# ISCB NEWSLETTER



President's Letter

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# A NOTE FROM ISCB PRESIDENT

# Michael Gribskov

#### **EXECUTIVE COMMITTEE**

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Dear Members, Affiliates and Friends,

We indeed, as the proverb says, "live in interesting times." Two years ago, ISCB decided to add more realism to its role as an international society by approving a proposal to host the ISMB meeting in Brisbane, Australia. This represents the first time that the ISMB meeting has been held outside of North America and Europe, and is an expression of ISCB's commitment to all regions of the world. Unfortunately, world events such as war, SARS, and increased fuel prices have created anxieties among many possible participants. This is unfortunate as the organizers have assembled an extremely strong program and have put in long hours to ensure that this year's ISMB will be the best ever. It is even more unfortunate that a low attendance at this year's ISMB might be used, in the future, to argue against holding meetings outside of North America and Europe. I personally think this would be a great mistake and I encourage you to show your support of the "international" in ISCB by voting with your feet and coming to Brisbane this summer.

ISCB has seen enormous growth over the last several years, growing from only a few hundred members to over 1700. This society has naturally experienced some growing pains, but now has an infrastructure in place to carry us into the future. The ISCB board of directors is currently formulating a strategic plan for the Society that will set our course for the next several years. Many of you participated in our recent survey (over 250 responses!) and this provides crucial information that the board will use in making a plan. However, this need not be your only involvement in the process. If you have ideas about what ISCB should be, where it should be going, or how it



could change the world I encourage you to send them in by email to *admin@iscb.org*, or to myself or any of the Board of Directors.

The strategic planning process will be completed this summer and, I believe, will result in a stronger and more focused ISCB. In particular, I expect improvements in the benefits and services that we offer to our members, expansion in our support for scholarly conferences and publications, and a more stable model for funding society activities to result from our new strategic plan. As ISCB is a volunteer organization, there will be many opportunities for our members to take part in and shape the future of the society. I look forward to working with you in making ISCB stronger and better.

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Tracy Zhao, Programming

# **REGISTER NOW FOR ISMB 2003**

ISMB 2003 REGISTRATION NOW OPEN www.iscb.org/ismb2003/reg.shtml

SAVE \$100USD BY REGISTERING BY MAY 23, 2003. Previous ISMB conferences have sold out one week after the early registration date.

#### REGISTRATION FEES

The conference fees include all scientific sessions, poster session, exhibit hall entrance, breakfast, lunches, receptions, and one copy of the ISMB 2003 proceedings. All fees include 10% GST.

## On or Before May 23, 2003

Academia: \$470USD (ISCB members) \$580USD (Non-ISCB members)

Student: \$340USD (ISCB members) \$450USD (Non-ISCB members)

Corporate: \$745USD (ISCB members) \$850USD (Non-ISCB members)

### AFTER MAY 23, 2003

Academia: \$550USD (ISCB members) \$660USD (Non-ISCB members)

Student: \$385USD (ISCB members) \$500USD (Non-ISCB members)

Corporate: \$825USD (ISCB members) \$935USD (Non-ISCB members)

### ISMB REGISTRATION

Web: www.iscb.org/ismb2003/reg.shtml

TUTORIAL SESSIONS (June 29, 2003)
Individuals may register for one or two optional tutorials. There will be maximum eight (8) concurrent sessions in the morning and seven (7) maximum concurrent sessions in the afternoon. Please note: Tutorials may only accommodate a limited number of participants, consequently, some tutorials may sell out. It is recommended that participants sign up as soon as possible.

Price for one tutorial: \$85USD Price for two tutorials: \$130USD

### MORNING TUTORIALS (8:30-12:30)

- Bioethics for Bioinformaticists. Instructor: Wayne Hall
- Introducing Workflow Integration of BioEnterprise Applications on a Java Platform.
   Instructor: Tin Wee Tan
- Statistical Issues in Microarray Data Analysis.
   Instructor: Mark Reimers
- Analysis of Regulatory Sequences Controlling the Expression of Gene Network. Instructor: Wyeth Wasserman
- Molecular Phylogenetics and Evolutionary Analysis. Instructor: Graziano Pesole
- Molecular Modeling: Building a 3D Protein Structure from Its Sequence. Instructor: Shoba Ranganathan
- Mining the Biomedical Literature Using Semantic Analysis and Natural Language Processing Techniques. Instructor: Ronen Feldman
- The EM Algorithm and Some of Its Applications in Molecular Biology. Instructor: Frederique Galisson

### AFTERNOON TUTORIALS (13:30-17:30)

- Artificial Intelligence and Machine Learning Techniques for Bioinformatics. Instructor: Ajit Narayanan
- Computational Approaches to Detecting Gene-Gene Interactions. Instructor: Jason Moore
- Data Warehousing in Molecular Biology.
   Instructor: Vladimir Brusic
- Microarray Data Normalization and Transformation. Instructor: John Quackenbush
- Extracting Biological Information from Systemscale Protein Interactome Data. Instructor: Sudhir Sahasrabudhe
- Molecular Evolution: Evolutionary Dynamics and Molecular Biophysics. Instructor: David Pollock
- Training and Support for Bioinformatics -Theoretical and Practical Aspects. Instructor: Eitan Rubin

# **BOARD & PRESIDENT ELECT NOMINATIONS**

The Call for Nominations went out, and ISCB members and Affiliated Regional Groups returned a positive response by submitting a total of 36 nominations for members representing eight countries to fill up to ten possible seats on the Board of Directors. The nominations process opened with the announcement of an online submission form in mid February-by the deadline two months later nine members had offered their services to the board through self nominations and 27 nominees were put forth by their peers. In addition, three nominations were received for President-Elect, which is a new Officer/Executive Committee position of the ISCB intended to serve as next in line for the Presidency.

The next step in the process is for each Board nominee to evaluate his or her desire and ability to serve as an ISCB Board Member and then complete the board candidate acceptance form and questionnaire by the deadline of May 16, 2003. As new Board Members are voted in by the existing and outgoing Board, the final decision will be made at the annual Board of Directors meeting on June 29, just prior to the start of ISMB 2003 in Brisbane, Queensland, Australia.

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# WELCOME TO ISMB 2003

Finishing touches are being put on the program of the 11th international conference on Intelligent Systems for Molecular Biology, to be held at the Brisbane Convention & Exhibition Centre, Brisbane, Australia from 29 June to 3 July 2003.

