



Debunking Evolution - main points

from www.newgeology.us/presentation32.html

John Michael Fischer, 2013

This list is a summary. More information is on the webpage.

A. Evolutionists usually talk about small differences in creatures, but the claim of evolution theory is enormous – the invention of every form of life that exists or ever existed on Earth without using any intelligent guidance. The small differences are called “micro-evolution” but that is not evolution; it is variation. Every creature has limits to how much it can change or adapt - limits to its variation. Disease bacteria have mutations constantly and become resistant to drugs, but they always remain bacteria. “Macro-evolution”, big change, is what the theory of evolution is about.

B. To get past the limits of variation, mutations are supposed to provide information to build new organs. But all known mutations result in the loss of information. There are cases where such loss has a selective advantage in certain situations, and disadvantages in other situations. Certainly, no new structure is invented. A short-circuit in a computer is like a mutation in DNA, and no-one would expect to upgrade their computer that way.

C. Every structure and function in a creature takes much more than one change to "invent". It must be in the body-plan of the developing embryo, must differentiate stem cells into the proper type, must be able to receive nutrients, do waste removal and repair, must have nerves and muscles or other devices linked to a control center, and must integrate with the other elements of the biological system. If all these changes in the DNA do not happen randomly at the same time, it is impossible for a new, working organ to be made.

D. There should be many more transitional creatures in the fossil record than distinct species, many times more. But there are none - not even Archaeopteryx.

E. If life did not begin by chemicals coming together, there could be no evolution. Specialists have been working for 60 years on how this might have happened, and all they can produce "naturally" (without laboratory equipment and techniques to isolate

and concentrate chemicals) are some of the many nucleotides and amino acids. They cannot make cell walls, RNA, DNA, ribosomes, organelles, cytoplasm, or cilia of even a cell or bacterium in a natural environment. After 60 years they have nothing to show but speculation and eternal hope. It is hard to prove a negative, but these origin-of-life specialists have come close. What we learn from their work is that life cannot arise on its own from chemicals, and thus there could never be evolution.

F. Evolutionists make charts showing supposed ancestral lines of descent. They call these “trees of life”. The problem is, different genes make different “trees of life”, and there are tens of thousands of different genes.

G. Evolutionists are often forced to invoke the “parallel or convergent evolution” fudge whenever the same new organ appears on unrelated creatures in the fossil record. It is not an explanation, it is an excuse.

H. In every taxonomic group studied so far, around 10 to 30% of the genes are so-called “orphan genes” because they are unlike genes in any other species. They are not modifications of genes from supposed ancestors; they must have formed spontaneously, “de novo”. That was formerly assumed to be impossible, and for good reason. It is essentially an admission that the foundation of evolution theory, descent with modification, is falsified. The only way to describe the existence of these genes is miraculous.

I. The Second Law of Thermodynamics requires all natural processes to become more disordered over time. It prevents the invention of new organs by mutations, because without a construction system already in place, things naturally fall apart – they don’t get more complex.

J. The Law of Biogenesis (life only comes from life) has never been seen to have been violated. But evolutionists believe it must have happened, and maybe more than once!

K. DNA is made of only right-handed versions of nucleotides, while proteins are made of only left-handed versions of amino acids. Yet any random chemical reaction that produced nucleotides or amino acids would make an equal mix of left and right-handed versions of each. Even if the thousands of nucleotides or amino acids needed to form individual DNA or protein molecules were able to combine from this mix, they would be a jumble of left and right-handed versions that could not function at all. This is the problem of chirality for evolution theory.

