scholar	2019+	Current
Kristjan Niitpold	AU	Post-doctoral scholar	2018-19	Education, Heureka Science Center, Helsinki
MaKalea Kirkland	AU	Lab technician	2017-20	Grad student
Halie Taylor	AU	Lab technician	2016-17	Nutritionist, HI
Adam Brasher	AU	Lab technician	2016	Peace Corp
Emily Welling	AU	Lab technician	2016	Grad student, C. Charleston
Yufeng Zhang	AU	Post-doctoral scholar	2015-17	Assistant Professor, U Memphis
Michael Hobensack	AU	Lab technician	2015	USC medical school student
Victoria Lam	AU	Lab technician	2015-16	Applying to grad school
Zach Donoviel	AU	Lab technician	2015	Medical school student

Dallas Garst	AU	Construction	2012	AU graduate
Lauren Downing	AU	Animal technician	2011	Vet tech, AU vet school
Matthew Ramirez	AU	Animal technician	2011	Post-doc, Univ Rhode Island
Luke Bridges	AU	Animal technician	2011	Wildlife tech, USDA
Ryan Hudgins	AU	Animal technician	2011	Wildlife tech, USFWS
Elaine Stuhrman	Contract	Animal technician	2010	Unknown
Andrew Wiggins	Contract	Animal technician	2010	Hospital lab technician

4. Courses and curriculum developed

4a. Courses at Auburn University

BIOL3100, Comparative Anatomy, undergraduate course

(Fall 2012, 2013, 2015, 2016, 2017, 2018, Spring 2021) Most students in this course are pre-professionals or zoology majors in their junior or senior year. The objective of this course is to introduce students to the major anatomical systems of vertebrates. Lecture emphasizes how structure implements function and the inferred evolutionary history of these systems. This course includes a lab where students gain critical skills in dissection and tissue handling and learn to identify anatomical structures.

Significantly revised from CCU course in 2012. All lectures were modified to match the rigor of Armbruster's Comparative Anatomy Course and to match the content of a new textbook. The lab's structure lists were updated with the use of a new lab manual, and a diversity lab was added to the curriculum following my success with this lab at Coastal Carolina University (Armbruster also adopted this lab). The diversity lab asks the students to apply what they have learned dissecting the shark, mudpuppy, and cat to the dissection and identification of structures in a vertebrate that they have not examined previously.

Significant revisions in 2013. I added use of clickers (later switched to TopHat) to encourage students to come to class, to get feed-back on student understanding, and create an interactive atmosphere at a time of day that can be challenging to inspire students to speak up (8AM). I also revised most lectures to include reference to the phylogenetic context of many structures discussed throughout the semester.

BIOL4970/7970, Current topics in Animal Energetics

(Spring 2015) Students participating in this course include graduate students in Biological Sciences and advanced undergraduates from Biological Sciences. Students taking this course become conversant in energy expenditure measures, metabolic rate, and mitochondrial function and become familiar with the relevance of each to current studies in ecology, evolution, health, and disease. Students hone their skills in searching the scientific literature, verbally describing and critiquing published research, and making science accessible to a broad audience. In class, we alternate between lecture in one week and student presentations of papers from the scientific literature in the following week.

Also, we work on the critical skill of conveying information about science to a lay audience by putting together a 90 min outreach program for K4-6 kids and their parents.

BIOL5750/6750, Ornithology, graduate/undergrad course

(Spring 2014, 2018). Students participating in this course include graduate students from Biological Sciences, Wildlife, and Education and undergraduates from Biological Sciences, Wildlife, and Fisheries. This course aims to introduce students to the evolution, anatomy, physiology, behavior, and ecology of birds. This course includes a lab in which students gain skills in bird identification and dissection. They are also introduced to standard methods in ornithology.

Revised from Hill's course in 2014. Significant changes to Hill's lectures included adding recent examples from the literature to many lectures, more detail to physiology and anatomy lectures, a bird dissection and anatomy laboratory, and a scavenger hunt to Dauphin Island field trip to promote active engagement.

BIOL5750/6750, Mammalogy, graduate / undergrad course

(Fall 2019) Students participating in this course include graduate students from Biological Sciences, Wildlife, and Pathobiology (vet school) and undergraduates from Biological Sciences, Wildlife, and Entomology. This course aims to introduce students to the evolution, anatomy, physiology, behavior, and ecology of mammals. This course includes a lab where students gain skills in mammal identification, trapping, censusing, building phylogenetic trees, and quantifying behavior, running statistics on data, and giving powerpoint presentations.

This lecture and most of the labs were completely redesigned in 2019. All labs were completely revamped or replaced for use online in 2020.

BIOL7550 Physiological Ecology of Reproduction, graduate/undergrad course. I team-teach this course with Dr. Haruka Wada.

(Spring 2013, 2015, 2017, 2019). Students participating in this course have included graduate students in Biological Sciences, Wildlife, Fisheries and Science Media Communication, and advanced undergraduates from Biological Sciences. The course is designed to review 3-4 current topics on the evolutionary and environmental variables that contribute to variation in physiology and reproductive performance among individuals. These topics have included 1) constraints on reproduction, 2) the developmental environment and future performance, 3) the mechanistic basis of life-history tradeoffs, and 4) predicting the response to a changing environment. The instructors present relevant background material on each topic, and then the students develop unique hypothesis within the context of one of the topics. Each student writes an ideas paper on his/her hypothesis, presents his/her idea to the class in a lecture, and then defends his/her idea in a mock-defense. Students also participate in peer review. Students review each other's papers as if it were a journal article submitted for publication. All authors complete a written response to their reviews before submitting their final paper for grading. Students also bring in journal articles and give a brief presentation on the article.

Course developed in 2013. This was a new course created from scratch in 2013. Many of this course's goals were inspired by the recollections of courses and assignments that colleagues thought were most beneficial in their graduate career. Topics covered included 1) constraints on reproduction, 2) the developmental environment and future performance, and 3) predicting the response to a changing environment

Significant revisions in 2015. We reorganized and refined all of the topics presented in 2013 and added a 4th topic: the mechanistic basis of life-history tradeoffs.

4b. Courses at Coastal Carolina University (CCU):

CCU, CMWS 687, Vertebrate Sampling and Collection, graduate course

(Spring 2007). Students participating in this course all studied vertebrates in the masters in Coastal Marine and Wetland Studies program. The goals of this course were to introduce students to state scientific collection permits and IACUC, give students teaching experience (they each gave a lecture on the collection techniques specific to the vertebrate taxon they study), and provide students with a opportunity to validate collection techniques that would be applied to their own research.

CCU – BIOL390, Natural History of East Africa, undergraduate course

(Summer 2005). Students participating in this course were mostly juniors and seniors in biology. The goal of this Maymester course was to examine the natural history of the birds and mammals of Kenya. I participated in this course as a secondary instructor. The primary instructor for this course was Dr. Richard Koesterer.

CCU – BIOL 436 / 536, Animal Behavior, graduate course

(Fall 2004). Students in this course were primarily senior Biology majors but also included 1 student from the master's in teaching program. This course's objective was to introduce students to the basic concepts in animal behavior, provide students with the tools necessary to complete a simple study in animal

behavior, and guide students through the process of conducting a small group research project. I team taught this course with Dr. Chris Hill.

CCU - BIOL 598, *Reproduction, a Model for Integrating Biological Disciplines*, graduate course (Summer 2004) Students in this course were all in the master's in teaching program at CCU. I team taught this course with Dr. Chuck Peterson. Because students often find it difficult to tie related concepts when Biological disciplines are presented independently, the goal of this course was to teach teachers how to make critical links between biological disciplines using a specific topic. We discussed how anatomy, genetics, evolution, physiology, and cellular biology are related to reproduction in humans and other animals. Lecture time included a mix of traditional lecture, group discussion and activities, time for students to work together on lesson plans, and student presentation of their lessons.

CCU – BIOL315 *Comparative Vertebrate Anatomy* - undergraduate

(Fall 2002-Fall 2007, offered every fall semester). – Most students in this course were biology majors in their junior or senior year. The objective of this course is to introduce students to the major anatomical systems in vertebrates. Lecture emphasizes how structure implements function and the inferred evolutionary history of these systems. I also expected that knowledge gained from a limited number of species would allow the students to predict function from structure in other vertebrate species. This course was taught as a combined lecture-lab course. In addition, students gained critical skills in dissection and tissue handling and learned to identify anatomical structures. With both a laboratory and lecture room available during the period that class was taught, I covered material and then moved right to the lab and immediately dissect and look at the structures discussed.

CCU - BIOL122 *Biological Sciences II* - undergraduate

(Fall 2002-Spring 2007). – Students in this course were primarily composed of first-year biology and marine science majors. The objective was to introduce students to key topics in evolution, ecology, animal physiology, and plant physiology. All lectures were based on a mix of material in their textbook and examples from other sources, including recently published works. I also gave examples from my own work whenever possible. Students were provided with weekly learning objectives, reading, and review questions. In addition, weekly quizzes were posted on WebCT as a mechanism to keep students on top of the material. I incorporated short group learning tasks into lecture once every 1-2 weeks.

5. Grants related to teaching

5a. Submitted while at Auburn University

None

5b. Submitted while at Coastal Carolina University

Date	Title	PI's	Source	Duration	Amount	Status
2005	Investigative Physiology in the Undergraduate Biology Laboratory	R Koesterer (PI), WR Hood (Co-PI)	NSF-DUE	1 year	\$129,154	Not funded
2005	Investigative Physiology in the Undergraduate Biology Laboratory	WR Hood (PI), R Koesterer (Co-PI)	NSF-DUE	1 year	\$129,154	Not funded
2004	Investigative Physiology	M Crow (PI), R Koesterer, WR Hood (Co-PI's)	NSF-DUE	1 year	\$81,070	Returned

6. Publications related to teaching

None

7. Other contributions to teaching

Assisted and participated in the following courses:

- Fall 2016, Mitonuclear Ecology, taught by G. Hill
- Fall 2014, Mitonuclear Ecology, taught by G. Hill
- Spring 2012, Sexual Selection, taught by G. Hill
- Spring 2008, Animal Coloration, taught by G. Hill
- Fall 2007, Advanced Evolutionary Concepts, taught by G. Hill

Discussion groups:

- Fall 2012, Participant in Mitochondrial Evolution discussion group
- Spring 2012, Initiated and leaded discussion of *The Flexible Phenotype* by Piersma and van Gils.
- Fall 2007-Spring 2008, Participant in BEERS - Behavior, Ecology, and Evolution Reading Society.
- Spring 2009-Spring 2010, Initiated P-Nut - the Physiological and Nutritional Ecology reading group

Undergraduate Advising at Auburn University

- 2015-2016 - I served as biology for ~10 advisees.
- 2014-2015 - I served as biology / pre-vet advisor for ~10 advisees.
- 2013-2014 - I served as biology / pre-vet advisor for ~10 advisees.
- 2012-2013 - I served as the pre-vet advisor for ~20 advisees.

Teaching and leadership workshops

- 2004. Pacific Crest Teaching Institute workshop. 3-day workshop with invited instructor.
- 2003. 'Building vital undergraduate science, technology, engineering and mathematics departments and programs' Project Kaleidoscope, 2 day workshop, Agnes Scott College, GA.
- 2003. Master teacher workshop. 2-day workshop with invited instructor.

8. Teaching philosophy (Last updated 9/15)

Classroom instruction:

In the classroom, I try to be enthusiastic and present material in a manner that is well suited to varied learning styles, giving detailed explanations, examples, and visual aids including PowerPoint graphs, diagrams, photos, and video. Where appropriate, I encourage interaction and discussion, taking advantage of the opportunity to draw upon each student's unique experiences and observations and I also regularly draw on my own research experience. These examples help to make the concepts more real and memorable for the students. Former students have re-told my stories years later and described the concept with which it was associated.

For each of my classes, I explicitly (undergrad courses) or implicitly (grad courses) develop a suite of topic specific learning objectives and goals developing particular aptitudes. For example, one of my learning objectives for Comparative Anatomy is for students to learn to predict the diet of a vertebrate given the form of its gastrointestinal tract. One of the goals for my grad level reproduction course is to teach students how to defend their ideas (a skill valuable for public presentations, qualifying exams and thesis defenses). Writing learning objectives and goals helps me to prioritize the material covered in lectures and helps students to know what to focus on in preparation for exams.

Mentoring graduate and undergraduate research students:

My primary goal as a graduate mentor is to prepare my students for a career in academics. I view my role as a guide and a resource. I monitor the progress of my students, give advice, and make suggestions but also give my students the space to grow as independent scientists. I expect my students to develop their own projects whether building on an established project or taking on a new direction within the context of the primary interests of my lab group. Grant writing and teaching are skills that are essential to success in academics, so I also insist that my students apply for funding to help support their project and participate in teaching when they are not supported by a fellowship. In weekly lab meetings, we review manuscripts near submission, present research ideas, and practice presentations – giving students an opportunity to give and receive critical feedback.

I maintain several undergraduate assistants in my lab each semester. When an undergraduate starts in the lab, he/she assists with ongoing projects. Most students start in the lab by collecting data on the reproductive status of our animals and helping with animal husbandry. This gives me an opportunity to assess their ability and dedication. In subsequent semesters, they often help in the lab with DNA extractions, PCR, and animal dissections and tissue collection. Students who display strong aptitude and dedication have gone on to developed independent research projects. They have written proposals, acquired funds to support their research, presented at national meetings, submitted their work for publication, and one student was awarded a prestigious National Science Foundation pre-doctoral fellowship. Many of the undergrads that have worked in my lab have been admitted to top graduate, medical, veterinary, pharmacy, and optometry schools.

Self-evaluation:

I believe that I am an enthusiastic and fair instructor. I believe that my students know that I care about their performance and are not intimidated to ask questions. In Comparative Anatomy, it had been difficult to motivate students for any form of discussion at 8AM and attendance tends to be low. I'll continue to look for creative ways to wake them up, pull them out of their shell, and make them excited to get up and come to class at 8AM. In fall 2013, I started using clickers in the classroom with two goals in mind, a) give students participation and bonus points for arriving early (a method of encouraging attendance) and b) give me a method for interacting with a large class at a time of day when many are less inclined to be interactive. I've been very happy with this method. It allows me to include questions that both asks the students to think critically and asks the students to tie what they observed in lab to concepts in lecture.

B. Research/Creative Work

Reprints of scholarly work available at: <http://www.thehoodlaboratory.com/>
Citations as of 1/18/21: Total citations = 1029 h-index = 17; i10-index = 28

Throughout section: Graduate students indicated in **blue** followed by a ^G superscript, undergraduates indicated in **orange** followed by a ^U superscript and post-docs indicated in **dark blue** followed by a ^P superscript,

1. Books

None

2. Article-length publications (citations and impact factors as of 1/26/18):

2a. Peer-reviewed book chapters:

Book chapters listed below were prepared partially or entirely since starting at Auburn University

6. Kunz, TH, RA Adams and **WR Hood**. 2009. Methods for Assessing Size and Birth and Postnatal Growth and Development in Bats. Pp. 273-314 in T.H. Kunz and S. Parsons (ed) Ecological and Behavioral Methods for the Study of Bats. John Hopkins University Press, Baltimore. (100% AU, Hood 20%), (citations 16).
5. **Hood WR**, MB Voltura, and OT Oftedal. 2009. Methods of measuring milk composition and yield in small mammals. Pp. 529-553 in T.H. Kunz and S. Parsons (ed) Ecological and Behavioral Methods for the Study of Bats. John Hopkins University Press, Baltimore. (10% AU, Hood 80%), (citations 14).

