

CURRICULUM VITAE

Chris R. Gissendanner, Ph.D.

Department of Biological Sciences
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EDUCATION

Ph.D. Cellular Biology, University of Georgia, August, 2001

M. S. Cellular Biology, University of Georgia, May, 1999

B. S. Biological Sciences, Florida State University, August, 1993

A.A. Tallahassee Community College, December, 1988

PROFESSIONAL EXPERIENCE

August 2023 – present	Professor and Chair Department of Biological Sciences Louisiana State University Shreveport, Shreveport, LA
August 2019 – August 2023	Professor of Biology Associate Director, School of Sciences Coordinator of the Biology Graduate Program University of Louisiana Monroe, Monroe, LA
January 2017-August 2019	Associate Professor of Biology Associate Director, School of Sciences Coordinator of the Biology Graduate Program University of Louisiana Monroe, Monroe, LA
July 2011-January 2017	Associate Professor Department of Basic Pharmaceutical Sciences College of Pharmacy University of Louisiana Monroe, Monroe, LA
August 2010-June 2011	Associate Professor Department of Biology University of Louisiana Monroe, Monroe, LA

August 2004 – August 2010 Assistant Professor
Department of Biology
University of Louisiana Monroe, Monroe, LA

December 2001- August 2004 Postdoctoral Research Fellow
New England Biolabs, Beverly, MA

January 2001-November 2001 Associate Scientist
Cambria Biosciences LLC, Waltham, MA

June 1995-December 2000 Graduate Research
Department of Cellular Biology
University of Georgia, Athens, GA
Advisor: Dr. Ann E. Sluder

- Ph.D. thesis: “Functional analysis of nuclear receptor genes in the nematode *Caenorhabditis elegans*”
- M. S. thesis: “Genetic analysis of an orphan nuclear receptor gene in *Caenorhabditis elegans*”

January 1994- November 1994 Applications Chemist
Shena, Inc., Norcross, GA

March 1992- January 1994 Environmental Lab Analyst
Florida Department of Environmental Regulation
Tallahassee, FL

HONORS

Willis-Knighton-ULS Board of Supervisors Professorship in Biology, 2021-2023

Phi Kappa Phi, 2019

Nominated Participant, University of Louisiana System Management and Leadership Institute, 2018-2019

ULM Foundation Award for Excellence in Research, 2018

Outstanding Faculty Award for Research, ULM College of Arts, Education, and Sciences, 2018

