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Ensign Professor of Medicine
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John N. Forrest, Jr., M.D.
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Yale University School of Medicine

Rolf K.H. Kinne, M.D., Ph.D.
Director, Max-Planck Institute
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SCIENTIFIC PERSONNEL

Principal Investigators

Lisa J. Bain, Ph.D.
Assistant Professor
Department of Biology
University of Texas – El Paso

William S. Baldwin, Ph.D.
Assistant Professor
Department of Biology
University of Texas – El Paso

Ned Ballatori, Ph.D.
Associate Professor of Toxicology
Department of Environmental Medicine
University of Rochester School of Medicine

David W. Barnes, Ph.D.
Director, Marine Cell Lines and Stem Cell Program
Mount Desert Island Biological Laboratory

Edward J. Benz, Jr., M.D.
President
Professor of Medicine
Dana Farber Cancer Institute

Nancy Berliner, M.D.
Professor of Internal Medicine and Genetics
Department of Internal Medicine
Yale University School of Medicine

James L. Boyer, M.D.
Ensign Professor of Medicine
Chief, Division of Digestive Diseases
Director Liver Center
Yale University School of Medicine

Peter M. Cala, Ph.D.
Professor and Chairman
Dept. of Human Physiology
School of Medicine
University of California, Davis

Associates

Mihaela Senek

Laura Chapman
Renee Thibodeau

Catherine Bennet
David Seward
Samuel Sligh III

Lori Dowell
Angela Parton

Anna Blakaj
Heidi Cho
Lien Thu-Dao

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Ian P. Callard, Ph.D.
Professor of Biology
Boston University

Kelley Bonner
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Professor of Biology
Georgia Southern University

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Curtis Lanier
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Lars Cleemann, Ph.D.
Assistant Professor of Pharmacology
Georgetown University

Vadim Degtiar, Ph.D.
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Elizabeth L. Crockett, Ph.D.
Assistant Professor
Department of Biological Sciences
Ohio University

Kevin Funk
R. Patrick Hassett, Ph.D.
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David C. Dawson, Ph.D.
Professor and Chair
Department of Physiology and Pharmacology
School of Medicine
Oregon Health Sciences University

Jonathan A. Dranoff, M.D.
Assistant Professor of Medicine
Yale University School of Medicine

Jennifer Neves
Diana Swett

Marlies Elger, Ph.D.
Research Scientist
Innere Medizin/Nephrologie
Medizinische Hochschule Hannover

Franklin H. Epstein, M.D.
William Applebaum Professor of Medicine
Beth Israel Hospital
Harvard Medical School

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Professor and Chair of Zoology
University of Florida

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Kelly Hyndman
Rachel Rose

Susan K. Fellner, Ph.D.
Research Professor
Department of Cellular and Molecular Physiology
University of North Carolina at Chapel Hill

Laurel Parker

Andreas Flemmer, M.D., Ph.D.
University Children's Hospital, Munich

Biff Forbush, Ph.D.
Professor and Director of Graduate Studies
Department of Cellular and Molecular Physiology
Yale University School of Medicine

John N. Forrest, Jr., M.D.
Professor of Medicine
Director of Student Research
Department of Internal Medicine
Yale University School of Medicine

Leonard R. Forte, Ph.D.
Professor and Senior Career (VA) Scientist
Department of Pharmacology
Missouri University School of Medicine
Harry S. Truman Memorial Veterans' Hospital

Gert Fricker, Ph.D.
Professor
Institut fuer Pharmazeutische Technologie und Biopharmazie

Raymond A. Frizzell, Ph.D.
Professor and Chair
Department of Cell Biology and Physiology
University of Pittsburgh School of Medicine

Leon Goldstein, Ph.D.
Professor
Department of Molecular Pharmacology
Physiology & Biotechnology
Brown University

Arnaud Bewley
Brian Dowd
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Kathi Peters, Ph.D.

Beth Goldstein
Dana-Lynn Koomoa
Mark Musch

Hermann Haller, M.D.
Professor of Medicine
Dept. of Nephrology
Hannover Medical School

Torsten Kirsch, Ph.D.
Jennifer Litteral
Richard Raymond
Abigail Sheldon
Patricia Waldron

Criss Hartzell, Ph.D.
Professor
Department of Cell Biology
Emory University

Catherine Hartzell
Tara Tweedie

Richard M. Hays, M.D.
Investigator and Professor of Medicine
Department of Medicine
Albert Einstein College of Medicine

Raymond P. Henry, Ph.D.
Professor
Department of Biological Sciences
Auburn University

