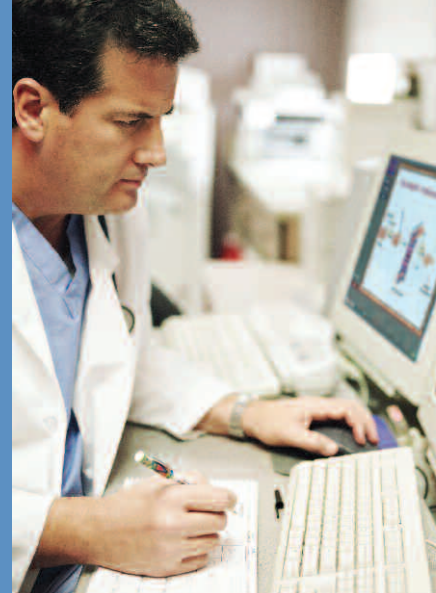


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- 1. Apoptosis**  
*Fundamentals, Pathways, Clinical Applications and Role in Disease*
- 2. Biology and Significance of Plasmids**  
*A discussion of extrachromosomal elements in microorganisms*
- 3. Calcium Signaling**  
*Regulation, Mechanisms, Effectors, Role in Disease and Recent Advances*
- 4. The Chloroplast: The Organelle that Sustains Us**
- 5. The Design and Analysis of Randomized Clinical Trials**
- 6. Drug Metabolizing Enzymes**  
*Fundamentals, Study Methods, Recent Advances and Clinical Significance*
- 7. Epigenetics**  
*Concepts, Theories, Paradigms and Mechanisms*
- 8. The Endoplasmic Reticulum**  
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- 9. Eukaryotic Gene Regulation**  
*From Chromatin to Transcription to mRNA Processing*
- 10. Evolution and Medicine**  
*How New Applications Advance Research and Practice*
- 11. Free Radicals and the Oxygen Paradox**  
*Oxidative Stress in Biology, Aging and Disease*
- 12. From DNA to Proteins: The Multiple Levels of Regulation**  
*Fundamentals and Latest Advances*
- 13. Frontiers of Research in Autoimmunity**  
*Etiology, Pathogenesis, Clinical Manifestation and Diagnostic Methodologies*
- 14. Gene-Environment Interactions in the Modulation of Pulmonary and Autoimmune Disease Risks**
- 15. Genetic Epidemiology I**  
*Fundamentals, Theory, Practice and Latest Developments*
- 16. Genetic Epidemiology II**  
*Latest Developments*
- 17. Human Population Genetics**  
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- 18. Mitochondrial Biogenesis**  
*Processes, Regulation, Functions and Disease*
- 19. Molecular Chaperones**  
*Principles and Diseases*
- 20. Monoclonal Antibodies as Therapeutic Agents**  
*Fundamentals, Therapeutic Applications and Latest Advances*
- 21. Neurodegenerative Diseases**  
*Fundamentals, Research Methods and Latest Advances*
- 22. Obesity**  
*Epidemiology, Etiology, Treatment and Consequences*
- 23. Protein Epidemiology**  
*Understanding Human Disease at the Level of Protein Structure and Function*
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- 25. Psychopharmacogenetics: Genetic Factors Influencing the Kinetics and Dynamics of Psychotropic Drugs**  
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*Structures, Function, Regulation, Mechanisms and Role in Disease*
- 29. Stem Cells and Regenerative Medicine**  
*Fundamentals, Therapeutic Applications and Ethical Considerations*
- 30. The World of Hormones**  
*Molecular and Physiological Insights*
- 31. Using Bioinformatics in the Exploration of Genetic Diversity**
- 32. Viruses and Viral Diseases**  
*Emerging Threats to Humans and Animals*