ULM College of Arts and Sciences Dean’s Performance Award in Research, 2010

Mortar Board Arts and Sciences Outstanding Faculty Member, 2007

PEER-REVIEWED PUBLICATIONS

#ULM graduate student; *ULM Undergraduate Student

1. Chen J, **Gissendanner CR**, Tikhe CV, Li H-F, Sun Q, Husseneder C (2022). Genomics and Geographic Diversity of Bacteriophages Associated With Endosymbionts in the Guts of Workers and Alates of *Coptotermes* Species (Blattodea: Rhinotermitidae). *Frontiers in Ecology and Evolution* <https://doi.org/10.3389/fevo.2022.881538>
2. Hanauer DI, Graham MJ, Arnold RJ, Ayuk MA, Balish MF, Beyer AR, Butela KA, Byrum CA, Chia CP, Chung HM, Clase KL, Conant S, Coomans RJ, D'Elia T, Diaz J, Diaz A, Doty JA, Edgington NP, Edwards DC, Eivazova E, Emmons CB, Fast KM, Fisher EJ, Fleischacker CL, Frederick GD, Freise AC, Gainey MD, **Gissendanner CR**, Golebiewska UP, Guild NA, Hendrickson HL, Herren CD, Hopson-Fernandes MS, Hughes LE, Jacobs-Sera D, Johnson AA, Kirkpatrick BL, Klyczek KK, Koga AP, Kotturi H, LeBlanc-Straceski J, Lee-Soety JY, Leonard JE, Mastropaolo MD, Merkhofer EC, Michael SF, Mitchell JC, Mohan S, Monti DL, Noutsos C, Nsa IY, Peters NT, Plymale R, Pollenz RS, Porter ML, Rinehart CA, Rosas-Acosta G, Ross JF, Rubin MR, Scherer AE, Schroeder SC, Shaffer CD, Sprengle AB, Sunnen CN, Swerdlow SJ, Tobiason D, Tolsma SS, Tsourkas PK, Ward RE, Ware VC, Warner MH, Washington JM, Westover KM, White SJ, Whitefleet-Smith JL, Williams DC, Wolyniak MJ, Zeilstra-Ryalls JH, Asai DJ, Hatfull GF, Sivanathan V (2022). Instructional Models for Course-Based Research Experience (CRE) Teaching. *CBE Life Sci Educ.* 2022 Mar;21(1):ar8. doi: 10.1187/cbe.21-03-0057.
3. **Gissendanner CR**, Baldwin WS, and Schaaf, MJM (2018). Non-Mammalian Nuclear Receptors: From Evolution to Human Disease. *Nuclear Receptor Research* 4. pii: 101366.
4. Tikhe CV, **Gissendanner CR**, Husseneder C (2018). Whole-Genome Sequence of the Novel Temperate *Enterobacter* Bacteriophage Tyrion, Isolated from the Gut of the Formosan Subterranean Termite. *Genome Announcements* 6(1). pii: e00839-17
5. Tikhe CV, **Gissendanner CR**, Husseneder C (2018). Whole-Genome Sequence of the Novel *Enterobacter* Bacteriophage Arya with an Integrase Pseudogene, Isolated from the Gut of the Formosan Subterranean Termite. *Genome Announcements* 6(1). pii: e00838-17
6. Bonilla JA, Isern S, Findley AM, Klyczek KK, Michael SF, Saha MS, Buchser WJ, Forsyth MH, Paudel S, **Gissendanner CR**, Wiedemeier AMD, Alonzo FL; University of Wisconsin–River Falls SEA-PHAGES; Florida Gulf Coast University SEA-PHAGES; University of Louisiana–Monroe SEA-PHAGES*; College of William & Mary SEA-PHAGES, Garlena RA, Russell DA, Pope WH, Cresawn SG, Jacobs-Sera D, Hatfull GF. Genome Sequences of 19 *Rhodococcus erythropolis* Cluster CA Phages (2017). *Genome Announcements* 5(49). pii: e01201-17.
7. David I Hanauer, Mark Graham, **SEA-PHAGES**, Laura Betancur, Aiyana Bobrownicki, Steven G. Cresawn, Rebecca Garlena, Deborah Jacobs-Sera, Nancy Kaufmann, Welkin H. Pope, Daniel A

Russell, Viknesh Sivanathan, David J. Asai, and Graham F. Hatfull (2017). An Inclusive Research-Education Community (iREC): A model for student engagement in science. *Proc Natl Acad Sci U S A*. 114(51):13531-13536

Note: Multi-institutional publication with a large number of authors. ULM **SEA-PHAGES** co-authors: Ann M. Findley, **Chris R. Gissendanner**, Allison Wiedemeier, Tom Sasek

8. Brandon Praslicka#, Jeremy Harmson, Joohyun Kim, Vittobai Rangaraj#, Aikseng Ooi, and **Chris R. Gissendanner** (2017). Binding site analysis of the *Caenorhabditis elegans* NR4A nuclear receptor *nhr-6* during development. *Nuclear Receptor Research* 4. pii: 101288

9. Goda AA, Naguib KM, Mohamed MM, Amra HA, Nada SA, Abdel-Ghaffar AB, **Gissendanner CR**, El Sayed KA (2016); Astaxanthin and Docosahexaenoic Acid Reverse the Toxicity of the Maxi-K (BK) Channel Antagonist Mycotoxin Penitrem A. *Marine Drugs*. 14(11). pii: E208.