L. The minimum number of genes needed for an organism to survive is probably 200 to 300. Most bacteria have 1000 to 4000 genes. And there are at least 17 basic things necessary for a cell to function, which must be working or it cannot live. This is the minimum level of complexity that must be met for a cell to exist:

Replication, recombination, and repair
Transcription
Cell cycle control, mitosis, and meiosis
Defense mechanisms
Cell wall/membrane biogenesis
Signal transduction mechanisms
Intracellular trafficking and secretion
Translation
Post-translational modification, protein turnover, chaperones
Energy production and conversion
Carbohydrate transport and metabolism
Amino acid transport and metabolism
Nucleotide transport and metabolism
Coenzyme transport and metabolism
Lipid transport and metabolism
Inorganic ion transport and metabolism
Secondary metabolite biosynthesis, transport, and catabolism

M. Evolutionists have to believe that for each protein, pure chance laid out long strings of amino acids that fold themselves into the exact shapes needed to interact with other specialized proteins and, where needed, get help from chaperone proteins which themselves appeared by chance. The necessary proteins cannot be invented one at a time. Either they are all there, ready to work together, or nothing happens and they disintegrate. Yet even if it could design proteins, mutation-natural selection would only work on one at a time, sporadically, over many years.

N. Gene regulatory networks (GRNs) build and operate all living things. There are gene regulatory networks for everything that happens, and some networks control other networks in a chain of command. The interactions within these networks are so complex that attempts at mapping them quickly degenerate into mazes of interactions. Random mutations cannot produce any complexity, and this super-extreme complexity is in every living thing.

Bottom line: Macro-evolution is physically impossible. It cannot happen; it has never happened. It is up to evolutionists, the ones making the claim, to prove otherwise.

Ernst Chain (1906-1979) and two others were awarded the 1945 Nobel Prize for Physiology or Medicine. Chain identified the structure of penicillin, and isolated the active substance. He is considered to be one of the founders of the field of antibiotics. Concerning Darwin's theory of evolution, Chain found it to be "a very feeble attempt" to explain the origin of species based on assumptions so flimsy that "it can hardly be called a theory."¹ He saw the reliance on chance mutations as a "hypothesis based on

no evidence and irreconcilable with the facts."² He wrote: "These classic evolutionary theories are a gross oversimplification of an immensely complex and intricate mass of facts, and it amazes me that they were swallowed so uncritically and readily, and for such a long time, by so many scientists without a murmur of protest."² Chain concluded that he "would rather believe in fairies than in such wild speculation" as Darwinism.¹

1. Clark, R.W. 1985. The Life of Ernst Chain: Penicillin and Beyond. New York: St. Martin's Press, p. 147.

2. Chain, E. 1970. Social Responsibility and the Scientist in Modern Western Society (Robert Waley Cohen memorial lecture). London: The Council of Christians and Jews, p. 25.

Many courageous scientists have signed their names to the statement "We are skeptical of claims for the ability of random mutation and natural selection to account for the complexity of life." They do this knowing that they can be damaged professionally by reprisals from leading evolutionists. Some of those who signed are listed below.

link: <http://www.discovery.org/scripts/viewDB/filesDB-download.php?id=660>

Dean Kenyon, Emeritus Professor of Biology San Francisco State University

Joseph Atkinson, Ph.D. Organic Chemistry Massachusetts Institute of Technology

Ben J. Stuart, Ph.D. Chemical & Biochemical Engineering Rutgers University

Dennis Dean Rathman, Staff Scientist MIT Lincoln Laboratory

Thomas M. Stackhouse, Ph.D. Biochemistry University of California, Davis

John B. Cannon, Ph.D. Organic Chemistry Princeton University

William J. Arion, Emeritus Professor of Biochemistry Cornell University

Mark Fuller, Ph.D. Microbiology University of California, Davis

John W. Balliet, Ph.D. Molecular & Cellular Biology University of Pennsylvania, Post-doctoral Fellowship, Harvard Medical School

Richard Gunasekera, Ph.D. Biochemical Genetics Baylor University

Marko Horb, Ph.D. Cell & Developmental Biology State University of New York

Malcolm W. MacArthur, Ph.D. Molecular Biophysics University of London (UK)

Daniel Kuebler, Ph.D. Molecular & Cellular Biology University of California, Berkeley

Lane Lester, Ph.D. Genetics Purdue University

Harry Lubansky, Ph.D. Biological Chemistry University of Illinois, Chicago

Daniel L. Moran, Ph.D. Molecular & Cellular Biology Ohio University

John Omdahl, Professor of Biochemistry & Molecular Biology University of New Mexico