**1. Apoptosis – 24 talks***Fundamentals, Pathways, Clinical Applications and Role in Disease***Series Editor:** Prof. Michael Hengartner – Institute of Molecular Biology, University of Zurich, Switzerland**Topics Covered:** The apoptotic pathway – Mechanisms of apoptosis – Apoptotic cells – The Bcl-2 family – Caspases – The p53 family – Apoptosis and disease – Clinical applications**Participating Speakers:** Dr. Eric Baehrecke, Dr. Simone Fulda, Dr. Irene Ghobrial, Prof. Douglas Green, Prof. Michael Hengartner, Prof. Peter Henson, Prof. Martin Herrmann, Dr. David Huang, Prof. Marja Jäättelä, Prof. Richard Kolesnick, Prof. Peter Kramer, Prof. Yuri Lazebnik, Prof. Jean-Claude Martinou, Prof. Gerry Melino, Prof. Shigekazu Nagata, Prof. Pierluigi Nicotera, Dr. Tom O'Brien, Prof. Moshe Oren, Prof. Kodi Ravichandran, Prof. Guy Salvesen, Prof. Yigong Shi, Dr. Richard Siegel, Prof. Herman Steller and Dr. Henning Walczak**2. Biology and Significance of Plasmids – 19 talks***A discussion of extrachromosomal elements in microorganisms***Series Editor:** Prof. Don Clewell – Professor Emeritus, University of Michigan, USA**Topics Covered:** Properties of plasmids – Replication – Maintenance and partitioning – Conjugation and mobilization – Gene systems commonly found on plasmids – Plasmids and bacterial evolution – Role of plasmids in biotechnology**Participating Speakers:** Prof. Deepak Bastia, Prof. George Chaconas, Prof. Ananda Chakrabarty, Prof. Don Clewell, Prof. Fernando de la Cruz, Prof. Gary Dunny, Prof. Barbara Funnell, Prof. Makkuni Jayaram, Prof. Saleem Khan, Prof. William Reznikoff, Prof. Julian Rood, Dr. Joel Schildbach, Prof. Guy Salvesen, Prof. David Summers, Prof. Christopher Thomas, Prof. Gerhart Wagner, Prof. Keith Weaver, Prof. Stephen Winans and Prof. Ellen Zechner**3. Calcium Signaling – 34 talks***Regulation, Mechanisms, Effectors, Role in Disease and Recent Advances***Series Editor:** Dr. Alec Simpson – School of Biomedical Sciences, University of Liverpool, UK**Topics Covered:** Generation of calcium signals: regulating influx and release from intracellular stores – Termination of calcium signals: calcium sequestration and calcium efflux – Measuring calcium – Regulation of calcium in and by organelles – Spatiotemporal properties of calcium signals – Calcium effectors – Calcium and disease**Participating Speakers:** Dr. Martin Bootman, Prof. Stephen Bolsover, Dr. Marisa Brini, Prof. Bob Burgoyne, Prof. Michael Cahalan, Prof. Ernesto Carafoli, Prof. Dermot Cooper, Prof. Peter Cullen, Prof. Annette Dolphin, Prof. Laura del Senno, Prof. Barbara Ehrlich, Prof. David Eisner, Prof. J. Kevin Foskett, Dr. David Friel, Prof. Anthony Galione, Dr. Julia Gerasimenko, Dr. Oleg Gerasimenko, Dr. Wolfgang Graier, Dr. Christopher George, Dr. Anne Green, Dr. Karen Lounsbury, Prof. Andrew Marks, Dr. Luca Munaron, Prof. Pierluigi Nicotera, Prof. Anant Parekh, Prof. Ian Parker, Dr. Randen Patterson, Prof. Ole Petersen, Dr. Paola Pizzo, Prof. Tullio Pozzan, Dr. Jim Putney, Prof. Rajini Rao, Prof. John Reeves, Prof. Rosario Rizzuto and Dr. Llewelyn Roderick**4. The Chloroplast: The Organelle that Sustains Us – 18 talks****Series Editor:** Prof. J. Kenneth Hooper – School of Life Sciences, Arizona State University, USA**Topics Covered:** Origin, evolution and structure of chloroplasts – Function in photosynthesis – Synthesis of essential nutrients – Assembly process – Genomics and proteomics – Biotechnology**Participating Speakers:** Prof. Louise Anderson, Dr. Ricardo Azevedo, Prof. Christoph Benning, Dr. Debashish Bhattacharya, Prof. Robert Blankenship, Prof. Henry Daniell, Prof. Elisabeth Gantt, Prof. J. Kenneth Hooper, Prof. Christopher Howe, Prof. Peter Lea, Prof. Richard Leegood, Prof. Stephen Mayfield, Prof. Paulo Mazzafera, Dr. Ron Mittler, Dr. Kevin Pyke, Prof. Wolfhart Rüdiger, Prof. Howard Thomas, Dr. Ute Voithknecht, Dr. Julian Whitelegge and Dr. William Zerges**5. The Design and Analysis of Randomized Clinical Trials – 18 talks****Series Editor:** Dr. Vance Berger – National Cancer Institute, USA**Topics Covered:** Randomization methods – Flexible, adaptive clinical trial design – Allocation methods and selection bias – Equivalence trials – Handling multiplicity – Missing data – Post-randomization adjustment – Ethical issues in trial design – Likelihood ratios – N-of-1 clinical trials**Participating Speakers:** Prof. Michael Akritas, Prof. Jeffrey Blume, Dr. George Born, Prof. Marc Buyse, Dr. Xun Chen, Dr. Valerie Durkalski, Dr. William Grant, Dr.

Anastasia Ivanova, Dr. J. Rosser Matthews, Mr. Damian McEntegart, Dr. Cyrus Mehta, Prof. Lemuel Moyé, Prof. Patrick Onghena, Prof. William Rosenberger, Dr. Abdul Sankoh, Prof. David Torgerson, Dr. Linda Yau and Dr. YanYan Zhou