10. Tikhe CV, Martin TM, **Gissendanner CR**, Husseneder C (2015). Complete Genome Sequence of Citrobacter Phage CVT22 Isolated from the Gut of the Formosan Subterranean Termite, *Coptotermes formosanus* Shiraki. *Genome Announcements*. 16;3(4). pii: e00408-15

11. Pope WH, Bowman CA, Russell DA, Jacobs-Sera D, Asai DJ, Cresawn SG, Jacobs WR, Hendrix RW, Lawrence JG, Hatfull GF; **SEA-PHAGES**; Phage Hunters Integrating Research and Education; Mycobacterial Genetics Course (2015). Whole genome comparison of a large collection of mycobacteriophages reveals a continuum of phage genetic diversity. *Elife*. 4:e06416

Note: Multi-institutional publication with a large number of authors. ULM **SEA-PHAGES** co-authors: Ann M. Findley, **Chris R. Gissendanner**, Allison Wiedemeier

12. Brandon Praslicka# and **Chris R. Gissendanner** (2015). The *C. elegans* NR4A nuclear receptor gene *nhr-6* promotes cell cycle progression in the spermatheca lineage. *Developmental Dynamics*, 244(3): 417.

13. S.G. Cresawn *et al.* (2014). Comparative Genomics of Cluster O Mycobacteriophages. *PLoS One*, 10(3):e0118725 .

Note: Multi-institutional publication with a large number of authors. ULM co-authors: Ann M. Findley, **Chris R. Gissendanner**

14. Phillip C.S.R. Kilgore, Urska Cvek, Marjan Trutschl, Brandon Praslicka#, **Christopher R. Gissendanner** (2014). MotifMutator: A combinatoric Tool for Modelling Binding-Site

Preference, accepted, *Proceedings of the 7th International Conference on Bioinformatics and Computational Biology*.

15. Chris R. Gissendanner, Allison M.D. Wiedemeier, Paul D. Wiedemeier, Russell L. Minton, Swapan Bhuiyan#, Jeremy S. Harmson#, Ann M. Findley (2014). A web-based restriction endonuclease tool for mycobacteriophage cluster prediction. *Journal of Basic Microbiology*, 54(10):1140.

16. C.T. Jordan *et al.* (2014). A Broadly Implementable Research Course in Phage Discovery and Genomics for First-Year Undergraduate Students. *mBio* **5** (1): e01051-13.

Note: Multi-institutional publication with a large number of authors. ULM co-authors: Ann M. Findley, **Chris R. Gissendanner**

17. Chris R. Gissendanner, Derrick Cardin#, Chris DuBose#, Moustafa El Sayed*, Jeremy S. Harmson, Brandon Praslicka#, Brian G. Rowan (2014). NHR-6, the *C. elegans* NR4A nuclear receptor ortholog, functionally interacts with the JUN-1 transcription factor during spermatheca development. *Genesis, The Journal of Genetics and Development* 52(1): 29-38

18. Asmaa A. Sallam, Nehad Ayoub, Ahmed I. Foudah, **Chris R. Gissendanner**, Sharon A. Meyer, Khalid A. El Sayed (2013). Indole Diterpene Alkaloids as Novel Inhibitors of the Wnt/ β -catenin Pathway in Breast Cancer Cells. *European Journal of Medicinal Chemistry* **70**: 594-606.

19. Asmaa A. Sallam, Wael E. Houssen, **Chris R. Gissendanner**, Khaled Y. Orabi, Ahmed I. Foudah, Khalid El Sayed (2013). Bioguided discovery and pharmacophore modeling of the mycotoxic indole diterpene alkaloids penitrems as breast cancer proliferation, migration, and invasion inhibitors. *Medicinal Chemistry Communications* **4**(10).

20. Chris R. Gissendanner and Tram Do Kelley# (2013). The *C. elegans* gene *pan-1* encodes novel transmembrane and cytoplasmic leucine-rich repeat proteins and promotes molting and developmental progression of the larva to adult transition. *BMC Developmental Biology* **13**: 21.

21. W.H. Pope *et al.* (2011). Expanding the diversity of mycobacteriophages: Insights into genome architecture and evolution. *PLoS One*. 6(1):e16329.

Note: Multi-institutional publication with a large number of authors. ULM co-authors: Ann M. Findley, **Christopher R. Gissendanner**, Jeremy S. Harmson#, Gina M. Hogan*, Ericka L. Hufford*, Brandon K. Morgan*, John R. Warner*

22. Melissa Heard#, Claude V. Maina, Benjamin E. Morehead*, Marius C. Hoener, Tri Q. Nguyen, Christopher C. Williams, Brian G. Rowan, **Chris R. Gissendanner** (2010). A functional NR4A nuclear receptor DNA-binding domain is required for organ development in *C. elegans*. *genesis, The Journal of Genetics and Development*, **48** (8): 485-491.