Charles Booth, Ph.D.
Erin Donovan
Anthony Moss, Ph.D.
Katherine Smith
Samuel Swenson

Hartmut Hentschel, Ph.D.
Research Scientist
Innese Medizin/Nephrologie
Medizinische Hochschule Hannover

Shawn E. Holt, Ph.D.
Assistant Professor
Department of Pathology
Medical College of Virginia
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Lynne Elmore, Ph.D.
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David Julian, Ph.D.
Assistant Professor
Department of Zoology
Ph.D.
University of Florida

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Mallika Lavakumar
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Karl J. Karnaky, Ph.D.
Associate Professor
Department of Cell Biology and Anatomy
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Pearl Ryder

Grant Kelley, M.D.
Associate Professor

Catherine Kelley

Department of Medicine
SUNY Upstate Medical University

George W. Kidder III, Ph.D.
Instrumentation Officer
Senior Scientist
Mount Desert Island Biological Laboratory

Casie Goldsmith
Michael Neville

Rolf K.H. Kinne, M.D., Ph.D.
Director
Max-Planck-Institute for Molecular Physiology
Dortmund, Germany

Evamaria Kinne-Saffran, M.D., Ph.D.
Senior Investigator
Max-Planck-Institute for Molecular Physiology
Dortmund, Germany
(dec'd 12/02)

James Saenz

Thomas J. Koob, Ph.D.
Section Chief, Skeletal Biology
Shriners Hospital for Children

Magdalena Koob-Edmunds
John Long, Ph.D.

Seth W. Kullman, Ph.D.
Assistant Research Professor
Environmental Sciences and Policy
Nicholas School for the Environment and Earth Sciences
Duke University

Petra H. Lenz, Ph.D.
Associate Research Professor
Békésy Laboratory of Neurobiology
Pacific Biomedical Research Center
University of Hawaii

Dan Hartline, Ph.D.
Gabriel Rodrigues

Donald L. Lovett, Ph.D.
Associate Professor
Department of Biology
The College of New Jersey

Thomas Ricart
Christopher Tanner

Carlos M. Luquet, Ph.D.
Teaching Assistant
Department of Biological Sciences
University of Buenos Aires
Buenos Aires, Argentina

Mihaela Senek

Carolyn Mattingly, Ph.D.
Scientific Curator
Comparative Toxicogenomics Database
Mount Desert Island Biological Laboratory

Glenn Colby
Eric Klausmeyer

John E. Mickle, Ph.D.
Instructor
Department of Pediatrics
Institute of Genetic Medicine
Johns Hopkins University School of Medicine

Joshua Bridges
Caitlin Stanton

David S. Miller, Ph.D.
Research Physiologist
Laboratory of Pharmacology and Chemistry
NIH/NIEHS

Bjorn Bauer, Ph.D.
Kelley Bleasby, Ph.D.
Leon Kuik
Sylvia Notenboom
Caitlin Unities

Martin Morad, Ph.D.
Professor of Pharmacology and Medicine
Department of Pharmacology
Georgetown University Medical Center

Thomas Pannabecker, Ph.D.
Research Assistant Professor
Department of Physiology
University of Arizona

Chris Petersen, Ph.D.
Professor of Biology
College of the Atlantic

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Allison Fundis
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Robert L. Preston, Ph.D.
Professor of Physiology
Department of Biological Sciences
Illinois State University

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Ishani Sud

J. Larry Renfro, Ph.D.
Professor of Physiology
Department of Physiology & Neurobiology
University of Connecticut

Ryan Pelis

John. R. Riordan, Ph.D.
Professor
Mayo Clinic Scottsdale

J.D. Campbell
Tim Jensen

Patricio Silva, M.D.
Chief, Section of Nephrology
Temple University Hospital

Céline Spanings-Pierrot, Ph.D.
Associate Professor
Laboratoire D'Ecophysiologie des Invertébrés
University of Montpellier II

Bruce A. Stanton, Ph.D.
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Dartmouth Medical School

Alex Lankowski
Druanne Prescott

James D. Stidham, Ph.D.
Professor of Biology
Presbyterian College

Andrea R. Tilden, Ph.D.
Assistant Professor of Biology
Colby College

Greg Cary
Meredith Crane

David W. Towle, Ph.D.
Senior Scientist
Mount Desert Island Biological Laboratory

Lindsay Parrie

Alice R.A. Villalobos, Ph.D.
Assistant Professor
Department of Physiology and Neurobiology
University of Connecticut

Ashley Gordon

Mark L. Zeidel, M.D.
Professor and Chair
Department of Medicine
University of Pittsburgh

Rebekah Gensure
Warren Hill, Ph.D.
John Mathai, Ph.D.