**6. Drug Metabolizing Enzymes – 23 talks***Fundamentals, Study Methods, Recent Advances and Clinical Significance***Series Editor:** Prof. Ann Daly – Pharmacogenetics Group, University of Newcastle Medical School, UK**Topics Covered:** Factors affecting drug metabolism – Laboratory methods – Predicting metabolizing pathways – Cytochrome P450s and non-P450s – Phase I enzymes – Phase II conjugating enzymes – Clinical significance of drug interactions – Clinical importance of pharmacogenetics**Participating Speakers:** Dr. Christine Beedham, Prof. Robert Branch, Prof. Kim Brøsen, Dr. Charles Crespi, Prof. Ann Daly, Dr. Maurice Dickins, Prof. Charles Falany, Res. Prof. Clement Furlong, Prof. F. Peter Guengerich, Prof. Magnus Ingelman-Sundberg, Prof. Eric Johnson, Dr. Julia Kirchheiner, Dr. Kathleen Knights, Prof. Peter Mackenzie, Dr. Patrick Maurel, Prof. John Miners, Prof. Edward Morgan, Prof. Ralf Morgenstern, Prof. Gordon Roberts, Dr. Erin Scheutz, Prof. Edith Sim, Dr. Dennis Smith and Prof. Richard Weinsilboum**7. Epigenetics – 21 talks***Concepts, Theories, Paradigms and Mechanisms***Series Editor:** Dr. Edith Heard – Mammalian Development Epigenetics Group, CNRS Curie Institute, France**Topics Covered:** Epigenetic concepts – Evolutionary considerations – DNA methylation – Histone modifications – Histone modifying enzymes – Histone dynamics, heritability and variants – Genomic imprinting – X inactivation – Polycomb – RNAi in heterochromatin formation/maintenance – Stem cell memory – Epigenetic reprogramming – Epimutations – Cytoplasmic epigenetics**Participating Speakers:** Dr. Geneviève Almouzni, Prof. Stephen Baylin, Prof. Adrian Bird, Dr. Anne Ferguson-Smith, Prof. Susan Gasser, Prof. Jenny Graves, Dr. Robin Holliday, Prof. Rudolf Jaenisch, Prof. Thomas Jenuwein, Dr. Mary Lyon, Dr. Fabienne Malagnac, Prof. Robert Martienssen, Prof. Vincenzo Pirrotta, Prof. Eric Selker, Prof. James Sherley, Prof. Phillippe Silar, Prof. Davor Solter, Prof. David Spector, Prof. Azim Surani, Prof. Bryan Turner, Prof. Emma Whitelaw and Dr. Reed Wickner**8. The Endoplasmic Reticulum – 12 talks***Fundamentals and Role in Disease***Series Editor:** Prof. Marek Michalak – Department of Biochemistry, University of Alberta, Canada**Topics Covered:** Structural and functional organization of the endoplasmic reticulum – The role of the ER in cellular processes under normal and pathological conditions – Endoplasmic reticulum protein synthesis, folding and posttranslational modification – The endoplasmic reticulum in apoptotic pathways – Communication with other organelles – Role in human diseases**Participating Speakers:** Dr. Luis Agellon, Dr. Nicolas Demaurex, Dr. Jurgen Denecke, Prof. J. Kevin Foskett, Dr. Benjamin Glick, Dr. Daniel Hebert, Prof. Randal Kaufman, Prof. Marek Michalak, Prof. Chris Nicchitta, Prof. Rosario Rizzuto, Prof. Roberto Sitia and Prof. Alexei Verkhratsky**9. Eukaryotic Gene Regulation – 19 talks***From Chromatin to Transcription to mRNA Processing***Series Editors:** Prof. Michael Carey – David Geffen School of Medicine at UCLA, USA and Prof. Stephen Smale – Howard Hughes Medical Institute at UCLA, USA

*"This is definitely a 'must have' resource to which every researcher should have access. Dr. Hengartner has done a masterful job of organizing a coherent and stimulating overview of the apoptosis field."*

**Professor John Reed, President and CEO,  
Burnham Institute for Medical Research, USA**

*"There is a huge amount of material available making this a superior resource and one that our faculty and students should retain access to."*

**Prof. Richard Swenson, Department of Biochemistry,  
The Ohio State University, USA**

**Topics Covered:** Transcription initiation, activation, elongation and repression – Chromatin structure – Histone code – Nucleosome remodeling complexes – DNA methylation – RNA splicing, stability and processing – Epigenetics – Genome-wide analyses – Recent methodological advances

**Participating Speakers:** Dr. Geneviève Almouzni, Prof. Arnold Berk, Prof. Bradley Cairns, Dr. Ann Dean, Prof. Brian Dynlacht, Prof. Peggy Farnham, Prof. Sankar Ghosh, Prof. Michael Hampsey, Prof. Grant Hartzog, Prof. Steven Jacobson, Prof. Tom Kerrpol, Prof. Siavash Kurdastani, Prof. Karolin Luger, Prof. Roy Parker, Prof. Yang Shi, Prof. Ali Shilatifard and Prof. Yi Zhang

### 10. Evolution and Medicine – 38 talks

*How New Applications Advance Research and Practice*

**Series Editor:** Prof. Randolph Nesse – University of Michigan, USA

**Topics Covered:** Fundamentals of evolution and medicine – Evolutionary genetics – Infectious disease, co-evolution and arms races – Environmental factors – Constraints and trade-offs – Sexual selection and reproduction – Cancer – Mental disorders – Practical applications

**Participating Speakers:** Dr. William Aird, Dr. Robert Aunger, Dr. Kathleen Barnes, Prof. Gillian Bentley, Dr. Carl Bergstrom, Prof. Timothy Bromage, Dr. Valerie Curtis, Prof. S. Boyd Eaton, Prof. Peter Ellison, Prof. Paul Ewald, Prof. Mel Greaves, Prof. David Haig, Dr. David Houle, Dr. Matthew Keller, Prof. Matthew Kluger, Dr. Daniel Kruger, Dr. Christopher Kuzawa, Prof. Jeffrey Long, Prof. Randolph Nesse, Prof. Gilbert Omenn, Prof. Mark Pagel, Prof. Linda Partridge, Prof. Andrew Read, Prof. Graham Rook, Prof. Paul Schmid-Hempel, Prof. Nicholas Schork, Prof. Paul Sherman, Prof. Stephen Stearns, Dr. Mark Thomas, Prof. John Torday, Prof. Wenda Trevathan, Dr. Paul Turner, Prof. Alan Weder, Prof. Robin Weiss, Dr. Mary Jane West-Eberhard and Prof. Lewis Wolpert

### 11. Free Radicals and the Oxygen Paradox – 24 talks

*Oxidative Stress in Biology, Aging and Disease*

**Series Editor:** Prof. Kelvin Davies – The University of Southern California, USA

**Topics Covered:** Chemistry of reactive oxygen and nitrogen species – Physiological roles and damaging potential of reactive oxygen and nitrogen species – Antioxidant enzymes and compounds – DNA repair enzymes – Diet – Responses to oxidative stress – Aging – Human disease – New potential therapies involving reactive oxygen and nitrogen species

