

# **Synthetic Peptides**

**Approaches**

**to**

**Biological Problems**

# **Synthetic Peptides**

## **Approaches to Biological Problems**

Proceedings of a Glaxo — UCLA Colloquium  
held at Park City, Utah  
January 31 - February 4, 1988

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### **Editors**

**James P. Tam**  
Rockefeller University  
New York, New York

**Emil Thomas Kaiser**  
Department of Bioorganic Chemistry  
Rockefeller University  
New York, New York

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Professor of Biochemistry  
University of Chicago

---

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# **Synthetic Peptides**

**Approaches  
to  
Biological Problems**

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To the memory of Emil Thomas Kaiser

## Contributors

**Johannes D. Aebi**, School of Pharmacy, University of Wisconsin-Madison, Madison, WI 53706 [321]

**D. Afchain**, Centre d'Immunologie et de Biologie Parasitaire, Institut Pasteur, 59045 Lille Cedex, France [43]

**Mushtaq Ahmad**, Department of Peptide Research, Roche Research Center, Hoffmann-La Roche Inc., Nutley, NJ 07110 [309]

**Dave C. Anderson**, Department of Pathobiology, University of Washington, Seattle, WA 98119; present address: Department of Biochemistry, NeoRx Corp., Seattle, WA 98119 [199]

**Feroza Ardeshtir**, The Agouron Institute, La Jolla, CA 92037 [181]

**Norman Aubry**, Department of Chemistry, Bio-Méga Inc., Laval, Quebec, Canada H7S 2G5 [63]

**P. Balaram**, Molecular Biophysics Unit, Indian Institute of Science, Bangalore 560 012, India [71]

**Nancy L. Balishin**, Department of Cancer Research, Merck Sharp & Dohme Research Laboratories, West Point, PA 19486 [295]

**Michael Barry**, Department of Pathobiology, University of Washington, Seattle, WA 98119; present address: Department of Biochemistry, NeoRx Corp., Seattle, WA 98119 [199]

**Rama Belagaje**, Department of Molecular Biology, Lilly Research Laboratories, Indianapolis, IN 46285 [283]

**Dominique H. Bellet**, Département de Biologie Clinique, Institut Gustave-Roussy, 94805 Villejuif, France [223]

**Ziva Berkovitch-Yellin**, Department of Physical Chemistry, Roche Research Center, Hoffman-La Roche Inc., Nutley, NJ 07110; present address: Department of Structural Chemistry, Weizmann Institute of Science, Rehovot, 76100 Israel [109]

**Jean-Michel Bidart**, Département de Biologie Clinique, Institut Gustave-Roussy, 94805 Villejuif, France [223]

**Claude Bohuon**, Département de Biologie Clinique, Institut Gustave-Roussy, 94805 Villejuif, France [223]

**Yves Bousquet**, Department of Chemistry, Bio-Méga Inc., Laval, Quebec, Canada H7S 2G5 [63]

The numbers in brackets are the opening page numbers of the contributors' articles.



**Mark E. Boyer**, Department of Cancer Research, Merck Sharp & Dohme Research Laboratories, West Point, PA 19486 [295]

**S. F. Brady**, Department of Medicinal Chemistry, Merck Sharp & Dohme Research Laboratories, West Point, PA 19486 [267]

**Christopher J. Brandl**, Best Department of Medical Research, University of Toronto, Toronto M5S 1A8, Ontario, Canada [97]

**Fred Brown**, Department of Virology, Wellcome Biotech Ltd., Beckenham, Kent BR3 3BS, England, [127]

**Sheila Brown**, Department of Medical Microbiology, London School of Hygiene and Tropical Medicine, London WC1E 7HT, England [211]

**François Bruderlein**, Department of Chemistry, Bio-Méga Inc., Laval, Quebec, Canada H7S 2G5 [63]

**Alan Buckley**, Department of Medical Microbiology, London School of Hygiene and Tropical Medicine, London WC1E 7HT, England [211]

