



**Sun  
CB-SIG  
Singapore  
15 May 2006**

**Dr. Stefan Unger**  
**Global Business Development Manager**  
**Life Sciences**  
**Sun Microsystems**



# THE PROBLEM: Health Sciences Continuum



**Basic/"Academic" Comp Bio  
Research**

**Directed Research/Discovery**

**Development**

**Manufacturing**

**Sales/Marketing**

**Regulatory Requirements  
throughout**

**Healthcare Delivery**



Health Sciences: From Basic/Academic Research to Healthcare Delivery

# THE SOLUTION: Sun's Vision in Life Sciences - Flexibility!

- Hardware
  - > "Desktop to Teraflops"
  - > "Tape to Petabytes"
  - > Sparc
    - > New UltraSPARC IV+ and T1 (32 "CoolThreads")
  - > AMD Opteron
    - > Fastest x64 (Opteron) systems on the market!
    - > Supported: Solaris 10 x64, Linux, Windows
- Software
  - > Solaris, Solaris 10 x86/x64
  - > Sun Java Enterprise System
- Partners
  - > Sun Does Not Compete in Applications! Takes **NO** IP!
- Programs
  - > Building and Supporting a Community

“ROI!”



*SunRay*



*SunBlade*



*V210, X2100, T1000*



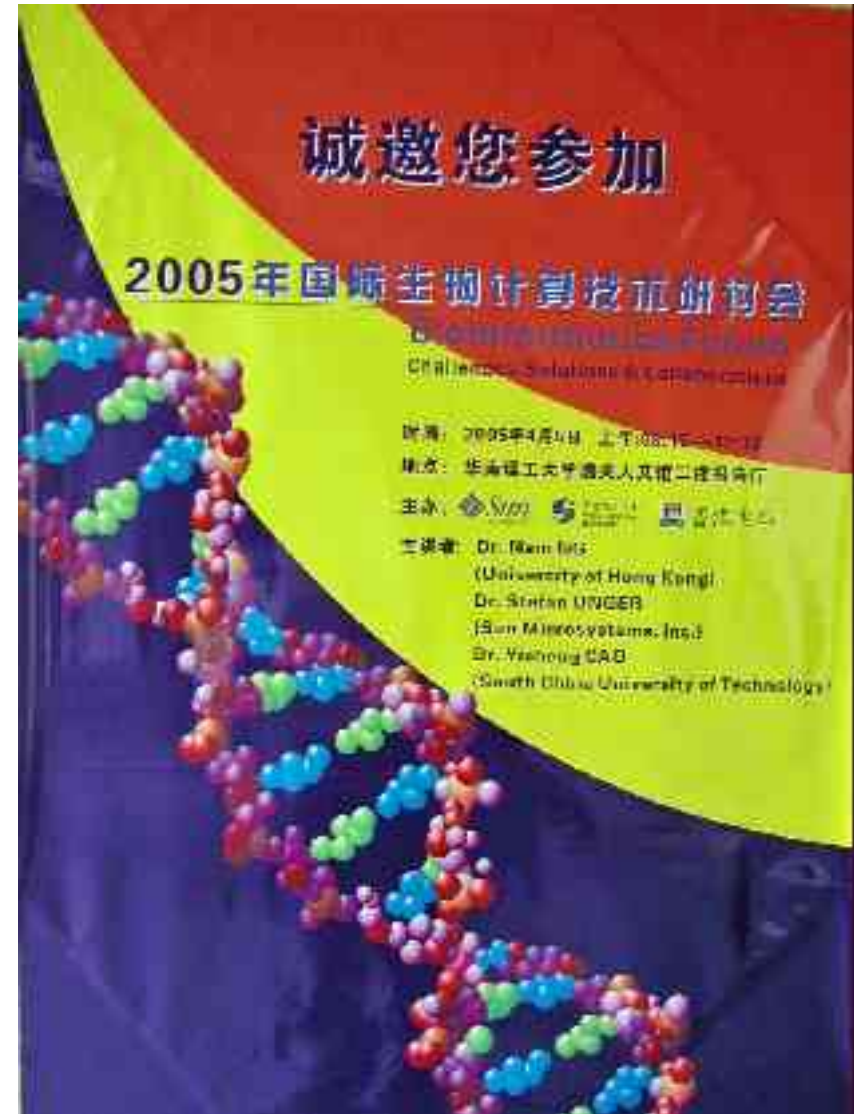
*SF V490, E6900*



*SF25K*

# Computational Biology

- Bioinformatics (BioX)
  - > Genomics
  - > Post-Genomics
- Macromolecular Structure
- Drug Discovery Technologies
- Bioengineering/Biosimulation
- Clinical Informatics
- Medical Imaging



