

Gordon research conference program

Metals in biology
January 21–25, 1996
Doubletree Hotel
Ventura, CA, USA

A look to the future

Richard Holm, Harvard University, USA: **Chair**

Gregory Petsko, Brandeis University, USA: **Cytochrome P₄₅₀ in four dimensions**

Cytochrome oxidases

Gerald Babcock, Michigan State University, USA: **Chair**

Robert Gennis, University of Illinois, USA: **Structure and function of the heme–copper oxidases**

Ninian Blackburn, Oregon Graduate Institute, USA: **XAS studies on heme–copper oxidases and models**

Stuart Ferguson, Oxford University, United Kingdom: **Structure of cytochrome *cd₁*: an oxidase and a nitrite reductase with an unusual heme**

Models for oxidases

Kenneth Karlin, Johns Hopkins University, USA: **Chair**

James Collman, Stanford University, USA: **Functional synthetic analogs of the oxygen binding/activating heme proteins: myoglobin and cytochrome *c* oxidase**

Joann Sanders-Loehr, Oregon Graduate Institute, USA: **Raman spectroscopy of blue, non-blue, and purple copper proteins**

William Tolman, University of Minnesota, USA: **Using synthetic chemistry to gain insight into O–O bond cleavage and C–H bond activation reactions of copper proteins**

Metal DNA processing and repair

Thomas O'Halloran, Northwestern University, USA: **Chair**

Gregory Verdine, Harvard University, USA: **Molecular mechanism of the Ada protein: a metalloactivated chemosensor for methylation damage in DNA**

Jacqueline Barton, California Institute of Technology, USA: **Damage and repair of DNA by rhodium complexes**

Dagmar Ringe, Brandeis University, USA: **The structure of the iron-activated regulatory protein diphtheria *tox* repressor**

Metal channels and neuroscience signal transduction

Jeremy Berg, Johns Hopkins University, USA: **Chair**

Joseph Falke, University of Colorado, Boulder, USA: **Molecular tuning of calcium binding sites in signaling pathways**

Gary Yellen, Massachusetts General Hospital, USA: **A conformation-sensitive engineered metal site in an ion channel**

Metal-binding biomolecules and metallorecognition

John Groves, Princeton University, USA: **Chair**

François Diederich, ETH-Zürich, Switzerland: **Dendritic metalloporphyrins and dendritic receptors**

Carol Fierke, Duke University Medical Center, USA: **Architecture of catalytic zinc binding sites in proteins**

Claude Meares, University of California, Davis, USA: **Mapping protein surfaces with metal ions**

Metal mobilization

Edward Stiefel, Exxon, USA: **Chair**

Donald Kurtz, Jr., University of Georgia, USA: **Structure and redox properties of rubrerythrin**

Peter Lindley, CCLRC Daresbury Laboratory, United Kingdom: **The X-ray structure of human ceruloplasmin at 3.1 Å: a putative role for the enzyme in iron metabolism**

Radicals and cofactors

John Caradonna, Yale University, USA: **Chair**

Richard Finke, Colorado State University, USA: **Coenzyme B₁₂-dependent ribonucleotide triphosphate reductase: chemical model and biochemical studies**

Martha Ludwig, University of Michigan, USA: **B₁₂-dependent methionine synthase: structures of the B₁₂- and AdoMet-binding fragments**

Martin Newcomb, Wayne State University, USA: **Hypersensitive radical probe studies of enzyme catalyzed hydroxylations**

Karl Wieghardt, Max-Planck Institut, Germany: **Modeling the dinuclear active sites of metalloproteins: coordinated radicals and mixed valent species**

Methodology in bioinorganic chemistry

Brian Hoffman, Northwestern University, USA: **Chair**

Stephen Cramer, University of California, Davis, USA: **Bioinorganic X-ray absorption spectroscopy: lessons from the past, prospects for the future**

Stephen Dunham, Metasyn, Inc., USA: **Paramagnetic distance constraints in the NMR structure determination of platinated nucleotides**

Harry Gray, California Institute of Technology, USA: **Photochemical methods for studying folding and other fast reactions of metalloproteins**

Edward Solomon, Stanford University, USA: **Electronic structure of the blue copper active site: contributions to reactivity**

Applications may be found in the October 13 issue of *Science* or requested from the conference chair:

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