At ISMB 2003 you'll experience an exciting program of tutorials, keynotes, papers, posters, technical demonstrations and commercial displays in a modern world-class venue next to Brisbane's South Bank parklands.

This year's meeting features an especially high standard of content, as unprecedented numbers of submissions required an especially rigorous selection by our international Program Committee under Co-chair Gene Myers.

On June 29th, we will present 15 half-day tutorials taught by internationally recognised leaders in diverse areas of computational biology and bioinformatics. These 15 were selected from a highly competitive field of 48 proposals.

Our eight keynote speakers – including 2002 Nobel Prize winner Sydney Brenner – will take us to the forefront of both computational sciences and genomic biology. Our original intention was to invite four "biologists" and four "computational scientists". But boundaries are fuzzy in computational biology, and it's more accurate to see our eight keynotes as positioned at various points along the gradient between "computation" and "biology".

Our 35 long and 13 short papers were selected from among an unprecedented 350 submissions. Full details (including abstracts) are now available on the conference website: www.iscb.org/ismb2003.

Again this year, ISMB continues to be supported by leading companies in computation, software, bioinformatics services, publishing and related industries, and by leading educational and research institutions. The conference website carries information on our sponsors, trade exhibition and demos.

Five Special Interest Groups (BOSC, Bio-Pathways, Text mining, Bio-Ontologies, and WEBo3) will meet just before ISMB 2003, on 27 and/or 28 June. For more information, follow the SIG link on the conference website.

#### INFORMATION UPDATE

The submission deadline for posters has now been extended to 19 May 2003. Posters submitted after that date will be accepted (if there's still room—and the Brisbane Conference & Exhibition Centre provides a LOT of room) but your abstract may not be included in the abstract book. As of today we have almost 400 poster submissions.

Information on visas, air travel, special air fares (see below for more information), airport transfers, car rentals, and local transportation has now been posted at:

www.iscb.org/ismb2003/trans\_visas.shtml

Don't miss out on the Early Registration Discount! The deadline is May 23, 2003.

### SARS

We all have heard the old Chinese malediction, "May you live in interesting times." These are certainly interesting times in which to hold a major international conference! As the conflict in Iraq began to subside, the SARS situation began to intrude more and more into the headlines.

The World Health Organisation website (www.who.int/csr/sarscountry/en/) provides

updates, six days a week, on probable SARS cases in all countries. As I write (12 May 2003) the WHO website says that there have been cumulatively 4 probable cases of SARS in Australia, all of whom have recovered.

The Australian Department of Health and Ageing website (www.health.gov.aulsars.htm) states: "Since the WHO health alert, Australia has intensified its disease surveillance capacity with information to hospitals, health workers and General Practitioners about symptoms to look for and infection control procedures to undertake if presented with a potential suspect case of SARS. While a number of patients in Australia have been placed under investigation after presenting with symptoms of the disease following recent travel from Asia, no cases of SARS have been found in Australia."

The website of ICIAM-5 (www.iciam.org), a major international mathematics conference that will convene in Sydney the week after ISMB-2003, also has a range of useful information about travel to Australia, information about the four cases (all of whom, according to the site, recovered before April 17th), and links to other websites with SARS information relevant to travelers.

A major international agricultural trade fair and exhibition has just ended in Rockhampton, a few hundred km north of Brisbane, with large delegations from overseas and (according to the press) a record attendance of more than 50,000 over the 8-day event. The XIX Genetics Congress in Melbourne, scheduled the week after ISMB-2003, so far has more than 2100 registrants.

## THE KEY BIOINFORMATICS EVENT FOR 2003

Websites and reports in the press assure us that there is a greater chance of being struck by lightning (1 in 5.3 million per year in Australia) than contracting SARS while transiting through an international connections area. Nonetheless, registrants from Europe who may be concerned about transiting through e.g. Singapore should be aware that excellent connections to and from Brisbane are available through Tokyo, Osaka, Seoul, Bangkok, Kuala Lumpur, Brunei, Manila, the Gulf via Perth, and other routes. Travelers from North America will normally connect through Sydney or Auckland.

Please watch the conference website for information and announcements.

#### **LOCATION**

Brisbane, the capital of Queensland, Australia's "Sunshine State," is Australia's only subtropical capital city. Sophisticated yet friendly, Brisbane is a year-round city that enjoys warm, bright summers and clear, mild winters. Brisbane itself is the perfect place to relax and enjoy the best of Australia. A wide range of restaurants, theatre, museums, galleries, parks and wildlife areas (not to mention Steve Irwin's Australia Zoo) awaits. It is also the perfect jumping-off point for a tour to the Great Barrier Reef, the Gold Coast, the Sunshine Coast, or the fabulous Aussie Outback. Tropical rainforest, white sand beaches, offshore islands, sailing, and mountain hiking are but a few of the opportunities waiting for you. For more information: www.ourbrisbane.com

www.queensland-holidays.com.au.

Queensland is also Australia's "Smart State", with a burgeoning biotechnology industry and several bioinformatics firms. Consider spending an extra day to visit the world-class research facilities at e.g. the University of

Queensland, Queensland University of Technology, Griffith University, and the Queensland Institute of Medical Research.

### **ACCOMMODATION**

Room blocks have been reserved in Brisbane for ISMB 2003 at special conference rates.

Conference attendees can book online via the accommodation web site:

www.iscb.org/ismb2003/housing.shtml

#### AIR TRAVEL

Corporate Travel Management (CTM) has been appointed the official travel agency for the 11th International Conference on Intelligent Systems for Molecular Biology. CTM offers special flexible/changeable conference airfares at up to 40% discount in economy class on Qantas services or the best Internet or published airfares available on Qantas and Virgin Blue Airlines. Quotes can be requested via our travel page: www.iscb.org/ismb2003/trans\_visas.shtml

#### AFFILIATED EVENTS

In addition to the Special Interest Group meetings, note the First IECA Conference on Systems Biology of *E. coli* (just before ISMB 2003, June 23-25 in Tsuruoka, Japan) and the World Genetics Congress (just after ISMB 2003, July 6-11 in Melbourne, Australia). As well, the Fifth International Congress on Industrial and Applied Mathematics (*www.iciam.org*) will convene in Sydney from July 7-11. Follow the links on our website for information about these and other affiliated events.

Mark Ragan

Chair, ISMB-2003 Local Organising Committee The ISCB thanks the following individuals for all their support, dedication, and commitment to producing to the ISMB 2003 conference.