Book chapters listed below were prepared prior to time at Auburn University

4. Kunz TH, **WR Hood**, and L Nadolny. 2010. Lactation and postnatal growth. Pp 223-238 in Bats in Captivity, Volume 2: Aspects of Rehabilitation (Barnard, S.M., ed.). Logos Press, Washington, D.C. (citations 0).
3. Kunz TH, L Nadolny, and **WR Hood**. 2010. Reproductive patterns and parental care: Megachiroptera. Pp 43-56 in Bats in Captivity, Volume 2: Aspects of Rehabilitation (Barnard, S.M., ed.). Logos Press, Washington, D.C. (citations 0).
2. Frank, CL, **WR Hood**, and MC Donnelly. 2004. The role of α -linolenic acid (18:3) in mammalian torpor. Pp. 71-80 in B. M. Barnes and H.V. Carey, eds. Life in the Cold: Evolution, Mechanisms, Adaptation and Application. Institute of Arctic Biology Press (citations 10).
1. Kunz TH, and **WR Hood**. 2000. Parental effort and postnatal growth in the Chiroptera. Pp. 415-468 in P. Krutzsch and E. Crichton, eds. Reproductive Biology of Bats. Academic Press, San Diego. (citations 111).

2b. Peer-reviewed journal articles

Published refereed journal articles:

Manuscripts listed below were prepared partially or entirely since starting at Auburn University

53. Koch, RE, KL Buchanan, S Casagrande, O Crino, DK Dowling, GE Hill, **WR Hood**, M McKenzie, MM Mariette, DWA Noble, A Pavlova, F Seebacher, P Sunnucks, E Udino, CR White, K Salin, A Stier. 2021. Integrating Mitochondrial Aerobic Metabolism into Ecology and Evolution. Trends in Ecology and Evolution. (100% AU, 5% Hood), (impact factor of journal 14.8).

52. **Y Zhang^P**, GE Hill, Z Ge **NR Park^G**, **HA Taylor^G**, **VA Andreassen^G**, L Tardy, AN Kavazis, C Bonneaud, **WR Hood**. 2021. Effects of a bacterial infection on mitochondrial function and oxidative stress in a songbird. *Physiological and Biochemical Zoology* 94:71-80. (100% AU, 40% Hood), (*impact factor of journal* 2.3).
51. **Heine, KB^G**, NM Justin, GE Hill and **WR Hood**. 2020. Ultraviolet irradiation alters the density of inner mitochondrial membrane and proportion of inter-mitochondrial junctions in copepod myocytes. *Mitochondrion* 56:82-90(100% AU, 40% Hood), (*impact factor of journal* 3.4)
50. **Yap, KN^P**, **Kaylene Yamada^G**, **Shelby Zikeli^G**, and **WR Hood**. 2020. Evaluating endoplasmic reticulum stress and unfolded protein response through the lens of ecology and evolution. *Biological Reviews*. (100% AU, 50% Hood), (*impact factor of journal* 8.8).
49. **Josefson, CC^C**, S Zohdy, and **WR Hood**. 2020. Methodological considerations for assessing immune defense in reproductive females. *Integrative and Comparative Biology* 60:732-741. (100% AU, 40% Hood), (*impact factor of journal* 2.1).
48. **Park, NR^G**, **HA Taylor^G**, **VA Andreassen^G**, **AS Williams^G**, **K Niitepöld^P**, **KN Yap^P**, AN Kavazis, and **WR Hood**. 2020. Mitochondrial physiology varies with parity and body mass in the laboratory mouse (*Mus musculus*). *Journal of Comparative Physiology B* (2020) 190:465–477(100% AU, 70% Hood), (*impact factor of journal* 2.5).
47. **Heine KB^G** and **WR Hood**. 2020. Mitochondrial behavior, morphology, and animal performance. *Biological Reviews*. doi: 10.1111/brv.1258(100% AU, 50% Hood), (*impact factor of journal* 8.8).
46. Hill, GE, **WR Hood (co-first author)**, Z Ge, JD Johnson, **NR Park^G**, **HA Taylor^G**, **VA Andreassen^G**, MJ Powers, AN Kavazis, **Y Zhang^P**. 2019. Plumage redness signals mitochondrial function in the House Finch. *Proceedings of the Royal Society B* 286 (1911), 20191354 (100% AU, 50% Hood), (*impact factor of journal* 4.3).
45. **Warren MF^G**, HA Hallowell, KV Higgins, MR Liles, **WR Hood**. 2019. Maternal dietary protein intake influences milk and offspring gut microbial diversity in a rat (*Rattus norvegicus*) model. *Nutrients* 11:2257. (100% AU, 30% Hood), (*impact factor of journal* 2.4).
44. **Heine KB^G**, MJ Powers, **C Kallenberg^U**, **VL Tucker^U**, **WR Hood**. 2019. Ultraviolet irradiation increases size of the first clutch but decreases longevity in a marine copepod. *Ecology and evolution* 9: 9759-9767(100% AU, 50% Hood), (*impact factor of journal* 2.3).
43. Havird,JC, RJ Weaver, L Milani, F Ghiselli, R Greenway, AJ Ramsey, AG Jimenez, DK Dowling, **WR Hood**, KL Montooth, S Estes, PM Schulte, IM Sokolova, and GE Hill. 2019. Beyond the powerhouse: integrating mitonuclear evolution, physiology, and theory in comparative biology. *Integrative and Comparative Biology* 59 (4), 856-863 (100% AU, 5% Hood), (*impact factor of journal* 2.1).
42. **Hood, WR**, **Y Zhang^P**, **HA Taylor^G**, **NR Park^G**, AE Beatty, RJ Weaver, **KN Yap^P**, AN Kavazis. 2019. Prior reproduction alters how mitochondria respond to an oxidative event. *Journal of Experimental Biology* 222 (12), jeb195545 (100% AU, 70% Hood), (*impact factor of journal* 3.0).
41. **Hood, WR**, **AS Williams^G**, GE Hill. 2019. An ecologists' guide to mitochondrial DNA mutations and senescence. *Integrative and Comparative Biology* doi: 10.1093/icb/icz097 (100% AU, 80% Hood), (*impact factor of journal* 2.1).
40. **Heine, KB^G**, AA Abebe, AE Wilson, **WR Hood**. 2019. Copepod respiration increases by 7% per degree °C increase in temperature: a meta-analysis. *Limnology and Oceanography. Limnology and Oceanography Letters* 4 (3), 53-61(100% AU, 30% Hood), (*impact factor of journal* 5.2).
39. Hyatt, HW, **Y Zhang^P**, **WR Hood**, AN Kavazis. 2019. Changes in metabolism, mitochondrial function, and oxidative stress between female rats under non-reproductive and three reproductive conditions. *Reproductive Sciences* 26 (1), 114-127 (100% AU, 30% Hood), (*impact factor of journal* 2.4).
38. **WR Hood**, **Y Zhang^P**, **AV Mowry^G**, HW Hyatt, AN Kavazis. 2018. Life history trade-offs within the context of mitochondrial hormesis. *Integrative and Comparative Biology* 58: 567-577 (100% AU, 90% Hood), (*impact factor of journal* 2.1).
37. **WR Hood**, SN Austad, P Bize, AG Jimenez, KL Montooth, PM Schulte, GR Scott, I Sokolova, JR Treberg, K Salin. 2018. The mitochondrial contribution to animal performance, adaptation, and life-history variation. *Integrative and Comparative Biology*: 480-485. (100% AU, 40% Hood), (*impact factor of journal* 2.1).
36. **Schmidt, CM^G**, LI Chiba, **WR Hood**. 2018. The effects of parity and litter size on bone metabolic activity in pregnant and lactating sows. *Journal of Animal Physiology and Animal Nutrition* 102:1651-1656. (100% AU, 50% Hood), (*impact factor of journal* 1.6).

35. **Zhang^P, Y, AL Brasher^U, NR Park^G, HA Taylor^G**, AN Kavazis, and **WR Hood**. 2018. High activity before breeding improves reproductive performance by enhancing mitochondrial function and biogenesis. *Journal of Experimental Biology*, jeb 177469. (100% AU, 50% Hood), (*impact factor of journal 3.3*).
34. Koch, RR, AN Kavzis, D Hasselquist, **WR Hood**, **Y Zhang^P**, GE Hill. 2018. No evidence that carotenoid pigments boost either immune or antioxidant defenses in a songbird. *Nature Communications* doi: 10.1038/s41467-018-02974-x (100% AU, 5% Hood), (*impact factor of journal 12.2*).
33. Hyatt, HW, **Y Zhang^P**, **WR Hood**, and AN Kavazis. 2018. Physiological, mitochondrial, and oxidative stress differences in the presence or absence of lactation in rats, *Reproductive Biology and Endocrinology* 16: 2. (100% AU, 30% Hood), (*impact factor of journal 2.8*).
32. **Zhang, Y^P, F Humes^G**, G Almond, AN Kavazis, and **WR Hood**. 2018. A mitohormetic response to pro-oxidant exposure in the house mouse. *American Journal of Physiology-Regulatory, Integrative and Comparative Physiology* doi: 10.1152/ajpregu.00176.2017 (100% AU, 50% Hood), (*impact factor of journal 3.0*).
31. Hyatt, HW, **Y Zhang^P**, **WR Hood**, and AN Kavazis. 2017. Lactation has persistent effects on a mother's metabolism and mitochondrial function. *Scientific Reports* 7: 17118, doi:10.1038/s41598-017-17418-7. (100% AU, 30% Hood), (*impact factor of journal 4.3*).
30. **Zhang, Y^P, C Kallenberg^U**, HW Hyatt, AN Kavazis, and **WR Hood**. 2017. Change in the Lipid Transport Capacity of the Liver and Blood during Reproduction in Rats. *Frontiers in Physiology* 8: article 517 (100% AU, 50% Hood), (*impact factor of journal 4.3*).
29. **Mowry, AV^G**, AN Kavazis, **WR Hood**. 2017. Mitochondrial function and bioenergetic tradeoffs during lactation in the House Mouse (*Mus musculus*). *Ecology and Evolution* DOI: 10.1002/ece3.2817 (100% AU, 50% Hood), (*impact factor of journal 2.5*).
28. **Schmidt, CM^G** and **WR Hood**. 2016. Female white-footed mice (*Peromyscus leucopus*) trade off offspring skeletal quality for self-maintenance when dietary calcium intake is low. *Journal of Experimental Zoology Part A: Ecological Genetics and Physiology* 325: 581-587. (100% AU, 50% Hood), (*impact factor of journal 1.2*).
27. **Zhang, Y^P** and **WR Hood**. 2016. Current versus future reproduction and longevity: a re-evaluation of predictions and mechanisms. *Journal of Experimental Biology* 219: 3177-3189. (100% AU, 75% Hood), (*impact factor of journal 2.9*). **Invited by J Exp Biol**
26. **Mowry, AV^G**, AN Kavazis, **AE Sirman^G**, WK Potts, **WR Hood**. 2016. Reproduction Does Not Adversely Affect Liver Mitochondrial Respiratory Function but Results in Lipid Peroxidation and Increased Antioxidants in House Mice. *PLoS ONE* 11(8): e0160883. (100% AU, 60% Hood), (*impact factor of journal 3.1*).
25. Bentz, AB, **A Sirman^G**, H Wada, KJ Navara, **WR Hood**. 2016. Relationship between maternal environment and DNA methylation patterns of estrogen receptor alpha in wild Eastern Bluebird (*Sialia sialis*) nestlings: a pilot study. *Ecology and Evolution* 6: 4741-4752. (100% AU, 40% Hood), (*impact factor of journal 2.5*).
24. **Skibieli AL^G** and **WR Hood**. 2015. Milk matters: offspring survival in Columbian ground squirrels is affected by nutrient composition of mother's milk. *Frontiers in Ecology and Evolution* 3:111. (100% AU, 50% Hood), (*impact factor of journal 3.5*).
23. **Hood WR** and **M Hobensack^U**. 2015. The effect of locomotor stress on the mobilization of bone from the maternal skeleton. *PLoS One* 10(3): e0122702. (100% AU, 90% Hood), (*impact factor of journal 3.0*).
22. Mateos-Gonzalez F, **WR Hood** and GE Hill. 2014. Carotenoid coloration predicts escape performance in the House Finch. *Auk* 131:275-281 (100% AU, 35% Hood), (*impact factor of journal 1.9*).
21. **Hood, WR**, DS Kessler, OT Oftedal. 2014. Milk composition and lactation strategy of a eusocial mammal, the naked mole-rat. *Journal of Zoology* 293:108–118. (75% AU, 40% Hood), (*impact factor of journal 1.8*).
20. **Schmidt CM^G** and **WR Hood**. 2014. Bone loss is a physiological cost of reproduction in white-footed mice (*Peromyscus leucopus*). *Mammalian Biology* 79:96–100. (100% AU, 50% Hood), (*impact factor of journal 1.6*).
19. Hill GE, Fu X, Balenger S, McGraw KJ, Giraudeau M, and **WR Hood**. 2013. Changes in concentrations of circulating heat-shock proteins in House Finches in response to different

- environmental stressors. *Journal of Field Ornithology* 84:416-424 (80% AU, 30% Hood), (*impact factor of journal 1.5*);).
18. Skibieli AL^G, JR Speakman, and WR Hood. 2013. Testing the prediction of energy allocation decisions in the evolution of life history tradeoffs. *Functional Ecology* 27:1382-1391. (90% AU, 40% Hood), (*impact factor of journal 5.2*).
 17. Davis A, **WR Hood**, GE Hill. 2013. Prevalence of Blood Parasites in Eastern Versus Western House Finches: Are Eastern Birds Resistant to Infection? *Ecosphere* 10:290-297 (80% AU, 30% Hood), (*impact factor of journal 2.3*).
 16. Skibieli AL^G, LM Downing^U, TJ Orr, and **WR Hood**. 2013. The evolution of the nutrient composition of mammalian milks. *Journal of Animal Ecology* 82:1254-1264. (90% AU, 40% Hood), (*impact factor of journal 4.8*).
 15. Skibieli AL^G and **WR Hood**. 2013. Milk Composition in a Hibernating Rodent; the Columbian Ground Squirrel (*Urocyon columbianus*). *Journal of Mammalogy* 94:146-154 (100% AU, 50% Hood), (*impact factor of journal 1.5*).
 14. Schmidt CM^G and **WR Hood**. 2012. Calcium availability influences litter size and sex ratio in white-footed mice (*Peromyscus leucopus*). *PLOS One* 7(8): e41402. (100% AU, 50% Hood), (*impact factor of journal 3.1*).
 13. **Hood WR**. 2012. A test of bone mobilization relative to reproductive demand: Skeletal quality is improved in cannibalistic females with large litters. *Physiological and Biochemical Zoology* 85:385-396 (100% AU, 100% Hood), (*impact factor of journal 2.0*).
 12. Senda, A, R Kobayashi, K Fukuda, T Saito, **W Hood**, T Kunz, O Oftedal and T Urashima. 2011. Chemical characterization of milk oligosaccharides of the island flying fox (*Pteropus hypomelanus*) (Chiroptera: Pteropodidae). *Animal Science Journal* 82:782-786. (5% AU, 5% Hood), (*impact factor of journal 1.0*).
 11. **Hood WR**, OT Oftedal, TH Kunz. 2011. Is tissue maturation necessary for flight? Changes in body composition during postnatal development in the big brown bat. *Journal of Comparative Physiology B* 181:423-435. (25% AU, 75% Hood), (*impact factor of journal 1.8*).
 10. Booher CM^G and **WR Hood**. 2010. Calcium utilization during reproduction in big brown bats (*Eptesicus fuscus*). *Journal of Mammalogy* 91:952-959 (100% AU, 50% Hood), (*impact factor of journal 1.5*).
 9. Hill, GE, **WR Hood** and K Huggins. 2009. A multifactorial test of the effects of carotenoid access, food intake, and parasite load on production of ornamental feather and bill coloration in American Goldfinches. *Journal of Experimental Biology* 212:1225-1233. (50% AU, 30% Hood), (*impact factor of journal 2.9*).