Tony Mega, Ph.D. Biochemistry Purdue University

Georgia Purdom, Ph.D. Molecular Genetics Ohio State University

Fred Van Dyke, Professor of Biology and Chair of the Biology Department Wheaton College (Illinois)

Jason David Ward, Ph.D. Molecular Biology and Biochemistry Glasgow University (UK)

Weimin Gao, Microbiologist Brookhaven National Laboratory

Charles Detwiler, Ph.D. Genetics Cornell University

Jonathan Wells, Ph.D. Molecular & Cell Biology University of California, Berkeley

David Zartman, Ph.D. Genetics & Animal Breeding Ohio State University

Mark Toleman, Ph.D. Molecular Microbiology Bristol University (UK)

Joseph Lary, Epidemiologist and Research Biologist (retired) Centers for Disease Control

Lisanne D'Andrea-Winslow, Ph. D. Cell Biology & Biochemistry Rutgers University

Luke Randall, Ph.D. Molecular Microbiology University of London (UK)

Christian M. Loch, Ph.D. Biochemistry and Molecular Genetics University of Virginia

Hannes Fischer, Ph.D. in Molecular Biology University of Pennsylvania

Peter Silley, Ph.D. Microbial Biochemistry University of Newcastle upon Tyne

Marco Fasoli, Ph.D. in Biochemistry University of Cambridge (UK)

Chrystal L. Ho Pao, Assistant Professor of Biology (Ph.D. Molecular Genetics, Harvard U.) Trinity International University

Emilio Cervantes, Ph.D. in Molecular Biology University of Salamanca, Spain

Donald F. Smee, Research Professor (Microbiology) Utah State University

Colin R. Reeves, Professor of Operational Research (Ph.D. Evolutionary Algorithms)
Coventry University (UK)

Eugene K. Balon, University Professor Emeritus, Department of Integrative Biology
University of Guelph (Canada)

William F. Smith, Ph.D. in Molecular & Cellular Biology McGill University

William A. Eckert III, Ph.D. in Cell & Molecular Physiology University of North Carolina,
Chapel Hill

Dennis M. Sullivan, Professor of Biology and Bioethics Cedarville University

Olivia Torres, Professor-Researcher (Human Genetics) Autonomous University of
Guadalajara (Mexico)

Donald A. Kangas, Professor of Biology Truman State University

John S. Roden, Associate Professor of Biology Southern Oregon University

Wayne Linn, Professor Emeritus of Biology Southern Oregon University

Luman R. Wing, Associate Professor of Biology Azusa Pacific University

Eduardo Arroyo, Professor of Forensics (Ph.D. Biology) Complutense University (Spain)

E. Norbert Smith, Ph.D. Zoology Texas Tech University

Peter C. Iwen, Professor of Pathology and Microbiology University of Nebraska Medical
Center

Daniel Howell, Ph.D. Biochemistry Virginia Tech

Charles A. Signorino, Ph.D. Organic Chemistry University of Pennsylvania

Jan Frederic Dudt, Associate Professor of Biology Grove City College

John G. Hoey, Ph.D. Molecular and Cellular Biology City University of New York
Graduate School

Theodore J. Siek, Ph.D. Biochemistry Oregon State University

Ivan M. Lang, Ph.D. Physiology and Biophysics Temple University

Joel Brind, Professor of Biology Baruch College, City University of New York

Vladimir L. Voeikov, Vice-Chairman, Chair of Bio-organic Chemistry, Faculty of Biology
Lomonosov Moscow State University (Russia)

Glen Needham, Associate Professor of Entomology Ohio State University

Rod Rogers, Ph.D. Agronomy/Plant Breeding Iowa State University

L. Kirt Martin, Professor of Biology Lubbock Christian University

Paul S. Darby, Ph.D. Organic Chemistry University of Georgia

James A. Huggins, Chair, Dept. of Biology & Dir., Hammons Center for Scientific Studies Union University