# ISMB 2003 ORGANIZING COMMITTEE

Gene Myers (Co-chair), University of California, Berkeley

Mark Ragan (Co-chair), Institute for Molecular Bioscience, University of Queensland

Kevin Burrage, Advanced Computational Modelling Centre, University of Queensland

Antoine Danchin, *Institut Pasteur,* Paris

Terry Gaasterland, *Rockefeller University* 

Minoru Kanehisa, Japanese Society for Bioinformatics, Kyoto University

 ${\sf Tim\ Littlejohn},\ {\it Biolateral\ Pty\ Ltd}.$ 

John Mattick, Institute for Molecular Bioscience, University of Queensland

Christos Ouzounis, European Bioinformatics Institute

Shoba Ranganathan, Asia-Pacific BioNet, National University of Singapore

David Wishart, University of Alberta

# ISMB 2003 LOCAL ORGANIZING COMMITTEE

Mark Ragan (Chair), Institute for Molecular Bioscience, University of Queensland

Peter Adams, Institute for Molecular Bioscience, University of Queensland

Tim Bailey, Institute for Molecular Bioscience, University of Queensland

Jennifer Hallinan, Institute for Molecular Bioscience, University of Queensland

Michelle Madden, Hotelier's International

Rohan Teasdale, Institute for Molecular Bioscience, University of Queensland



# 2003 OVERTON PRIZE

# Fim Kent

The ISCB will award the Overton Prize for 2003 to W. James Kent, an assistant research scientist at the University of California, Santa Cruz. The award, which recognizes outstanding achievement in the field of computational biology, will be presented at ISMB2003, where Kent will deliver the annual Overton Lecture on July 1, 2003.

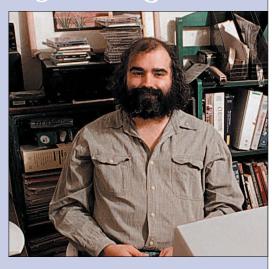
Kent is best known as the researcher who "saved" the human genome project, a feat chronicled in the *New York Times*. With little more than a month before the company Celera was to present a complete draft of the human genome to the White House in 2000, Kent wrote GigAssembler, a program that produced the first full working draft assembly of the human genome, which kept the data freely available in the public domain.

Kent's main scientific goal has been to understand gene regulation by building bioinformatics tools such as his Intronerator system for exploring the genome of *C. elegans*; the program

WABA, one of the first pair-HMMs for alignment of genomic DNA of two species; Improbiser, an expectation-maximization method to discover and cluster potential transcription factor binding sites; and the popular BLAT, which rapidly searches full genomes at both the DNA and protein levels.

The Overton Prize was established by the ISCB in memory of G. Christian Overton, a major contributor to the field of bioinformatics and member of the ISCB Board of Directors who died unexpectedly in 2000. The prize, now in its third year, is awarded for outstanding accomplishment to a scientist in the early- to mid- stage of his or her career who has already made a significant contribution to the field of computational biology through research, education, service, or a combination of the three.

Previous winners of the Overton Prize have included David Baker, Howard Hughes Medical Institute Investigator and associate professor at the University of Washington



2003 Overton Prize Recipient, Jim Kent

for his outstanding contributions in genomics, and Christopher Burge, assistant professor of biology at the Massachusetts Institute of Technology for his work identifying and modeling genes in higher eukaryotic organisms.

# SGI BEST PAPER AND BEST STUDENT PAPER FINALISTS CHOSEN

The ISMB2003 program committee, chaired by Gene Myers, professor of electrical engineering and computer sciences at the University of California, Berkeley, has chosen the finalists for this year's SGI Best Paper and Best Student Paper awards. The winners in both categories will be selected at ISMB2003.

The program committee and senior reviewers for the conference provided the initial nominations. The committee's cochairs then chose the finalists after reviewing all nominations. The winners will be selected by a subset of the senior review committee based on the written paper as well as oral presentation at the conference. The awards will be presented Wednesday, June 2 at 17:20 during ISMB2003.

#### **SGI BEST PAPER CANDIDATES:**

- Roded Sharan, Ivan Ovcharenko, Asa Ben-Hur, and Richard Karp: CREME: A Framework for Identifying Cis-Regulatory Modules in Human-Mouse Conserved Segments
- Saurabh Sinha, Erik van Nimwegen, and Eric Siggia: A Probabilistic Method to Detect Regulatory Modules
- Eran Segal, Roman Yelensky, and Daphne Koller: Genome-wide Discovery of Transcriptional Modules from DNA Sequence and Gene Expression
  (also nominated for SGI Best Student Paper)

# 2003 ISCB SENIOR SCIENTIST ACHIEVEMENT AWARD



The ISCB will present the first-ever ISCB Senior Scientist Accomplishment Award to David Sankoff, Canada Research Chair in Mathematical Genomics at the University of Ottawa and a member of the Centre de Recherches Mathématiques at the Université de Montréal. The prize will be awarded to Sankoff at ISMB2003, where he will present a keynote lecture on July 2, 2003.

The Senior Scientist Accomplishment Award recognizes members of the computational biology community who are more than 12 to 15 years post-degree and have made major contributions to the field of computational biology through research, education, service, or a combination of the three. Over the past 30 years, Sankoff formulated and contributed to many of the fundamental problems in computational biology.

In sequence comparison, he introduced the quadratic version of the Needleman-Wunsch algorithm, developed the first statistical test for alignments, initiated the study of the limit behavior of random sequences with Vaclav Chvatal and described the multiple alignment problem,

based on minimum evolution over a phylogenetic tree. In the study of RNA secondary structure, he developed algorithms based on general energy functions for multiple loops and for simultaneous folding and alignment, and performed the earliest studies of parametric folding and automated phylogenetic filtering.

Sankoff and Robert Cedergren collaborated on the first studies of the evolution of the genetic code based on tRNA sequences. His contributions to phylogenetics include early models for horizontal transfer, a general approach for optimizing the nodes of a given tree, a method for rapid bootstrap calculations, a generalization of the nearest neighbor interchange heuristic, various constraint, consensus and supertree problems, the computational complexity of several phylogeny problems with William Day, and a general technique for phylogenetic invariants with Vincent Ferretti.

