

Curriculum Vitae

CONTACT INFORMATION

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PROFESSIONAL EMPLOYMENT

Professor Department of Biological Sciences, Ferris State University, Big Rapids, MI
2014 – present

Associate Professor Department of Biological Sciences, Ferris State University, Big Rapids, MI
2009 – 2014

Assistant Professor Department of Biological Sciences, Ferris State University, Big Rapids, MI
2006 – 2009

Assistant Professor Department of Biological Sciences, California State University, Long Beach,
Long Beach, CA 2000 – 2006

Research Associate Department of Microbiology and Immunology, Virginia Commonwealth
University, Richmond, VA 1999 – 2000

Adjunct Professor Division of Natural Sciences, Piedmont Virginia Community College,
Charlottesville, VA 1996 – 1999

EDUCATION

Medical College of Virginia/Virginia Commonwealth University, Health Sciences Division. Richmond, Virginia 23298. August 1986 to December 1990. Ph.D. Department of Microbiology and Immunology. Advisor: Dr. Phillip Hylemon, Professor of Microbiology.

North Dakota State University, Fargo, North Dakota 58105. August 1984 to July 1986. M.S. Department of Bacteriology. Advisor: Dr. Thomas Glass, Associate Professor of Bacteriology.

Concordia College, Moorhead, MN 56560. August 1980 to May 1984. B.A. Major: Biology. Minor: Philosophy.

POST-DOCTORAL TRAINING

University of Virginia, School of Medicine, Department of Microbiology. Charlottesville, Virginia 22908. February 1997 to 1999. Was a research associate in the laboratory of Dr. Joanna Goldberg, Associate Professor of Microbiology.

University of Virginia, School of Medicine, Department of Microbiology. Charlottesville, Virginia 22908. January 1991 to January 1997. Was a research associate in the laboratory of Dr. Robert J. Kadner, Professor of Microbiology.

PROFESSIONAL AFFILIATIONS

American Society for Microbiology, Michigan Regional Branch of the American Society for Microbiology, Sigma Xi Honor Society, Tri-Beta Honor Society, Council of Undergraduate Research, Software Carpentry Instructor, and Open Science Foundation Ambassador

PROFESSIONAL ROLES

Academic Affairs General Education Assessment Coordinator
General Education Coordinator
Software Carpentry and Data Carpentry Instructor
Academic Affairs General Education Coordinator
Academic Affairs Assessment Coordinator
Ferris State University Quality Matters Trainer
Ferris State University Online Instruction Trainer
Ferris State University Blackboard Learn 9.1 Mentor (assigned 33 faculty members)
Assessment Coordinator for the Department of Biological Sciences
Co-program Coordinator for the B.S. in Biological Science
Advisor for the Tri-Beta Honors Society
Advisor for the Pre-Dental Club

AWARDS

Ferris State University Outstanding Course Assessment (2015)
Top 25 STEM Professor in Michigan (2013)
Ferris State University Distinguished Teacher of the Year (2012)
Softchalk Higher Education Online Challenge Winner (2011)
Ferris State University Exemplary On-Line Course, Web Enhanced (2007)

CERTIFICATES

Certificate, Data Analyst with R, DataCamp (2019)
Assessment Specialist Graduate Certificate, James Madison University (2015)
Data Science Specialization, John Hopkins University through Coursera (2015)
Certificate of Online Adjunct Teaching, University of Maryland (2013)

COURSES TAUGHT AT FERRIS STATE UNIVERSITY

BIOL108: *Medical Microbiology*. (2006 - present)

This three-unit course is taught every semester and is part of the core curriculum for allied health sciences majors at Ferris State University. The class focuses upon the diversity of microbial life forms, the basis of a protective immune defense, and a brief survey of important microbial pathogens. The laboratory covers essential microbiological techniques focusing upon the isolation, characterization, and identification of clinically important microbes.

BIOL286: *General Microbiology*. (2006 - present)

This three-unit course is taught every semester and is part of the curriculum for the clinical laboratory sciences program at Ferris State University. The lectures serve as a brief introduction to the microbial world including microbial structure, function, metabolism, classification, genetics, control of microbial growth and immunity. The laboratory provides practical experience with fundamental concepts, techniques and instrumentation and includes fieldtrips to the Big Rapids wastewater treatment plant.