Manuscripts listed below were prepared prior to time at Auburn University

8. **Hood WR**, OT Oftedal, TH Kunz. 2006. Variation in body composition of female big brown bats (*Eptesicus fuscus*) during lactation. *Journal of Comparative Physiology B* 176: 807-819. (*impact factor of journal 1.8*).
7. Shawkey MD, GE Hill, KJ McGraw, **WR Hood**, and K Huggins. 2006. An experimental test of contributions and condition dependence of microstructure and carotenoids in yellow plumage coloration. *Proceedings of the Royal Society B* 273:2985-2991. (*impact factor of journal 4.8*).
6. **Hood WR**, J. Bloss, and T.H. Kunz. 2002. Intrinsic and extrinsic sources of variation in timing and synchrony of births and postnatal growth in the big brown bat, *Eptesicus fuscus*, in New England. *Journal of Zoology* 258:355-363. (*impact factor of journal 1.8*).
5. Bloss J, TE Acree, JM Bloss, **W.R. Hood** and T.H. Kunz. 2002. Potential use of chemical cues for colony-mate recognition in big brown bats, *Eptesicus fuscus*. *Journal of Chemical Ecology* 28:799-814. (*impact factor of journal 3.2*).
4. **Hood WR**, TH Kunz, OT Oftedal, SJ Iverson, D LeBlanc, and J Seyjagat. 2001. Interspecific and intraspecific variation in the proximate, mineral, and fatty acid composition of milk in Old-World fruit bats (Chiroptera: Pteropodidae). *Physiological and Biochemical Zoology* 74:134-146. (*impact factor of journal 2.0*).

3. Kunz TH, E Bicer, **WR Hood**, MJ Axtell, WR Harrington, BA Silvia, and EP Widmaier. 1999. Plasma leptin decreases during lactation in insectivorous bats. *Journal of Comparative Physiology B* 169:61-66. (*impact factor of journal 1.9*).
2. **Hood WR**, and KA Ono. 1997. Variation in maternal attendance patterns and pup behavior in a declining population of Steller sea lions (*Eumetopias jubatus*). *Canadian Journal of Zoology* 75:1241-1246. (*impact factor of journal 1.5*).
1. Byrnes P, and **WR Hood**. 1994. First account of Steller sea lion (*Eumetopias jubatus*) predation on a young California sea lion (*Zalophus californianus*). *Marine Mammal Science* 10:381-383. (*impact factor of journal 1.7*).

2c. Other publications

Magazine articles (not peer-reviewed)

1. **Hood, WR** and GE Hill. 2009. The mystery of turacin and turacoverdin: why do Turacos have unique feather pigments? *The International Turaco Society Magazine* 32:20-27.

Published Abstracts (not peer-reviewed)

Published extended abstracts (3-5 pg.) while on faculty at Auburn

17. **Hood, WR**, **Y Zhang^P**, **A Brasher^U**, **N Park^G**, **H Taylor^G**, A Kavazis. 2018. Activity before reproduction alters reproductive performance and maternal bioenergetic capacity via mitochondrial plasticity. *Proceedings of the Comparative Nutrition Society 2018*
18. **Hood, WR**, GE Hill, A Kavazis, **Y Zhang^P**. 2018. Male red carotenoid coloration indicated mitochondrial performance in the house finch. *Proceedings of the Comparative Nutrition Society 2018*
19. **Hood, WR**, **A Mowry^G**, **Y Zhang^P**, A Kavazis. 2016. Understanding the bioenergetic mechanism that underlie putative interactions among life history traits. *Proceedings of the Comparative Nutrition Society 2016*
16. **Warren, M^G**, M Liles, **WR Hood**. Effects of dietary protein intake on fecal and milk microbiota. *Proceedings of the Comparative Nutrition Society 2016*
15. **Hood, WR**, **Sirman, AE^G**. 2014. Maternal diet, metabolism, and reproductive effort in the house mouse. *Proceedings of the Comparative Nutrition Society 2014*
14. **Skibieli AL^G**, **WR Hood**. 2012. Milk matters: Offspring survival in Columbian ground squirrels is affected by nutrient composition of milk. *Proceedings of the Comparative Nutrition Society 2012*
13. **Skibieli AL^G**, **LM Downing^U**, TJ Orr, and **WR Hood**. 2012. The evolution of the nutrient composition of mammalian milks. *Proceedings of the Comparative Nutrition Society 2012*
12. **Hood WR**. 2010. Locomotor stress and mineral mobilization from the maternal skeleton. *Proceedings of the Comparative Nutrition Society 2010*
11. **Booher CM^G** and **WR Hood**. 2010. Calcium as currency for assessing physiological costs of reproduction in white-footed mice. *Proceedings of the Comparative Nutrition Society 2010*
10. **Skibieli AL^G** and **WR Hood**. 2010. Temporal and inter-individual variation in milk composition in a free-ranging, hibernating rodent. *Proceedings of the Comparative Nutrition Society 2010*

Published extended abstracts (3-5 pg.) prior to starting at Auburn

9. **Hood WR** and GE Hill. 2006. Male color, but not body composition, reveals food deprivation in the American goldfinch. *Proceedings of the Comparative Nutrition Society 2006*
8. **Parsons ME^G** and **WR Hood**. 2006. Does algae consumption influence carotenoid based coloration in bluegill sunfish. *Proceedings of the Comparative Nutrition Society 2006*
7. Voltura MB, **WR Hood**, and OT Oftedal. 2006. A comparison of methods for determining the nitrogen and fat composition of milk: how to best analyze milk collected from small mammals. *Proceedings of the Comparative Nutrition Society 2006*
6. **Hood WR**, **L Mello^U**, M Kowalska, R Buffenstein. 2004. The effect of polyunsaturated fatty acid intake on lipid storage and on rates of cooling and rewarming in the naked mole rat (*Heterocephalus glaber*). *Proceedings of the Comparative Nutrition Society 2004*

5. **Hood WR** and **A Melinchuk^U**. 2004. Adipose fatty acid composition in the little brown bats (*Myotis lucifugus*) during hibernation. *Proceedings of the Comparative Nutrition Society 2004*
4. **Hood WR**, CF Frank. 2002. Polyunsaturated Fatty Acid Intake and Its Effect on Over-Winter Survival by Golden-Mantled Ground Squirrels. *Proceedings of the Comparative Nutrition Society 2002*
3. **Hood, WR**, OT Oftedal, and T.H. Kunz. 2000. Nutritional Limitations on Lactation and Postnatal Growth in the Big Brown Bat, *Eptesicus fuscus*. *Proceedings of the Comparative Nutrition Society*
2. **Hood, WR**, TH Kunz, OT Oftedal, SJ Iverson. 2000. Inter- and intraspecific variation in proximate, mineral, and fatty acid composition in old-world fruit bats (Chiroptera: Pteropodidae). *Proceedings of the Comparative Nutrition Society 2000*
1. **Hood, WR**, TH Kunz, and OT Oftedal. 1998. Meeting the nutritional requirements of lactation: calcium and energy utilization in an insectivorous bat. *Proceedings of the Comparative Nutrition Society 1998*

Published regular abstracts while on faculty at Auburn

50. VR Favorit, AN Kavazis, **WR Hood**, P Villamediana, AL Skibieli. 2020. Mitochondrial function in the liver and skeletal muscle of mid-lactation dairy cattle. *Journal of Dairy Science* 103:192.
49. Parry, HA; **Yap, KN^P**; Gladden, LB; Hill, GE; **Hood, WR**; Kavazis, AN, 2020. MitoMobile Validation: Taking a Molecular Physiology Lab to the Field. *Society for Integrative and Comparative Biology, Austin, TX*
48. **Yamada, KYH^G**; **Zikeli, SL^G**; **Yap, KN^P**; Zhang, Y; Kiaris, H; Kavazis, AN; **Hood, WR**. 2020. The relationship between the unfolded protein response and mitochondrial performance in deer mice maintained in a natural context. *Society for Integrative and Comparative Biology, Austin, TX*
47. **Andreasen, VA^G**; **Yap, KN^P**; Yamada, K; **Williams, A^G**; **Zikeli, S^G**; Kavazis, AN; **Hood, WR**. 2020. The impact of maternal corticosterone on offspring morphology and mitochondrial physiology. *Society for Integrative and Comparative Biology, Austin, TX*
46. **Zikeli, S^G**; **Yamada, K^G**; **Yap, K^P**; Zhang Y; Kiaris, H; **Hood, WR**. 2020. Shy and Stressed? Correlations Between Corticosterone Level, Unfolded Protein Response, and Animal Personality. *Society for Integrative and Comparative Biology, Austin, TX*
45. **Heine, KB^G**; Justyn, NM; Hill, GE; **Tucker, VL^U**; **Jung, D^U**; **Pollock, B^U**; **Hood WR**. 2020. Modeling Mitochondrial Behavior and Morphology from TEM Micrographs of Copepod Myocytes Following Ultraviolet Irradiation. *Society for Integrative and Comparative Biology, Austin, TX*
44. Justyn, NM; **Heine, KB^G**; Peteya, JA; **Hood, WR**; Shawkey, MD; Wang, B; Hill, GE. 2020. Persistence of Carotenoids in the Red Eyespots of Copepods (*Tigriopus californicus*) on Carotenoid-free Diets. *Society for Integrative and Comparative Biology, Austin, TX*
43. **Hood WR**, **AS Williams^G**, GE Hill. 2019. Mitochondrial Replication Error and Senescence. *Integrative and Comparative Biology*.
42. **Josefson, CC^G**, Heard RD, **Hood, WR**. 2019. Trans-generational effects during development following maternal immune challenge in a lactating rodent. *Integrative and Comparative Biology*.
41. Parry HA, **Josefson, CC^G**, **Taylor, HA^G**, **Andreasen, V^G**, **Park, NR^G**, **Hood, WR**, Kavazis, AN. 2019. Immune Challenge During Reproduction has Minimal Impact on Mitochondrial Respiration and Oxidative Stress. *Integrative and Comparative Biology*.
40. **Zhang, Y^P**, Hill, GE, **Park, N^G**, **Taylor, HA^G**, **Andreasen, V^G**, Kavazis, AN, Bonneaud, C, **Hood, WR**. 2019. Effects of *Mycoplasma gallisepticum* on mitochondrial function and oxidative stress in house finch. *Integrative and Comparative Biology*.
39. **Taylor, HA^G**, **Park, NR^G**, Kavazis, AN, **Hood, WR**. 2019. Variation in Mitochondrial Complex Activity, Oxidative Stress, and the Unfolded Protein Response in the Brain of Mice with Region and Parity. *Integrative and Comparative Biology*.
38. **Heine, KB^G**, Powers, MJ, **Kallenberg, MC^U**, **Tucker, VL^U**, **Hood, WR**. 2019. Moderate UV-B Irradiation Increases Fecundity but Decreases Longevity in a Marine Copepod. *Integrative and Comparative Biology*.
37. **Niitepold, K^P**, Parry HA, Kavazis, AN, **Hood, WR**. 2019. Starvation reduces mitochondrial function in the monarch butterfly. *Integrative and Comparative Biology*.
36. **Hood, WR**, **Y Zhang^P**, **A Brasher^U**, **N Park^G**, **H Taylor^G**, A Kavazis. 2018. Activity before reproduction alters reproductive performance and maternal bioenergetic capacity via mitochondrial plasticity. *Proceedings of the Comparative Nutrition Society 2018*
35. **Hood, WR**, GE Hill, A Kavazis, **Y Zhang^P**. 2018. Male red carotenoid coloration indicated mitochondrial performance in the house finch. *Proceedings of the Comparative Nutrition Society 2018*

34. **Hood WR, Y Zhang^P, AV Mowry^G**, HW Hyatt, AN Kavazis. 2018. Re-evaluating life history trade-offs within the context of mitochondrial hormesis. *Integrative and Comparative Biology*.
33. **Park, NP^G, Y Zhang^P**, AN Kavazis, and **WR Hood**. 2018. Oxidative DNA damage and repair in response to induced ROS exposure in mice. *Integrative and Comparative Biology*.
32. **Zhang, Y^P, H Taylor^G, M Kash^U**, MD Roberts, and **WR Hood**. 2018. Induced ROS exposure improves mitochondrial performance in hepatocytes. *Integrative and Comparative Biology*
31. **Josefson, CC^G** and **WR Hood**. 2018. Life history trait co-variation patterns within the house mouse (*Mus musculus*) differ from across species predictions. *Integrative and Comparative Biology*.
30. **Taylor, HA^G, Y Zhang^P, M Kash^U**, AN Kavazis, M Roberts, **WR Hood**. 2018. Response of hepatocytes to ROS exposure: Temporal variation in oxidative stress response signaling pathways. *Integrative and Comparative Biology*.
29. **Josefson, CC^G, AE Sirman^G, WR Hood**. 2018. The role of maternal protein intake on partitioning of resources among offspring. *Integrative and Comparative Biology*. **Brasher AL^U, Y Zhang^P**, AN Kavazis, and **WR Hood**. 2017. Does relative activity prior to breeding improve mitochondrial function and oxidative damage following a reproductive event? *Integrative and Comparative Biology*.
28. **Kallenberg MK^U, Y Zhang^P**, HW Hyatt, AN Kavazis, and **WR Hood**. 2017. Reproductive effects on lipid transport capacity in liver and blood in rats. *Integrative and Comparative Biology*.
27. **Josefson, CC^G** and **WR Hood**. 2017. Using phenotypic variation in the lab mouse to deduce physiological variables that correlate with life history variation. *Integrative and Comparative Biology*.
26. **Hood, WR** and **Y Zhang^P**. 2017. Understanding the bioenergetic mechanisms that underlie the interactions among life history traits. *Integrative and Comparative Biology*.
25. **Zhang, Y^P, F Humes^G, A Brasher^U, C Kallenberg^U**, AN Kavazis, **WR Hood**. 2017. The mitohormetic response and an evaluation of a method for inducing oxidative damage. *Society for Integrative and Comparative Biology, New Orleans, LA*.
24. **Hood, WR, AV Mowry^G**, AN Kavazis. 2016. Tissue-specific variation in mitochondrial function and implications for the costs of reproduction. *Integrative and Comparative Biology*.
23. **Josefson, CC^G**, AB Bentz, **WR Hood**, H Wada. 2016. Epigenetic and neuroanatomical changes associate with early-life exposure to exogenous corticosterone in Eastern Bluebird (*Sialia sialis*) nestlings. *Integrative and Comparative Biology*.
22. **Conte, AN^G, EM Welling^U**, AN Kavazis, **WR Hood**. 2016. A test of the relationship between oxidative damage and energy expenditure in a passerine bird. *Integrative and Comparative Biology*.
21. **Sirman, AE^G**, JP Avery, **ZS Donoviel^U**, **WR Hood**. 2015. The effects of the developmental environment on reproductive effort and insulin-like growth factor 1 in the house mouse (*Mus musculus*). *Integrative and Comparative Biology*.
20. **Hood, WR, AV Mowry^G**, AN Kavazis. 2015. Mitochondrial function and life history variation in the house mouse. *Integrative and Comparative Biology*.
19. **Chen, CW^G, WR Hood**. 2015. The impact of maternal protein intake on offspring organ development in the house mouse (*Mus musculus*). *Integrative and Comparative Biology*.
18. **Hobensack, MJ^U, WR Hood**. 2014. Increasing mechanical strain on the skeleton during reproduction does not reduce bone mobilization during reproduction in the mouse. *Integrative and Comparative Biology*
17. **Donoviel ZS^U, AE Sirman^G, WR Hood**. 2014. Maternal dietary effects and age at first reproduction in the house mouse. *Integrative and Comparative Biology*
16. **Bentz, AB^G, AE Sirman^G**, H Wada, **WR Hood**. 2014. Effects of maternal hormones on epigenetic state of steroid receptors in Eastern bluebird offspring. *Integrative and Comparative Biology*
15. **Sirman, AE^G**, ZC Devries, **ZS Donoviel^U**, **WR Hood**. 2014. The effects of early nutrition on metabolic rate and fitness in the house mouse (*Mus musculus*). *Integrative and Comparative Biology*
14. **Poundstone, MM^U, WR Hood**. 2014. Growing up in the dark isn't so bad, part II: Development of cavity nesting bluebirds is not limited by access to UVB light. *Integrative and Comparative Biology*
13. **Hood, WR**. 2014. Maternal diet, developmental plasticity, and reproductive fitness in the house mouse. *Integrative and Comparative Biology*
12. **Skibieli AL^G**, JR Speakman, **WR Hood**. 2013. The costs of current reproduction are not traded against maternal survival or subsequent reproductive performance in the Columbian Ground Squirrel. *Integrative and Comparative Biology*
11. **Hood WR**. 2012. Growing up in the dark isn't so bad: Development of cavity nesting bluebirds is not limited by vitamin D. *Integrative and Comparative Biology*