Over the last fifteen years he has focused on the evolution of genomes as the result of chromosomal rearrangement processes. Here he introduced the computational analysis of genomic edit distances, including parametric versions, the distribution of



2003 ISCB SSAA Recipient,, David Sankoff

gene numbers in conserved segments in a random model with Joseph Nadeau, phylogeny based on gene order with Mathieu Blanchette and David Bryant, generalizations to include multi-gene families, including algorithms for analyzing genome duplication and hybridization with Nadia El-Mabrouk, and the statistical analysis of gene clusters with Dannie Durand. Sankoff is also well known in linguistics for his methods of studying grammatical variation and change in speech communities, the quantification of discourse analysis and production models of bilingual speech.

#### **SGI BEST STUDENT PAPER CANDIDATES:**

- Maureen Heymans and Ambuj Singh: Deriving phylogenetic trees from the similarity analysis of metabolic pathways
- Orla Osullivan, Marc Zehnder, Des Higgins, Philipp Bucher, Aurelien Grosdidier, and Notredame Cedric: APDB: A Novel Measure for Benchmarking Sequence Alignment Methods without Reference Alignments
- Yoshihiro Yamanishi, Jean-Philippe Vert, Akihior Nakaya, and Minoru Kanehisa: Extraction of Correlated Gene Clusters from Multiple Genomic Data by Generalized Kernel Canonical Correlation Analysis
- Eran Segal, Roman Yelensky, and Daphne Koller: Genome-wide Discovery of Transcriptional Modules from DNA Sequence and Gene Expression (also nominated for SGI Best Paper)
- Eran Segal, Haidong Wang, and Daphe Koller: Discovering
  Molecular Pathways from Protein Interaction and Gene Expression
  Data



# **KEYNOTE**

# Sydney Brenner

Sydney Brenner, one of three recipients of the 2002 Nobel Prize in medicine, will deliver a keynote speech at ISMB2003. Brenner, a distinguished professor at the Salk Institute for Biological Studies and founder of the Molecular Sciences Institute, was honored for his contributions toward discoveries about how genes regulate organ growth and the process of programmed cell death.

Brenner showed that the tiny transparent worm *C. elegans* was useful for studying how cells specialize and organs develop. His work ``laid the foundation for this year's prize,'' the awards committee said.

During his distinguished career, Brenner also demonstrated that a chemical could produce specific genetic mutations in the worm, allowing different mutations to be linked to specific effects on organ development. The work of Brenner and this year's Nobel laureates in medicine has implications for understanding a range of diseases, including cancer, AIDS, strokes and neurodegenerative diseases.

"Sydney Brenner has made remarkable contributions throughout his career to our understanding of biology and medicine," said Richard Murphy, president and CEO of the Salk Institute for Biological Studies. "He was responsible for uncovering the basic principles of how DNA instructs cells to make proteins and he was the first to sequence the genome of an entire multi-cellular organism (the worm *C. Elegans*), work that set the stage for understanding the field of cell death, which is critical to our understanding of many diseases, including cancer and degenerative diseases of the

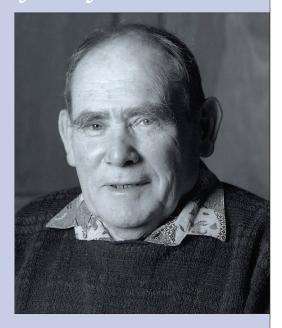
brain. His work also provided the foundation for the subsequent sequencing of the human genome. Sydney is a true visionary and one of the most important biologists of our time. He is well deserving of this honor."

In the early 1960s, Brenner established the existence of messenger RNA, or mRNA, which can be translated into proteins, and demonstrated that the nucleotide sequence of mRNA determines the order of amino acids in proteins. For these discoveries in 1971, Brenner received his first Lasker Award, sometimes referred to as "America's Nobels," in Basic Medical Research. He received a second Lasker Award in 2000.

Among his other notable advances, Brenner – with Salk Institute Distinguished
Professor Francis Crick—proposed that a single amino acid is coded by three nucleotides, a triplet, of RNA.

Born in 1927 in Germiston, South Africa, Brenner was awarded degrees in medicine and science in 1947 from the University of Witwatersand in Johannesburg. He subsequently moved to England where, in 1954, he received a D.Phil. in chemistry from Oxford University. In 1957, Brenner joined the Medical Research Council in Cambridge, England. There, he became director of the Laboratory of Molecular Biology and the Molecular Genetics Unit.

From 1981-1985, Brenner served as a non-resident fellow at the Salk Institute; from 1989-1991, he was a scholar-in-residence at the Scripps Research Institute. In 1996, Brenner became president and director of science at the Molecular Sciences Institute in Berkeley, Calif.



Brenner has received numerous awards, including the Gairdner Foundation
International Award, the Krebs Medal, the Croonian Medal, the Harvey Prize, the Waterford Bio-Medical Science Award, the Kyoto Prize, the King Faisal International Prize for Science, and the Bristol-Myers Squibb Award for Distinguished Achievement in the Neuroscience Research. He is a member of the Royal Society of London, is a foreign associate of the U.S. National Academy of Sciences, and is an adjunct professor of biology at the University of California, San Diego.

# ISMB-ECCB 2004

ISMB2004 will be held jointly with the third installation of the European Conference on Computational Biology (ECCB), a coordinated effort with Genes, Proteins and Computers VIII (GPCVIII). Organizers of the ISMB-ECCB 2004 estimate the meeting, which will run from August 1-5 in Glasgow, Scotland, will be the largest bioinformatics conference to be held that year.

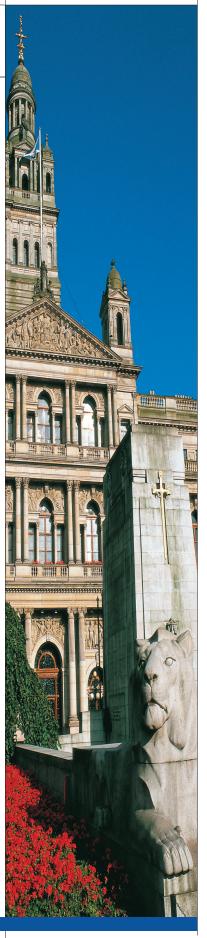
The meeting will mark the first time ISMB, which will be in its twelfth year, has been held in conjunction with another bioinformatics meeting. The conference will be hosted jointly by the European Bioinformatics Institute (EBI), the UK-funded Collaborative Computational Project II (CCPII), and the Scottish Bioinformatics Forum (SBF) and will take place in the Scottish Exhibition and Conference Centre, a state-of-the-art conference auditorium that seats up to 3,000 delegates, has extensive breakout facilities, and is linked to 22,000 square meters of exhibition space and a 285-bedroom hotel.