BIOL373: *Cell Biology*. (2020)

I just took over this course upon the retirement of Dr. Fadayomi. It is generally taught in spring semesters mostly to Pre-Optometry majors. I am planning major revisions to this course in the future.

BIOL386: *Medical Microbiology and Immunology.* (2015 - present)

This five-unit course was taught during the spring semester and was part of the curriculum for the Pre-Medical major. This course has now been discontinued and replaced with an Immunology course.

BIOL387: *Microbiology and Immunology.* (2008 and 2009)

This three-unit course was taught every semester and was part of the curriculum for the clinical laboratory sciences program at Ferris State University. The lectures served as a brief introduction to the microbial world including microbial structure, function, metabolism, classification, genetics, control of microbial growth and immunity.

BIOL389: *Immunology.* (2019 - present)

I have developed this three-unit course with a lab to replace BIOL386 in our curriculum. Its addition has reduced the amount of content overlap in our curriculum and helps to better prepare our pre-professional students for their programs.

BIOL390: *Reproducible Research.* (2018 - present)

This three-unit online course introduces students to the R programming and statistical language and covers the fundamental skills necessary to perform reproducible data analysis using actual biological data sets.

BIOL438: *Microbiology for Optometry.* (2017 - present)

This four-unit course is taught every fall semester and is part of the curriculum for the Doctorate program in Optometry at Ferris State University. The class covers the structure, function, and virulence of microorganisms with an emphasis on ocular infections. A substantial portion of the course covers mammalian immune defenses, especially those of the eye.

BIOL472: *Proteins.* (2013)

This three-unit course is taught every other year and is part of the curriculum for the Biotechnology program at Ferris State University. The class covers protein structure, function, purification, and characterization with an emphasis on lab applications, problem solving, and trouble-shooting.

COURSES TAUGHT AT OTHER INSTITUTIONS

MICR320: *Bacterial Pathogenesis.* CSULB (2000 – 2006)

This five-unit course is taught every semester and is part of the core curriculum for Microbiology majors at CSULB. Lectures were focused upon molecular mechanisms of host-parasite interactions in a broad range of human pathogens.

MICR471: *Bacterial Physiology.* CSULB (2000 – 2006)

This is a three-unit course that is taught once per year during the spring semester. Using a comparative approach, the growth, metabolism, nutrition, and ecology of bacteria and archaeobacteria are discussed. Recent publications are used to compare the diverse strategies employed by prokaryotes to adapt to their environment.

BIOL696: *Research Methods.* CSULB (2002 – 2006)

This three-unit, course is offered during the fall semester for graduate students in the process of completing their thesis. Topics covered include experimental design, data presentation, computer graphics, and technical writing. The class culminates with formal oral, written, and poster presentation of their research.

BIOL220H: *Introduction to Bioinformatics.* CSULB (2004)

This two-unit, team-taught course is offered during the fall semester to honors students in the department. Topics covered include the nature of biological information, database design and queries, sequence comparisons, phylogenetic analyses, and predictions of structure and function based upon sequence data. One half of the course time is dedicated to using current computer algorithms for actual sequence analyses.

MICR200: *General Microbiology for Health Professionals.* CSULB (2005)

This is a general microbiology course for those planning careers in nursing, health care and education, and foods and nutrition. This course offers a broad overview of the structure, function, and diversity of microorganisms with an emphasis on their roles in human health.

NAS185: Microbiology. Piedmont Virginia Community College (1997 – 1999)

This four-unit course introduced microorganisms, their metabolism, and involvement in human disease. Emphasis was placed upon prokaryotic metabolism and genetics as well as the molecular and cellular aspects of the human immune system.

BIO101/102: Introductory Biology Laboratory. Piedmont Virginia Community College (1996 –1999)

Laboratory sessions included exercises spanning Botany, Animal Physiology, Biochemistry, Genetics, and Molecular Biology. As laboratory instructor, I prepared, presented, and graded all lab materials, quizzes, and practical exams.

RESEARCH FUNDING

Faculty Research Grant – Factors Affecting Endocrine Disruptor Removal from Wastewater
Faculty Research Committee, Ferris State University 2018 (in preparation)
Role: P.I.