10. Skibieli AL^G and WR Hood. 2012. Building better babies: Impact of individual variation in milk composition on differential reproductive performance of Columbian ground squirrels. *Integrative and Comparative Biology*
9. Ramirez, MD^U, AL Skibieli^G, WR Hood. 2012. Lactating Columbian ground squirrels increase nutrient absorption without altering digesta retention. *Integrative and Comparative Biology*
8. Hood WR. 2011. Limits on bone mobilization during reproduction. *Integrative and Comparative Biology*
7. Schmidt Booher CM^G and WR Hood. 2011. Dietary calcium, maternal skeletal condition and lifetime reproductive performance of white-footed mice (*Peromyscus leucopus*). *Integrative and Comparative Biology*
6. Skibieli AL^G and WR Hood. 2011. Temporal and inter-individual variation in milk composition in a free-ranging, hibernating rodent. *Integrative and Comparative Biology*
5. Hood WR. 2011. Locomotor stress and mineral mobilization from the maternal skeleton. *Integrative and Comparative Biology*
4. Hood WR. 2011. Cannibalism of offspring protects the integrity of the maternal skeleton. *Integrative and Comparative Biology*
3. Hood WR and CM Booher^G. 2009. Mineral dynamics during reproduction in insectivorous bats: skeletal integrity is favored over increased reproductive output. *Integrative and Comparative Biology*
2. Hood WR and GE Hill. 2009. Dietary fat influences carotenoid-based coloration in the American Goldfinch. *Integrative and Comparative Biology*
1. Booher CM^G and WR Hood. 2009. Calcium intake, bone metabolism and reproductive output of white-footed mice (*Peromyscus leucopus*). *Integrative and Comparative Biology*

Published regular abstracts prepared prior to time at Auburn

None

3. Presented papers or lectures

3a. Invited lectures at Universities/Institutes

Lectures given while on faculty at Auburn

16. 2020, fall – postponed. WR Hood. Mitochondrial function and life history tradeoffs. **Dept. of Biology, University of South Carolina, Columbia, SC**
15. 2018, Oct 10. WR Hood. Mitochondrial function and life history tradeoffs. **Dept. of Biology, North Carolina State University, Greensboro, NC**
14. 2017, Feb 10. WR Hood. Mitochondrial function and life history tradeoffs. **Dept. of Biology, University of Mississippi, Oxford, MS**
13. 2016, Nov 10, WR Hood. Mitochondrial function and life history tradeoffs. **Dept. of Biology, University of California, Riverside, CA**
12. 2016, Oct 25, WR Hood. Mitochondrial function and life history tradeoffs. **Nutrition and Obesity Research Center, University of Alabama, Birmingham, AL**
11. 2014, January 17. Investigating the roles of nutrition, lactation, and bone metabolism in reproductive performance. **Dept. of Biology, University of Northern Florida, Jacksonville, FL**
10. 2013, May 1. Investigating the roles of nutrition, lactation, and bone metabolism in reproductive performance. **Dept. of Biological Sciences, Texas Tech University, Lubbock, TX**
9. 2012, Jan 30. Investigating the roles of nutrition, lactation, and bone metabolism in reproductive performance. **Dept. of Biology, University of New Orleans (invited by graduate students), New Orleans, LA.**
8. 2012, Jan 20. Investigating the roles of nutrition, lactation, and bone metabolism in reproductive performance. **Dept. of Animal Sciences, Auburn University,**
7. 2011, Oct 19. Calcium, bones, milk, and babies: Investigating the role of extrinsic and intrinsic limitations on reproduction. **Museu de Ciències Naturals, Barcelona Spain.**

6. 2011, Feb 9. Calcium, bones, milk, and babies: Investigating the role of extrinsic and intrinsic limitations on reproduction. **AU-Repro Forum, Auburn University.**
5. 2011, Jan 28. Calcium, bones, milk, and babies: Investigating the role of dietary, physiological, and biomechanics limitations on reproduction. **Department of Biomechanical Engineering, University of Alabama, Birmingham, AL**
4. 2009, Dec 9. Bone mineralization: an underappreciated cost of reproduction. **National Centre for Biological Sciences, Bangalore, India.**

Lectures given prior to starting at Auburn

3. 2006. How Bats Meet the Nutritional Demands of Lactation. **Dept. of Biology, West Chester University, West Chester, PA**
2. 2001. Nutritional Limitations on Lactation in the Big Brown Bat, *Eptesicus fuscus*. **Dept. of Biology, City College of New York, NY.**
1. 2000. Nutritional Limitations on Lactation in the Big Brown Bat, *Eptesicus fuscus*. **Dept. of Biological Sciences, Fordham University, Bronx, NY.**

3b. Presentations at professional meetings

Symposia organized at professional meetings

2018. Symposium - Society for Integrative and Comparative Biology, San Francisco, CA. 'Inside the black box: the mitochondrial basis of life-history variation and animal performance'. Organized with Dr. Karine Salin, University of Glasgow. The full day symposium + ½ day companion session included 11 invited speakers.

Invited presentations at professional meetings

Presentation given while on faculty at Auburn

- 2021: Oral presentation: Hood WR. A role for mitohormesis in reproductive fitness and longevity. **Rank Prize Funds Symposium**, Grasmere, UK. Variation in metabolic rate - where does it come from and does it matter? (invited by Neil Metcalf) – *postponed due to COVID 19*
- 2019: Oral presentation: Hood WR, AS Williams^G. Replication Error, Mitochondrial Function, and Senescence, An Ecologists Guide. **Society for Integrative and Comparative Biology**. Symposium on: Beyond the powerhouse: integrating mitonuclear evolution, physiology, and theory in comparative biology.. (invited by Justin Havarid)
2015. Oral presentation: Hood WR, AV Mowry^G, A. Kavazis. **International Congress of Comparative Physiology and Biochemistry**. Symposium on: Links between Oxidative Stress and Life Histories (invited by Neil Metcalfe and Jan Taylor)
2013. Oral presentation: Hood WR. Bone metabolism and lactation. **Experimental Biology**. Symposium on: Bone physiology under environmental stress (invited by Tomasz Owerkowicz)

Presentations at professional meetings

Presentations given while on faculty at Auburn – presenter in italics

117. 2020. Poster presentation: VR Favorit, AN Kavazis, **WR Hood**, P Villamediana, AL Skibiell. American. Mitochondrial function in the liver and skeletal muscle of mid-lactation dairy cattle. American Dairy Science Association. Virtual
116. 2020. Oral presentation: **Yap KN^P**, **KYH Yamada^G**, **SL Zikeli^G**, Y Zhang, Y Zhang, AN Kavazis, LB Gladden, MD Roberts, H Kiaris, **WR Hood**. Individual variation in cellular unfolded protein response, respiratory capacity, and stress tolerance in deer mice (*Peromyscus maniculatus*). *Society for Integrative and Comparative Biology, Virtual.*

115. 2020. Oral presentation: **Hood, WR**. Life history, condition dependency, and mitochondrial performance. *Society for Integrative and Comparative Biology, Virtual*.
114. 2020. Oral presentation: **Niitepöld K^P**, HA Parry, AG Appel, J de Roode, AN Kavazis, **WR Hood**. Of monarchs and mitochondria: Effects of starvation and infection on flight physiology in the monarch butterfly. *International Congress of Entomology, Helsinki, Finland*
113. 2020. Oral presentation: Parry, HA; **Yap, KN^P**; Gladden, LB; Hill, GE; **Hood, WR**; Kavazis, AN MitoMobile Validation: Taking a Molecular Physiology Lab to the Field. *Society for Integrative and Comparative Biology, Austin, TX*
112. 2020. Oral presentation: **Yamada, KYH^G**; **Zikeli, SL^G**; **Yap, KN^P**; Zhang, Y; Kiaris, H; Kavazis, AN; **Hood, WR**. The relationship between the unfolded protein response and mitochondrial performance in deer mice maintained in a natural context. *Society for Integrative and Comparative Biology, Austin, TX*
111. 2020. Oral presentation: **Andreasen, VA^G**; **Yap, KN^P**; Yamada, K; **Williams, A^G**; **Zikeli, S^G**; Kavazis, AN; **Hood, WR**. The impact of maternal corticosterone on offspring morphology and mitochondrial physiology. *Society for Integrative and Comparative Biology, Austin, TX*
110. 2020. Poster presentation: **Zikeli, S^G**; **Yamada, K^G**; **Yap, K^P**; Zhang Y; Kiaris, H; **Hood, WR**. Shy and Stressed? Correlations Between Corticosterone Level, Unfolded Protein Response, and Animal Personality. *Society for Integrative and Comparative Biology, Austin, TX*
109. 2020. Oral presentation: **Heine, KB^G**; Justyn, NM; Hill, GE; **Tucker, VL^U**; **Jung, D^U**; **Pollock, B^U**; **Hood WR**. Modeling Mitochondrial Behavior and Morphology from TEM Micrographs of Copepod Myocytes Following Ultraviolet Irradiation. *Society for Integrative and Comparative Biology, Austin, TX*
108. 2020. Oral presentation: Justyn, NM; **Heine, KB^G**; Peteya, JA; **Hood, WR**; Shawkey, MD; WANG, B; Hill, GE Persistence of Carotenoids in the Red Eyespots of Copepods (*Tigriopus californicus*) on Carotenoid-free Diets. *Society for Integrative and Comparative Biology, Austin, TX*
107. 2019. Oral presentation: GE Hill, **Hood WR**, AN Kavazis, **Y Zhang^P**. Male Red Carotenoid Coloration Indicates Mitochondrial Performance in the House Finch. *Society for Molecular Biology and Evolution, Manchester Central, England*
106. 2019. Oral presentation: **Yap KN^P**, **V Andreasen^G**, **A Williams^G**, **K Yamada^G**, **S Zikeli^G**, AN Kavazis, **WR Hood**. Impact of elevated corticosterone during lactation on offspring morphology and mitochondrial physiology. *International Congress on Comparative Physiology and Biochemistry, Ottawa, Canada*
105. 2019. Oral presentation: **Hood WR**, GE Hill, AN Kavazis, **Y Zhang^P**. Male Red Carotenoid Coloration Indicates Mitochondrial Performance in the House Finch. *International Congress on Comparative Physiology and Biochemistry, Ottawa, Canada*
104. 2019. Oral presentation: **Hood WR**, GE Hill, AN Kavazis, **Y Zhang^P**. Male Red Carotenoid Coloration Indicates Mitochondrial Performance in the House Finch. *American Ornithological Society, Anchorage, AL*
103. 2019. Oral presentation: **Hood WR**, **AS Williams^G**, GE Hill. Mitochondrial Replication Error and Senescence. *Society for Integrative and Comparative Biology, Tampa, FL*
102. 2019. Oral presentation: **Josefson, CC^G**, Heard RD, **Hood, WR**. Trans-generational effects during development following maternal immune challenge in a lactating rodent. *Society for Integrative and Comparative Biology, Tampa, FL*
101. 2019. Poster presentation: Parry HA, **Josefson, CC^G**, **Taylor, HA^G**, **Andreasen, V^G**, **Park, NR^G**, **Hood, WR**, Kavazis, AN. Immune Challenge During Reproduction has Minimal Impact on Mitochondrial Respiration and Oxidative Stress. *Society for Integrative and Comparative Biology, Tampa, FL*
100. 2019. Oral presentation: **Zhang, Y^P**, Hill, GE, **Park, N^G**, **Taylor, HA^G**, **Andreasen, V^G**, Kavazis, AN, Bonneaud, C, **Hood, WR**. Effects of *Mycoplasma gallisepticum* on mitochondrial function and oxidative stress in house finch. *Society for Integrative and Comparative Biology, Tampa, FL*
99. 2019. Oral presentation: **Taylor, HA^G**, **Park, NR^G**, Kavazis, AN, **Hood, WR**. Variation in Mitochondrial Complex Activity, Oxidative Stress, and the Unfolded Protein Response in the Brain of Mice with Region and Parity. *Society for Integrative and Comparative Biology, Tampa, FL*
98. 2019. Oral presentation: **Heine, KB^G**, Powers, MJ, **Kallenberg, MC^U**, **Tucker, VL^U**, **Hood, WR**. Moderate UV-B Irradiation Increases Fecundity but Decreases Longevity in a Marine Copepod. *Society for Integrative and Comparative Biology, Tampa, FL*