Similar to ISMB, ECCB is a multi-disciplinary conference that bridges the fields of computer science, mathematics, physics, chemistry and biology by bringing together involved scientists from all over the world. It builds on the excellent reputation of the national computational biology conferences held in many European countries, by operating a revolving scheme: each year, one of the European countries hosts the European conference, jointly with its national conference on computational biology. The inaugural ECCB was held in conjunction with the German Conference on

Bioinformatics in Saarbrücken, Germany, in October 2002.

The 2004 meeting will be organized and the program committee chaired by David Gilbert of the University of Glasgow and Janet Thornton of the European Bioinformatics Institute. So far, the organizers have proposed a format similar to previous ISMB meetings, including papers, presenters, posters, awards, special interest groups, and an "Education Day" of workshops and tutorials.

The organizing and program committees have representatives from every continent and both committees will be actively involved in promoting the conference to their local bioinformatics communities and encouraging submissions from around the world. Likewise, they will encourage the global participation of special interest groups, educators in bioinformatics, and companies, particularly those who are applying bioinformatics to improving human health and well-being.



## **BRAZIL CHOSEN FOR ISMB 2006**

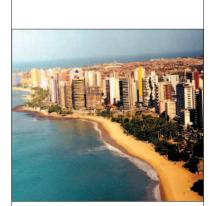
In 2006, ISMB will be held in Fortaleza, Brazil, marking the first time the meeting has been held in South America. The meeting will also be the largest bioinformatics conference ever held in Brazil.

In December, then-President of the ISCB, Phil Bourne, and ISMB conference planner Stephanie Hagstrom toured Fortaleza, a city of nearly two million people on the Atlantic coast. Fortaleza is the capital of Ceará, a state known for its beautiful beaches, culture, nightlife, as well as being a center for academic research and business. Fortaleza is a popular tourist destination, receiving an average 500,000 tourists annually.

Hagstrom said, "We're very excited about ISMB2006. Fortaleza is a beautiful city, and the facilities there are first-rate. The state of Ceará is interested in developing bioinformatics in the region as well."

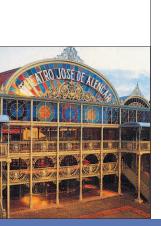
During their inspection visit to Fortaleza Bourne and Hagstrom met with the Governor of Ceará, Lúcio Alcântara, and other local officials. They also visited with ISCB Director Goran Neshich of EMBRAPA, who was instrumental in putting together the proposal for the conference.

The event will be held at the Fortaleza Convention Center from August 6-II, 2006. The modern facility is easily accessible from the airport include auditoriums, conference rooms, mini-auditoriums, an acclimatized pavilion for expositions, parking area, and a food court.



LEFT COLUMN: Various views of Fortaleza

RIGHT: ISCB Past President Phil Bourne and ISCB staff member Stephanie Hagstrom, meet with ISMB2006 chair Goran Neshich and local organizers in Brazil to tour a convention center.





# PACIFIC SYMPOSIUM ON BIOCOMPUTING 2003

ISCB was once again pleased to be affiliated with the Pacific Symposium on Biocomputing (PSB) 2003, held January 3-7, 2003, in Lihue, Hawaii, at the Kauai Marriott Resort and Beach Club (psb.stanford.edu/psb03/). Since 1996, PSB has built a reputation as a truly international, multidisciplinary conference for the presentation and discussion of current research in the theory and application of computational methods in problems of biological significance.

PSB 2003 brought together approximately 350 top researchers from the US and around the world to exchange research results and address open issues in all aspects of computational biology. Presentations covered recent and current works in databases, algorithms, interfaces, visualization, modeling and other computational methods, as applied to biological problems, with emphasis on applications in datarich areas of molecular biology.

Specifically designed to be responsive to the need for critical mass in sub-disciplines within Biocomputing, PSB sessions are defined dynamically each year in response to specific proposals and organized by leaders in the emerging areas. Sessions are targeted to provide

a forum for publication and discussion of research in biocomputing's "hot topics," providing an early forum for serious examination of emerging methods and approaches in this rapidly changing field.

During the conference ISCB hosted an open meeting attended by approximately 50-70 ISCB members and interested attendees. Just prior to his term expiration, ISCB President Philip Bourne, Ph.D., was able to give attendees an update on the state of the Society, and field questions and comments regarding past activities as well as future plans and projects.

PSB 2004 will be held January 6-10, 2004 on the Big Island of Hawaii at the Fairmont Orchid Hotel. Once again, ISCB will continue our affiliation with this excellent conference series, and will again be sponsoring a limited number of student and post doc travel fellowships. Watch for announcements from the Society in the months ahead. Additionally, conference registration will be opening very soon. See psb.stanford.edulindex.html for further details.



ISCB bids farewell to our staff Graphic Designer and Webmaster, Jennifer Matthews. Last year Jennifer embraced the exciting assignment of changing the face of ISCB throughout our website and printed literature by creating a more professional and current design. The ISCB wishes Jennifer the best of success in her new position at the Scripps Institute of Oceanography in La Jolla, California.

Filling the staff role of Graphic Designer and Webmaster is Dana Jermanis, a recent graduate of the University of California, San Diego. As Dana arrives with her own unique talents and great ideas we are thrilled to have her and are ready to watch for a continuation of the increased professionalism of our public appearance.

ISCB is also pleased to welcome Kyle Wright. Kyle is a student at the University of California, San Diego. He is offering part time database management support to the Society, and as is the case with database programming, many of you have undoubtedly already seen his work without realizing it. But behind the scenes we know exactly what his contributions have been and are thrilled to have him aboard.



PSB travel fellowship award recipients from ISCB (from left): Patrick Glennison, ISCB Past President Philip Bourne, and Indra Neil Sarkar (not pictured: Alex Lancaster and Jochen



# VANCOUVER BIOINFORMATICS USERS GROUP

Once a month, over 150 members of the bioinformatics community in the Vancouver area of British Columbia Canada, amass for VanBUG, the Vancouver Bioinformatics Users Group. This isn't a meeting of enthusiasts of some obscure VW, but instead an effort to coordinate and exchange ideas within the Pacific northwest's bioinformatics community.

VanBUG attracts local researchers, students and other interested professionals to hear seminars from respected bioinformaticians from the local area and from around the world. VanBUG strives to expose the community to cutting-edge research, approaches that could be applied to each individual's day to day work, and some of the chal-

lenges other researchers have overcome, or see looming on the horizon.