23. Manish Parihar#, Russell L. Minton, Sharita Flowers*, Anna Holloway#, Benjamin E. Morehead*, Julianne Paille*, **Chris R. Gissendanner** (2010). The genome of the nematode *Pristionchus pacificus* encodes putative homologs of RXR/Usp and EcR. *General and Comparative Endocrinology* **167** (1): 11-17.
24. Jolene Zheng, Fred Enright, Michael Keenan, John Finley, Jun Zhou, Jianping Ye, Frank Greenway, Reshani N. Senevirathne, **Chris R. Gissendanner**, Rosaly Manaois, Alfredo Prudente, Joan M. King, Roy Martin (2010). Resistant starch, fermented resistant starch, and short chain fatty acids reduce intestinal fat deposition in *Caenorhabditis elegans*. *Journal of Agricultural and Food Chemistry* **58** (8): 4744-4748.
25. George Tzertzinis, Ana L. Egaña, Subba-Reddy Palli, Marc Robinson-Rechavi, **Chris R. Gissendanner**, Canhui Liu, Thomas R. Unnasch, Claude V. Maina (2010). Molecular evidence for a functional ecdysone signaling system in *Brugia malayi*. *PLoS Neglected Tropical Diseases* **4** (3): e625.
- 26. Chris R. Gissendanner**, Kristopher K. Kelley#, Tri Q. Nguyen, Marius C. Hoener, Ann E. Sluder, Claude V. Maina (2008). The *C. elegans* NR4A nuclear receptor is required for spermatheca morphogenesis. *Developmental Biology* **313**: 767-786.
27. Marc Robinson-Rechavi, Claude V. Maina and **Chris R. Gissendanner**, Vince Laudet, Ann E. Sluder (2005). Explosive lineage-specific expansion of the orphan nuclear receptor HNF-4 in nematodes *Journal of Molecular Evolution* **60**: 577-86
- 28. Chris R. Gissendanner**, Kirsten Crossgrove, Kelly A. Kraus, Claude V. Maina, Ann E. Sluder (2004). Expression and function of conserved nuclear receptor genes in *Caenorhabditis elegans*. *Developmental Biology* **266**: 399-416.
29. Marc Van Gilst, **Chris R. Gissendanner**, Ann E. Sluder (2002). Diversity and function of orphan nuclear receptors in nematodes. *Critical Reviews in Eukaryotic Gene Expression* **12**: 65-88.
- 30. Chris R. Gissendanner**, Ann E. Sluder (2000). *nhr-25*, the *Caenorhabditis elegans* ortholog of *ftz-f1*, is required for epidermal and somatic gonad development. *Developmental Biology* **221**: 259-272.

GRADUATE STUDENTS TRAINED

M.S. Thesis Students (ULM Biology)

Kristopher Kelley, graduated 2007

Riddhi Bhatt, graduated 2008

Tram Do Kelley, graduated 2008

Manish Parihar, graduated 2008

Melissa Heard, graduated 2009

Rashika Rangaraj, graduated 2010

Todd Spears, graduated 2023

Theo Courteaux, graduated 2024

Ph.D. Students (ULM Pharmacy)

Brandon Praslicka, graduated 2015

Derrick Cardin, graduated 2016

INVITED PRESENTATIONS

Phi Kappa Phi Induction Ceremony, Monroe, LA, April, 2019

Louisiana School for Math, Science and the Arts, Natchitoches, LA, March, 2015

LBRN 13th Annual Meeting, January 31, 2015

The NIH R15 program: a grantee's perspectives, LBRN Workshop, March, 2012

Department of Biology, Loyola University-New Orleans, New Orleans, LA, October, 2010

Department of Structural and Cellular Biology, Tulane University School of Medicine, New Orleans, LA, October, 2010

Department of Chemistry, University of Louisiana at Monroe, Monroe, LA, March, 2010

Department of Biology, University of Louisiana at Monroe, Monroe, LA, November, 2009