97. 2019. Oral presentation: **Niitepold, K^P**, Parry HA, Kavazis, AN, **Hood, WR**. Starvation reduces mitochondrial function in the monarch butterfly. *Society for Integrative and Comparative Biology, Tampa, FL*
96. 2018. Oral presentation: **Hood, WR, Y Zhang^P, A Brasher^U, N Park^G, H Taylor^G**, A Kavazis. Activity before reproduction alters reproductive performance and maternal bioenergetic capacity via mitochondrial plasticity. *Comparative Nutrition Society, Quebec City, Canada*.
95. 2018. Oral presentation: **Hood, WR**, GE Hill, A Kavazis, **Y Zhang^P**. Male red carotenoid coloration indicated mitochondrial performance in the house finch. *Comparative Nutrition Society, Quebec City, Canada*.
94. 2018. Poster presentation: **Heine KB^G**, Powers MJ, Weaver RJ & **Hood WR**. Life History Benefits of UV-B Irradiation in a Marine Copepod (*Tigriopus californicus*). *Ecological Society of America, New Orleans, LA*
93. 2018. Poster presentation: **Heine KB^G**, Powers MJ, Weaver RJ & **Hood WR**. Life History Benefits Following UV-B Exposure in a Marine Copepod (*Tigriopus californicus*). *Second Annual Nathan Shock Symposium on the Basic Biology of Aging, Birmingham, AL*
92. 2018. Oral presentation: **Hood WR, Y Zhang^P, AV Mowry^G**, HW Hyatt, AN Kavazis. Life history trade-offs within the context of mitochondrial hormesis. *Peromyscus Genetic Stock Center May 2018 Symposium, Columbia, SC*
91. 2018. Poster presentation: **Andreassen, V^G**, Kavazis, AN, **Hood, WR**. Dietary stress and mitochondrial performance following reproduction. *Peromyscus Genetic Stock Center May 2018 Symposium, Columbia, SC*
90. 2018. Poster presentation: **Taylor, HA^G, Park, NR^G, Josefson, CC^G, Hood, WR**. Life-history trade-offs and ROS and ER stress interaction in the brain. *Peromyscus Genetic Stock Center May 2018 Symposium, Columbia, SC*
89. 2018. Poster presentation: **Zikeli, S^G, Hood, WR** Measuring reproductive performance in *Peromyscus* in a natural context. *Peromyscus Genetic Stock Center May 2018 Symposium, Columbia, SC*
88. 2018. Poster presentation: **Frey, K^U**, and **WR Hood**. Determining the effects of Reproductive Performance on Bone Quality in Female House Mice. *Auburn University This is Research Student Symposium*.
87. 2018. Poster presentation: **Hood WR, Y Zhang^P, AV Mowry^G**, HW Hyatt, AN Kavazis. Re-evaluating life history trade-offs within the context of mitochondrial hormesis. *Second Annual Nathan Shock Symposium on the Basic Biology of Aging, Birmingham, AL*
86. 2018. Oral presentation: **Hood WR, Y Zhang^P, AV Mowry^G**, HW Hyatt, AN Kavazis. Re-evaluating life history trade-offs within the context of mitochondrial hormesis. *Society for Integrative and Comparative Biology, San Francisco, CA*. **Co-organizer of symposium: Inside the black box: the mitochondrial basis of life-history variation and animal performance.**
85. 2018. Oral presentation: **Park, NP^G, Y Zhang^P**, AN Kavazis, and **WR Hood**. Oxidative DNA damage and repair in response to induced ROS exposure in mice. *Society for Integrative and Comparative Biology, San Francisco, CA*
84. 2018. Oral presentation: **Zhang, Y^P, H Taylor^G, M Kash^U**, MD Roberts, and **WR Hood**. Induced ROS exposure improves mitochondrial performance in hepatocytes. *Society for Integrative and Comparative Biology, San Francisco, CA*
83. 2018. Oral presentation: **Josefson, CC^G** and **WR Hood**. Life history trait co-variation patterns within the house mouse (*Mus musculus*) differ from across species predictions. *Society for Integrative and Comparative Biology, San Francisco, CA*
82. 2018. Poster presentation: **Taylor, HA^G, Y Zhang^P, M Kash^U**, AN Kavazis, M Roberts, **WR Hood**. Response of hepatocytes to ROS exposure: Temporal variation in oxidative stress response signaling pathways. *Society for Integrative and Comparative Biology, San Francisco, CA*
81. 2018. Poster presentation: **Josefson, CC^G, AE Sirman^G, WR Hood**. The role of maternal protein intake on partitioning of resources among offspring. *Society for Integrative and Comparative Biology, San Francisco, CA*
80. 2018. Poster presentation: **Park, NR^G, Y Zhang^P, A Brasher^U, C Kallenberg^U**, AN Kavazis, and **WR Hood**. Increased Physical Activity (Running) Before Breeding Improves Reproductive Performance By Enhancing Mitochondrial Function and Biogenesis. *UAB Center for Exercise Medicine 5th Annual Symposium, Birmingham, AL*

79. 2018. Poster presentation: **Zhang^P**, Y; **F Humes^G**, **A Brasher^U**, **C Kallenberg^U**, A Kavazis, **WR Hood**. The mitohormetic response and an evaluation of a method for inducing oxidative damage. *UAB Center for Exercise Medicine 5th Annual Symposium, Birmingham, AL*
78. 2017. Poster presentation: **Kallenberg, C^U** **Zhang, Y^P**, , HW Hyatt, AN Kavazis, and **WR Hood**. Change in the Lipid Transport Capacity of the Liver and Blood during Reproduction in Rats. *Auburn University This is Research Student Symposium*.
77. 2017. Poster presentation: **Brasher, AL^U** **Y Zhang^P**, Y, , **NR Park^G**, **HA Taylor^G**, AN Kavazis, and **WR Hood**. High activity before breeding improves reproductive performance by enhancing mitochondrial function and biogenesis. *Auburn University This is Research Student Symposium*.
76. 2018. Oral presentation: **Hood, WR**. Reevaluating the cost of reproduction. *Society for the Study of Evolution, Portland, OR*.
75. 2017. Oral presentation: **Zhang, Y^P**, **F Humes^G**, **A Brasher^U**, **C Kallenberg^U**, AN Kavazis, **WR Hood**. The mitohormetic response and an evaluation of a method for inducing oxidative damage. *Experimental Biology, Chicago, IL*
74. 2017. Poster presentation: **Hyatt, H**, **Y Zhang^P**, **WR Hood**, and AN Kavazis. Alterations of Mitochondrial Function and Metabolism in Skeletal Muscle, Liver, and White Adipose: Early Evidence for the Lactation Reset Hypothesis. *Experimental Biology, Chicago, IL*
73. 2017. Poster presentation: **Brasher AL^U**, **Y Zhang^P**, AN Kavazis, and **WR Hood** Does relative activity prior to breeding improve mitochondrial function and oxidative damage following a reproductive event? *Society for Integrative and Comparative Biology, New Orleans, LA*.
72. 2017. Poster presentation: **Kallenberg MK^U**, **Y Zhang^P**, HW Hyatt, AN Kavazis, and **WR Hood** Reproductive effects on lipid transport capacity in liver and blood in rats. *Society for Integrative and Comparative Biology, New Orleans, LA*.
71. 2017. Poster presentation: **Josefson, CC^G** and **WR Hood**, Using phenotypic variation in the lab mouse to deduce physiological variables that correlate with life history variation. *Society for Integrative and Comparative Biology, New Orleans, LA*.
70. 2017. Oral presentation: **Hood, WR** and **Y Zhang^P**. Understanding the bioenergetic mechanisms that underlie the interactions among life history traits. *Society for Integrative and Comparative Biology, New Orleans, LA*.
69. 2017. Oral presentation: **Zhang, Y^P**, **F Humes^G**, **A Brasher^U**, **C Kallenberg^U**, AN Kavazis, **WR Hood**. The mitohormetic response and an evaluation of a method for inducing oxidative damage. *Society for Integrative and Comparative Biology, New Orleans, LA*.
68. 2016. Oral presentation: **Hood, WR**, **A Mowry^G**, **Y Zhang^P**, A Kavazis. 2016. Understanding the bioenergetic mechanisms that underlie putative interactions among life history traits. *Comparative Nutrition Society, Puerto Rico*
67. 2016. Oral presentation: **Warren, M^G**, M Liles, **WR Hood**. Effects of dietary protein intake on fecal and milk microbiota. *Comparative Nutrition Society, Puerto Rico*
66. 2016. Oral presentation: **Hood WR** and **Y Zhang^P**. A re-evaluation of the predictions and mechanisms that underlie the interactions between current reproduction, future reproduction, and survival. *Society for the Study of Evolution, Austin, TX*.
65. 2016. Poster presentation: **Welling, EM^U**, **Conte, AN^G**, AN Kavazis, **WR Hood**. Evaluating the relationship between energy expenditure and oxidative damage in the house finch, *Haemorrhous mexicanus*. *Auburn University This is Research Student Symposium*.
64. 2016. Oral presentation: **Hood, WR**, **AV Mowry^G**, AN Kavazis. Tissue-specific variation in mitochondrial function and implications for the costs of reproduction. *Society for Integrative and Comparative Biology, Portland, OR*.
63. 2016. Poster presentation: **Josefson, CC^G**, AB Bentz, **WR Hood**, H Wada. Epigenetic and neuroanatomical changes associate with early-life exposure to exogenous corticosterone in Eastern Bluebird (*Sialia sialis*) nestlings. *Society for Integrative and Comparative Biology, Portland, OR*
62. 2016. Poster presentation: **Conte, AN^G**, **EM Welling^U**, AN Kavazis, **WR Hood**. A test of the relationship between oxidative damage and energy expenditure in a passerine bird. *Society for Integrative and Comparative Biology, Portland, OR*
61. 2015. Oral presentation: **Josefson CC**, AB Bentz, **WR Hood**, H Wada. Understanding nature versus nurture: Using avian song as a model for ecological epigenetics. *Ecological Genomics Symposium, Manhattan, Kansas*

60. 2015. Oral presentation: **Chen, CW^G**. The impact of maternal protein intake on offspring organ development in the house mouse (*Mus musculus*). *Auburn University This is Research Student Symposium*.
59. 2015. Poster presentation: **Wyatt, N^U**. Maternal diet and its impact on the gut and milk microbiota. *Auburn University This is Research Student Symposium*.
58. 2015. Oral presentation: **Hood, WR**, AV Mowry, AN Kavazis. Mitochondrial function and life history variation in the house mouse. *Society for Integrative and Comparative Biology, West Palm Beach, FL*
57. 2015. Oral presentation: **Sirman, AE^G**, JP Avery, **ZS Donoviel^U**, **WR Hood**. The effects of the developmental environment on reproductive effort and insulin-like growth factor 1 in the house mouse (*Mus musculus*). *Society for Integrative and Comparative Biology, West Palm Beach, FL*
56. 2015. Oral presentation: **Chen, CW^G**, **WR Hood**. The impact of maternal protein intake on offspring organ development in the house mouse (*Mus musculus*). *Society for Integrative and Comparative Biology, West Palm Beach, FL*
55. 2014. Oral presentation: **Hood, WR**, **AE Sirman^G**. 2014. Maternal diet, metabolism, and reproductive effort in the house mouse. *Comparative Nutrition Society Symposium, Flat Rock, NC*
54. 2014. Oral presentation: **Hood, WR**. 2014. Developmental plasticity and reproductive fitness in the house mouse. *Society for the Study of Evolution, Raleigh, NC*
53. 2014. Poster presentation: **Bentz, AB^G**, **AE Sirman^G**, H Wada, **WR Hood**. Effects of maternal hormones on epigenetic state of steroid receptors in Eastern bluebird offspring. *Society for Integrative and Comparative Biology, Austin, TX 2014*.
52. 2014. Poster presentation: **Poundstone, MM^U**, **WR Hood**. Growing up in the dark isn't so bad, part II: Development of cavity nesting bluebirds is not limited by access to UVB light. *Society for Integrative and Comparative Biology, Austin, TX*
51. 2014. Poster presentation: **Hobensack, MJ^U**, **WR Hood**. Increasing mechanical strain on the skeleton during reproduction does not reduce bone mobilization during reproduction in the mouse. *Society for Integrative and Comparative Biology, Austin, TX*
50. 2014. Poster presentation: **Donoviel ZS^U**, **AE Sirman^G**, **WR Hood**. Maternal dietary effects and age at first reproduction in the house mouse. *Society for Integrative and Comparative Biology, Austin, TX*
49. 2014. Poster presentation: **Sirman, AE^G**, ZC Devries, **ZS Donoviel^U**, **WR Hood**. The effects of early nutrition on metabolic rate and fitness in the house mouse (*Mus musculus*). *Society for Integrative and Comparative Biology, Austin, TX*
48. 2014. Oral presentation: **Hood, WR**. Maternal diet, developmental plasticity, and reproductive fitness in the house mouse. *Society for Integrative and Comparative Biology, Austin, TX*
47. 2013. Oral presentation. **Siefferman L**, T Morris, **WR Hood**. 2013. Mate choice and personality in the Eastern Bluebird. *American Society of Ornithologist, Chicago*.
46. 2013. Poster presentation: **Skibieli AL^G**, LM Downing, TJ Orr, and **WR Hood***. The evolution of the nutrient composition of mammalian milks. *Society for the Study of Evolution, Snowbird, UT*
45. 2013. Oral presentation: **Skibieli AL^G**, JR Speakman, **WR Hood***. The costs of current reproduction are not traded against maternal survival or subsequent reproductive performance in the Columbian Ground Squirrel. *Society for Integrative and Comparative Biology, San Francisco, CA*
44. 2012. Oral presentation: **Skibieli AL^G**, **WR Hood**. Milk matters: Offspring survival in Columbian ground squirrels is affected by nutrient composition of milk. *Comparative Nutrition Society Symposium, Monterey, CA*
43. 2012. Poster presentation: **Skibieli AL^G**, LM Downing, TJ Orr, and **WR Hood***. The evolution of the nutrient composition of mammalian milks. *Comparative Nutrition Society Symposium, Monterey, CA*
42. 2012. Poster presentation: **Hood WR**. Growing up in the dark isn't so bad: Development of cavity nesting bluebirds is not limited by vitamin D. *Society for Integrative and Comparative Biology, Charleston, SC*
41. 2012. Oral presentation: **Skibieli AL^G** and **Hood WR**. Building better babies: Impact of individual variation in milk composition on differential reproductive performance of Columbian ground squirrels. *Society for Integrative and Comparative Biology, Charleston, SC*
40. 2012. Poster presentation: **Ramirez MD^U**, **AL Skibieli^G**, **WR Hood**. Lactating Columbian ground squirrels increase nutrient absorption without altering digesta retention. *Society for Integrative and Comparative Biology, Charleston, SC*
39. 2011. Poster presentation: **Hood WR**. Electrolyte and water balance in the Ruby-throated hummingbird. *American Ornithology Union, Jacksonville, FL*.