Faculty Research Grant – Lipopolysaccharide sialation in *Fusobacterium nucleatum*
Faculty Research Committee, Ferris State University 2007
Role: P.I.

3 S06 GM 063119-02S2 (Kingsford, Laura) 2003 - 2005
Support for Continuing Research Excellence (SCORE)
Role: P.I.

2 R25 GM 0089-04 (Bauer, Roger) 2003 – 2004
Bridges to the Future: Baccalaureate Bridge Program
Role: Faculty participant.

COMMITTEE APPOINTMENTS AT FERRIS STATE UNIVERSITY

Department:

Department Curriculum Committee (2007-2009, 2017-present)
Department Assessment Committee (*ad hoc*) (2009-present, chair)
Department Awards Committee (2012-present)
Tenure Committee for Schuyler Pike (2018-present)
Department Planning Committee (2011-2017)
Geneticist Faculty Search Committee (2012-2013)
Tenure Committee for Anne Spain (2011-2016, chair)
Microbiologist Faculty Search Committee (2010-2011)
Developmental Biologist Faculty Search Committee (2007-2008)

College:

College of Arts and Sciences Assessment Committee (2007-present)
College of Arts and Sciences Dean Search Committee (2015)
College of Arts and Sciences Dean Search Committee (2011-2012)
College of Arts and Sciences Planning Committee (2011-2016)

University:

University Assessment Committee (2020)
Academic Affairs General Education Committee (2014-present)
Associate Provost of Operations Search Committee (2016)
Assistant Dean of FLITE Search Committee (2014)
University Assessment Committee (2012-present)
Vice-President of Student Affairs Search Committee (2013, co-chair)
Human Subjects Review Committee (2006-2013)
General Education Scientific Understanding Committee (2008-2010)
National Competitive Scholarships Committee (2006-2007)

ABSTRACTS AND PRESENTATIONS

1. **Franklund, C.V.** Enhancing Faculty Engagement in Assessment Using Interactive Reporting. IUPUI Assessment Institute. 2018.
2. **Franklund, C.V.** Improve Assignments – General Education Assessment on a Tight Budget. Nuventive Users Conference. 2018.
3. **Franklund, C.V.** Reproducible Assessment of General Education: Systematic Use of Course-Level Student Data. IUPUI Assessment Institute. 2017.
4. **Franklund, C.V.** Assessing General Education Program Outcomes: Systematic Use of Course-Level Student Data. Nuventive Users Conference. 2017.
5. Bishop, R., **C. Franklund**, J. Joseph, H. Pavletic, V. Piercey, and T. Williams. Moving the needle on General Education assessment. Association of American Colleges & Universities, Institute on General Education and Assessment. 2016.
6. **Franklund, C.V.** Facilitating the Systematic Assessment and Reporting of Course-Level General Education Outcomes. Association of American Colleges & Universities, General Education and Assessment: From My Work to Our Work. 2016.
7. **Franklund, C.V.** Facilitating the Systematic Assessment and Reporting of Course-Level General Education Outcomes. Association of American Colleges & Universities, From Mission to Action to Evidence: Empowering and Inclusive General Education Programs. 2015.
8. Creating Institutional Processes that Enhance Faculty Engagement in Learning Assessment. HLC-NCA Assessment Workshop. 2013.
9. **Franklund, C.V.** Polio: A Disease on the Brink of Extinction. Big Rapids Rotary Club. 2011.
10. **Franklund, C.V.** Facilitating Collaborative Learning with Google Apps. Lilly Conference on College and University Teaching. 2010.
11. Woodman, H., **C.V. Franklund**, and C. Conley-Sowels. Rubrics + Readability = Retention – The 3 Rs: Making the Connection. Lilly Conference on College and University Teaching. 2010.
12. Woodman, H., **C.V. Franklund**, and C. Conley-Sowels. Rubrics Rock! Using Rubrics to Assess Authentic Student Learning. Texas A&M Assessment Conference. 2010.
13. Woodman, H., **C.V. Franklund**, and C. Conley-Sowels. Rubrics Rock! Rubistar and Beyond: Rubrics to Use Monday Morning. Lilly Conference on College and University Teaching. 2009.
14. **Franklund, C.V.** Using Computer-Assisted Formative Feedback to Enhance Learning in an Introductory-Level Microbiology Course. Lilly Conference on College and University Teaching. 2008.
15. **Franklund, C.V.** Microscopic Analysis of Oral Biofilms. Microscopy Society of Southern California. 2003.
16. **Franklund, C.V.** Genetic Analysis of Lipopolysaccharide Synthesis in *Fusobacterium nucleatum*. California State University, Fullerton. 2003.
17. Nolan, D., H. Abdelhadi, and **C.V. Franklund**. Cloning and Characterization of the *recA* Gene from *Fusobacterium nucleatum* 10953. National Meeting of the American Society for Microbiology. 2003.
18. Raps, A., and **C.V. Franklund**. Cloning and Analysis of a Lipopolysaccharide Core Gene from *Fusobacterium nucleatum*. National Meeting of the American Society for Microbiology. 2002.
19. Raps, A., and **C.V. Franklund**. Cloning and Analysis of a Lipopolysaccharide Core Gene from *Fusobacterium nucleatum*. Southern California Branch Meeting of the American Society for Microbiology. 2001.
20. Krebs, T., **C.V. Franklund**, and J.B. Goldberg. Function Analysis of Enzymes in Lipopolysaccharide Biosynthesis. Annual Meeting of the Virginia Branch of the Amer. Society for Microbiology. 1999. (Honorable Mention).