Department of Biology, University of Louisiana-Lafayette, Lafayette, LA, October, 2009

Department of Biology, University of West Georgia, Carrollton, GA, February, 2009

Lyon College, Batesville, AR, November, 2008

Department of Biochemistry, LSU-Health Sciences Center, Shreveport, LA, May, 2008

ULM Department of Toxicology, March, 2006

Center for Biotechnology International Symposium on Nuclear Receptors, Stockholm, Sweden, October, 2004

GRANTS FUNDED

Research Proposals

NIH COBRE (LSU-HSC Shreveport) Sub-Award, *Potential of Mycobacteriophage as Candidates for Phage Therapy*, 5/1/2015-4/30/2016 -4/30/2017; Role: Co-PI, \$83,333

LA EPSCoR Pfund, *Activity and tissue-specific functions of the novel eLRR protein PAN-1 in C. elegans*, 1/1/13-12/31/14; Role: PI, \$10,000

LA EPSCoR Pfund, *Biodiversity and genomics of bacteriophages associated with termites and phage therapy in the termite gut model*, 1/1/13-12/31/14; Role: Co-PI; PI: Claudia Husseneder (LSU AgCenter), \$9,997

NIH National Institute of Child Health and Human Development, *NR4A Regulation of Organ Morphogenesis*, 7/20/2009-6/30/2013; Role: PI, \$210,000 total

Louisiana Biomedical Research Network INBRE program, funded by NIH National Center for Research Resources, *NR4A Regulation of Organogenesis*, 5/1/2010-4/30/2012; Role: PI, \$247,698 total for 2010-2012; Project Mentor: Brian Rowan, PhD, Tulane Medical School

Louisiana Biomedical Research Network INBRE program, funded by NIH National Center for Research Resources, *NR4A Regulation of Organogenesis*, 12/1/2006-4/30/2010; Role: PI, \$326,510 total; Project Mentor: Brian Rowan, PhD, Tulane Medical School

Louisiana Board of Regents Research Competitiveness Subprogram, *Nuclear Receptor Regulation of Organogenesis in the Model Organism Caenorhabditis elegans*, 7/1/05-6/30/08; Role: PI, \$82,064 total plus \$19,000 institutional match

Funded Education/Facilities Proposals

Chris R. Gissendanner, Ann Findley, Tom Sasek, Srinivas Garlapati, Anne Case Hanks (Co-PIs) Sub-award from NSF-IUSE Grant, Georgia Gwinnett College, “Assessment of microbial diversity in a “Pond in a Jar” ecosystem, 9/2018-9/2019, \$3,571

Seetharama Jois, Khalid El Sayed, Srinivas Garlapati, Siva Murru, Matthew Talbert, George Matthaolampakis, Ann Findley, **Chris R. Gissendanner (Co-PIs)**, NIH-LBRN Shared Equipment Program, 5/1/2018-4/30/2019, \$50,000

Chris R. Gissendanner, Ann Findley, Karen Briski (Co-PIs), NIH Institute of General Medical Sciences/Louisiana INBRE, “ULM Instrument Core Facility”, Alterations and Renovations component of INBRE Renewal, 5/1/15-4/30/16, \$246,760

Ann M. Findley (PI), Chris R. Gissendanner, Srinivas Garlapati, Matthew Talbert, Tom Sasek, Allison Wiedemeier (Co-PIs), NIH-LBRN Shared Equipment Program, 5/1/2015, 4/30/2016, \$50,000

P.D. Wiedemeier, A. Wiedemeier, R.L. Minton, L. Smith, **C.R. Gissendanner**, A.M. Findley Amazon Web Services, “Restriction enzyme cut-count comparison and visualization tool to profile unknown mycobacteriophage”, 10/2013-10/2015, \$2,500

Ann Findley and **Chris R. Gissendanner** (Co-PIs), Louisiana INBRE, “Disseminating the HHMI-SEA NGRI phage discovery laboratory to LA-INBRE partner institutions”, 12/2011-5/2013, \$24,400

Ann Findley (Co-PI), **Chris R. Gissendanner (Co-PI)**, Jeremy Harmson#, Science Education Alliance Sabbatical for summer, 2010, “Phage Genomic Module Development: Confirming a, “Lysogen Culture, Cluster Predictive DNA, Digestion & Gene Knockout Experiments”

Russell Minton (PI), Ann Findley, **Chris R. Gissendanner**, Louisiana Board of Regents Biological Sciences Traditional Enhancement, “Incorporating a bioinformatics thread across the Biology curriculum”, \$77,459, 7/2009-6/2010

Ann Findley (PI), **Chris R. Gissendanner**, Debra Jackson, Russell Minton, Tom Sasek, and Gary Stringer, Undergraduate Science Education Program at ULM. Howard Hughes Medical Institute, \$700,000, 2009-2012.