# Global COE in Computational Biology

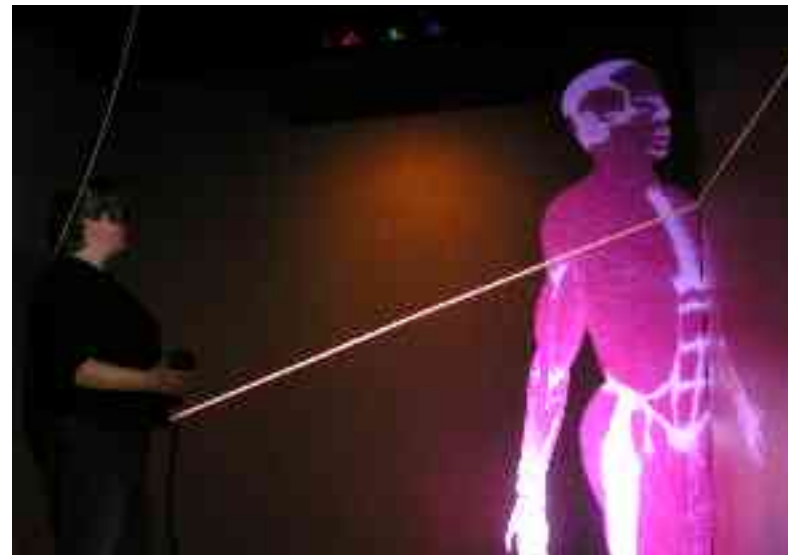
## NA/EMEA

Delaware Biotechnology Institute	US	<i>High Performance Comp Bio</i>
RTP (7 NC Institutions)	US	<i>Bioinformatics and Computational Biology</i>
UC Davis	US	<i>Public Health and Safety Informatics</i>
Dartmouth	US	<i>Neuroscience (fMRI)</i>
LONI/UCLA	US	<i>Computational Biology (Neuroimaging)</i>
UTHSC/SA	US	<i>Biological Modeling and Simulation</i>
U. Calgary	CANADA	<i>Visual Genomics</i>
Graz U Technology/U.Vienna	AUSTRIA	<i>Computational Genomics and Biomedical Informatics</i>
Parque Cientifico de Madrid	SPAIN	<i>Biocomputing</i>
Bielefeld	GERMANY	<i>Bioinformatics and Data Integration</i>
ETH	SWITZERLAND	<i>Biomedical Simulation</i>
Leeds	UK	<i>Virtual Tissue Engineering</i>

# Global COE in Computational Biology

## APAC

Nat. Cheng Kung U.	TAIWAN	<i>Bioinformatics</i>
Tokyo U. Science	JAPAN	<i>Biological Data Mining</i>
Hokkaido U	JAPAN	<i>Glycoinformatics and Glycotechnology</i>
RIKEN	JAPAN	<i>Open Bioinformatics Grid</i>
Genome Institute Singapore	SINGAPORE	<i>Digital Biology/Integrated Medical Genomics</i>
CDFD	INDIA	<i>Medical Bioinformatics</i>
U. Queensland	AUSTRALIA	<i>Molecular Simulations of Bio- and Nano-Systems</i>



# Programs

- Build Community
  - > Sun HPC Consortium
  - > Computational Biology Special Interest Group: 1650+ members, 15 meetings
  - > Sun Centers of Excellence: 19 active
  - > Sun Lecturers/Chairs
    - > U. Calgary, Dr Christoph Sensen, Applied Bioinformatics (with iCORE)
  - > Other Projects
    - > Discover Life (server)
- Upcoming/Recent Sun EDU CB Sponsored Events
  - > “Webservices for Computational Biology”, VBI, VA 5/05
  - > “Neuroimaging and Genomics”, Greece, 5/05
  - > ISMB, Detroit, MI, 6/05
  - > “Bridging Gaps in Computational Biology”, RTP, NC , 9/05
  - > BioIT World, Boston, 4/06
  - > CB-SIG, Singapore, 5/06
  - > **CB-SIG, Dresden, 6/06**

# Sun CB-SIG Agenda, Singapore May 2006

- 1:30 p.m. Kick off and Introductions, *Stefan Unger, Sun Microsystems***
- 1:45 p.m. Large Scale Skin Grading in the Real World, *Fumio Mizoguchi, WisdomTec Inc. & Tokyo University of Science, Japan***
- 2:15 p.m. APSTC & GSTN, *Deepak Jeevan Kumar, APSTC, Sun Microsystems***
- 2:45 p.m. Sun in Computational Biology and HPC, *Ulrich Meier, Sun Microsystems***
- 3:15 p.m. Break**
- 3:45 p.m. Computational Chemistry and Bioinformatics for Glycoscience and Glycotechnology, *Nobuaki Miura, Hokkaido University, Japan***
- 4:15 p.m. Integrated Approaches to Mine the Cellular Transcriptome, *Guillaume Bourque, Genome Institute of Singapore***
- 4:45 p.m. Bioinformatics Computing at Taiwan: Functional Module Discovery and Visualization from Protein-Protein Interaction Network, *Jung-Hsien Chiang, National Cheng Kung University, Taiwan***
- 5:15 p.m. Wrap up, *Stefan Unger, Sun Microsystems***