2002 SUMMER FELLOWSHIP RECIPIENTS

HIGH SCHOOL STUDENT FELLOWSHIPS

Hancock County Scholars Recipients:

Katherine Hessler, Ellsworth High School

Erik Klausmeyer, Sumner Memorial High School

Renee Thibodeau, Carrabassett Valley Academy
Tara Tweedie, Bucksport High School

Mentors:

Franklin Epstien, M.D.
Richard Hays, M.D.
Patricio Silva, M.D.
Glenn Colby
Carolyn Mattingly, Ph.D.
William Baldwin, Ph.D.
Criss Hartzell, Ph.D.

High School Student Fellowship:

Matthew Lankowski, Portland High School
Samuel Swenson, Evanston Township High School
Valerie Johnson, Maine School of Science and Mathematics

Shawn E. Holt, Ph.D.
Raymond Henry, Ph.D.
Jennifer Litteral

Community Environmental Toxicology Laboratory:

Orrin Johnson, MDI High School
Jennifer Reynolds, MDI High School

Jane Disney, Ph.D.
Jane Disney, Ph.D.

Durham High School Recipients:

Samuel Sligh, Hillside High School
Abigail Sheldon, NC School of Science and Mathematics
Ishani Sud, Hillside High School

James L. Boyer, M.D.
Peter M. Cala, Ph.D.
Hermann Haller, M.D.
Robert L. Preston, Ph.D.

Secondary Education through Health:

Renee Rolston, Queens Gateway to Health Sciences HS

John N. Forrest, Jr., M.D.

Dana Farber Cancer Institute:

Lien-Thu Dao, Boston Latin School

Edward Benz, M.D.

Maine Research Internships for Teachers and Students (MERITS):

Pearl Ryder, Maine School of Science and Mathematics

Karl Karnaky, Ph.D.

UNDERGRADUATE STUDENT FELLOWSHIPS

NSF Research Experience for Undergraduates (REU):

Catherine Bennet, Georgetown University

Marie Bewley, Yale University

Ashley Gordon, Univ. of Maryland-Baltimore County

Asaf Hanish, University of Pittsburgh

Giulianna Lizano, Boston University

William Motely, Middlebury College

Thomas Ricart, The College of New Jersey

Gabriel Rodrigues, Rutgers University

James Saenz, University of Massachusetts-Boston

Katherine Smith, University of New Hampshire

Caitlin Unites, College of the Atlantic (*2002 Silk Fellow*)

Ned Ballatori, Ph.D.

James L. Boyer, Ph.D.

John N. Forrest, Jr. M.D.

Alice Villalobos, Ph.D.

Raymond Frizzell, Ph.D.

John N. Forrest, Jr., M.D.

John N. Forrest, Jr., M.D.

Donald Lovett, Ph.D.

Petra Lenz, Ph.D.

Eva Kinne-Saffran, M.D., Ph.D.

Mark Zeidel, M.D.

Raymond Henry, Ph.D.

David Miller, Ph.D.

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Nicollette Bolton, Colby College

JD Campbell, University of Maine

Greg Cary, Colby College

Sarah Eichenberger, Bates College

Maria Joachim, Bates College

Jennifer Neves, University of Maine

Susannah Parke, Colby College

Lindsay Parrie, College of the Atlantic

Richard Raymond, University of Maine

Mihaela Senek, College of the Atlantic

Jane Barker, Ph.D.

The Jackson Laboratory

John Riordan, Ph.D.

Andrea Tilden, Ph.D.

Patsy Nishina, Ph.D.

The Jackson Laboratory

Alexandar Chervonsky, M.D., Ph.D.

The Jackson Laboratory

Jonathan Dranoff, M.D.

Tanya Golovkina, Ph.D.

The Jackson Laboratory

David Towle, Ph.D.

Hermann Haller, M.D.

Lisa Bain, Ph.D.

NSF Collaborative Research at Undergraduate Institutions (CRUI):

Becky Clifford, Illinois State University

Erica Donnelly, Illinois State University

Alison Fundis, College of the Atlantic

Caisie Goldstein, Illinois State University

Amy Guy, Illinois State University

Michael Neville, Illinois State University

Nicklaus Richards, Illinois State University

Katrina Zarella, College of the Atlantic

all students mentored by:

George Kidder, Ph.D.

Chris Peterson, Ph.D.

Robert L. Preston, Ph.D.

American Heart Association Research Fellowship:

Druanne Prescott, Boston University
Christopher Sighinolfi, University of Pennsylvania

Patricia Waldron, Grinnell College

Bruce Stanton, Ph.D.
Franklin Epstein, M.D.
Richard Hays, M.D.
Patricio Silva, M.D.
Hermann Haller, M.D.