38. 2011. Oral presentation: **Skibieli AL^G**, and **Hood WR**. Building better babies: Impact of individual variation in milk composition on differential reproductive performance of Columbian ground squirrels. *Auburn University graduate student forum*.
37. 2011. Oral presentation: **Ramirez MD^U**, **AL Skibieli^G**, **WR Hood**. Lactating Columbian ground squirrels increase nutrient absorption without altering digesta retention. *Undergraduate Research and Creative Scholarship Forum*. Auburn, AL
36. 2011. Oral presentation: **Hood WR**. Limits on bone mobilization during reproduction. *Society for Integrative and Comparative Biology*, Salt Lake City, UT
35. 2011. Oral presentation: **Schmidt Booher CM^G** and **WR Hood**. Dietary calcium, maternal skeletal condition and lifetime reproductive performance of white-footed mice (*Peromyscus leucopus*). *Society for Integrative and Comparative Biology*, Salt Lake City, UT
34. 2011. Poster presentation: **Skibieli AL^G** and **WR Hood**. Temporal and inter-individual variation in milk composition in a free-ranging, hibernating rodent. *Society for Integrative and Comparative Biology*, Salt Lake City, UT– **Skibieli won student poster presentation competition in the division of ecology and evolution**.
33. 2011. Poster presentation: **Hood WR**. Locomotor stress and mineral mobilization from the maternal skeleton. *Society for Integrative and Comparative Biology*, Salt Lake City, UT
32. 2010. Poster presentation: **Hood WR**. Cannibalism of offspring protects the integrity of the maternal skeleton. *International Behavioral Ecology Congress*, Perth, Western Australia
31. 2010. Oral presentation: **Hood WR**. Cannibalism of offspring protects the integrity of the maternal skeleton. *Comparative Nutrition Society Symposium*, Tucson, AZ
30. 2010. Poster presentation: **Hood WR**. Locomotor stress and mineral mobilization from the maternal skeleton. *Comparative Nutrition Society Symposium*, Tucson, AZ
29. 2010. Oral presentation: **Booher CM^G** and **WR Hood**. Calcium as currency for assessing physiological costs of reproduction in white-footed mice. *Comparative Nutrition Society Symposium*, Tucson, AZ – **Booher won student oral presentation competition**.
28. 2010. Poster presentation: **Skibieli AL^G** and **WR Hood**. Temporal and inter-individual variation in milk composition in a free-ranging, hibernating rodent. *Comparative Nutrition Society Symposium*, Tucson, AZ
27. 2010. Poster presentation: **Eisert R**, **OT Oftedal**, **WR Hood**, and **AD Mitchell**. Isotope dilution and body composition: updating a tool for nutritional ecology. *Comparative Nutrition Society Symposium*, Tucson, AZ
26. 2010. Poster presentation: **Eisert R**, **OT Oftedal**, **WR Hood**, and **AD Mitchell**. Isotope dilution and body composition: updating a tool for nutritional ecology. *American Physiological Society*, Westminster, CO
25. 2010. Oral presentation: **Filhiol T^U** and **WR Hood**. Maternal vitamin K and offspring mineralization in *Mus musculus*. *National Council on Undergraduate Research*, Missoula, MT
24. 2010. Oral presentation: **Filhiol T^U** and **WR Hood**. Maternal vitamin K and offspring mineralization in *Mus musculus*. *Undergraduate Research and Creative Scholarship Forum*. Auburn, AL — **Filhiol won 2nd place in the Sigma Xi outstanding science oral presentation competition**.
23. 2010. Oral presentation: **Booher CM^G** and **WR Hood**. Calcium as currency for assessing physiological costs of reproduction in white-footed mice. *Auburn University graduate student forum* – **Booher won 2nd place student oral presentation competition**.
22. 2009. Oral presentation: **Hood WR** and **CM Booher^G**. Mineral dynamics during reproduction in insectivorous bats: skeletal integrity is favored over increased reproductive output. *Society for Integrative and Comparative Biology*, Boston, MA
21. 2009. Poster presentation: **Hood WR** and **GE Hill**. Dietary fat influences carotenoid-based coloration in the American Goldfinch. *Society for Integrative and Comparative Biology*, Boston, MA
20. 2009. Poster presentation: **Booher CM^G** and **WR Hood**. Calcium intake, bone metabolism and reproductive output of white-footed mice (*Peromyscus leucopus*). *Society for Integrative and Comparative Biology*, Boston, MA

Presentations given prior to starting at Auburn

19. 2006. Oral presentation: **Hood WR** and GE Hill. Male color, but not body composition, reveals food deprivation in the American goldfinch. *Comparative Nutrition Society Symposium, Keystone, Colorado*.
18. 2006. Poster presentation: **ME Parsons^G** and **WR Hood**. Does algae consumption influence carotenoid based coloration in bluegill sunfish. *Comparative Nutrition Society Symposium, Keystone, Colorado*. – Parsons won student poster competition.
17. 2006. Poster presentation **Hood WR**, MB Voltura, and OT Oftedal. A comparison of methods for determining the nitrogen and fat composition of milk: how to best analyze milk collected from small mammals. *Comparative Nutrition Society Symposium, Keystone, Colorado*.
16. 2006: Poster presentation: **Hood WR** and GE Hill. Coloration in American goldfinches distinguishes single verses multiple environmental challenges. *International Society for Behavioral Ecology, Tours, France*
15. 2005. Oral presentation: **Hood WR** and GE Hill. Male color, but not body composition, reveals food deprivation in the American goldfinch. *The Crissey Zoological Nutrition Symposium. Raleigh, NC*.
14. 2004. Poster presentation: **Hood WR** and **A Melinchuk^U**. Adipose fatty acid composition in the little brown bats (*Myotis lucifugus*) during hibernation. *Thirty-fourth North American Symposium on Bat Research, Salt Lake City, UT*
13. 2004. Poster presentation: **Hood WR**, **L Mello^U**, M Kowalska, R Buffenstein. The effect of polyunsaturated fatty acid intake on lipid storage and on rates of cooling and rewarming in the naked mole rat (*Heterocephalus glaber*). *Comparative Nutrition Society Symposia, Hickory Corners, MI*.
12. 2004. Poster presentation: **Melinchuk A^U** and **WR Hood**. Adipose fatty acid composition in the little brown bats (*Myotis lucifugus*) during hibernation. *Comparative Nutrition Society Symposia, Hickory Corners, MI*
11. 2002. Oral presentation: **Hood WR**, CF Frank. Polyunsaturated Fatty Acid Intake and Its Effect on Over-Winter Survival by Golden-Mantled Ground Squirrels. *Comparative Nutrition Society Symposia, Antwerp, Belgium*.
10. 2002. Oral presentation: **Hood WR**, CF Frank. Polyunsaturated Fatty Acid Intake and Its Effect on Over-Winter Survival by Golden-Mantled Ground Squirrels. *Physiological Ecology Meeting Bishop CA*
9. 2002. Poster presentation: **Hood WR**, OT Oftedal, TH Kunz. Nutritional limitations on lactation in the big brown bat, *Eptesicus fuscus*. *Thirty-second North American Symposium on Bat Research, Burlington, VT*.
8. 2001. Oral presentation: **Hood WR**. Body composition during lactation and post natal growth in the Big Brown Bat, *Eptesicus fuscus*. *Physiological Ecology Meetings, Bishop, CA*
7. 2000. Oral presentation: **Hood WR**, OT Oftedal, and TH Kunz. Nutritional Limitations on Lactation and Postnatal Growth in the Big Brown Bat, *Eptesicus fuscus*. *Comparative Nutrition Society Symposia, Pacific Grove, CA*.
6. 2000. Poster presentation: **Hood WR**, TH Kunz, OT Oftedal, SJ Iverson. Inter- and intraspecific variation in proximate, mineral, and fatty acid composition in old-world fruit bats (Chiroptera: Pteropodidae). *Comparative Nutrition Society Symposia, Pacific Grove, CA*.
5. 2000. Oral presentation: **Hood WR**, TH Kunz, OT Oftedal, and SJ Iverson. Inter- and intraspecific variation in proximate, mineral, and fatty acid composition in old-world fruit bats (Chiroptera: Pteropodidae). *American Society of Mammalogists, Durham, NH*.
4. 1998. Oral presentation: **Hood WR**, TH Kunz, and OT Oftedal. Meeting the nutritional requirements of lactation: calcium and energy utilization in an insectivorous bat. *Comparative Nutrition Society Symposia, Banff, Alberta, Canada*.
3. 1997. Poster presentation: **Hood WR**. Post-natal growth and milk composition in four species of *Pteropus*. *Twenty-seventh North American Symposium on Bat Research, Tucson, AZ*.
2. 1996. Oral presentation: **Hood WR**, JM Bloss, TH Kunz, and OT Oftedal. Milk intake and milk composition by *Eptesicus fuscus* in New England. *Twenty-sixth North American Symposium on Bat Research, Bloomington, IL*.
1. 1993. Poster presentation: **Hood WR** and KA Ono. Effects of El Niño on maternal attendance patterns and pup behavior in a declining population of Steller sea lions. *Tenth Biennial Conference on the Biology of Marine Mammals, Galveston, TX*

4. Exhibitions

None

5. Performances

None

6. Patents and inventions

None

7. Other research/creative contributions

- Hood lab webpage: <http://www.thehoodlaboratory.com/>
- Attended bioenergetics workshop, March 2017, Buck Institute, Novato, CA

8. Grants and contracts

8a. External Support

While at Auburn University:

Funded:

Title	PI's	Source	Date, Duration	Amount	Role
Supplement CAREER proposal	WR Hood (PI), Grad student Ashley Williams	NSF-CAREER	2019, 1 yr	\$50,000	Designed project, wrote proposal
Genome to Fitness: An analysis of the stress response in <i>Peromyscus</i>	Kiaris (PI), WR Hood (Co-PI)	NSF-EPSCoR	2017, 4 yrs	\$3,998,124 (\$1,348,649 to Hood)	Designed 1/4 of project, wrote 1/4 of proposal
Novel method to capture intact DNA for NGS applications	D. Mead* (PI), W. Hood , M. Liles *Varigen Biosciences Corp.	NIH Phase I SBIR	2018, 9 Months	Phase 1, all to Varigen	Collaborator, supply tissues if funded and play a larger role in testing efficacy in phase II
Meeting: Symposium Support for SICB 2018 Inside the Black Box	WR Hood (PI), Karine Salin (Co-PI)	NSF-IOS	2017, 1 yr	\$14,774	<i>Conceived and wrote 1/2 proposal</i>
Effects of mitohormesis on reproduction and longevity	WR Hood (PI)	NSF-CAREER	2015, 5 yrs	\$1,032,465 (\$1,032,465 to Hood)	Designed project, wrote proposal
The mechanistic basis for improved metabolic health in females following lactation	WR Hood (PI), A Kavazis (Co-PI)	NIH-R03	2014, 2 yrs	\$148,000 (\$74K to Hood, \$74K Kavazis)	Designed project, wrote 3/4 of proposal

Meeting: Symposium Support for SICB 2014 stress and ornamentation	WR Hood (PI)	NSF-DEB	2013, 1 yr	\$12,000 (\$12,000 to Hood)	<i>Submitted on behalf of NSF-IOS deputy director GE Hill</i>
Dietary calcium, vitamin D and reproductive performance in bluebirds	WR Hood (PI)	Kaytee Pet Products	2011, 1 yr	\$34,812 (\$34,813 to Hood)	Designed project, wrote proposal
Dietary protein and reproductive performance in American Goldfinches	WR Hood (PI)	Kaytee Pet Products	2011, 1 yr	\$8,323 (\$8,323 to Hood)	Designed project, wrote proposal
Chronic exposure of hummingbirds to electro-nectar diet.	WR Hood (PI)	Kaytee Pet Products	2011, 1 yr	\$5,463 (\$5,463 to Hood)	Designed project, wrote proposal
Four 12x18 flight cages	WR Hood (PI)	Kaytee Pet Products	2011, single purchase	worth \$30,000 (purchased by Kaytee)	Designed project, wrote proposal
Experimental test of hummingbird diets and water balance.	WR Hood (PI)	Kaytee Pet Products	2009, 1 yr	\$36,363 (\$36,363 to Hood)	Designed project, wrote proposal

Pending:

Title	PI's	Source	Date	Amount	Role
The roles of mitochondrial behavior and morphology in animal performance	Hood W , A Kavazis	NSF-IOS	Nov 2020, 4 yrs	\$1,049,215	Wrote grant with grad student

Not Funded:

Title	PI's	Source	Date	Amount	Role
The physiological mechanisms of hybrid dysfunction and Haldane's Rule	G Hill, W Hood , A Kavazis	NSF-IOS	March 2020, 4 yrs	\$1,524,623	Equal collaborator with Hill, wrote 50% of grant
Investigating the Influence of Reproduction, Mitochondrial Replication Error, and Cellular Senescence on Longevity in House Mice	A Williams, W Hood (PI)	Amer. Fed. Aging Research	Feb 2019, 1.5 yrs	\$50,000	PI – wrote grant with grad student
Effects of Single Parenthood on Mothers in a Monogamous Mammal	W Saltzman (PI), T Garland (co-PI), B Trainor, W Hood (collaborator)	NIH-R21	Nov 2017, 3 years	\$425,000	Collaborator, will complete milk assays if funded
Variation in the unfolded protein response as a modifier of appetite: Implications for the adaptation at high altitudes	Kiaris (PI), WR Hood (Co-PI)	NSF-IOS	2019, 3 yrs	\$795,410	Designed 1/4 of project, wrote 1/4 of proposal
Effects of Single Parenthood on Mothers in a Monogamous Mammal	W Saltzman (PI), T Garland,	NIH-R21	Sept 2017, 3 years	\$425,000	Collaborator, will complete milk assays if funded

	W Hood (Collaborators)				
Effects of Single Parenthood on Mothers in a Monogamous Mammal	W Saltzman (PI), T Garland, W Hood (Collaborators)	NIH-R21	Nov 2016, 3 years	\$425,000	Collaborator, will complete milk assays if funded
Adaptation and plasticity in response to nutritional variation in natural populations	Warner, DA (PI), SS French, SM Secor, MR Liles, WR Hood (collaborator), TS Schwartz	NSF-IOS	2016, 3 yrs	Pre-proposal, no budget	Collaborator, will complete nutritional assays if funded
Effects of Single Parenthood on Mothers in a Monogamous Mammal	W Saltzman (PI), T Garland, W Hood (Collaborators)	NIH-R21	May 2016, 3 years	\$425,000	Collaborator, will complete milk assays if funded
Functional differences in muscle mitochondria between migratory and non-migratory birds	WR Hood (PI), A Kavazis (Co-PI)	NSF-IOS	2016, 3 yrs	Pre-proposal, no budget	Designed project, wrote $\frac{3}{4}$ of proposal
Carry-over Effects, Mitohormesis, and Reproductive Performance	WR Hood (PI)	NSF-IOS	2016, 3 yrs	Pre-proposal, no budget	Designed project, wrote proposal with my post-doc
Functional differences in muscle mitochondria between migratory and non-migratory birds	WR Hood (PI), A Kavazis (Co-PI)	NSF-IOS	2015, 3 yrs	Pre-proposal, no budget	Designed project, wrote $\frac{3}{4}$ of proposal
Diet induced programming of offspring immune function through the milk microbiome	WR Hood (PI), Skibiel, Liles, Schwartz (Co-PI's)	NSF-IOS	2014, 4 yrs	Pre-proposal, no budget	Designed project, wrote $\frac{1}{2}$ of proposal
Mitochondrial regulation and the tradeoff between reproduction and maintenance	WR Hood (PI), A Kavazis (Co-PI)	NSF-IOS	2014, 3 yrs	Pre-proposal, no budget	Designed project, wrote $\frac{3}{4}$ of proposal
Maternal diet and its impact on offspring metabolic phenotype and reproductive performance	WR Hood (PI)	NSF-CAREER	2013, 5 yrs	\$672,636	Designed project, wrote proposal
Experimental tests of the Resource Tradeoff Hypothesis for signal honesty	WR Hood (PI)	NSF-IOS	2013, 3 yrs	\$367,599	Wrote $\frac{1}{4}$ of proposal, GE Hill designed and wrote $\frac{3}{4}$ of proposal (could not submit, NSF-IOS director)
The role of a hormone-mediated maternal effect on aggression	WR Hood (PI), H Wada (Co-PI)	NSF-IOS	2013, 3 yrs	Invited pre proposal, \$356,914	Designed project and wrote proposal with grad student
Mitochondrial genomic adaptation to the thermal environment	WR Hood (PI)	NSF-DEB	2013, 3 yrs	Pre-proposal, no budget	Designed project, wrote proposal
Mitochondrial efficiency and energy allocation to reproduction	WR Hood (PI)	NSF-IOS	2013, 3 yrs	Pre-proposal, no budget	Designed project, wrote proposal