**Participating Speakers:** Prof. Angelo Azzi, Prof. Allan Butterfield, Prof. Enrique Cadenas, Prof. Jean Cadet, Prof. Kelvin Davies, Dr. Phyllis Dennery, Dr. Miral Dizdaroğlu, Prof. Leopold Flohé, Prof. Henry Jay Forman, Prof. Tilman Grune, Dr. Derick Han, Prof. Malcolm Jackson, Prof. Balaraman Kalyanaraman, Prof. Willem Koppelman, Prof. Matilde Maiorino, Prof. Simin Meydani, Prof. Jason Morrow, Prof. Giuseppe Poli, Dr. Rafael Radi, Prof. Pamela Shaw, Prof. Daret St. Clair, Prof. Allen Taylor, Prof. Maret Traber, Dr. José Viña and Prof. Jay Zweier

### 12. From DNA to Proteins: The Multiple Levels of Regulation – 23 talks

*Fundamentals and Latest Advances*

**Series Editor:** Prof. Panagiotis Tsonis – Department of Biology, University of Dayton, USA

**Topics Covered:** Chromatin architecture – Nucleosome dynamics – DNA replication – Transcription – Intron splicing – mRNA modifications – mRNA surveillance – miRNA – RNA editing – Nuclear organization – Protein synthesis, elongation, folding and destruction – Gene and protein microarrays – Global gene expression

**Participating Speakers:** Prof. Martin Buck, Prof. Walter Englander, Prof. Joachim Frank, Prof. Alfred Goldberg, Prof. Steve Hajduk, Prof. Michael Hampsey, Prof. Jeffrey Hansen, Dr. Trey Ideker, Prof. Roger Kornberg, Prof. Patrick Linder, Prof. James Manley, Prof. Lynne Maquat, Prof. Timothy Nilsen, Prof. Smita Patel, Prof. Anna Marie Pyle, Prof. Marina Rodnina, Prof. Aaron Shatkin, Dr. Frank Slack, Prof. David Spector, Dr. Craig Tomlinson, Prof. Panagiotis Tsonis and Prof. Jonathan Widom

### 13. Frontiers of Research in Autoimmunity – 29 talks

*Etiology, Pathogenesis, Clinical Manifestation and Diagnostic Methodologies*

**Series Editor:** Prof. Yehuda Shoenfeld – Sheba Medical Center, Tel Aviv University, Israel

**Topics Covered:** Autoimmune diseases – Infection and autoimmunity – Innate immunity – Natural antibodies – Diagnostic methods in autoimmunity – Therapeutic advances

**Participating Speakers:** Prof. Juan-Manuel Anaya, Prof. Ronald Asherson, Mr. Steven Binder, Dr. Nicola Bizzaro, Dr. Ricard Cervera, Prof. Maurizio Cutolo, Dr. Andrea Doria, Prof. Johan Frostegård, Prof. M. Eric Gershwin, Prof. Loïc

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### 14. Gene-Environment Interactions in the Modulation of Pulmonary and Autoimmune Disease Risks – 17 talks

**Series Editors:** Prof. David Christiani – Harvard School of Public Health and Harvard Medical School, USA and Dr. Patricia Fraser – CBR Institute for Biomedical Research, Brigham and Women's Hospital and Harvard Medical School, USA

**Topics Covered:** Statistical genetics of complex diseases – Molecular epidemiology of pulmonary diseases – Ethical implications of gene-environment studies – Use of biomarkers – Molecular epidemiology of autoimmune diffuse connective tissue diseases – Drug induced disease

**Participating Speakers:** Prof. Frank Arnett, Prof. David Christiani, Dr. Glinda Cooper, Prof. L. Adrienne Cupples, Dr. Patricia Fraser, Prof. Evelyn Hess, Prof. Judith James, Dr. Peter Kraft, Prof. Nan Laird, Prof. Maureen Mayes, Prof. Lee Newman, Prof. Lyle Palmer, Prof. Louise Ryan, Dr. Richard Sharp, Prof. Edwin Silverman, Prof. Thomas Smith, Prof. Donna Spiegelman and Prof. Scott Weiss

### 15. Genetic Epidemiology I – 21 talks

*Fundamentals, Theory, Practice and Latest Developments*

**Series Editor:** Dr. Mike Weale – Duke Institute for Genome Sciences and Policy, USA

**Topics Covered:** Basic genetics – Population genetics – Segregation analysis – Genetic linkage analysis – Study design – Genome wide scans – Sample size issues – Heterogeneity – Haplotype phase inference graphic modeling – Modeling complex metabolic pathways – Models and methods for association mapping – Correcting for population structure – DNA pooling – Haplotype tagging SNPs – Pharmacogenetics

**Participating Speakers:** Prof. Chris Amos, Prof. David Balding, Prof. Chris Cannings, Prof. David Clayton, Dr. Andrew Collins, Prof. Peter Donnelly, Prof. Robert Elston, Prof. David Goldstein, Prof. Steve Jones, Dr. Andrew Morris, Prof. Newton Morton, Dr. Jonathan Pritchard, Prof. Michael Province, Prof. Pak Sham, Dr. Dawn Teare, Prof. Allun Thomas, Prof. Duncan Thomas and Prof. Bruce Weir