21. Dean, C.D., **C.V. Franklund**, J.D. Retief, M.J. Coyne, Jr., K. Hatano, D.J. Evans, G.B. Pier, and J.B. Goldberg. Sequence Analysis of the O Antigen Locus from the Serogroup O11 *Pseudomonas aeruginosa* Strain PA103. Annual Meeting of the American Society for Microbiology. 1998.
22. **Franklund, C.V.** and J.B. Goldberg. Cloning and Characterization of *gltX* from *Pseudomonas aeruginosa*. Annual Meeting American Society for Microbiology 1998.
23. **Franklund, C.V.** and R.J. Kadner. Regulation of *btuB* in *Escherichia coli*. Annual Meeting American Society for Microbiology. 1996.
24. Baron, S. F., **C. V. Franklund**, and P. B. Hylemon. Cloning, Sequencing, and Expression of the Gene coding for 7 α -hydroxysteroid dehydrogenase from *Eubacterium* sp. VPI 12708. Southeastern Microbial Physiology and Genetics Conference. 1994.
25. Baron, S. F., **C. V. Franklund**, and P. B. Hylemon. Characterization of the Bile Acid-Inducible NADH:Flavin Oxidoreductase Gene from *Eubacterium* sp. VPI 12708. Annual Meeting of the Virginia Branch of the American Society for Microbiology. 1993.
26. Baron, S. F., **C. V. Franklund**, and P. B. Hylemon. Characterization of the Bile Acid-Inducible NADH:Flavin Oxidoreductase Gene from *Eubacterium* sp. VPI 12708. Annual Meeting of the American Society for Microbiology. 1993.
27. **Franklund, C.V.**, and P.B. Hylemon. Purification and Characterization of a 7 α - Hydroxysteroid Dehydrogenase from *Eubacterium* sp. Strain VPI 12708. Annual Meeting of the Virginia Branch of the American Society for Microbiology. 1989. (Outstanding Speaker Award)
28. **Franklund, C.V.**, and P.B. Hylemon. Evidence for a Multiprotein Complex Containing the Cholera-Inducible NADH:Flavin Oxidoreductase from *Eubacterium* sp. Strain VPI 12708. Annual Meeting of the American Society for Microbiology. 1988.
29. **Franklund, C.V.**, and P.B. Hylemon. Evidence for a Multiprotein Complex Containing the Cholera-Inducible NADH:Flavin Oxidoreductase from *Eubacterium* sp. Strain VPI 12708. Annual Meeting of the Virginia Branch of the American Society for Microbiology. 1988.
30. **Franklund, C.V.**, and T.L. Glass. Glucose Uptake by the Cellulolytic Rumen Anaerobe *Bacteroides succinogenes* S85. Annual Meeting of the North Dakota Branch American Society for Microbiology. 1986.
31. **Franklund, C.V.**, and T.L. Glass. Glucose Uptake by the Cellulolytic Rumen Anaerobe *Bacteroides succinogenes* S85. Annual Meeting of the American Society for Microbiology. 1986.