Scott S. Kinnes, Professor of Biology Azusa Pacific University

Bruce Simat, Associate Professor of Biology Northwestern College

Jarrold W. Carter, Ph.D. Bioengineering University of Washington

William McVaugh, Associate Professor of Biology Department of Natural Sciences, Malone College

Jeffrey E. Lander, Ph.D. Biomechanics University of Oregon

James G. Tarrant, Ph.D. Organic Chemistry University of Texas, Austin

Lennart Saari, Adjunct Professor, Wildlife Biology University of Helsinki (Finland)

Arthur Chadwick, Ph.D. Molecular Biology University of Miami

Gary Maki, Director, Ctr. for Advanced Microelectronics and Biomolecular Research University of Idaho

C. Steven Murphree, Professor of Biology Belmont University

Charles G. Sanny, Prof. of Biochemistry Oklahoma State University Ctr. for Health Sciences

Wusi Maki, Research Asst. Professor, Dept. of Microbiology, Mol. Biology, & Biochem. University of Idaho

Yvonne Boldt, Ph. D. Microbiology University of Minnesota

David William Jensen, Professor of Biology Tomball College

Øyvind A. Voie, Ph.D. Biology University of Oslo (Norway)

David K. Shortess, Professor of Biology (Retired) New Mexico Tech

A.D. Harrison, Emeritus Professor of Biology University of Waterloo

Richard S. Beale, Jr., Ph.D. Entomology University of California, Berkeley

Roger Lien, Ph.D. Physiology North Carolina State University

Gregory J. Brewer, Prof. of Neurology, Medical Microbiology, Immunology and Cell Biology Southern Illinois University School of Medicine

Marc C. Daniels, Associate Professor of Biology William Carey University

Ke-Wei Zhao, Ph.D. Neuroscience University of California, San Diego

Henry Zuill, Emeritus Professor of Biology Union College

Begona M. Bradham, Ph.D. Molecular Biology University of South Carolina

Ernest L. Brannon, Professor Emeritus, Distinguished Research Professor (Ph.D. Fisheries) University of Idaho

Miroslav Hill, Former Director of Research Centre National de la Recherche Scientifique (France)

Christopher Williams, Ph.D. Biochemistry Ohio State University

Georg A. Speck, Ph.D. Biology, Molecular Pharmacology University of Heidelberg (Germany)

Noel Funderburk, Ph.D. Microbiology University of North Texas

Gerald Wegner, Ph.D. Entomology Loyola University

Robert Waltzer, Associate Professor of Biology Belhaven College

James R. Brawer, Professor of Anatomy & Cell Biology (Ph.D., Harvard) McGill University (Canada)

Linda Walkup, Ph.D. Molecular Genetics University of New Mexico Medical School

Nigel E. Robinson, Ph.D. Molecular Biology University of Nottingham (UK)

Vincente Villa, Emeritus Professor of Biology Southwestern University

Royal Truman, Ph.D. Organic Chemistry Michigan State University

Denis M. Boyle, Ph.D. Medical Biochemistry University of Witwatersrand (South Africa)

D. Albrey Arrington, Ph.D. Wildlife & Fisheries Sciences Texas A&M University

Leonard Loose, Ph.D. Botany University of Leeds (UK)

Derek Linkens, Senior Research Fellow and Emeritus Professor (Biomedical Eng.)
University of Sheffield (UK)

James Swanson, Professor of Biological Sciences Old Dominion University

Wade Warren, C.J. Cavanaugh Chair in Biology Louisiana College

Justin Holl, Ph.D. Animal Science University of Nebraska, Lincoln

Mark Swanson, Ph.D. Biochemistry University of Illinois

Ricardo Bravo Méndez, Professor of Zoology and Ichthyology Universidad de
Valparaíso (Chile)

Richard Sternberg Ph.D. Biology (Molecular Evolution) Florida International University
Also: Ph.D. Systems Science (Theoretical Biology) Binghamton University

Timothy Standish, Ph.D. Environmental Biology George Mason University

Audris Zidermanis, Ph.D. Nutrition & Molecular Biology Texas Woman's University

Jacquelyn W. McClelland, Professor (Ph.D. Nutritional Biochemistry) North Carolina
State University, NCCE