Ann Findley (Co-PI) and **Chris R. Gissendanner** (Co-PI)
National Genomics Research Initiative, HHMI-Science Education Alliance-PHAGES, for course supplies and meeting travel, 8/2008-5/2011, Program continued with ULM and INBRE funding

Chris R. Gissendanner (PI) and Ann M. Findley
Louisiana Board of Regents Biological Sciences Traditional Enhancement, “Incorporation of genomics and discovery-based learning into the biology laboratory curriculum.”, \$47,000 plus \$10,000 institutional match, 7/2006-6/2007.

Selected Education/Facilities Proposals, Not Funded

Chris R. Gissendanner (PI), Karen Briski, (co-PI), and Ann M. Findley (co-PI)
RM 13-016: The NIH Building Infrastructure Leading to Diversity Initiative (2013)
“The North Louisiana Nexus for the Engagement of Students in Biomedical Research (NewLANES)”, Scored but not funded, \$17,607,198

Student Grants

1. Derrick Cardin (Ph.D.): *Using BRET to study protein-protein interactions of the C. elegans PAN-protein*, Summer, 2014: \$7,500. Louisiana Biomedical Research Network.
2. Satish Dahal (Undergraduate): *Assessment of Secreted and GPI-linked Extracellular Leucine-Rich Repeat Proteins as Possible Ligands for the Transmembrane Protein PAN-1 in C. elegans* 10/12 – 5/13: \$768. Beta Beta Beta Foundation Research Scholarship

TEACHING EXPERIENCE

Undergraduate: Genetics, Principles of Biology I, SEA-PHAGES, Developmental Biology (undergraduate/graduate), Cell Biology, Advanced Concepts in Genetics and Molecular Biology (undergraduate/graduate), Genetics Lab, Seminar, General Biology (non-majors)

Graduate: Gene Regulation, Endocrinology, Research Methods, Seminar

Professional (Pharmacy): Pathophysiology, Drug Action, Pharmacology

SELECTED PROFESSIONAL SERVICE

External Advisory Committee, Cardiovascular Undergraduate Research Initiative for Underrepresented Students (NIH R25) Program, Louisiana State University Health Sciences Center-Shreveport, 1/2019-present

External Advisory Committee, Arkansas INBRE (4/2010-present)

Guest Editor, “Non-Mammalian Nuclear Receptors: From Evolution to Human Disease”, *Nuclear Receptor Research*, 2017

Executive Committee (At-Large, Associate Treasurer, Treasurer), Association of Southeastern Biologists (2016-2023)

National Science Foundation Review Panel, March 23-25, 2015

Associate Editor, *Eastern Biologist/eBio* (2012-present)

Research Awards Committee, Association of Southeastern Biologists (2012-2014)

Manuscript Reviewer for *Development*, *General and Comparative Endocrinology*, *FEBS Letters*, *PloS One*, *BMC Evolutionary Biology*, *JZUS*, *BBA*, *Gene Expression Patterns*, *Chemo-Biological Interactions*

SELECTED UNIVERSITY and COLLEGE SERVICE (ULM)

Chair, Graduate Council (2022- 2023)

Chair, Institutional Biosafety Committee (2008-2023)

SACSCOC Quality Enhancement Plan Planning Committee (2017-2018)

Co-Director, Biomedical and Molecular Core Facility (2015-2016)

University Curriculum Committee (2014 – 2020)

Chair, School of Pharmacy Curriculum Committee (2014-2016)

Faculty Senate Executive Committee (Secretary and President; 2013 – 2016)

Research Council (2009 – 2014)