Cystic Fibrosis Foundation Research Fellowship:

Joshua Bridges, University of Maine
Kiki Stanton, Brown University

John Mickle, Ph.D.
Bruce Stanton, Ph.D.

Thomas H. Maren Foundation Student Fellowship:

Laurel Parker, University of Maine

Susan Fellner, M.D.

Stanley Bradley/Stam and Judy Fellowship:

Dana-Lynn Koomoa, Brown University

Leon Goldstein, Ph.D.

NEW INVESTIGATOR AWARDS

Salisbury Cove Research Fund:

David W. Barnes, Ph.D., MDI Biological Laboratory (also CMTS)
Andreas W. Flemmer, M.D., University Children's Hospital Munich
Gert Fricker, Ph.D., University of Heidelberg
Criss Hartzell, Ph.D., Emory University (also CMTS)
Shawn E. Holt, Ph.D., Medical College of Virginia, Commonwealth University (also CMTS)
David Julian, Ph.D., University of Florida (also CMTS)
Grant G. Kelley, M.D., SUNY Upstate Medical University (also CMTS)
John E. Mickle, Ph.D., Johns Hopkins University School of Medicine
Thomas Pannabecker, Ph.D., University of Arizona
Andrea R. Tilden, Ph.D., Colby College

MDIBL Named Fellowships:

Franklin H. Epstein, M.D., Harvard Medical School, *Blum/Halsey and Bowditch Fellowships*
Richard M. Hays, M.D., Albert Einstein College of Medicine, *Blum/Halsey and Bowditch Fellowships*
Donald L. Lovett, Ph.D., The College of New Jersey, *Dahlgren and Roy Forster Fellowships*
Carlos M. Luquet, Ph.D., University of Buenos Aires, *FH Epstein Investigator ship and Boylan Fellowship*
Patricio Silva, M.D., Temple University Health Science Center, *Blum/Halsey and Bowditch Fellowships*
Celine Spanings-Pierrot, Ph.D., University of Montpellier, France, *Schmidt-Nielsen and Milbury Fellowships*

MDIBL NIEHS Center for Membrane Toxicity Studies Fellowships:

Lisa Bain, Ph.D., University of Texas at El Paso

William Baldwin, Ph.D., University of Texas at El Paso

David W. Barnes, Ph.D., MDI Biological Laboratory

Criss Hartzell, Ph.D., Emory University

Shawn E. Holt, Ph.D., Medical College of Virginia, Commonwealth University

David Julian, Ph.D., University of Florida

Grant G. Kelley, M.D., SUNY Upstate Medical University

Seth W. Kullman, Ph.D., Duke University

John R. Riordan, Ph.D., Mayo Clinic Scottsdale

2002 SEMINARS

Seminars preceded by an asterisk were presented by investigators supported by the NIEHS Center for Membrane Toxicity Studies at the Mount Desert Island Biological Laboratory

Morning Transport Seminars

- *July 8 "A view into the portal: Epithelial/mesenchymal interactions in the biliary microenvironment" Jonathan A. Dranoff, M.D., Assistant Professor, Department of Internal Medicine and Digestive Diseases, Yale University School of Medicine
- July 15 "Calcium signaling in rectal gland artery and tubules" Susan K. Fellner, M.D., Research Professor, Department of Cell and Molecular Physiology, University of North Carolina
- *July 22 "CFTR, PDZ Proteins and cellular zip codes" Bruce Stanton, Ph.D., Professor of Physiology, Dartmouth Medical School
- July 29 "Sodium and ammonium transporter expression in crab gill" David W. Towle, Ph.D., Senior Investigator; Director, Marine DNA Sequencing Center, Mount Desert Island Biological Laboratory
- *August 5 "CFTR: Electrostatics, thiol chemistry, and the mechanism of anion conduction" David C. Dawson, Ph.D., Professor and Chair, Department of Physiology and Pharmacology, Oregon Health and Science University
- *August 12 "Secrets in small caves" Hermann Haller, M.D., Director of Nephrology; Chairman of Internal Medicine, Hannover Medical School, Germany
- *August 19 "The latest in motoring" Richard M. Hays, M.D., Professor of Medicine, Albert Einstein College of Medicine
- *August 26 "CFTR trafficking: Where and how?" Raymond A. Frizzell, Ph.D., Professor and Chair, Department of Cell Biology and Physiology, School of Medicine, University of Pittsburgh