**Stephen K. Burley**, Department of Medicine, Brigham & Women's Hospital, Boston, MA 02115 [87]

**James F. Callahan**, Department of Peptide Chemistry, Smith, Kline & French Laboratories, King of Prussia, PA 19406 [257]

**A. Capron**, Centre d'Immunologie et de Biologie Parasitaire, Institut Pasteur, 59045 Lille Cedex, France [43]

**H. Caron**, Centre d'Immunologie et de Biologie Parasitaire, Institut Pasteur, 59045 Lille Cedex, France [43]

**T.M. Ciccarone**, Department of Medicinal Chemistry, Merck Sharp & Dohme Research Laboratories, West Point, PA 19486 [267]

**Ellen E. Codd**, Department of Reproductive and Developmental Toxicology, Smith, Kline & French Laboratories, King of Prussia, PA 19406 [257]

**C. D. Colton**, Department of Medicinal Chemistry, Merck Sharp & Dohme Research Laboratories, West Point, PA 19486 [267]

**J. Cornette**, Centre d'Immunologie et de Biologie Parasitaire, Institut Pasteur, 59045 Lille Cedex, France [43]

**Charles M. Deber**, Research Institute, Hospital for Sick Children, Toronto M5G 1X8 and Department of Biochemistry, University of Toronto, Toronto M5S 1A8, Ontario, Canada [97]

**Raisa B. Deber**, Department of Community Health, University of Toronto, Toronto M5S 1A8, Ontario, Canada [97]

**J.P. Defoort**, Centre d'Immunologie et de Biologie Parasitaire, Institut Pasteur, 59045 Lille Cedex, France; present address: Service de Chimie des Biomolécules, Institute Pasteur, 59045 Lille Cedex, France [43]

**René R. P. de Vries**, Department of Immunohematology and Blood Bank, University Hospital of Leiden, Leiden, The Netherlands [199]

**N. Dhanasekaran**, Department of Pharmacology, University of Wisconsin-Madison, Madison, WI 53706 [321]

**Richard DiMarchi**, Department of Biochemistry, Lilly Research Laboratories, Indianapolis, IN 46285 [283]

**Brian Dunlap**, School of Pharmacy, University of Wisconsin-Madison, Madison, WI 53706 [321]

**Drake S. Eggleston**, Department of Physical and Structural Chemistry, Smith, Kline & French Laboratories, King of Prussia, PA 19406 [257]

**John H. Elder**, Department of Molecular Biology, Scripps Clinic and Research Foundation, La Jolla, CA 92037 [159]

**Janet Epp**, Department of Molecular Biology, Lilly Research Laboratories, Indianapolis, IN 46285 [283]

**Arthur M. Felix**, Department of Peptide Research, Roche Research Center, Hoffmann-La Roche Inc., Nutley, NJ 07110 [309]

**Janette Flint**, The Agouron Institute, La Jolla, CA 92037 [181]

**David Fry**, Department of Physical Chemistry, Roche Research Center, Hoffmann-La Roche Inc., Nutley, NJ 07110 [109]

**Victor M. Garsky**, Department of Medicinal Chemistry, Merck Sharp & Dohme Laboratories, West Point, PA 19486 [295]

**Jean Gauthier**, Department of Chemistry, Bio-Méga Inc., Laval, Quebec, Canada H7S 2G5 [63]

**H. Mario Geysen**, Department of Molecular Immunology, Commonwealth Serum Laboratories, Parkville, Victoria 3052, Australia [19]

**Marc Girard**, Pasteur Vaccins, 92430 Marnes-la-Coquette, France [143]

**C. K. Grant**, Pacific Northwest Research Foundation, Seattle, WA 98104 [159]

**H. Gras-Masse**, Centre d'Immunologie et de Biologie Parasitaire, Institut Pasteur, 59045 Lille Cedex, France [43]

**David Greeley**, Department of Physical Chemistry, Roche Research Center, Hoffmann-La Roche Inc., Nutley, NJ 07110 [109]

**Mitchell Gross**, Smith, Kline & French Laboratories, King of Prussia, PA 19406 [181]

**David C. Heimbrook**, Department of Cancer Research, Merck Sharp & Dohme Research Laboratories, West Point, PA 19486 [295]