### 16. Genetic Epidemiology II – 17 talks

*Latest Developments*

**Series Editor:** Dr. Mike Weale – King's College London, UK

**Topics Covered:** Special designs – Linkage and association studies – Special populations – Isolated populations – DeCode and genetic epidemiology – Whole-genome studies: types of data – Whole-genome studies: methods – Genome-wide associated studies

**Participating Speakers:** Prof. David Balding, Dr. Ren-Hua Chung, Prof. Andrew Collins, Dr. Frank Dudbridge, Prof. Robert Elston, Mr. A Geert Heidema, Dr. Christoph Lange, Dr. Kathryn Lunetta, Prof. Paul McKeigue, Dr. Dan Nicolae, Prof. Leena Peltonen, Prof. Michael Province, Dr. Andrew Skol, Dr. Mike Weale and Prof. Bruce Weir

*"From DNA to Proteins is a series of presentations that takes the viewer to all levels of gene regulation and the series editor, Panagiotis Tsonis, has assembled an impressive roster of world experts. I found the series fun, informative and the format of narrated PowerPoint presentations easy to follow. The talks are well structured with emphasis on the three-dimensional aspects as well. These series should be a very useful source in the classroom and for interested scientists in all disciplines of biology and biotechnology."*

**Professor Peter Agre, Nobel Laureate, Johns Hopkins University School of Medicine, USA**

*"These talks by many of the world's leading authorities are clearly presented, up-to-date and well-illustrated. They provide excellent and wide-ranging reviews of human genetic variation and its implications for recent human evolution, human diversity and health."*

