

Comparative Biomedical Science (PhD): Infection and Immunity Concentration

Plan Requirements

| Code | Title | Hours |
|---|---|-----------|
| Core Courses | | 10 |
| CBS 565 | Fundamentals of Biomedical Sciences | |
| CBS 662 | Professional Conduct in Biomedical Research | |
| CBS 800 | CBS Seminar (3 credit hours required) | |
| ST 511 | Statistical Methods For Researchers I | |
| Concentration Requirements | | 8 |
| CBS 707 | Fundamentals of Infectious Disease | |
| CBS 816 | Advanced Topics In Immunology (2 credit hours required) | |
| IMM/MB 751 | Immunology | |
| Seminar Course | | 2 |
| CBS 811 | Seminar in Infectious Disease (2 credit hours required) | |
| Additional courses/Research Credits | | 46 |
| Elective Courses | | 6 |
| Elective courses are selected by the student and degree advisor/mentor and must be approved by the student's graduate advisory committee. Possible elective courses include, but are not limited to, the following: | | |
| BCH 553 | Biochemistry of Gene Expression | |
| BCH 555 | Proteins and Molecular Mechanisms | |
| BCH 701 | Macromolecular Structure | |
| BCH 703 | Macromolecular Synthesis and Regulation | |
| BCH 705 | Molecular Biology Of the Cell | |
| BIT 510 | Core Technologies in Molecular and Cellular Biology | |
| BIT 564 | Protein Purification | |
| BIT 565 | Real-time PCR Techniques | |
| BIT 566 | Animal Cell Culture Techniques | |
| CBS 561 | Principles of Collaboration and Team Science | |
| CBS 563 | Leadership in Interdisciplinary Biomedical Sciences | |
| CBS 586 | One Health: From Philosophy to Practice | |
| CBS 660 | Fundamentals of Comparative Molecular Medicine | |
| CBS 770 | Cell Biology | |
| CBS 764 | Advances in Gastrointestinal Pathophysiology | |
| CBS 775 | Designing population-based research | |
| CBS 806 | Animal Models in Comparative and Translational Research | |
| CBS 810 | Special Topics (Introduction to Grant Writing) | |
| CBS 886 | Interdisciplinary Research Team Mentoring | |
| GN 701 | Molecular Genetics | |

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| GN 702 | Cellular and Developmental Genetics |
| GN 735 | Functional Genomics |
| GN/ST 756 | Computational Molecular Evolution |
| GN/MB 758 | Microbial Genetics & Genomics |
| GN/PB/BCH 761 | Advanced Molecular Biology Of the Cell |
| GN/BCH 768 | Nucleic Acids: Structure and Function |
| GN 810 | Special Topics in Genetics |
| IMM/PO 757 | Comparative Immunology |
| MB 535 | Bacterial Pathogenesis |
| MB 714 | Microbial Metabolic Regulation |
| MB 718 | Introductory Virology |
| ST 501 | Fundamentals of Statistical Inference I |
| ST 512 | Statistical Methods For Researchers II |
| ST 701 | Statistical Theory I |
| TOX 501 | Principles of Toxicology |