Developmental plasticity in metabolism, reproductive physiology, and lifetime reproductive performance	WR Hood (PI), H Wada (Co-PI)	NSF-IOS	2012, 3 yrs	Invited pre-proposal, \$399,924	Invited pre-proposal Designed project, wrote proposal
Developmental programming of the adrenocortical response and its effect on reproductive performance in a songbird	H Wada (PI), WR Hood (Co-PI)	NSF-IOS	2012, 3 yrs	Pre-proposal, no budget	Contributed to design
Phenotypic programming: the role of early development from physiology to fitness	WR Hood (PI), FS Dobson (Co-PI)	NSF-IOS	2012, 4 yrs	\$594,843	Designed project, wrote proposal
DDIG - Hormonal regulation of nutrient transfer during lactation: impacts on life history and offspring fitness	WR Hood (PI), A Skibieli (PhD student)	NSF-DEB	2010, 2 yrs	\$14,942	Worked with grad student who designed and wrote proposal
The effects of diet on turacin and turacoverdin pigmentation in Turacos.	WR Hood (PI)	Mazuri	2009, 1 yrs	\$9,000	Designed project, wrote proposal
Transgenerational effects of nutrient transfer during suckling.	WR Hood (PI)	NSF-IOS	2009, 3 yrs	\$442,822	Designed project, wrote proposal
Constraints on calcium mobilization, maternal skeletal integrity, and reproductive performance.	WR Hood (PI)	NSF-IOS	2008, 3 yrs	\$431,585	Designed project, wrote proposal

While at Coastal Carolina University:**Funded:**

Title	PI's	Source	Date, Duration	Amount	Role
Survey of small mammals on Spring Island	WR Hood (PI)	Spring Island Trust	2007, 1yr	\$15,000 (\$15,000 to Hood)	Designed project, wrote proposal
Bat Diversity and Abundance in the Francis Marion National Forest	WR Hood (PI)	US Forest Service	2003, 1yr	\$10,000 (\$10,000 to Hood)	Designed project, wrote proposal

Not Funded:

Title	PI's	Source	Date, Duration	Amount	Role
A multifactorial test of environmental constraints on coloration in a fish and a bird	WR Hood , GE Hill (PI's)	NSF-IOS	2007, 3 yrs	219,472	Contributed to project designed, wrote ½ of proposal
The signal content of carotenoid and melanin coloration in a songbird and a fish	GE Hill, WR Hood (PI's)	NSF-IOS	2006, 3 yrs	\$143,926	Contributed to project designed, wrote ½ of proposal
Purchase of a gas chromatograph with cyber-infrastructure capabilities	T Burns (PI) D Slusher, B Simpson, WR Hood (Co-PI's)	NSF-CHE	2013, single purchase	\$79,512	Contributed paragraph to proposal on biology use of instrument

A multifactorial test of environmental constraints on ornamental plumage coloration	GE Hill, WR Hood (PI's)	NSF-IOS	2006, 3 yrs	\$196,062	Contributed to project designed, wrote ½ of proposal
Acquisition of a Varian GC-MS/MS system	T Burns (PI) D Slusher, B Simpson, W Hood , D Evans (Co-PI's)	NSF-CHE	2013, single purchase	\$211,747	Contributed paragraph to proposal on biology use of instrument

While at Boston University (funded only)

- 1998. American Natural History Museum, Theodore Roosevelt Grant
- 1998. Sigma Xi, Boston University Chapter, Grant-in-Aid of Research
- 1998. American Society of Mammalogist, Grant-in-Aid of Research
- 1996. Smithsonian Institution, Graduate Student Research Fellow
- 1996. Sigma Xi, Grant-in-Aid of Research

8b. Internal Support:

While at Auburn University (funded only unless recent):

Title	PI's	Source	Date	Amount	Status
A Mobile Mitochondria Laboratory (AU MitoMobile) to Lead the World in Measuring Bioenergetics in Natural Settings	G Hill, W Hood , K Niitepold, A Kavazis, B Gladden, M Nelms, M Eddy, J Tennant	Presidenti al Awards for Interdiscipl inary Research	2018, 3 yrs	\$636,941	Contributed to design and proposal
Effects of mitohormesis on reproduction and longevity	WR Hood (PI), A. Kavazis (Co-PI)	Intramural Grant Program	2014, 2 yrs	\$40,000 (\$20,000 Hood; \$20,000 Kavazis)	Designed project, wrote proposal
Dietary Effects on Milk Microbial Diversity and Application to Swine Production	WR Hood (PI), MR Liles, FF Bartol, A Skibiell (Co-PIs)	Hatch Funding Program	2014, 2 yrs	\$25,000 (\$25,000 to Hood; others advised)	Designed project, wrote proposal
Faculty Travel Grant to present at the Comparative Nutrition Society meeting	WR Hood	COSAM	2014, for Aug 2014	\$337 (\$337 to Hood)	Wrote proposal
Mitochondrial function, energetic trade-offs, and reproductive performance	WR Hood (PI), A. Kavazis (Co-PI)	Intramural Grant Program	2013, 3 yrs	Not funded	Designed project, wrote proposal
Metabolic cages for cancer, drug, and metabolic disease research	M Greene & R Judd (Co-PI's) C Foradori, RJaeganthan, R Arnold, W Hood (Co-I's)	Intramural Grant Program	2013, single purchase	\$182,078 (\$182,078 to Greene and Judd to purchase equipment; Hood has access to equipment as participant)	Contributed paragraph from biology
Maternal and environmental factors affecting reproductive	PI's B Akingbemi, W Hood , F Bartol	Intramural Grant Program	2012, 3 yrs	Not funded	Contributed to design

tract development and reproductive performance					
Faculty Travel Grant to present at Society for Integrative and Comparative Biology meeting	WR Hood	COSAM	2012, for Jan 2013	\$500 <i>(\$500 to Hood)</i>	Wrote proposal
Faculty Travel Grant to present at Society for Integrative and Comparative Biology meeting	WR Hood	COSAM	2011, for Jan 2012	\$500 <i>(\$500 to Hood)</i>	Wrote proposal
Development of a nutritional explicit model for the impact of climate change on herbivores	WR Hood (PI), FS Dobson (Co-PI)	Intramural Grant Program	2010, 1 yr	\$4000 <i>(\$4000 to Hood; Dobson advised)</i>	Designed project, wrote proposal
Faculty Travel Grant to present at the Comparative Nutrition Society meeting	WR Hood	COSAM	2010, for Aug 2010	\$500 <i>(\$500 to Hood)</i>	Wrote proposal
Nutritional Systems for Swine to Increase Reproductive Efficiency	L Chiba (PI), WR Hood (Co-PI)	Hatch/Multistate Funding Program	2009, 3 yrs	\$49,282 <i>(\$45,282 to Chiba; \$4,000 to Hood)</i>	Designed 1 of 3 experiments, wrote that section of proposal
Faculty Travel Grant to present at the Society for Integrative and Comparative Biology meeting	WR Hood	COSAM	2008, for Jan 2009	\$500 <i>(\$500 to Hood)</i>	Wrote proposal

While at Coastal Carolina University (funded only)

- 2006. Professional Enhancement Grant
- 2006. Professional Activities Mini-Grant
- 2004. Professional Enhancement Grant
- 2004. Professional Activities Mini-Grant
- 2003. Professional Enhancement Grant
- 2003. Professional Activities Mini-Grant
- 2002. Professional Enhancement Grant

While at Boston University (funded only)

- 1994-1998, 1999-2000. Boston University Teaching Fellowship
- 1998-1999. Boston University and National Institutes of Health Reproduction Training Fellowship
- 1998. Boston University Travel Grant

While at University of California, Santa Cruz (funded only)

- 1992. William Bay Heald Award for Student Research
- 1992. Friends of the Long Marine Laboratory Award for Research

9. Scholarly program (Last updated 9/20)

The primary focus of research in my lab has been **understanding the mechanistic basis for variation in individual performance and life history**. To this end, we can categorize our work as followings:

Understanding of the role of mitochondrial function and reactive oxygen species exposure in reproduction and longevity. In the last few years, the lions-share of our work has focused on understanding the mechanisms that underlie the tradeoff between reproduction and longevity. In other words, we want to know why is it that species and individuals with higher reproductive output tend to have a shorter lifespan than those with lower reproductive output. We have taken several approaches to addressing this question:

- ***The relationship between reproduction, oxidative stress, mitochondrial function, and subsequent survival***

- We have evaluated the impact of litter size on overwinter survival in Columbian ground squirrel. (Amy L. Skibi et al., 2013)
- We evaluated how reproduction changes oxidative stress and mitochondrial performance during and after reproduction in wild-derived house mice, lab mice, and lab rats. (Hyatt et al., 2018a; Hyatt et al., 2018b; Mowry et al., 2017, 2016; Park et al., 2020)
- We evaluate the relationship between the expression of a sexually selected trait and oxidative stress and mitochondrial performance in the house finch. (Hill et al., 2019)

Current summary: Our results currently provide no evidence that reproduction has immediate impacts on survival or that reproduction hinders the immediate performance of mitochondria, even under enhanced oxidative damage.

- ***The interaction between oxidative events and life history***

Animals experience many events that can alter their oxidative balance – including but not limited to heat stress, pathogens, toxins, relative activity, and reproduction. We ask these events interact to alter individual performance. We suspect that these interactions contribute to variation in performance among individuals.

- We have quantified the impact of relative ROS exposure on reproductive performance and longevity and on mitochondrial physiology. (Heine et al., 2019; Zhang et al., 2018a)
- We have asked how reproduction impacts a females ability to respond to a subsequent oxidative event. (Wendy R. Hood et al., 2019)

Current summary: Our findings highlight the relative ROS exposure does interact with the life history patterns of animals, and this response appears to be linked to changes in the mitochondria.

- ***The response of mitochondria to ROS exposure***

- We have directly altered ROS production in animals to evaluate how the mitochondria respond to an oxidative event. (Zhang et al., 2018b)

Current summary: We have found that both mitochondrial physiology and mitochondrial morphology response to increased ROS. While the initial insult increases oxidative damage and hinders mitochondrial respiration but both recover. Both ROS levels drop, and the enzymatic activity of the mitochondrial complexes improves. Our results highlight that it is important to consider the timing and dosage of ROS in any study.

- ***Theory on the mechanistic basis for life-history tradeoffs***

- We have written theoretical papers proposing a role for mitochondrial hormesis in life-history tradeoff and a possible role of mitochondrial replication error in the life history patterns of animals in the wild. (Hood et al., 2018; Wendy R Hood et al., 2019; Zhang and Hood, 2016)

Does endoplasmic reticulum stress influence performance in natural contexts. Endoplasmic reticulum stress occurs when unfolded proteins accumulate within the ER. Cells respond by upregulating the unfolded protein response (UPR). Variation in the performance of the UPR had been correlated to variation in the condition of laboratory animals, and a poor functioning UPR has been linked to several diseases such as Alzheimer's and Parkinson's disease. We currently have no understanding of how variation in the UPR impacts animals' performance in the wild.

Milk composition and the impact of lactation on human health

- We have described milk composition for several species, including naked-mole rats, Columbian ground squirrels, and several species of bats. (Hood, 2001; Hood et al., 2001, 2014; Kunz and Hood, 2000; Skibieli and Hood, 2012)
- We have shown that the composition of a mother's milk composition impacts offspring survival in Columbian ground squirrels. (Skibieli and Hood, 2015)
- We completed the first phylogenetically corrected statistical analysis of milk composition across vertebrates, allowing us to describe factors that contribute to the evolution of milk composition. (A L Skibieli et al., 2013)
- We have described how maternal diet impacts milk microbiota. (Warren et al., 2019)
- In humans, women who do not nurse their babies have a higher statistical probability of obesity, diabetes, and cancer than women who forgo nursing. We have quantified the impact of lactation on cellular metabolism and mitochondrial function. (H. W. Hyatt et al., 2018; Hyatt et al., 2017)

Do animals maintained in seminatural enclosures display phenotypes that are more closely related to animals living in the wild than animals living under standard laboratory conditions?

The phenotypes that animals display are a product of gene by environmental interactions. Thus, to get accurate phenotype measures, we think it's important to evaluate phenotype under natural context. When we can't study animals in the wild, we often kept them in enclosures designed to mimic the animal's natural environment. We are currently evaluating if the white-footed phenotypes in our seminatural enclosure are more similar to wild mice than mice living in laboratory conditions.

All published references are listed under section B2; Grants are listed under section B8.

C. Extension

Served as a nutritional consultant for Scott's Wild Bird seed:

- Coordinated test of products to deter squirrels from wild birdseed, Oct 2009-Sept 2010.
- Coordinated study of seed preference in wild birds, Mar-Apr 2008
- Presented at the Scotts Ornithology Summit Mar 19, 2008.

D. Service

1. University Service

1a. University-level activity

Auburn University

- **Green labs** – As a member of this committee, I help make it easier for labs to recycle and make their labs more environmentally friendly and sustainable.
- **Presentations for AU Writing Center (1x) and Honors college (3x)** (2014, 2015, 2016, 2017) – I gave students an overview of National Sciences Foundation Graduate Research Fellowship Program

Coastal Carolina University

- **Scholarship committee** (2005-2007). – As a member of this committee, I reviewed scholarship applications and voted for recipients.
- **Celebration of Inquiry scheduling committee** (2005-2007) – As a member of this committee, I helped schedule a two-day conference on campus.
- **Core curriculum committee** (2004-2006) – As a member of this committee, I participated in discussions of University's core curriculum.
- **Strategic planning committee** (2004-2006) – As a member of this committee, I participated in discussions of the University's strategic plan.
- **Summer grade school course: Biology of Bats** (2003) – I ran a 1-week course for grade school students through the University's outreach program.

1b. College

Auburn University

- **Science Café (2020)** – My grad students and I gave a 1h virtual present on Mitochondria that was open to the public.
- **COSAM research advisory committee** (2017+) – This committee oversees address common research-related issues across COSAM and proposes solutions
- **Biomedical advisory committee** (2015-2020) – This committee oversees the curriculum for the pre-professional major and reviews and grants student awards.
- **Get Under the Surface** (2015) – This program invites 4-6th grade students and a parent to campus to participate in a laboratory. My lab group offered a lab on 'the Dynamic Digestive System' which introduced the students' to comparative anatomy and digestive physiology.
- **Summer Science Institute** (2013, 2014) – This program selects top rising junior and senior high school students from AL and GA to participate in a 10-day long science immersion camp. SSI students are introduced to cutting edge research and participate in short laboratories developed by AU faculty. In 2013, I offered a field lab that introduced the students to nocturnal vertebrates. In 2014, I worked with other biology faculty on a lab that introduced students to DNA extraction and use of DNA sequencing for bacteria identification.
- **Science Fair** (2013, 2014) – I served as judge for Eastern-Central Alabama junior high/high school science fair hosted by the Auburn College of Science and Mathematics.
- **AU Explore Science Expo** (2009, 2010, 2013) – AU Explore is a one-day event where over 1000 regional 8th graders from the region visit the Auburn campus. Faculty and graduate students set up exhibits to introduce students to science and their research. My lab group hosts a exhibit on comparative nutrition.
- **Arboretum Days (2011)** – I gave an interactive oral presentation on bluebirds for event at the College of Science and Mathematics Arboretum.

Coastal Carolina University

- **Science Council** (2004-2005) – As a member of this committee, I participated in discussions on how to improve the quality of science and research within the college.