**Professor Chris Stringer FRS, Natural History Museum, London, UK**

**17. Human Population Genetics – 27 talks***Evolution and Variation***Series Editors:** Prof. Luigi Luca Cavalli-Sforza and Prof. Marcus Feldman – Stanford University, USA**Topics Covered:** Evolutionary history – Evolutionary forces at play – Markers – The human phenotype – Population structure – Complex patterns of natural selection – The Human Genome Project – HapMap – Historical and geographical genetic variation**Participating Speakers:** Prof. Sir Walter Bodmer, Prof. Luigi Luca Cavalli-Sforza, Dr. Nancy Cox, Prof. Kaare Christensen, Prof. Andrew Clark, Prof. Bertrand Desjardins, Dr. Anna Di Rienzo, Prof. Marcus Feldman, Prof. Henry Greely, Prof. Austin Hughes, Dr. Toomas Kivisild, Prof. Richard Klein, Prof. Gil McVean, Prof. S. 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Mitochondrial Biogenesis – 24 talks***Processes, Regulation, Functions and Disease***Series Editor:** Prof. David Hood – Kinesiology and Health Science, Faculty of Pure and Applied Science, York University, Canada**Topics Covered:** Mechanisms of mitochondrial biogenesis – Transcriptional control of nuclear genes – Protein import into mitochondria – Mitochondria fission and fusion – mtDNA regulation – Mitochondria in disease states – Thyroid hormone effects – Effects of exercise – Reactive oxygen species and mitochondria – Mitochondrial myopathies – Mitochondria and apoptosis – Aging and mitochondria**Participating Speakers:** Prof. Stephen Alway, Dr. Martin Brand, Dr. Tony Collins, Prof. José Cuezva, Dr. Aubrey de Grey, Prof. Salvatore DiMauro, Prof. Douglas Green, Prof. Grant Hatch, Dr. Russell Hepple, Dr. Anastasia Kralli, Prof. John Lemasters, Dr. Trevor Lithgow, Prof. Julio Montoya, Prof. Christopher Moyes, Dr. Darrell Neuffer, Prof. David Nicholls, Dr. Leo Nijtmans, Prof. Pascal Reynier, Prof. Richard Scarpulla, Prof. Anthony Schapira, Dr. Luca Scorrano, Dr. Mark Tarnopolsky, Dr. Joachim Weitzel and Dr. Zhi-Qing Zhao**19. Molecular Chaperones – 25 talks***Principles and Diseases***Series Editor:** Dr. Walid Houry – Department of Biochemistry, University of Toronto, Canada**Topics Covered:** Prokaryotic molecular chaperones – GroEL/GroES – Chaperone mechanisms in cellular protein folding – The Hsp70/Hsp40 system – Role and function of molecular chaperones – Eukaryotic molecular chaperones – Hsp90 and Hsp104 – Molecular chaperones of the endoplasmic reticulum and mitochondria – Role of molecular chaperones in disease**Participating Speakers:** Prof. François Baneyx, Prof. James Bardwell, Prof. Jeffrey Brodsky, Dr. Gabriela Chiosis, Prof. Douglas Cyr, Prof. R. John Ellis, Dr. John Glover, Prof. Pierre Goloubinoff, Prof. Dr. Ulrich Hartl, Prof. Amnon Horovitz, Dr. Walid Houry, Prof. Koreaki Ito, Dr. Michel Leroux, Dr. Joen Luirink, Dr. Peter Lund, Dr. Michael Maurizi, Prof. Michael Sherman, Dr. David Toft, Prof. Dr. Kürsad Turgay, Prof. Elizabeth Vierling, Prof. Keith Willison, Dr. Konstanze Winklhofer, Prof. Tomoko Yamamoto, Dr. Jason Young and Prof. Michal Zolkiewski**20. Monoclonal Antibodies as Therapeutic Agents – 26 talks***Fundamentals, Therapeutic Applications and Latest Advances***Series Editor:** Prof. Herman Waldmann – Sir William Dunn School of Pathology, University of Oxford, UK**Topics Covered:** Improving on “natural” rodent antibodies – Antibodies in cancer therapy – Diagnostic antibodies – Cell surface glycoproteins on cells of the immune system – Antibodies as immunosuppressants – Antibodies in protection against microbial disease**Participating Speakers:** Prof. Kari Alitalo, Prof. James Allison, Prof. Neil Barclay, Dr. Marianne Brüggemann, Prof. Dennis Burton, Prof. Lucienne Chatenoud, Dr. Mike Clark, Dr. Alasdair Coles, Prof. Alastair Compston, Prof. Marc Feldmann, Prof. Mark Greene, Prof. Geoffrey Hale, Prof. Reuben Harris, Prof. John Isaacs, Prof. Christian Larsen, Prof. David Mason, Prof. Michael Neuberger, Dr. Bronislaw Pytowski, Prof. Kanti Rai, Prof. Ben Seon, Prof. Terry Strom, Prof. Thomas Tedder, Prof. Laurence Turka, Prof. Herman Waldmann, Prof. Thomas Waldmann and Prof. Sir Gregory Winter**21. Neurodegenerative Diseases – 21 talks***Fundamentals, Research Methods and Latest Advances***Series Editor:** Prof. John Hodges – MRC Cognition and Brain Sciences Unit and the University Department of Neurology, Cambridge, UK**Topics Covered:** Major neurodegenerative diseases – Alzheimer's disease – Frontotemporal dementia – Parkinson's disease – Huntington's disease – Motor Neurone Disease – Clinical features – Epidemiological facts – Natural history – Prognosis – Structural and functional neuroimaging – Pathology – Molecular and genetic aspects**Participating Speakers:** Prof. Roger Barker, Dr. David Burn, Prof. Ashley Bush, Prof. Stanley Fahn, Prof. Pierluigi Gambetti, Prof. John Hardy, Prof. Karl Herholz, Prof. John Hodges, Prof. Michael Hutton, Prof. Jillian Kril, Prof. John Mayer, Prof. David Rubinsztein, Prof. Anthony Schapira, Prof. Philip Scheltens, Dr. Andrew Singleton, Dr. Kevin Talbot and Prof. David Westaway**22. Obesity – 20 talks***Epidemiology, Etiology, Treatment and Consequences***Series Editor:** Prof. Claude Bouchard – Pennington Biomedical Research Center, Louisiana State University, USA**Topics Covered:** Epidemiology: assessment and prevalence – The obesogenic environment – Etiology and causes – Consequences of obesity – Treatment options – The prevention challenge**Participating Speakers:** Prof. David Allison, Prof. Arne Astrup, Prof. David Barker, Prof. Hans-Rudolf Berthoud, Prof. George Bray, Prof. Henry Buchwald, Prof. Robert Eckel, Dr. Jarmo Kaukua, Prof. Shiriki Kumanyika, Prof. Rudy Leibel, Prof. Ian Macdonald, Prof. Aila Risannen, Prof. Wim Saris, Prof. Jacob Seidell, Prof. Arya Sharma, Prof. Albert Stunkard, Prof. Boyd Swinburn, Prof. Luc Van Gaal, Prof. Thomas Wadden, Prof. Peter Wilson and Dr. Anne Wolf**23. Protein Epidemiology – 34 talks***Understanding Human Disease at the Level of Protein Structure and Function***Series Editor:** Prof. Ben Dunn – University of Florida, USA**Topics Covered:** Protein structure and function – Creation of protein variability by manipulation of genes – Metabolic diseases caused by genetic mutation – Disorders of blood coagulation – Other molecular and metabolic diseases**Participating Speakers:** Prof. Antonio Baici, Prof. Stephen Benkovic, Prof. Wolfram Bode, Prof. Dieter Brömme, Prof. Jeff Chamberlain, Prof. Edward Conway, Prof. Charles Craik, Dr. Toshiyuki Fukao, Prof. Bruce Furie, Dr. David Gailani, Prof. Volkmar Gieselmann, Prof. Gregory Grabowski, Prof. Niels Gregersen, Prof. Sandra Hofmann, Prof. Michael James, Prof. Andrew Kaplan, Dr. Geoffrey Kembell-Cook, Dr. Jane Leopold, Prof. David Lillicrap, Prof. Don Mahuran, Dr. John McVey, Prof. Ronald Nagel, Dr. Rikke Olsen, Prof. Steve Olson, Prof. Josef Prchal, Prof. J. Evan Sadler, Prof. William Sly, Prof. Mary Sugden, Prof. Edward Tuddenham, Prof. David Warnock, Prof. John Weisel, Dr. James Whisstock, Dr. Heather Yeowell and Prof. Alberto Zanella**24. Protein Folding, Aggregation and Design – 19 talks***Concepts, Experiments, Theories and Mechanisms***Series Editor:** Dr. Caroline Wright – Cambridge Consultants Ltd., UK**Topics Covered:** Protein structure and stability – Protein folding kinetics, pathways and mechanisms – Protein folding simulations – Protein folding *in vivo* – Protein misfolding and disease – Protein aggregation: amyloid fibril structure, sequence determinants and links to disease – Protein design: selection, computational modification and *de novo* design**Participating Speakers:** Prof. David Allsop, Prof. David Barker, Prof. Fabrizio Chiti, Dr. Jane Clarke, Prof. Fred Cohen, Prof. Valerie Daggett, Prof. Christopher Dobson, Prof. R. John Ellis, Dr. Stephen Hagen, Prof. F. Ulrich Hartl, Prof. Michael Hecht, Prof. Thomas Keifhaber, Dr. Jacqui Matthews, Prof. Vijay Pande, Prof. Mark Pepys, Prof. Lynne Regan, Prof. Dr. Benjamin Schuler and Prof. Eugene Shakhnovich**25. Psychopharmacogenetics: Genetic Factors Influencing the Kinetics and Dynamics of Psychotropic Drugs – 23 talks***Definitions, Research Methodology, Current State of Research and Clinical Applications***Series Editor:** Dr. Maria Arranz – Division of Clinical Neuropharmacology, Institute of Psychiatry, King's College London, UK**Topics Covered:** Fundamental psychopharmacology – Genetic investigations of complex traits – Psychotropic drug metabolizing enzymes – Genetic determinants of the pharmacokinetics and pharmacodynamics of psychotropic drugs – Adverse drug reactions – Pharmacogenetics in predicting treatment response**Participating Speakers:** Dr. Maria Arranz, Prof. Vincenzo Basile, Dr. Jerome Breen, Prof. Ann Daly, Dr. Paul Debenham, Dr. Michael Dettling, Prof. Ridha Joobar, Prof. Julia Kirchheiner, Dr. Jo Knight, Prof. Brian Leonard, Dr. Mario Masselis, Prof. Gavin Reynolds, Prof. Alessandro Serretti and Prof. Aiming Yu