VanBUG's inaugural session hosted respected scientists such as Lincoln Stein (Cold Spring Harbor Laboratory), Steven Jones (Canada's Michael Smith Genome Sciences Centre), Wyeth Wasserman (Centre for Molecular Medicine and Therapeutics) and, VanBUG's co-founder, Francis Ouellette (UBC Bioinformatics Centre). The second season has delivered again to the community by hosting Nat Goodman (Institute for Systems Biology), amiably known as the "IT guy" from Genome Technology magazine, as well as Anne Condon (University of British Columbia) and Chris Upton (University of

Victoria). All past talks are available on our website.

Included in this season is a celebration for the 50th anniversary of the publication of the structure of DNA. VanBUG has arranged an evening panel of local scientists who have seen or helped shaped the events of the last 50 years to share their personal reflections on where we have been and are going. And if that just isn't enough, pizza is free and beer is cheap. To find out more about VanBUG's schedule visit vanbug.org or contact the development team at dev@vanbug.org.

VanBUG is generously sponsored by Genome British Columbia and IBM.

# SPOTLIGHT: ASIA PACIFIC BIOINFORMATICS NETWORK (APBIONET)

Little over a year ago the Asia Pacific Bioinformatics Network (APBioNet) became an official affiliate of the ISCB, which involves cross-promotion of the two societies through publications and conferences, a voice for APBioNet to promote regional matters on the ISCB board, and potential support for APBioNet's regional activities, such as travel sponsorships.

APBioNet was founded in January 1998 at the Pacific Symposium for Biocomputing and has grown to over 500 members. The group has a strong record of outreach around the Pacific Rim and Asia (with members as far west as Pakistan and Europe), encouraging collaboration in the field of bioinformatics in the Asia Pacific region as well as promoting awareness among biologists of the need to acquire bioinformatics skills.

APBioNet Secretariat Tan Tin Wee of the National University of Singapore predicts that APBioNet's growth will keep pace with the overall growth of the field in the Asia Pacific region. "Of course, the more

benefits and value-addedness we provide, the more people will come forward to join," he said.

APBioNet has an ambitious set of shortand long-term goals. In the near term, group is working on many initiatives, among them rolling out an APBioGrid and workflow testbed, creating S\* mirror sites in the Asia Pacific region, supporting conferences, raising funds, encouraging volunteers, and applying for grants to bring bioinformatics to developing countries, such as the recently awarded APBioBox software development project funded by the International Development Research Centre of Canada (IDRC).

"That is a lot of things to do in a short time frame, but the field is moving so rapidly," said Tan.

APBioNet's outreach efforts have begun to yield results for educational outreach, particularly with the success of the S\* Alliance, and for encouraging bioinformatics in developing countries. APBioNet played a key role in inspiring researchers in

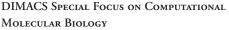
Thailand to initiate the InCOB conference, which will be held in Penang, Malaysia this year, 8-10 September (*cgat.ukm.mylincobl*). The ISCB is offering travel fellowships for APBioNet members to attend InCOB..

In addition APBioNet has begun coordinating not only with the ISCB, but also OMG, BOST, I<sub>3</sub>C, and others to introduce Asia Pacific people to the imperative of participating in standardization and open source initiatives.

APBioNetters are looking forward to ISMB 2003 and have been helping with administrative tasks, through the organizing committee, and in providing supplementary financial assistance for some participants. APBioNet's vice president and ISCB Director Shoba Ranganathan of the National University of Singapore will also be chairing one of the ISMB special interest group meetings, WEB03.

More about APBioNet can be found at www.apbionet.org/.

## EVENTS AND OPPORTUNITIES OF INTEREST



DATE: September 2000-August 2003 URL: dimacs.rutgers.edu/Workshops/ index-compmolecbiol.html

3RD ANNUAL RECOMB SATELLITE MEETING ON DNA SEQUENCING TECHNOLOGIES AND COMPUTATION

DATE: May 17-19, 2003

LOCATION: Stanford University, Palo Alto,

California, USA

URL: recomb-satellite.stanford.edu

BIOINFORMATICS 2003

**DATE:** May 22-24, 2003

LOCATION: Helsinki, FINLAND

URL: bioinf.uta.fi/bio2003/

Hawaii International Conference on

STATISTICS

**DATE:** June 5-8, 2003

LOCATION: Honolulu, Oahu, USA URL: www.hicstatistics.org/cfp\_stats.htm

CALL FOR PAPERS: 3RD ACM SIGKDD

Workshop on Data Mining in

BIOINFORMATICS

SUBMISSION DEADLINE: June 6, 2003

URL: www.cs.rpi.edu/~zaki/BIOKDD03/

Frontiers in Bioinformatics 2003

DATE: June 6-8, 2003

LOCATION: Buffalo, New York, USA URL: www.bioinformatics.buffalo.edu/

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CALL FOR PAPERS: 15TH IEEE

International Conference on Tools with Artificial Intelligence (ICTAI 2003) SUBMISSION DEADLINE: June 15, 2003

URL: sierra.ecs.csus.edu:8080/

MATHEMATICS OF EVOLUTION AND PHYLOGENY

**DATE**: June 16-19, 2003

LOCATION: Institut Henri Poincaré, Paris,

FRANCE

URL: www.ihp.jussieu.fr/mep/

# ISCB Affiliated Conferences

ISMB 2003

\$80USD DISCOUNT FOR REGULAR ISCB

MEMBERS; \$45USD DISCOUNT FOR

STUDENT/POSTDOC MEMBERS

**DATE:** June 29-July 3, 2003

LOCATION: Brisbane, Queensland,

AUSTRALIA

URL: www.iscb.org/ismb2003/index.shtml

### **INCOB 2003**

DATE: September 8-10, 2003 LOCATION: Penang, MALAYSIA

URL: cgat.ukm.my/incob/

#### ECCB 2003

DATE: September 27-30, 2003 LOCATION: Paris, FRANCE URL: www.inra.fr/eccb2003/

### PSB 2004

\$100USD DISCOUNT FOR ISCB MEMBERS

**DATE:** January 6-10, 2004

LOCATION: Big Island of Hawaii, USA

URL: psb.stanford.edu/

### ISMB/ECCB 2004

(a joint meeting in conjunction with GPCVIII)