Friday Noon Brown Bag Seminars

- July 5 Introductory 5 minute talks by MDIBL Principal Investigators to summarize summer research projects
- July 19 "Sulfate transport across flounder intestine" Rylan Pelis, Graduate Student, Physiology and Neurobiology, University of Connecticut

*"Functional variation in complex diseases" John Mickle, Ph.D., Instructor,
Institute of Genetic Medicine, Johns Hopkins University School of Medicine

July 26 "What turns crabs on?" Donald Lovett, Ph.D., Associate Professor, Department
of Biology, The College of New Jersey

*"H₂S: Friend or foe?" David Julian, Ph.D., Assistant Professor, Department of
Zoology, University of Florida

*August 2 "Are you feeling your Oats? Organic anion transport in kidney and choroid
plexus" David S. Miller, Ph.D., Research Physiologist, Laboratory of
Pharmacology and Chemistry, NIH/NIEHS

*August 16 "Fish cell culture" David Barnes, Ph.D., Senior Investigator; Director,
Marine Cell Lines and Stem Cell Program, Mount Desert Island Biological
Laboratory

August 23 "Fiddling with rhythm: Biological clocks of crabs" Andrea Tilden, Ph.D.,
Assistant Professor, Department of biology, Colby College

"Telomerase and fish" Shawn Holt, Ph.D., Assistant Professor, Department of
Pathology, Medical College of VA at Virginia

Wednesday Evening Public Seminars

July 3 "Getting a Charge Out of Chloride Channels" Criss Hartzell, Ph.D. Professor,
Department of Cell Biology, Emory University

*July 10 THE TWENTY-FIRST WILLIAM B. KINTER MEMORIAL LECTURE –
"The Era of Genomics in Environmental Health Research" Samuel H. Wilson,
M.D., Deputy Director, National Institute of Environmental Health Sciences
(NIEHS) & National Toxicology Program; Chief, DNA Repair and Nucleic
Acid Enzymology Workgroup, Laboratory of Structural Biology, NIEHS, NIH

July 17 THE EIGHTH HELEN F. CSERR MEMORIAL LECTURE – "Regulation of
body fat: Basic mechanisms and changes with age" Barbara Horwitz, Ph.D.,
Professor of Physiology; Vice Provost-Academic Personnel, University of
California, Davis

July 24 THE TWELFTH ANNUAL THOMAS H. MAREN MEMORIAL SEMINAR –
"New concepts to treat glaucoma: Did Professor Maren's dream get fulfilled?"
Michael Wiederholt, M.D., Ph.D., Professor of Physiology and Clinical
Physiology, University Hospital Benjamin Franklin, Freie Universitat Berlin

- July 31 NO SEMINAR
- August 7 THE SEVENTH LEONARD SILK MEMORIAL LECTURE – “Yesterday, Today & Tomorrow: Israel and South Africa” Benjamin Pogrund, Journalist and Director, Yakar’s Center for Social Concern, Jerusalem, Israel
- August 14 “Molecular Genetics of Steroid Hormone Biosynthesis in *Drosophila*: The Only Way to Fly” Lawrence Gilbert, Ph.D., William Rand Kenan Professor of Biology, University of North Carolina at Chapel Hill

Special Seminars and Presentations

- *June 21 “Cyclic GMP transport: MRP-4/5 as target molecules for anti-cancer drugs” Leonard R. Forte, Professor, Department of Pharmacology, School of Medicine, University of Missouri
- August 2 THE MOUNT DESERT ISLAND BIOLOGICAL LABORATORY NATURAL SCIENCES SEMINAR: “The Search for Habitable Planets” David Latham, Ph.D., Senior Astronomer, Harvard-Smithsonian Center for Astrophysics
- August 9 “Future Science: Scientists of Tomorrow at Work Today” Public symposium featuring presentations by local and national high school and college students participating in exciting hands-on research training programs at MDIBL and the Jackson Laboratory
- August 15 “Mosquitoes and Antarctic fish: Ion transporters and isoforms” David Petzel, Ph.D., Associate Professor, Department of Biomedical Sciences, Creighton University School of Medicine

All Campus Ethics Seminar Series “Responsible Conduct in Research”

- July 2 Session #1 - hosted by J.B. Claiborne, Ph.D., Professor of Biology, Georgia Southern University, and David H. Evans, Ph.D., Professor and Chair, Department of Zoology, University of Florida
- July 9 Session #2 – hosted by John Mickle, Ph.D., Instructor, Institute of Genetic Medicine, Johns Hopkins University School of Medicine, and Jonathan A. Dranoff, M.D., Assistant Professor of Medicine, Division of Digestive Diseases, Yale University School of Medicine
- July 23 Session #3 – hosted by James D. Stidham, Ph.D., Professor of Biology, Presbyterian College