**26. Retroviruses – 17 talks***Biology, Pathogenic Mechanisms and Treatment***Series Editor:** Prof. Robert Gallo – University of Maryland Baltimore, USA**Topics Covered:** Defining retroviruses – The first human retroviruses – HIV and its causative role in AIDS – Peculiarities of the HIV genome – HIV transmission and epidemiology – Public health and prevention issues – HIV therapy – HIV preventive vaccine – Help for developing nations**Participating Speakers:** Prof. William Blattner, Prof. Arsène Burny, Prof. Robert Gallo, Prof. William Hall, Prof. Kuan-Teh Jeang, Prof. Andrew McMichael, Dr. Joseph O'Neill, Dr. George Pavlakis, Prof. Lee Ratner, Prof. Robert Redfield, Prof. Robert Siliciano, Dr. Jonathan Stoye, Prof. Sten Vermund, Prof. Paul Volberding, Prof. Mark Wainberg, Prof. Bruce Walker, Dr. Lucas Willems and Prof. Junji Yodoi**27. RNA Interference – 19 talks***Principles and Applications***Series Editor:** Prof. John Rossi – Division of Molecular Biology, Beckman Research Institute of the City of Hope, USA**Topics Covered:** Functional roles in plants, yeast, *Drosophila*, *C. elegans* and mammals – Molecular mechanisms – Cell signaling pathways – Drosha, Dicer, R2D2 and Argonaute proteins – Use as a gene function analysis tool – Selection and target design of siRNA designs – Therapeutic applications to viral infections, genetic diseases, heart disease and cancer – Target delivery methods**Participating Speakers:** Dr. Mark Behlke, Prof. Richard Carthew, Prof. Beverly Davidson, Dr. Ciaran Faherty, Dr. Annick Harel-Bellan, Prof. Leemor Joshua-Tor, Dr. Anastasia Khvorova, Dr. Narry Kim, Dr. Jens Kurreck, Dr. Young Sik Lee, Dr. Patrick Lu, Prof. Robert Martienssen, Dr. Michael McManus, Dr. Eric Miska, Dr. Kevin Morris, Prof. Zissimos Mourelatos, Mr. Michael O'Grady, Prof. John Rossi, Dr. Dmitry Samarsky and Dr. Peter Welch**28. Signal Transduction via Protein Tyrosine Kinase Receptors – 19 talks***Structures, Function, Regulation, Mechanisms and Role in Disease***Series Editor:** Prof. Carl-Henrik Heldin – Ludwig Institute of Cancer Research, Sweden**Topics Covered:** *In vivo* and *in vitro* function of the EGF, insulin, PDGF, HGF, VEGF and Eph receptor families – Structure of PTK receptors and regulation of their kinase activities – PTK receptors *in vivo* – Negative regulation of PTK receptors – Intracellular signal transduction pathways activated by PTK receptors – Clinical use of PTK receptor antagonists**Participating Speakers:** Prof. Kari Alitalo, Prof. Tony Burgess, Prof. Graham Carpenter, Prof. Melanie Cobb, Prof. Paulo Comoglio, Prof. Brian Druker, Dr. Stevan Hubbard, Prof. Tony Hunter, Prof. Nancy Hynes, Dr. Andrius Kazlauskas, Dr. Moosa Mohammadi, Prof. Benjamin Neel, Prof. Elena Pasquale, Prof. Tony Pawson, Prof. Marco Pierotti, Prof. Bart Vanhaesebroeck, Prof. Morris White and Prof. Yosef Yarden**29. Stem Cells and Regenerative Medicine – 17 talks***Fundamentals, Therapeutic Applications and Ethical Considerations***Series Editors:** Prof. Dame Julia Polak – Director, and Dr. Anne Bishop – Reader, Tissue Engineering and Regenerative Medicine Centre, Imperial College London, UK**Topics Covered:** Stem cells: adult and embryonic – Regenerative medicine – Tissue engineering: the science, the technology and the industry – Clinical potential of stem cells – Genes and cells therapy – Bone marrow technology – Therapeutic applications – Biotechnology – Commercialization – Ethical and regulatory considerations**Participating Speakers:** Prof. Charles Archer, Dr. Anne Bishop, Prof. Sir Martin Evans, Mr. Julian George, Prof. Nagy Habib, Dame Suzi Leather, Dr. Sakis Mantalaris, Prof. John Martin, Dr. Ronald McKay, Prof. Anne McLaren, Dr. Jim McWhir, Prof. Robert Nerem, Prof. Dame Julia Polak, Dr. Gareth Roberts, Prof. Brian Salter, Dr. Molly Stevens, Prof. Tom Webster and Dr. James Willerson**30. The World of Hormones – 19 talks***Molecular and Physiological Insights***Series Editors:** Prof. Helen Henry and Prof. Anthony Norman – Department of Biochemistry, University of California, Riverside, USA**Topics Covered:** Introduction to the world of hormones – The reproductive hormones – Hormones in calcium and phosphorus homeostasis – Hormonal maintenance of homeostasis of fluids, electrolytes and blood pressure – Hormones and energy metabolism – Hormones and growth – Frontiers in hormone research**Participating Speakers:** Prof. Jeffrey Bender, Prof. Richard Bergman, Prof. David Feldman, Prof. Helen Henry, Prof. Tony Hunter, Prof. Derek LeRoith, Prof. Robert Lindsay, Dr. Chantal Mathieu, Prof. Bruce McEwen, Prof. Stavros Manolagas, Prof. Dino Moras, Prof. Robert Nissenson, Prof. Anthony Norman, Prof. Stuart Sealfon, Dr. Hugh Taylor, Prof. Nancy Weigel, Prof. JoEllen Welsh and Prof. Elizabeth Wilson**31. Using Bioinformatics in the Exploration of Genetic Diversity – 18 talks****Series Editor:** Prof. Matthew He – Division of Math, Science and Technology, Nova Southeastern University, USA**Topics Covered:** Biological and ecosystem diversity – Populations, samples and biological databases – Bioinformatics and genome analysis – Human disease and genetic variation – Genetic epidemiology – Therapeutic development**Participating Speakers:** Dr. Vincent Chow, Prof. Robert Clarke, Dr. Nick Davies, Dr. Michael Dean, Dr. Kelly Frazer, Dr. Jean Gao, Ms. Elaine Gunter, Dr. Sally John, Dr. Charles Lee, Prof. Jennie Lou, Prof. Giri Narasimhan, Dr. George Nelson, Dr. Christopher O'Donnell, Mr. Vincent Richards, Dr. Kishore Sakharkar, Dr. Meena Sakharkar, Prof. Mahmood Shiviji, Prof. Himla Soodyall, Dr. Rosemarie Swanson, Prof. Michel Tibayrenc and Dr. Andreas Wagner**32. Viruses and Viral Diseases – 22 talks***Emerging Threats to Humans and Animals***Series Editor:** Prof. Peter Palese – Professor and Chairman, Department of Microbiology, Mount Sinai School of Medicine, USA**Topics Covered:** Structure and characteristics of viruses – Antiviral strategies – Vaccines and their successful uses – Important medical pathogens: HIV, influenza and hepatitis viruses – Biothreat agents – Viruses affecting the respiratory system – Viruses affecting the gastrointestinal system – Viruses targeting the brain**Participating Speakers:** Prof. Ralph Baric, Dr. Christopher Basler, Prof. Kenneth Berns, Dr. John Blaho, Prof. Roberto Cattaneo, Prof. Richard Condit, Prof. Richard Elliott, Dr. Mary Estes, Dr. Ron Fouchier, Dr. Adolfo Garcia-Sastre, Prof. Anne Gershon, Prof. Mary Klotman, Prof. Stanley Lemon, Prof. Norman Letvin, Prof. W. 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**Topics Covered:** Bioorganic chemistry and the origins of chemical biology – Nucleic acids – Natural products in the elucidation of biological mechanisms – Chemical biology in signaling and protein function – Proteins: engineering, design, molecular recognition and catalysis – Combinatorial chemistry/chemical diversity – Chemical biological investigation of biological mechanisms – Genomics / proteomics and the study of biomolecules and biomolecular interactions