JOURNAL ARTICLES

1. Pandak, W.M., P. Bohdan, **C. Franklund**, D.H. Mallonee, G. Eggertsen, I. Björkhem, Z.R. Vlahcevic, and P.B. Hylemon. Expression of Sterol 12 α -Hydroxylase Alters Bile Acid Pool Composition in Primary Rat Hepatocytes and *In Vivo*. *Gastroenterology* **120**:1801-9 (2001).
2. Dean, C.D., **C.V. Franklund**, J.D. Retief, M.J. Coyne, Jr., K. Hatano, D.J. Evans, G.B. Pier, and J.B. Goldberg. Characterization of the O Antigen Locus from the Serogroup O11 *Pseudomonas aeruginosa* Strain PA103: Identification of the O Antigen Polymerase Gene. *J. Bacteriol.* **181**: 4275–4284 (1999).
3. **Franklund, C.V.**, and J.B. Goldberg. Cloning and Characterization of *gltX* from *Pseudomonas aeruginosa* PAK. *J. Bacteriol.* **181**:3582-3586 (1999)
4. Aitchison, P. M., Gay, S. B., **Franklund, C. V.**, & Jackson, J. J. A Web-based end of rotation quiz. *Academic Radiology*, **4**: 860–861 (1997)
5. **Franklund, C.V.** and R.J. Kadner. Multiple Transcribed Elements Control Expression of the *Escherichia coli btuB* Gene. *J. Bacteriol.* **179**:4039-4042 (1997)
6. **Franklund, C.V.**, S.F. Baron, and P.B. Hylemon. Characterization of the *baiH* Gene Encoding a Bile Acid-Inducible NADH:Flavin Oxidoreductase from *Eubacterium* sp. Strain VPI 12708. *J. Bacteriol.* **175**:3002-3012 (1993).

7. Baron, S.F., **C.V. Franklund**, and P.B. Hylemon. Cloning, Sequencing, and Expression of the Gene Coding for Bile Acid 7-Hydroxysteroid Dehydrogenase from *Eubacterium* sp. Strain VPI 12708. *J. Bacteriol.* **173**:4558-4569 (1991).
8. Hylemon, P.B., P.D. Melone, **C.V. Franklund**, E. Lund, and I. Björkhem. Mechanism of Intestinal 7-dehydroxylation of Cholic Acid: Evidence that Allo-Deoxycholic Acid is an Inducible Side-Product. *J. Lipid Res.* **32**: 89-96 (1991).
9. **Franklund, C.V.**, P. de Prada, and P.B. Hylemon. Purification and Characterization of a Microbial, NADP-Dependent Bile Acid 7-Hydroxysteroid Dehydrogenase. *J. Biol. Chem.* **265**: 9842-9849 (1990).
10. White, W.B., **C.V. Franklund**, J.P. Coleman, and P.B. Hylemon. Evidence for a Multigene Family Involved in Bile Acid 7-Dehydroxylation in *Eubacterium* sp. Strain VPI 12708. *J. Bacteriol.* **170**: 4555-4561 (1988).
11. **Franklund, C.V.**, and T.L. Glass. Glucose Uptake by the Cellulolytic Ruminal Anaerobe *Bacteroides succinogenes*. *J. Bacteriol.* **169**: 500-506 (1987).

BOOKS AND CHAPTERS

1. OpenStax. Microbiology. OpenStax College. <https://openstax.org/details/books/microbiology> (2016)
Contributing author for chapters 22, 25, and 26.
2. **Franklund, C.V.** Microbiology Laboratory Manual: Observing and Recording the Microbial World. <http://doi.org/10.17605/OSF.IO/W88AX> (2016)
3. **Franklund, C.V.** Microbiology. Chancellors Learning Systems, Fishers, IN. (2004).
4. Lathrop, J.T., **C.V. Franklund** and R.J. Kadner. Communication Between Membranes in TonB-Dependent Transport Across the Bacterial Outer Membrane. In W.N. Kohings, H.R. Kaback and J.S. Lolkema (eds). Handbook of Biol. Phys. Vol. 2. Elsevier Press (1996).