**Edgar P. Heimer**, Department of Peptide Research, Roche Research Center, Hoffmann-La Roche Inc., Nutley, NJ 07110 [309]

**Michael N. Horst**, Biochemistry Section, Division of Basic Science, School of Medicine, Mercer University, Macon, GA 31027 [51]

**Richard A. Houghten**, The Department of Molecular Biology, The Scripps Clinic and Research Foundation, San Diego, CA 92037 [239]

**Colin Howard**, Department of Medical Microbiology, London School of Hygiene and Tropical Medicine, London WC1E 7HT, England [211]

**Jeff Hubenthal-Voss**, The Marjorie B. Kovler Viral Oncology Laboratories, The University of Chicago, Chicago, IL 60637 [239]

**William F. Huffman**, Department of Peptide Chemistry, Smith, Kline & French Laboratories, King of Prussia, PA 19406 [257]

**A. A. M. Janson**, Department of Immunohematology and Blood Bank, University Hospital of Leiden, Leiden, The Netherlands [199]

**Isabella L. Karle**, Laboratory for the Structure of Matter, Naval Research Laboratory, Washington, DC 20375 [71]

**Stephen B.H. Kent**, Division of Biology, California Institute of Technology, Pasadena, CA 91125 [143]

**David M. Kiefer**, Department of Cancer Research, Merck Sharp & Dohme Research Laboratories, West Point, PA 19486 [295]

**Chin Sook Kim**, Division of Biology, California Institute of Technology, Pasadena, CA 91125 [143]

**Harish P. M. Kumar**, Department of Molecular Biology, Scripps Clinic and Research Foundation, La Jolla, CA 92037 [159]

**Theodore Lambros**, Department of Peptide Research, Roche Research Center, Hoffmann-La Roche Inc., Nutley, NJ 07110 [309]

**Hanneke Lankhof**, Central Veterinary Institute, 8200 AV Lelystad, The Netherlands [171]

**Carole Lemieux**, Laboratory of Chemical Biology and Peptide Research, Clinical Research Institute of Montreal, Montreal, Quebec, Canada H2W 1R7 [257]

**Harlan Long**, Department of Biochemistry, Lilly Research Laboratories, Indianapolis, IN 46285 [283]

**T. A. Lyle**, Department of Medicinal Chemistry, Merck Sharp & Dohme Research Laboratories, West Point, PA 19486 [267]

**Vincent MacGison**, Department of Physical Chemistry, Roche Research Center, Hoffmann-La Roche Inc., Nutley, NJ 07110 [109]

**Sarah Maines**, Department of Animal Science Research, Roche Research Center, Hoffmann-La Roche Inc., Nutley, NJ 07110 [309]

**Tom J. Mason**, Department of Molecular Immunology, Commonwealth Serum Laboratories, Parkville, Victoria 3052, Australia [19]

**Timothy McGarty**, Department of Peptide Research, Roche Research Center, Hoffmann-La Roche Inc., Nutley, NJ 07110 [309]

**William Mellon**, School of Pharmacy, University of Wisconsin-Madison, Madison, WI 53706 [321]

**Rob H. Meloen**, Central Veterinary Institute, 8200 AB Lelystad, The Netherlands [171]

**Thomas F. Mowles**, Department of Animal Science Research, Roche Research Center, Hoffmann-La Roche Inc., Nutley, NJ 07110 [309]

**A. Robert Neurath**, The Lindsley F. Kimball Research Institute of the New York Blood Center, New York, NY 10021 [143]

**Kenneth A. Newlander**, Department of Peptide Chemistry, Smith, Kline & French Laboratories, King of Prussia, PA 19406 [257]

**R. F. Nutt**, Department of Medicinal Chemistry, Merck Sharp & Dohme Research Laboratories, West Point, PA 19486 [267]

**Allen Oliff**, Department of Cancer Research, Merck Sharp & Dohme Research Laboratories, West Point, PA 19486 [295]

**A. Ouaiissi**, Centre d'Immunologie et de Biologie Parasitaire, Institut Pasteur, 59045 Lille Cedex, France [43]

**W. J. Paleveda**, Department of Medicinal Chemistry, Merck Sharp & Dohme Research Laboratories, West Point, PA 19486 [267]