Total Hours **72**

Faculty

Full Professors

Kenneth B. Adler

Glen William Almond

Kevin L. Anderson

Christopher M. Ashwell

Michele Battle

Ronald E. Baynes

Adam Joseph Birkenheuer

Anthony T. Blikslager

James C. Bonner

Russell J. Borski

Matthew Breen

Edward Bealmear Breitschwerdt

Ke Cheng

Maria T Correa

Paula J Cray

Rocio Crespo

Frederick J. Fuller

John E. Gadsby

Troy Ghashghaei

Isabel M. Gimeno

John R. Godwin

Jody L. Gookin

Bruce Hammerberg

Jan Hawkins

Lee-Ann Jaykus

Samuel L. Jones

Matthew D. Koci

Seth William Kullman

Duncan X. Lascelles

Scott M. Laster

Jerry M. Law

Keith E. Linder

Carolyn Jane Mattingly

Kathryn Montgome Meurs

Paul Edward Mozdziak

Natasha J. Olby

Mark G. Papich

Heather Patisaul

Jorge A. Piedrahita

Emilie Francesca Rissman

Yogesh Saini

Kaori Sakamoto

Philip L. Sannes

Gabriela Seiler

Barbara Sherry

Robert Charles Smart

Geoffrey W. Smith

Joshua Stern

Michael K. Stoskopf

Siddhartha Thakur

Jun Tsuji

Jeffrey A. Yoder

Associate Professors

Erica L. Behling-Kelly

Petra Bizikova

Luke B. Borst

Nicolas Emile Buchler

Jeffrey Eells

Jonathan E. Fogle

Derek M. Foster

Shobhan Gaddameedhi

Michala de Linde Henriksen

Paul R. Hess

Megan E. Jacob

Cristina Lanzas

Ronald H Li

Sara K. Lyle

John Edward Meitzen

Nanette M. Nascone-Yoder

Michael Warren Nolan

Monique Danielle Pairis-Garcia

Xinxia Peng

Antonio Planchart

Marcelo Rodriguez-Puebla

Michael Sano

Lauren V. Schnabel

Michael L. Sikes

Barrett D Slenning

Susan T. Tonkonogy

Gregory Wilkerson

Assistant Professors

Belinda Sena Akpa

Abigail Armwood

Christa Baker

Tal Ben-Horin

Eric Robert Brooks

Yevgeny Brudno

Benjamin John Callahan

Elisa Crisci

Glenn Paul Cruse
 Christopher Matthew Dekaney
 Natalia Duque-Wilckens
 Joshua R Fletcher
 Lisa Gamsjaeger
 Liara M. Gonzalez
 Margaret Elizabeth Gruen
 Christopher Daniel Guilluy
 Jennifer Lauren Halleran
 Tobias Ernst Kaeser
 Albert Jun Qi Keung
 Manuel Kleiner
 Raveendra Rangarao Kulkarni
 Yen-Hao Lai
 Caroline Laplante
 Jennine M. Lection
 Elizabeth Lucas
 Jennifer Ann Luff
 Gustavo Machado
 Kurt Marsden
 Neil McCarthy
 Kelly Ann Meiklejohn
 Kristen Michele Messenger
 Santosh Kumar Mishra
 Hiroyuko Mochizuki
 Annie Oh
 Karen Min-Jee Park
 Kursten Veronica Pierce
 Michael Rahe
 Sarah Kathleen Rhea
 Breanna Jo Sheahan
 Mary Katherine Sheats
 Sarah Elizabeth Shelton
 Thiago Vilar Silva
 Panchan Sitticharoenchai
 Eduardo Javier Lopez Soto

Casey Michelle Theriot
 Laurianne Chantal Van Landeghem
 Ian A. Williamson
 Jose Augusto Len Yin
 Kelley Varner
 Jian Zhang

Practice/Research/Teaching Professors

Alix Berglund
 Phuong-Uyen Cao Dinh
 Ke Huang
 Ricardo G. Maggi
 Caroline McKinney
 Thierry Jean Marie Olivry
 Erin Frey Pearson

Teaching Assistant Professors

Emily Martin
 Kristen Sullivan

Adjunct Faculty

Hannah Atkins
 Jennifer Lynn Davis
 Majid Douraki
 Janice A. Dye
 Johanna Rebecca Elfenbein
 Sarah O'Flaherty
 Holly Roessner
 Elizabeth Caitlin Rose
 Alexander Tran

Emeritus Faculty

Harold J. Barnes
 Talmage T. Brown Jr.
 John Michael Cullen

Lloyd Norman Fleisher

Oscar J. Fletcher Jr.

Sarah Y. Gardner

Marlene L. Hauck

Cynthia L. Hemenway

Suzanne Kennedy-Stoskopf

Michael Green Levy

David H. Ley

Nancy A. Monteiro-Riviere

William M. Morrow

Paul E. Orndorff

W. Rich Redding

Jim E. Riviere

Malcolm C. Roberts

Barbara Lynn Sherman

Clifford Richard Swanson

Donald E. Thrall