**DATE:** August 1-5, 2004

Location: Glasgow, Scotland, UK URL: www.iscb.org/ismbeccb2004/

#### RECOMB 2004

**DATE:** March 27-31, 2004

LOCATION: San Diego, California, USA

URL: recombo4.sdsc.edu

#### ISMB 2006

**DATE:** August 4-11, 2006

LOCATION: Fortaleza, Ceara, BRAZIL



# discount when they register for the following three events:

MICROARRAY ANALYSIS, VISUALIZATION, AND INTEGRATION

**DATE:** May 20-22, 2003

**LOCATION:** Boston, Massachusetts, USA URL: www.marcusevans.com/EVENTS/
Life\_Science\_CFEventinfo.asp?RecID=7349

# Knowledge Management for Pharmaceutical R&D

**DATE:** June 3-5, 2003

**Location:** Boston, Massachusetts, USA URL: www.marcusevans.com/EVENTS/
Life\_Science\_CFEventinfo.asp?RecID=7318

#### **EXECUTIVE IT LIFE SCIENCE FORUM**

DATE: June 4-5, 2003

**LOCATION:** Boston, Massachusetts, USA URL: www.marcusevans.com/EVENTS/
Life\_Science\_CFEventinfo.asp?RecID=7332

### SCHOLARSHIP OFFER FOR ISCB MEMBERS

The Stanford University Biomedical Informatics Training Program and Stanford Center for Professional Development (SCPD) will award one ISCB member a scholarship to attend Bioinformatics: Methods and Techniques - a three-day, intensive survey of Bioinformatics. The scholarship will cover the cost of course tuition but not expenses related to travel or accommodations. The scholarship has a value of \$2595 USD and ISCB memberships must be paid for year 2003 to qualify to win. Application deadline is May 23, 2003. Apply at:

http://proed.stanford.edu/?bioinformatics\_iscb-

scholarship



# **EVENTS AND OPPORTUNITIES OF INTEREST**

SHORT COURSE: BIOINFORMATICS: KEY TO A

New Biology

DATE June 19-20, 2003

LOCATION: Berkeley, California, USA

URL: www.unex.berkeley.edu/eng/sum/336727.html

WORKSHOP: SCIENCE AND SOCIAL

RESPONSIBILITY

DATE: June 20-23, 2003

LOCATION: Garrison, New York, USA CONTACT: Callahan@thehastingscenter.org

2003 International Conference on MATHEMATICS AND ENGINEERING TECHNIQUES IN MEDICINE AND BIOLOGICAL SCIENCES

(METMBS '03)

DATE: June 23-26, 2003

LOCATION: Monte Carlo Resort, Las Vegas,

Nevada, USA

URL: metmbs.sdsu.edu/

BIOMED 2003

**DATE:** June 25-27, 2003

LOCATION: Salzburg, AUSTRIA

URL: www.iasted.org/conferences/2003/salzburg/bio-

med.htm

CALL FOR PAPERS: THEORETICAL COMPUTER

SCIENCE SPECIAL ISSUE ON PATTERN

DISCOVERY IN THE POST GENOME

SUBMISSION DEADLINE: June 30, 2003

URL: www.dimi.uniud.it/labs/bioinformatics/ downloads/callForPapersTCS2003.html

International Conference on Computer SCIENCE AND ITS APPLICATIONS (ICCSA-2003)

DATE: July 1-2, 2003

LOCATION: San Diego, California, USA

URL: www.useducationservice.com/conference/

callforpaper.htm

GENETICS XIX INTERNATIONAL CONGRESS OF GENETICS GEMONES: THE LINKAGE TO LIFE

DATE: July 6-12, 2003

LOCATION: Melbourne, AUSTRALIA

URL: www.geneticscongress2003.com/index.php

15TH EDITION LIPARI SUMMER SCHOOL

DATE: July 13-26, 2003

LOCATION: Lipari, ITALY

URL: lipari.cs.unict.it

15TH JOHN INNES SYMPOSIUM: STRUCTURAL

CHALLENGES IN THE POST-GENOMIC ERA"

DATE: July 15-18, 2003

LOCATION: Norwich, UK URL: www.jic.bbsrc.ac.uk/events/symposium/

BIOTHAILAND 2003

DATE: July 17-20, 2003

LOCATION: Bangkok, THAILAND

URL: biothailand2003.biotec.or.th

Moscow Conference on Computational

Molecular Biology (MCCMB'03)

DATE: July 22-25, 2003

LOCATION: Moscow, RUSSIA

URL: mccmb.belozersky.msu.ru/2003/

CALL FOR PAPERS: Special Issues of the

Informs Journal on Computing:

COMPUTATIONAL MOLECULAR

BIOLOGY/BIOINFORMATICS

SUBMISSION DEADLINE: August 1, 2003

URL: joc.pubs.informs.org/

CallSpecialIssueCompBio.html

Symposium Integrative Bioinformatics

**DATE:** August 4-5, 2003

LOCATION: Bielefeld, GERMANY

URL: cweb.uni-bielefeld.de/agbi/

home/index.html?id=142

**COURSE:** Techniques in Bioinformatics AND COMPARATIVE GENOMICS

**DATE:** August 4-8, 2003

LOCATION: Madison, Wisconsin, USA

URL:

www.btci.org/courses/intermediate/tbcgo3.html

**IEEE Computer Society Bioinformatics** Conference

DATE: August 11-14, 2003

LOCATION: Stanford University, Palo Alto,

California, USA

URL: conferences.computer.org/bioinformatics/

COURSE: Computational Approaches to

Analyzing Gene Expression Data

**DATE:** August 11-15, 2003

LOCATION: Madison, Wisconsin, USA

URL: www.btci.org/courses/intermediate/

caagedo3.html

12TH INTERNATIONAL CONGRESS OF RADIATION RESEARCH

DATE: August 17 to 22, 2003

LOCATION: Brisbane, AUSTRALIA

URL: www.icrr2003.org/

GORDON RESEARCH CONFERENCE ON

BIOINFORMATICS 2003: FROM INFERENCE TO

PREDICTIVE MODELS

DATE: August 24-29, 2003

LOCATION: Queen's College, Oxford, UK

URL: www.grc.org/programs/2003/bioinf.htm

THIRD INTERNATIONAL SUMMER SCHOOL ON COMPUTATIONAL BIOLOGY (ISSCB 2003)

DATE: August 31-September 5, 2003

LOCATION: Warsaw, POLAND

URL: www.mimuw.edu.pl/isscbo3/

7TH EUROPEAN CONFERENCE ON ARTIFICIAL

LIFE (ECAL-2003)