John Silvius, Ph.D. Plant Physiology West Virginia University

Edson R. Rocha, Research Assistant Professor, Microbiology, East Carolina University

Mark C. Biedebach, Professor Emeritus of Physiology California State University, Long
Beach

Gregory Shearer, Ph.D. Physiology University of California, Davis

Marshall Adams, Ph.D. Marine Sciences University of North Carolina, Chapel Hill

Leslie J. Wiemerslage, Emeritus Professor (Ph.D. Cell Biology, Univ. of Pennsylvania)
Southwestern Illinois College

Steve Maxwell, Associate Professor of Molecular and Cellular Medicine Texas A&M
University, H.S.C.

Charles W. Bell, Professor Emeritus of Biological Sciences San Jose State University

Seyyed Imran Husnain, Ph.D. Bacterial Genetics University of Sheffield (UK)

Gayle Livingston Birchfield, Ph.D. Biology University of Missouri, Columbia

Thomas Saleska, Professor of Biology Concordia University

Jussi Meriluoto, Professor, Department of Biochemistry & Pharmacy Abo Akademi University (Finland)

Mubashir Hanif, Ph.D. Plant Biology University of Helsinki (Finland)

Dan Reynolds, Ph.D. Organic Chemistry University of Texas, Austin

Oleh Havrysh, Senior Research Assistant, Protein & Peptide Structure & Function Dept. Institute of Bioorganic Chemistry & Petrochemistry Ukrainian National Academy of Sciences (Ukraine)

Mark Shlapobersky, Ph.D. Virology Bar-Ilan University (Israel)

Arthur John Jones, Ph.D. Zoology & Comparative Physiology Birmingham University (UK)

David Reed, Ph.D Entomology University of California, Riverside

Bruce Holman, III, Ph.D. Organic Chemistry Northwestern University

Gordon Mills, Emeritus Professor of Biochemistry University of Texas, Medical Branch

Rebecca Orr, Ph.D. Cell Biology University of Texas, Southwestern

Khawar Sohail Siddiqui, Senior Research Associate (Protein Chemistry) University of New South Wales (Australia)

Steve D. Figard, Ph.D. Biochemistry Florida State University

Art Nitz, Ph.D. Anatomy & Neurobiology University of Kentucky

Thomas Milner, Associate Professor of Biomedical Engineering University of Texas, Austin

Martin Poenie, Associate Professor of Molecular and Cell Biology University of Texas, Austin

Andy McIntosh, Full Professor of Thermodynamics and Combustion Theory University of Leeds (UK)

Shane A. Kasten, Post-Doctoral Fellow (Ph.D. Biochemistry, Kansas State University) Virginia Commonwealth University

Garrick Little, Ph.D. Organic Chemistry Texas A & M University

Peter Line, Ph.D. Neuroscience Swinburne University of Technology (Australia)

Paul Whitehead, Ph.D. Chemical Thermodynamics University of Natal (South Africa)

Matti Leisola, Professor, Laboratory of Bioprocess Engineering Helsinki University of Technology

Manuel Garcia Ulloa Gomez, Director of Marine Sciences Laboratory Autonomous University of Guadalajara (Mexico)

Kurt J. Henle, Professor Emeritus (Ph.D. Biophysics, University of Pennsylvania) University of Arkansas for Medical Sciences

Teresa Larranaga, Ph.D. Pharmacology University of New Mexico

Yuri Zharikov, Post-Doctoral Research Fellow (Ph.D. Zoology) Simon Fraser University (Canada)

Martin LaBar, Ph. D. Genetics & Zoology University of Wisconsin, Madison

Heather Kuruvilla, Ph.D. Biological Sciences State University of New York, Buffalo

Paul Kuld, Associate Professor of Biological Science Biola University

Charles Koons, Ph.D. Organic Chemistry University of Minnesota

Miguel A. Rodriguez, Undergraduate Lab. Coordinator for Biochemistry University of Ottawa (Canada)