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Available mid 2008

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**Topics Covered:** Perspective and pathogenesis – The brain and its blood supply – Mechanisms of brain ischemia and haemorrhage – The diagnosis and investigation of stroke – The treatment of stroke – Rehabilitation – Prevention – Stroke in the young – Stroke in women – Controversies and answers

**Participating Speakers:** Prof. Jean-Claude Baron, Dr. John Bowler, Prof. Martin Brown, Dr. Cheryl Bushnell, Prof. Louis Caplan, Dr. Bart Demaerschalk, Prof. Gabrielle DeVeber, Prof. Geoffrey Donnan, Prof. Jan van Gijn, Prof. Vladimir Hachinski, Prof. Werner Hacke, Prof. Graeme Hankey, Prof. Wolf-Dieter Heiss, Prof. Clay Johnston, Prof. Lalit Kalra, Prof. Carlos Kase, Dr. Bo Norving and Prof. Jeffrey Saver

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Available late 2008

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**Topics Covered:** The new risk management era – Risk management components – Regulatory developments – Industry response – Vioxx and cardiovascular disease – Rosiglitazone and cardiovascular disease – Tegenero – Tysabri and progressive multifocal leukoencephalopathy

## Genetics of Cardiovascular Disease – 17 talks

Available late 2008

**Series Editor:** Prof. Steve Humphries – Centre for Cardiovascular Genetics, BHF Laboratories, UK

**Topics Covered:** Epidemiology of CHD – Risk factors – Lipid metabolism – Thrombotic risk factors – Plaque rupture – Oxidative stress – Familial hypercholesterolemia – Gene environment and interaction – Dyslipidemias – Gene therapy for LDL deficiency – Pharmacogenetics – Mendelian randomization to explore causality