Students-only Seminars:

- July 16 Session #1 – “Let’s study killifish!”
Joshua Bridges, University of Maine; Jennifer Neves, University of Maine; Dru Prescott, Boston University; Kiki Stanton, Brown University; Diana Swett, Yale University
- *July 23 Session #2 – 1) “Endocrine disruptors!”; 2) “Is sulfide a neuromodulator?”
Faithlore Gardner, University of Florida; Mallika Lavakumar, University of Florida
- July 30 Session #3 – “How you can have your lobster and eat it too”
Lindsay Parrie, College of the Atlantic; David W. Towle, Ph.D., Mount Desert Island Biological Laboratory

2002 CONFERENCES AND WORKSHOPS

*SYMPOSIUM:

- July 10-11 NINTH ANNUAL MOUNT DESERT ISLAND BIOLOGICAL
LABORATORY (MDIBL) ENVIRONMENTAL HEALTH SCIENCES
SYMPOSIUM - Sponsored by the NIEHS Center for Membrane Toxicity Studies
at the MDIBL, National Center for Research Resources, Yale University
Liver Center, Kinter Memorial Lectureship Fund, and MDIBL

Exploiting Genome Data To Understand The Function, Regulation, And Evolutionary Origins Of Toxicologically Relevant Genes

Wednesday, July 10:

Keynote Speaker - 21st Annual Kinter Lecture: “The Era of Genomics in Environmental Health Research” Samuel H. Wilson, M.D., Deputy Director, NIEHS

Thursday, July 11:

Welcome, John Forrest, M.D., Director of the MDIBL, Yale University School of Medicine

SESSION I: *Exploiting microarray and whole genome databases*

“The National Center for Toxicogenomics (NCT)” James K. Selkirk, Ph.D., Deputy Director, The National Center for Toxicogenomics

“Differential gene expression in toxicology: practicalities, problems and potential” John C. Rockett, Ph.D., U.S. Environmental Protection Agency

"So many poisons, so little time!" Christopher A. Bradfield, Ph.D., McArdle Laboratory, Univ. of Wisconsin, Madison

"The Mouse Genome Database (MGD): Using mice to understand ourselves" Janan T. Eppig, Ph.D., The Jackson Laboratory

"Gene ontology classifications" David Hill, Ph.D., The Jackson Laboratory

"Classification of gene function using whole genome analysis: xenobiotic transport genes" Ian Paulsen, Ph.D., The Institute for Genomic Research

SESSION II: *Exploiting databases for gene clusters*

"Complex pathways for protecting against alkylating agents" Leona D. Samson, Ph.D., Massachusetts Institute of Technology

"Global analysis of protein activities using proteome chips" Heng Zhu, Ph.D., Yale University School of Medicine

"The MDIBL's Comparative Toxicogenomics Database (CTD)" Carolyn Mattingly, Ph.D., and Glenn T. Colby, the MDIBL

SESSION III: *Understanding gene function, regulation, and mechanisms of toxicity using comparative approaches: selected examples*

"Cloning of the skate orthologues of the organic solute transporters Bsep, Oatp and Mrp2: insights into structure, function and evolutionary origins" James L. Boyer, M.D., Yale University School of Medicine, and the MDIBL

"Identification of novel detoxification genes using marine vertebrates" Ned Ballatori, Ph.D., University of Rochester School of Medicine, and the MDIBL

"Molecular determinants of Hg sensitivity of Na-K-Cl cotransport: learning from shark - human differences" Biff Forbush, Ph.D., Yale University School of Medicine, and the MDIBL

"Target sites of heavy metals in membrane transport systems: Conclusions from functional studies and genomic data" Rolf Kinne, M.D., Ph.D., and Eva Kinne-Saffran, M.D., Ph.D., Max Plank Inst., and MDIBL

"Xenobiotic Transport Across the Blood-CSF Barrier: Genes, Mechanisms and Surprises" David Miller, Ph.D., NIEHS, and the MDIBL

***SYMPOSIUM:**

August 9-12 **Stem Cells on Land and at Sea**

Co-hosted by The Mount Desert Island Biological Laboratory and The Jackson Laboratory - Sponsored by the National Center for Research Resources, National Institute of Diabetes & Digestive & Kidney Diseases, Maine Biomedical Research Infrastructure Network and The Lasker Foundation

Friday, August 9

"Leroy Stevens' Contributions to the Field" John Gearhart, Ph.D., Johns Hopkins School of Medicine

"Nuclear Cloning, Stem Cells and Reprogramming of the Genomes" Rudolph Jaenisch, M.D., Whitehead Institute, MIT

Saturday, August 10

Session I *Human ES Cells: State of the Science: Advances, Boundaries and Limitations*
(James Thomson, Ph.D., Barbara Knowles, Ph.D.)