**Karen Parker**, Division of Biology, California Institute of Technology, Pasadena, CA 91125 [143]

**Gregory A. Petsko**, Department of Chemistry, M.I.T., Cambridge, MA 02139 [87]

**Wouter C. Puyk**, Central Veterinary Institute, 8200 AB Lelystad, The Netherlands [171]

**S. Rakhit**, Department of Chemistry, Bio-Méga Inc., Laval, Quebec, Canada H7S 2G5 [63]

**Harold E. Ralph**, The Lindsley F. Kimball Research Institute of the New York Blood Center, New York, NY 10021 [143]

**Robert T. Reese**, The Agouron Institute, La Jolla, CA 92037 [181]

**Daniel H. Rich**, School of Pharmacy, University of Wisconsin-Madison, Madison, WI 53706 [321]

**Sylvia J. Richman**, The Agouron Institute, La Jolla, CA 92037 [181]

**Mark W. Riemen**, Department of Cancer Research, Merck Sharp & Dohme Research Laboratories, West Point, PA 19486 [295]

**Dagmar Ringe**, Department of Chemistry, M.I.T., Cambridge, MA 02139 [87]

**Stuart J. Rodda**, Department of Molecular Immunology, Commonwealth Serum Laboratories, Parkville, Victoria 3052, Australia [19]

**Bernard Roizman**, The Marjorie B. Kovler Viral Oncology Laboratories, The University of Chicago, Chicago, IL 60637 [239]

**Arnold E. Ruoho**, Department of Pharmacology, University of Wisconsin-Madison, Madison WI 53706 [321]

**Wim M. M. Schaaper**, Central Veterinary Institute, 8200 AB Lelystad, The Netherlands [171]

**Peter W. Schiller**, Laboratory of Chemical Biology and Peptide Research, Clinical Research Institute of Montreal, Montreal, Quebec, Canada H2W 1R7 [257]

**Brigitte Schoner**, Department of Molecular Biology, Lilly Research Laboratories, Indianapolis, IN 46285 [283]

**Pawan Sharma**, The Agouron Institute, La Jolla, CA 92037 [181]

**Carol Silverman**, Smith, Kline & French Laboratories, King of Prussia, PA 19406 [181]

**G. M. Smith**, Department of Medicinal Chemistry, Merck Sharp & Dohme Research Laboratories, West Point, PA 19486 [267]

**John A. Smith**, Departments of Molecular Biology and Pathology, Massachusetts General Hospital and Department of Pathology, Harvard Medical School, Boston, MA 02114 [31]

**Michael Steward**, Department of Medical Microbiology, London School of Hygiene and Tropical Medicine, London WC1E 7HT, England [211]

**Helen Stirk**, Department of Medical Microbiology, London School of Hygiene and Tropical Medicine, London WC1E 7HT, England [211]

**Nathan Strick**, The Lindsley F. Kimball Research Institute of the New York Blood Center, New York, NY 10021 [143]

**Dennis T. Takata**, Department of Peptide Chemistry, Smith, Kline & French Laboratories, King of Prussia, PA 19406 [257]

**James P. Tam**, The Rockefeller University, 1230 York Avenue, New York, NY 10021 [xxi,3]

**A. Tartar**, Centre d'Immunologie et de Biologie Parasitaire, Institut Pasteur, 59045 Lille Cedex, France; present address: Service de Chimie des Biomolécules, Institut Pasteur, 59045 Lille Cedex, France [43]

**Adri Thomas**, Central Veterinary Institute, 8200 AB Lelystad, The Netherlands [171]

**Voldemar Toome**, Department of Physical Chemistry, Roche Research Center, Hoffmann-La Roche Inc., Nutley, NJ 07110 [109]