1c. Departmental

Auburn University

- **Diversity, Equity, and Inclusion (2020+)** – As the chair committee, I have coordinated meetings, and lead discussions, and organized workshop.
- **Curator of Mammals (2020+)** – As curator of mammals, I am responsible for ensuring mammal collection is maintained, I will grow our mammalian tissue collection, and participate in outreach activities.
- **Graduate studies committee (2019+)** - As a member of this committee, I reviewed and ranked graduate student applications to our department.
- **Animal Behavior hiring committee, Chair (2018-2019)** – As the chair committee, I have coordinated meetings, reviewed faculty applicants, and will organize interviews, meet with candidates and report the committee's recommendation to the department.
- **Behavior Ecology Evolution and Conservation Core, Chair (2018+)** - As the chair committee, I have coordinated meetings of BEEC and lead discussions on faculty hires and presented these outcomes to the department.
- **Animal Behavior hiring committee, Chair (2018-2019)** – As the chair committee, I have coordinated meetings, reviewed faculty applicants, and will organize interviews, meet with candidates and report the committee's recommendation to the department.
- **Microbiome hiring committee (2017-2018)** – As a member of this committee, I reviewed faculty applicants and participated in campus interviews.
- **Aviary planning and oversight committee, Chair (2017+)** – As chair of this committee, I facilitate planning and discussion of use of space at the aviary.
- **Departmental awards committee (2016-2018)** – As a member of this committee, I reviewed nominations and voted on student awardees.
- **Strategic plan development committee (2016-2017)** – As a member of this committee, I will work with the group to develop a draft strategic plan for the department.
- **Ecophysiology hiring committee (2016)** – As a member of this committee, I reviewed faculty applicants and participated in campus interviews.
- **Graduate recruitment committee (2013-2015)** – As a member of this committee, I reviewed proposals from biology faculty and voted on the distribution of graduate recruitment funds.
- **Departmental awards committee (2008-2011)** – As a member of this committee, I reviewed nominations and voted on student awardees.
- **Talons (2013)** – Talons is a 1-day recruitment fair for high school students considering applying for Auburn. I helped man the biology table and talked to perspective students.
- **Guest speaker Conservation Biology Learning Community (2008, 2009, 2012, 2013, 2014).** I presented an introduction to my research and career path to students

Coastal Carolina University

- **Bioblitz (2005)** – I participated in a one-day survey of all living species on the CCU campus.
- **Faculty hiring committees (2004, 2005, 2006)** – As a member of this committee, I reviewed faculty applicants and participated in campus interviews.
- **Organized 'Eyes on Biology' public seminar series (2003, 2004)** – I gave seminar on my research and on the contribution of Darwin to biology.

- **Proactive committee** (2002-2004) – As a member of this committee, I helped to identify issues that could create future hardships for the biology department such a lack of a backup power to freezers in the biology building. I helped identify solutions to each problem.

1d. Community service:

- 2020. I ran a full day Scouts workshop that allowed students (~10-14 yrs old) to obtain their Mammal Badge. Students learned about mammals, built a bat house, and looked for mammal sign.
- 2015-2019. I worked local 7th and 9th grade teachers, an Alabama Science in Motion (ASIM) biology education specialist, and an Auburn Department of Education assessment specialist to develop three 2-day lesson plans for both 7th and 9th graders on mitochondrial function. Our research is prominently featured in the lesson plans to help students learn about current science being conducted in a nearby university. Lessons includes videos and more detailed science literacy material on our webpage <https://www.mitoeducationresearch.com/>. In the 2015-2016, and 2016-2017 academic year, these lesson plans were piloted in the teacher's classrooms. Student learning was assessed during this pilot phase and then, modified them accordingly. In summer 2017 and 2018 (years 3-4 of award), we invited regional 7th and 9th grade science teachers to a training workshop on the application of our lesson plans. Twelve teachers attended. In the 2017-2018 and 2018-2019 academic year, the developed lesson plans were piloted in these teachers' classrooms. In fall 2018, we took the labs for review by ASIM professionals and got approval for our labs to be made available to teachers throughout Alabama. In 2019, the materials were approved for ASIM and are currently being finalized This is being funded by my NSF CAREER award.

External P&T packets

- Reviewed tenure packet for faculty member at Colgate University.

Paid Consultant

- 2020. Expert witness, Gunther McIntosh, PLLC, Ft Lauderdale, FL. Served as expert witness on a legal case which required that I evaluate the taxonomic origin of tissue in meat.

Volunteer Consultant

- 2005: Provided advice to head pastor, church board, and Department of Health and Environmental Control on exclusion of ~2000 bats from abandon church. Obtained support from Santee Cooper Power Company in building bat houses for relocating the bats.

Press

- 2019. Hood lab MitoMobile highlighted in on AU.com. The Office of Communications set the article to PR Newswire and within 5 days, **the article had potentially hit 71 million people.** https://ocm.auburn.edu/newsroom/news_articles/2019/10/041028-mitomobile-research.php?fbclid=IwAR0wylmkLi853oqhDpK2UtwZ0AeAokKQzWhwl0F4_ITFhZkqbZI6pNGV8jc#.XZe7X2gx-LM.facebook
- 2018. Hood interviewed as lactation expert for Science News 'A jumping spider mom nurses her brood for weeks on milk' <https://www.sciencenews.org/article/jumping-spider-mom-nurses-her-brood-for-weeks-on-milk>

[brood-weeks-milk?fbclid=IwAR1ilgiKPDb92gCQFg8w4hYQ_zVjjk06fSWnnlQB_Adpi2f1GdU4jo_bdkw](http://www.education.auburn.edu/news/kavazis-hood-research-sheds-new-light-on-female-reproduction-and-lactation/?fbclid=IwAR1ilgiKPDb92gCQFg8w4hYQ_zVjjk06fSWnnlQB_Adpi2f1GdU4jo_bdkw)

- 2018. Hood lab research highlighted in College of Education magazine
http://www.education.auburn.edu/news/kavazis-hood-research-sheds-new-light-on-female-reproduction-and-lactation/?fbclid=IwAR2x_b2z8Kblj0c4PsOu67gVUzXx8C2E2qSv2j6PFf3VRBOLVkrBww78DE
- 2018. Hood lab research highlighted in Journey, COSAM magazine
http://www.auburn.edu/cosam/news/journey/2018/winning_the_rat_race.htm
- 2017. Hood lab undergraduate interviewed at SICB and quoted in Science regarding how our findings relate to highlighted study “Why large dogs live fast and die young”.
<http://www.sciencemag.org/news/2017/01/why-large-dogs-live-fast-and-die-young>
- 2016. Article “The surprising links between human milk and wild” references our comparative milk paper <http://www.bbc.com/future/story/20160707-the-surprising-links-between-human-milk-and-the-wild?ocid=ww.social.link.facebook>
- 2015. Article on our research “Seven of the Most Extreme Milks in the Animal Kingdom” was published in Smithsonian Science News Online Magazine,
<http://www.smithsonianmag.com/ist/?next=science-nature/seven-most-extreme-milks-animal-kingdom-180956588/#mdG0269qctIH5sXc.01>
- 2015. News clip and online article on our NIH grant ‘Auburn University gets grant to research health benefits of breastfeeding’ covered by WFSA, Montgomery,
<http://www.wsfa.com/story/29846533/auburn-university-gets-grant-to-research-health-benefits-of-breastfeeding>
- 2015. Article on our NIH grant ‘Auburn University gets grant to research health benefits of breastfeeding’ covered in Fox 10 online, Mobile, <http://www.fox10tv.com/story/29846533/auburn-university-gets-grant-to-research-health-benefits-of-breastfeeding>
- 2015. COSAM and Auburn University announcement of CAREER award,
<http://www.auburn.edu/cosam/news/articles/2015/06/hood-receives-nsf-career-award-to-study-the-effects-of-reproduction-on-aging..htm>
- 2015. Article on my research published in Auburn’s College of Science and Mathematics, Society for Women in Sciences and Mathematics newsletter.
- 2015. Article on my research published in Auburn’s College of Science and Mathematics, Society for Women in Sciences and Mathematics newsletter.
- 2014. Article on our research “The secret formula to feeding 900 babies: Scientists uncover milk composition of naked mole-rat queens” was published in Smithsonian Science News Online Magazine, <http://smithsonianscience.org/2014/03/secret-formula-feeding-900-babies-scientists-uncover-milk-composition-naked-mole-rat-queens/>
- 2014. Article on our research “How to milk a naked mole-rat” was published in Science News Magazine, <https://www.sciencenews.org/article/how-milk-naked-mole-rat>
- 2014. Our research “Mega Milk Composition Analysis” featured in SPLASH: International Milk Genomics Consortium newsletter <http://milkgenomics.org/article/mega-milk-composition-analysis/>
- 2013. Our research “Mega Mammal Milk Analysis” discussed on the biology blog: Mammals suck...Milk. <http://mammalssuck.blogspot.com/2013/11/mega-mammal-milk-analysis.html>
- 2008. Interviewed about bat research for South Carolina public television show ‘Expeditions with Patrick McMillian’.
- 2005. Interviewed by local news regarding Cherry Hill bat exclusion, Channel 13, Myrtle Beach
- 2005. Interviewed by local news regarding Cherry Hill bat exclusion, Channel 15, Myrtle Beach

- 2005. Interviewed by local newspaper regarding Cherry Hill bat exclusion, Sun News, Myrtle Beach
- 2005. Interviewed by local newspaper regarding Cherry Hill exclusion, Horry Independent, Conway
- 2004. Featured guest on 'Forever Wild', a local environmental education TV series
- 2003. Research featured in local newspaper, Sun News, Myrtle Beach

Public presentations (adult audience)

- 2009. Seminar on bats Opelika/Auburn Lyon's Club, AL
- 2007. Seminar on bats and vertebrate nutritional ecology, Master Naturalist, Spring Island, SC
- 2007. Seminar on bats, Charleston Audubon Society, SC
- 2006. Research seminar, Celebration of Inquiry, CCU
- 2005. Brief seminar on Darwin, Darwin Day, CCU
- 2005. Presentation on bat exclusion and service to community, SETOMA Club, SC
- 2004. Master Naturalist Advanced Training Session, "Surveying and Identifying Bats", Lube Bat Conservancy, Gainesville, FL
- 2004. Women in science, Celebration of Inquiry, CCU
- 2003. Seminar on bats, CCU Renaissance Day
- 2003. Seminar on bats, CCU, Eyes on Biology Series
- 2003. Seminar on bats, Low Country Institute, Spring Island, SC
- 2003. Seminar on bats, Horry County Audubon Society, SC

Public presentations (K-12 students)

- 2009. Bat display, Creepy Critters, AU Forest Ecology Research, AL
- 2006. Presentation on bats, Swampfest, Playcard Environmental Center, SC
- 2005. Presentation on bats, Waccamaw Elementary, SC
- 2005. Presentation on bats, Children's museum of South Carolina, SC
- 2004. Workshop on bat biology, Junior Scholars Academy, CCU
- 2004. Presentation on bats, Children's museum of South Carolina, SC
- 2003. Workshop on bat biology, Junior Scholars Academy, CCU
- 2003. Presentation on bats, Baby Animal Day, Playcard Environmental Center, SC
- 2003. Presentation on bats, Waccamaw Elementary, SC
- 2003. Presentation on bats, Swampfest, Playcard Environmental Center, SC2. Professional service

Peer-review of journal articles

- **2020:** Experimental Gerontology (2), Journal of Experimental Biology (2), Proceedings of the Royal Society (1). American Journal of Physiology-Regulatory, Integrative and Comparative Physiology

- (1), Mechanisms of Aging and Development (1), Physiological and Biochemical Zoology (1), Frontiers in Physiology (1)
- **2019:** Frontiers in Ecology and Evolution (2), Physiological and Biochemical Zoology (1), Integrative and Comparative Biology (1), Biology Letters (1), PeerJ (1), Journal of Mammalogy (1), Scientific Reports (1), Proceedings of the Royal Society (1), Journal of Experimental Biology (2), Philosophical Transactions (1), Reproductive Sciences (1), Livestock Science (1),
 - **2018:** Journal of Veterinary Behavior: Clinical Applications and Research (1), Physiological and Biochemical Zoology (2), Frontiers in Ecology and Evolution (2), Laboratory Animals (1), Journal of Comparative Physiology B (1), Biology Letters (1), Biological Reviews (1), Rejuvenation Research (1), Journal of Experimental Biology (2)
 - **2017:** Laboratory Animal (1), Journal of Zoology (1), Journal of Mammalogy (2), Plos One (1), Hepatobiliary Surgery and Nutrition (1), Physiological and Biochemical Zoology (3)
 - **2016:** Journal of Zoology (1), Journal of Mammalogy (1), Methods in Ecology and Evolution (1), Physiological and Biochemical Zoology (3)
 - **2015:** Journal of Anatomy (1), Functional Ecology (1), Proceedings of the Royal Society, B (1), Physiological and Biochemical Zoology (2)
 - **2014:** Physiological and Biochemical Zoology (1), Journal of Experimental Biology (2)
 - **2013:** Comprehensive Physiology (2), Biological Research (1), Journal of Animal Science (1) Journal of Applied Physiology (1)
 - **2012:** Comparative Biochemistry and Physiology (1), Journal of Mammalogy (1), Zoo Biology (1)
 - **2011:** Journal of Experimental Biology (1), Zoo Biology (2), Iranian Journal of Biosystematics (1)
 - **2010:** Zoo Biology (1), Livestock Science (1)
 - **2009:** Behavioral Ecology and Sociobiology (1)
 - **2008:** New Zealand Journal of Marine and Freshwater Research (1), Zoo Biology (1)
 - **2007:** Zoo Biology (3), Physiological and Biochemical Zoology (1), American J of Primatology (1)
 - **2006:** Zoo Biology (1)
 - **2005:** Zoo Biology (1)
 - **Prior to 2005:** Reviewed manuscripts for American Midland Naturalist, Ecoscience, Physiological and Biochemical Zoology, Zoo Biology

Peer-review of book chapters:

- **2006:** Ecological and Behavioral Methods for the Study of Bats (1)

Peer-review of research proposals:

- **2020:** May. NSF IOS, Physiological and Structural Systems Cluster. Panelist, reviewed 9 proposals and participated review panel online.
- **2018:** September. NSF IOS-CAREER, Physiological and Structural Systems Cluster. Panelist, reviewed 9 proposals and participated review panel in Washington DC.
- **2017:** March. NIH-Dual Purpose with Dual Benefit: Research in Biomedicine and Agriculture Using Agriculturally Important Domestic Animal Species (R01). Panelist, reviewed 30 proposals and participated review panel in Washington DC.

- **2013-2014:** NSF GFRP panelist, reviewed 4 proposals in detail and participated review panel
- **2104:** NSF-IOS ad hoc review (1)
- **2008:** National Fish and Wildlife Foundation (1)
- **2003:** City College of New York, Faculty Research Award (1)

7b. Society activity

- 2021, **Session chair**, Society for Integrative and Comparative Biology meeting
- 2019, **Reviewer of nominations for Bartholomew Award** for the Division of Comparative Physiology, Society for Integrative and Comparative Biology
- **2015-2016, Acting-President, Comparative Nutrition Society.** Duties include: overseeing all society activities, helping to organize biennial symposium, fund-raising.
- **2008-2010, Elected Secretary, Comparative Nutrition Society.** Duties included: maintaining membership, helping to organize biennial symposium in Tucson, AZ, Aug 6-10, 2010.
- **2006-2008, Elected Secretary, Comparative Nutrition Society.** Duties included: maintaining membership, helping to organize biennial symposium in Liscombe, Nova Scotia, Aug 8-13, 2008.
- **2004-2006, Elected Secretary, Comparative Nutrition Society.** Duties included: maintaining membership database, helping to organize biennial symposium in Keystone, CO, Aug 4-10, 2006
- **2003-2004, Appointed Secretary, Comparative Nutrition Society.** Duties included: maintaining membership database, helping to organize biennial symposium in Hickory Corners, MI, Jul 14-19, 2004
- **2003-2010, Webmaster, Comparative Nutrition Society.** Duties included: built and maintained the webpage for the society.
- **1998-2000, Student Liaison, Comparative Nutrition Society.** Duties included: serve as a voice for student members.

I maintain memberships in the following societies

- Comparative Nutrition Society
- Society for Integrative and Comparative Biology
- American Society of Mammalogist
- Sigma Xi