"Human Embryonic Stem Cells" James Thomson, Ph.D., University of Wisconsin - Madison

"Differentiation of Human Embryonic Stem Cells" Martin Pera, Ph.D., Monash University

"Multipotent Potential of Adult Stem Cells" Katherine Verfaillie, M.D., The Stem Cell Institute

"Differentiation and Transplantation of Cells Derived from Human Embryonic Germ Cells"
John Gearhart, Ph.D., Johns Hopkins School of Medicine

"Cell Surface Markers of Human ES Cells" Peter Andrews, Ph.D., University of Sheffield

Session II *Emerging Technologies: Analysis, Applications and Therapeutics*
(Peter Igarashi, M.D., John N. Forrest, Jr., M.D.)

"Transgenic Mice in Studies of Cell Differentiation" Peter Igarashi, M.D., University of Texas Southwestern Medical Center

"Emerging technologies in embryonic stem cell mediated genome alterations" Andras Nagy, Ph.D., Mt. Sinai Hospital, Toronto, Canada

"Stem Cell Therapy for the Diseased Solid Organ" Loren Field, Ph.D., Indiana University School of Medicine

"Stem Cells and Other Mechanisms of Renal Regeneration" Hermann Haller, M.D., Medical

School Hannover

"In-vitro organogenesis: Kidney" Christopher Burrow, M.D., DNA Sciences

"Avian Transgenic Chimeras through Embryonic Stem Cells" Marie-Cecile van de Lavoie, DVM, Ph.D., Origen Therapeutics

Sunday, August 11

Session III *Comparative Biology of Stem Cells: Lessons Learned in the Process* (David Barnes, Ph.D.)

"Zebrafish Embryonic Stem Cell Culture" Paul Collodi, Ph.D., Purdue University

"Utility of Zebrafish for the Study of Stem Cells" Leonard Zon, M.D., Howard Hughes Medical Inst., Children's Hospital, Boston

"Cell Lines Derived From Farm Animal Preimplantation Embryos" Neil Talbot, Ph.D., USDA

"Telomerase, Aging, Cancer, and Stem Cells" Shawn Holt, Ph.D., Medical College of Virginia

Public Lecture and Panel Discussion-Maren Auditorium (Edward J. Benz, Jr., M.D., Moderator):

Lecture

"Key Ethical Questions for Stem Cell Researchers" Ronald Green, Ph.D., Eunice & Julian Cohen Professor for the Study of Ethics and Human Values, Dartmouth College

Panel Discussion

Edward J. Benz, M.D., Dana Farber Cancer Institute, Moderator

Diane Krause, M.D., Ph.D., Yale University School of Medicine

Ronald Green, Ph.D., Dartmouth College

James Thomson, Ph.D., University of Wisconsin - Madison

Monday, August 12

Session IV *Stem Cell Differentiation: Hematopoiesis* (Stuart Orkin, M.D.)

"Plasticity of Bone Marrow Derived Stem Cells" Diane Krause, M.D., Ph.D., Yale University School of Medicine

"Hematopoietic Stem Cell Formation and Function" Stuart Orkin, M.D., Dana Farber Cancer Institute

"Genetic Modification of Hematopoietic Stem Cells" Robert Hawley, Ph.D., American Red Cross

Session V *Stem Cell Differentiation: Neuronal Differentiation* (Joanne Conover, Ph.D.)

“Progenitors for Adult Neurogenesis” Arturo Alvarez-Buylla, Ph.D., University of California - San Francisco

“Where Do Neural Stem Cells Come From and How Do They Maintain Themselves” Derek van der Kooy, Ph.D., Medical School, University of Toronto

***WORKSHOP:**

May 3 & 4 Community Participation in Genomic Databases

Conference Goal:

To develop strategies for involving the scientific community with the ongoing development and curation of the Comparative Toxicogenomics Database.