**Frédéric Troalen**, Département de Biologie Clinique, Institut Gustave-Roussy, 94805 Villejuif, France [223]

**Roger Tung**, School of Pharmacy, University of Wisconsin-Madison, Madison, WI 53706 [321]

**Jay Valinsky**, The Lindsley F. Kimball Research Institute of the New York Blood Center, New York, NY 10021 [143]

**Serge Valois**, Department of Chemistry, Bio-Méga Inc., Laval, Quebec, Canada H7S 2G5 [63]

**Jaap G. van Bakkum**, Central Veterinary Institute, 8200 AB Lelystad, The Netherlands [171]

**Wim van Schooten**, Department of Immunohematology and Blood Bank, University Hospital of Leiden, Leiden, The Netherlands [199]

**D. F. Veber**, Department of Medicinal Chemistry, Merck Sharp & Dohme Research Laboratories, West Point, PA 19486 [267]

**Thomas Vedvick**, The Agouron Institute, La Jolla, CA 92037 [181]

**Richard F. Walker**, Department of Reproductive and Developmental Toxicology, Smith, Kline & French Laboratories, King of Prussia, PA 19406 [257]

**Ching-Tso Wang**, Department of Peptide Research, Roche Research Center, Hoffmann-La Roche Inc., Nutley, NJ 07110 [309]

**T. M. Williams**, Department of Medicinal Chemistry, Merck Sharp & Dohme Research Laboratories, West Point, PA 19486 [267]

**R.J. Winqvist**, Department of Medicinal Chemistry, Merck Sharp & Dohme Research Laboratories, West Point, PA 19486 [267]

**G. Andrew Woolley**, Research Institute, Hospital for Sick Children, Toronto M5G 1XB and Department of Biochemistry, University of Toronto, Toronto M5S 1A8, Ontario, Canada [97]

## Preface

The explosive growth in applications of synthetic peptides to the elucidation of biological problems provided the impetus to organize the UCLA Colloquium on **Synthetic Peptides: Approaches to Biological Problems**, held at Park City, Utah, January 31–February 4, 1988. Synthetic peptides, which now are widely accessible by the solid-phase synthesis method developed by Professor Bruce Merrifield 25 years ago, have become powerful tools with which to define the structure and functions of such biological activities as antigen–antibody, hormone–receptor, substrate–enzyme, and protein–DNA interactions. It is anticipated that, as the availability of amino acid sequences derived from genomic DNA increases, the understanding of the use of synthetic peptides—their syntheses, structures, and applications—will facilitate the approach to solving many biological problems.

The importance of peptides and synthetic chemistry on synthetic vaccines, mapping of immunodominant epitopes, and understanding of antigen–antibody interactions was reflected in the decision to hold this conference concurrently with the UCLA Symposium on **Technological Advances in Vaccine Development**. In his Keynote Address on Catalytic Antibodies, Dr. Richard Lerner outlined the influence of synthetic chemistry on biological problems. Approximately half of the contributions to this volume involve work related to synthetic peptides in the field of immunology.

This proceedings volume, **Synthetic Peptides: Approaches to Biological Problems**, includes 25 articles in six sections, just as they appeared in the conference program: methods and applications, prediction of peptide and protein structures, synthetic peptide-based vaccines, determinations of antigenic domains, bioactive conformations of peptide hormones, and peptide hormones and growth factors.

During the preparation of this volume, I was greatly saddened by the untimely passing of my co-organizer for this meeting, Professor Tom Kaiser, at the age of 50, on July 18, 1988. Tom will be remembered as a valued colleague, an energetic scientist, and for his brilliant work on the structural bases of biological activities of peptides and proteins.

We gratefully acknowledge Glaxo, Inc., for sponsorship of this meeting. Additional support was received from Smith Kline Beckman; Pharmacia LKB Biotechnology, Inc.; Merck Sharp & Dohme Research Laboratories; Applied Biosystems, Inc.; and O.C.S. Laboratories. In addition, we wish to thank the UCLA Symposia staff, especially Robin Yeaton and Betty Handy, for valuable and patient assistance.

James P. Tam

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