Carl Koval, Full Professor, Chemistry & Biochemistry University of Colorado, Boulder

Magda Narciso Leite, Professor, College of Pharmacy & Biochemistry Universidade Federal de Juiz de Fora (Brazil)

Hiroshi Ishii, M.D., Ph.D. Behavioral Neurology Tohoku University (Japan)

Michael Kinnaird, Ph.D. Organic Chemistry University of North Carolina, Chapel Hill

Lasse Uotila, M.D., Ph.D. Medicinal Biochemistry University of Helsinki (Finland)

Irfan Yilmaz, Professor of Biology (Ph.D. Systematic Zoology) Dokuz Eylul University (Turkey)

Micheal Kelleher, Ph.D. Biophysical Chemistry University of Ibadan (Nigeria)

David Jones, Professor of Biochemistry & Chair of Chemistry Grove City College

Yongsoon Park, Ph.D. Nutritional Biochemistry Washington State University

Tony Jelsma, Ph.D. Biochemistry McMaster University (Canada)

David Ives, Emeritus Professor of Biochemistry Ohio State University

Amiel G. Jarstfer, Professor & Chair, Department of Biology LeTourneau University

Mark P. Bowman, Ph.D. Organic Chemistry Pennsylvania State University

Rafe Payne, Ph.D. Biology University of Nebraska

Cornelius Hunter, Ph.D. Biophysics University of Illinois

Joseph Francis, Associate Professor of Biology Cedarville University

Roland Hirsch, Ph.D. Analytical Chemistry University of Michigan

Todd Peterson, Ph.D. Plant Physiology University of Rhode Island

Walter Hearn, Ph.D. Biochemistry University of Illinois

Janice Arion, Ph.D. Animal Science Cornell University

William Harris, Ph.D. Nutritional Biochemistry University of Minnesota

James Harman, Associate Chair, Dept. of Chemistry & Biochemistry Texas Tech University

Dan Hale, Professor of Animal Science Texas A&M University

Sun Uk Kim, Ph.D. Biochemical Engineering University of Delaware

Mark Geil, Ph.D. Biomedical Engineering Ohio State University

Ibrahim Barsoum, Ph.D. Microbiology George Washington University

Jim Gibson, Ph.D. Biology Loma Linda University

William Gilbert, Emeritus Professor of Biology Simpson College

Pamela Faith Fahey, Ph.D. Physiology & Biophysics University of Illinois

Ann Gauger, Ph.D. Zoology University of Washington

John K. G. Kramer, Adjunct Professor, Dept. of Human Biology & Nutrition Sciences University of Guelph (Canada)

Daniel Galassini, Doctor of Veterinary Medicine Kansas State University

Stephen C. Knowles, Ph.D. Marine Science University of North Carolina, Chapel Hill

Marvin Fritzler, Professor of Biochemistry & Molecular Biology University of Calgary
Medical School (Canada)

Suzanne Sawyer Vincent, Ph.D. Physiology & Biophysics University of Washington

Clarence Fouche, Professor of Biology Virginia Intermont College

Margaret Flowers, Professor of Biology Wells College

William Everson, Ph.D. Human Physiology Penn State College of Medicine

Bruce Evans, Ph.D. Neurobiology Emory University

Daniel Ely, Professor, Biology University of Akron

Robert Eckel, Professor of Medicine, Physiology & Biophysics University of Colorado
Health Sciences Center

David Prentice, Professor, Department of Life Sciences Indiana State University

Kenneth Dormer, Ph.D. Biology & Physiology University of California, Los Angeles

Robert DiSilvestro, Ph.D. Biochemistry Texas A & M University

David DeWitt, Chair, Department of Biology & Chemistry Liberty University

Michael Delp, Professor of Physiology Texas A&M University

Robert DeHaan, Ph.D. Human Development University of Chicago

Gage Blackstone, Doctor of Veterinary Medicine Texas A&M University

Thomas Deahl, Ph.D. Radiation Biology The University of Iowa

Leon Combs, Professor & Chair, Chemistry & Biochemistry Kennesaw State University