Friday, May 3

Welcoming address - James L. Boyer, M.D., Director, Center for Membrane Toxicity Studies, Mount Desert Island Biological Laboratory

Keynote Address – “The Role of Toxicogenomics in Environmental Health Research”
Ray Tennant, Ph.D., Director, The National Center for Toxicogenomics, NIEHS

Saturday, May 4

Welcome - John N. Forrest, Jr., M.D., Director, Mount Desert Island Biological Laboratory

Session I

“Toxicological Models: Marine vs. Mammal” John Stegeman, Ph.D., Woods Hole Oceanographic Institution

“Integrating Resources in Biological Databases” Joel Richardson, Ph.D., Mouse Genome Database (MGD)

“Community Interaction with Biological Databases” Janan T. Eppig, Ph.D., Mouse Genome Database (MGD)

“Data Acquisition for the Zebrafish Information Network (ZFIN)” Monte Westerfield, Ph.D. Zebrafish Information Network (ZFIN), University of Oregon

“Genomic Data Curation” Karen Christie, Ph.D., *Saccharomyces* Genome Database

“Gene Expression Analysis” Michael Thomas, Ph.D., Bioinformatics Research Center, Medical

College of Wisconsin

Session II

“Comparative Toxicogenomics Database: Biological Features” Carolyn Mattingly, Ph.D., MDIBL

“Comparative Toxicogenomics Database: System Components” Glenn Colby, MDIBL

Workshops:

Workshop 1 – Dahlgren Hall - **Fostering community participation**

Goal: *A process and criteria for data submission by the scientific community*

Moderators: Dr. Judith Blake, Dr. Seth Kullman

Workshop 2 – Maren Auditorium - **Matching community needs with the biological content in the database**

Goal: *A list of priorities for the biological content of the database*

Moderators: Dr. David Williams, Dr. Michael Carvan

Workshop 3 – Dahlgren Hall - **Managing gene expression data (ESTs and Microarrays)**

Goal: *A strategy for integrating large gene expression data sets into the database*

Moderators: Dr. David Towle, Pierre Bushel

Workshop 4 – Maren Auditorium - **Ideas for the next generation of the database**

Goal: *A list of new features and functions for the next generation of the database*

Moderators: Dr. Biff Forbush, Dr. David Hinton

2002 COURSES

- | | |
|-----------------|---|
| April 30-May 10 | Bates College Course in Comparative Functional Genomics
Course Directors – Glen Lawson, Ph.D., Bates College; David W. Towle, Ph.D., MDIBL |
| May 20-June 1 | Washington College, Community Ecology of Coastal Maine
Course Director – Martin Connaughton, Ph.D. |
| * May 26-June 8 | Illinois State University and College of the Atlantic CRUI, Physiology of Marine and Maritime Organisms
Course Directors - George Kidder, Ph.D., MDIBL; Robert Preston, Ph.D., Illinois State University; Chris Petersen, Ph.D., College of the Atlantic |
| June 1-8 | University of Pittsburgh School of Medicine, Intensive Pedagogical Experience in Laboratory Research |

Course Directors - Raymond Frizzell, Ph.D. and Mark Zeidel, M.D.

- * June 8-15 Yale University School of Medicine, Intensive Pedagogical ~~Experiences in~~
Laboratory Research
Course Directors - John N. Forrest, Jr., M.D. and David Kessler, J.D.,
M.D.
- * June 15-22 Fourth Annual Intensive Course in Quantitative Fluorescent *Microscopy*
Course Director - Simon C. Watkins, Ph.D., University of Pittsburgh
School of Medicine
- September 4-9 Biomedical Exchange Program Forum and International Academy of Life
Sciences Meeting
Course Director - Hilmar Stolte, M.D.
- November 2-3 University of Maine BRIN Short Course, Comparative Animal
Physiology
Course Director - Malcolm Shick, Ph.D.

PUBLICATIONS

Publications preceded by an asterisk were prepared by investigators funded by the NIEHS Center for Membrane Toxicity Studies at the Mount Desert Island Biological Laboratory

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- * Ballatori, N. Transport of toxic metals by molecular mimicry. *Environ. Health Persp.* 110 (Suppl. 5):689-694, 2002.
- * Ballatori, N. and A.R. Villalobos. Defining the molecular and cellular basis of toxicity using comparative models. *Toxicol. Appl. Pharmacol.* 183:207-220, 2002.
- * Cai S.Y., Soroka C.J., Ballatori N., and J.L. Boyer. Molecular characterization of a multidrug resistance-associated protein, Mrp2, from the little skate. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* 284(1):R125-30, 2003.
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- Fellner, S.K. and L. Parker. A Ca^{2+} -sensing receptor modulates shark rectal gland function. *J. Exp. Biol.* 205:1889-1897, 2002.
- * Flemmer, A., Giménez, I., Dowd, B., Darman, R.B. and B. Forbush. Activation of the Na-K-Cl cotransporter (NKCC1) detected with a phospho-specific antibody. *J. Biol. Chem.* 277:37551-37558, 2002.
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