**DATE**: September 14-17, 2003

LOCATION: Dortmund, GERMANY

URL: www.ecal2003.org

2003 IEEE International Workshop on

NEURAL NETWORKS FOR SIGNAL PROCESSING

**DATE:** September 15-17, 2003

LOCATION: Toulouse, FRANCE

URL: isp.imm.dtu.dk/nnsp2003/

WABI 2003: 3RD Workshop on Algorithms IN BIOINFORMATICS

**DATE:** September 15-20, 2003

LOCATION: Budapest, HUNGARY

URL: wabi.biomath.mssm.edu/

CALL FOR PARTICIPATION: ECCB

SATELLITE MEETING: MODELING AND

SIMULATION OF BIOLOGICAL REGULATORY

Processes

DATE: October 1, 2003

LOCATION: Paris, FRANCE

URL: www.inra.fr/eccb2003/satellite2.html

6TH ANNUAL CONFERENCE ON COMPUTATIONAL GENOMICS

DATE: October 8-11, 2003

LOCATION: Cambridge, Massachusetts, USA

 ${\sf URL:}\ www.jax.org/courses/tigro3.html$ 

GERMAN CONFERENCE ON BIOINFORMATICS

DATE: October 12-14, 2003

LOCATION: Neuherberg, GERMANY

URL: www.gcbo3.de.

ATLANTA BIOINFORMTICS CONFERENCE

**DATE:** November 13-16, 2003

LOCATION: Atlanta, Georgia, USA

URL: opal.biology.gatech.edu/GeneMark/conference/

Hawaii International Conference on

SCIENCES

DATE: January 15-January 18, 2004 LOCATION: Honolulu, Oahu, USA

URL: www.hicss.hawaii.edu/

2ND ASIA-PACIFIC BIOINFORMATICS

CONFERENCE (APBC 2004)

DATE: January 18-22, 2004

LOCATION: Dunedin, NEW ZEALAND

URL: www.fit.qut.edu.au/~chenp/APBC2004

SAC 2004 -19TH ACM SYMPOSIUM ON APPLIED COMPUTING: BIOINFORMATICS TRACK

**DATE**: March 14-17, 2004

LOCATION: Nicosia, CYPRUS URL: www.cs.iupui.edu/~bioin/

## **ADDITIONAL ITEMS**

Models of Infectious Diseases RFA

ABOUT: NIGMS has issued a request for applications for pilot research projects and database development for a new initiative, Models of Infectious Disease Agent Study (MIDAS). MIDAS will consist of a centralized database and a network of multidisciplinary scientists conducting computational and mathematical research to improve the ability to detect, control, and prevent emerging infectious diseases caused by naturally occurring or intentionally released pathogens, including those relevant to biodefense. The request for applications is at grants.nih.gov/grants/guide/rfa-files/RFA-GM-03-008.html

#### AMERICAN HEART ASSOCIATION (AHA)

ABOUT: The AHA supports research activities broadly related to cardiovascular function and disease, stroke, as well as basic science, clinical, bioengineering/biotechnology and public health problems. National Research Programs are offered bi-annually. Application deadline: July 15, 2003. Information and forms are available at my.americanheart.org/portal/professional/research

# CALL FOR SUBMISSIONS: BIOINFORMATICS INDIA

URL: www.bioinformaticscentre.org/journal/
ABOUT: In an attempt to fill vacuum created by lack of comprehensive information on bioinformatics development s in India, the Bioinformatics Institute of India is launching first of its kind of journal dedicated solely to bioinformatics. BII is providing the platform for expression and is calling for research papers/ review articles/ news clips to be published in this quarterly journal.

# FORTHCOMING TITLES FROM CHAPMAN & HALL/CRC PRESS

URL: www.crcpress.com

ABOUT: Order the following titles online and receive a 10% discount—use discount code CHB20XXXX when ordering. Statistical Analysis of Gene Expression Microarray Data, Terry Speed; Data Analysis Tools for DNA Microarrays, Sorin Draghici; Statistical Genomics and Bioinformatics, Second Edition, Ben Hui Liu.

# NSF, SCIENCE JOURNAL ANNOUNCE SCIENCE VISUALIZATION CONTEST

ABOUT: The National Science Foundation and the journal *Science* are now accepting entries for the inaugural 2003 Science and Engineering Visualization Challenge. This new national contest will recognize outstanding achievement by scientists, engineers, and visual information practitioners in the use of visual media to promote understanding of research results. Contest rules and entry submission instructions are available on the Web at <a href="https://wwww.nsf.gov/odl/lpa/events/sevc/">www.nsf.gov/odl/lpa/events/sevc/</a>.

# CALL FOR SUBMISSIONS: STATISTICAL APPLICATIONS IN GENETICS AND MOLECULAR BIOLOGY (SAGMB)

URL: http://www.bepress.com/sagmb

ABOUT: SAGMB publishes significant research on the application of statistical ideas to problems arising from computational biology. The focus of the papers should be on the relevant

statistical issues but should contain a succinct description of the relevant biological problem being considered. The range of topics is wide and will include topics such as linkage mapping, association studies, gene finding and sequence alignment, protein structure prediction, design and analysis of microarray data, molecular evolution and phylogenetic trees, DNA topology, and data base search strategies.

# Free CD 'Automation in Bioscience' Now Available

URL: www.modernsciences.com

ABOUT: A free CD 'Automation in Bioscience' is now available. Microbiological calculations and growth curve charts are shown directly in MS Excel. Almost all microbiology related fields are covered.

### Journal of Bioinformatics and Computational Biology (JBCB)

URL: www.worldscinet.com/jbcb/jbcb.shtml
ABOUT: The first issue is FREE online at:
http://www.worldscinet.com/jbcb/jbcb.shtml
idge National Labs, US) If you would like to
receive a FREE printed copy for review, please
complete the form at: www.worldscinet.com/
cgi-bin/printed\_copy.cgi?jbcb.

CONTACT: limsoon@lit.a-star.edu.sg, mli@cs.ucsb.edu, jwooley@sdsc.edu

# CALL FOR SUBMISSIONS: Intl. Journal of Cooperative Information Systems

URL: www.worldscinet.com/ijcis/mkt/guidelines.shtml

ABOUT: Papers describing state-of-the research including, but not limited to, the following areas are solicited: Database integration and interoperability; Information Modeling, metadata and data sharing; Multidatabase indexing and multidatabase queries; Data semantic and control; Ontology design; Knowledge discovery and datamining; Algorithms for large scale and distributed biological databases

To recommend a conference for inclusion in the ISCB Newsletter, please write to admin@iscb.org.



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