Jan Chatham, Ph.D. Neurophysiology University of North Texas

Shing-Yan Chiu, Professor of Physiology University of Wisconsin, Madison

Donald Clark, Ph.D. Physical Biochemistry Louisiana State University

John Brumbaugh, Emeritus Professor of Biological Sciences University of Nebraska,
Lincoln

Gary Kastello, Ph.D. Biology University of Wisconsin-Milwaukee

Karen Rispin, Assistant Professor of Biology LeTourneau University

Robert W. Kelley, Ph.D. Entomology Clemson University

David Richard Carta, Ph.D. Bio-Engineering University of California, San Diego

Lydia G. Thebeau, Ph.D. Cell & Molecular Biology Saint Louis University

Raymond Bohlin, Ph.D. Molecular & Cell Biology University of Texas, Dallas

Donald R. Mull, Ph.D. Physiology University of Pittsburgh

Richard Austin, Assoc. Prof. & Chair, Biology & Natural Sciences Piedmont College

Olen R. Brown, Emeritus professor of Molecular Microbiology & Immunology University of Missouri, Columbia

D.R. Eiras-Stofella, Director, Electron Microscopy Center (Ph.D. Molecular Biology) Parana Federal University (Brazil)

Neal Adrian, Ph.D. Microbiology University of Oklahoma

Abraham S. Feigenbaum, Ph.D. Nutritional Biochemistry Rutgers University

Michael Behe, Professor of Biological Science Lehigh University

Michael Atchison, Professor of Biochemistry University of Pennsylvania, Vet School

Thomas G. Guilliams, Ph.D. Molecular Biology The Medical College of Wisconsin

David Bolender, Assoc. Prof., Dept. of Cell Biology, Neurobiology & Anatomy Medical College of Wisconsin

John A. Davison, Emeritus Associate Professor of Biology University of Vermont

Ralph Seelke, Professor of Molecular and Cellular Biology University of Wisconsin, Superior

Annika Parantainen, Ph.D. Biology University of Turku (Finland)

Mae-Wan Ho, Ph.D. Biochemistry The University of Hong Kong

Donald Ewert, Ph.D. Microbiology University of Georgia

Russell Carlson, Professor of Biochemistry & Molecular Biology University of Georgia

Scott Minnich, Professor, Dept of Microbiology, Molecular Biology & Biochemistry University of Idaho

Bernard d'Abrera, Visiting Scholar, Department of Entomology British Museum (Natural History)

Denis Fesenko, Junior Research Fellow, Engelhardt Institute of Molecular Biology Russian Academy of Sciences (Russia)

Sergey I. Vdovenko, Senior Research Assistant, Department of Fine Organic Synthesis Institute of Bioorganic Chemistry and Petrochemistry Ukrainian National Academy of Sciences (Ukraine)

J. Benjamin Scripture, Ph.D. Biochemistry University of Notre Dame

Israel Hanukoglu, Professor of Biochemistry and Molecular Biology Chairman The College of Judea and Samaria (Israel)

Alan Linton, Emeritus Professor of Bacteriology University of Bristol (UK)

Giuseppe Sermonti, Professor of Genetics, Ret. (Editor, Rivista di Biologia/Biology Forum) University of Perugia (Italy)

Stanley Salthe, Emeritus Professor Biological Sciences Brooklyn College of the City University of New York

Philip Skell, Emeritus, Evan Pugh Prof. of Chemistry, Pennsylvania State University Member of the National Academy of Sciences

Lyle H. Jensen, Professor Emeritus, Dept. of Biological Structure & Dept. of Biochemistry University of Washington, Fellow AAAS

Lev Belousov, Prof. of Embryology, Honorary Prof., Moscow State University Member, Russian Academy of Natural Sciences

Eugene Buff, Ph.D. Genetics Institute of Developmental Biology, Russian Academy of Sciences

Emil Palecek, Prof. of Molecular Biology, Masaryk University; Leading Scientist Inst. of Biophysics, Academy of Sci., Czech Republic