

ICBO 2011 — Videos of Presentations and Discussion

* With thanks to Robert Yao

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Thursday July 28

9:00am From Proteins to Diseases

Invited Panel sponsored by the Protein Ontology (PRO) • <http://pir.georgetown.edu/pro/>

- [The Integration of Biomedical Knowledge](#)
Cathy Wu (Moderator)
- [Pathways and Complexes: How to Represent What We Know and What We Don't Know](#)
Judith Blake
- [From Protein Complex to Supra-Complex](#)
Bill Crosby
- [Pathways and Diseases: Towards an Integrated Representation](#)
Peter d'Eustachio
- [Question and Answer Session](#)

10:45am Gene and Cell Ontologies

Chairs: Judith Blake (The Jackson Laboratory) and Stefan Schulz (Medical University of Graz)

- [Where GO is Going and What it Means for Ontology Extension](#)
Catia Pesquita, Francisco M. Couto
- [Revising the Cell Ontology](#)
Terrence F. Meehan, Christopher J. Mungall, Alexander D. Diehl
- [Rapid Development of an Ontology of Coriell Cell Lines](#)
Chao Pang, Tomasz Adamusiak, Helen Parkinson, James Malone
- [Cell Line Ontology: Redesigning the Cell Line Knowledgebase to Aid Integrative Translational Informatics](#)
Sirarat Sarntivijai, Zuoshuang Xiang, Terrence F. Meehan, Alexander D. Diehl, Uma Vempati, Stephan Schürer, Chao Pang, James Malone, Helen Parkinson, Brian D. Athey, Yongqun He
- [Towards a Semantic Web Application: Ontology-Driven Ortholog Clustering Analysis](#)
Yu Lin, Zuoshuang Xiang, Yongqun He

1:45pm Ontology of Biological Mechanisms

Chairs: Lindsay Cowell (University of Texas Southwestern Medical Center) and Jobst Landgrebe (Cognotekt)

- [HeartCyc: A Cardiac Cycle Process Ontology Based in the Ontology of Physics for Biology](#)
Daniel L. Cook, Michal Galdzicki, Maxwell L. Neal, Jose L.V. Mejino, John H. Gennari
- [Composite Annotation for Heart Development](#)
Tariq Abdulla, Ryan Imms, Jean-Marc Schleich, Ron Summers
- [Ontology-Based Analysis of Event-Related Potentials](#)
Gwen Frishkoff, Robert Frank, Paea LePendur
- [Dispositions and Processes in the Emotion Ontology](#)
Janna Hastings, Werner Ceusters, Barry Smith, Kevin Mulligan

3:30pm The OBO Foundry

Featuring discussions of [BFO](#) (Barry Smith), the [Plant Ontology](#) (Laurel Cooper), the [Ontology for Biomedical Investigations](#) (Bjoern Peters), the [Ontology for General Medical Science](#) (Albert Goldfain) and the [Infectious Disease Ontology](#) (Lindsay Cowell)

6:00pm **Software Demonstrations 1:**

Chair: Patricia L. Whetzel (Stanford University)

- [Protein-Centric Connection of Biomedical Knowledge: Protein Ontology \(PRO\) Research and Annotation Tools](#)
Cecilia N. Arighi, Darren A. Natale, Judith A. Blake, Carol J. Bult, Michael Caudy, Alexander D. Diehl, Harold J. Drabkin, Peter D'Eustachio, Alexei Evsikov, Hongzhan Huang, Natalia V. Roberts, Alan Ruttenberg, Barry Smith, Jian Zhang, Cathy H. Wu
- [SHIRAZ and CABERNET: Leveraging Automation, Crowdsourcing, and Ontologies to Improve the Accuracy and Throughput of Zebrafish Histological Phenotype Annotations](#)
Brian Canada, Georgia Thomas, John Schleicher, James Z. Wang, Keith C. Cheng
- [Biomedical Ontology Matching Using the AgreementMaker System](#)
Isabel F. Cruz, Cosmin Stroe, Catia Pesquita, Francisco M. Couto, Valerie Cross
- [Bioportal: Ontologies and Integrated Data Resources at the Click of a Mouse](#)
Patricia L. Whetzel, Natasha Noy, Nigam Shah, Paul Alexander, Michael Dorf, Ray Fergerson, Margaret-Anne Storey, Barry Smith, Chris Chute, Mark Musen
- [Populous: A Tool for Populating an Ontology](#)
Simon Jupp, Matthew Horridge, Luigi Iannone, Julie Klein, Stuart Owen, Joost Schanstra, Katy Wolstencroft, Robert Stevens

7:00pm **Dinner & Keynote Lecture**

Chair: Christian J. Stoeckert Jr. (University of Pennsylvania)

Bernard de Bono

[Virtual
Physiological
Human Project](#)



Bernard de Bono (MD, PhD) leads the RICORDO effort at the European Bioinformatics Institute, providing semantic interoperability for mathematical models of physiology and associated clinical data. Dr. de Bono's work on interoperability standards and knowledge representation contribute to biomedical modeling carried out by the Virtual Physiological Human and Innovative Medicines Initiative communities. Until 2009, de Bono lectured on basic and applied physiology at the Malta Medical School.

Friday July 29

8:30am **Ontologies for Biomedical Investigations**

Chairs: Mélanie Courtot (British Columbia Cancer Research Center)
and Bjoern Peters (La Jolla Institute for Allergy and Immunology)

- [An Advanced Strategy for Integration of Biological Measurement Data](#)
Hiroshi Masuya, Georgios V. Gkoutos, Nobuhiko Tanaka, Kazunori Waki, Yoshihiro Okuda, Tatsuya Kushida, Norio Kobayashi, Koji Doi, Kouji Kozaki, Robert Hoehndorf, Shigeharu Wakana, Tetsuro Toyoda, Riichiro Mizoguchi
- [Annotating Experimental Records Using Ontologies](#)
Alexander García, Olga Giraldo, Jael García
- [Ontology Driven Data Collection for EuPathDB](#)
Jie Zheng, Omar S. Harb, Christian J. Stoeckert Jr.
- [Developing an Application Ontology for Biomedical Resource Annotation and Retrieval: Challenges and Lessons Learned](#)
Carlo Torniai, Matt Brush, Nicole Vasilevsky, Erik Segerdell, Melanie Wilson, Tenille Johnson, Karen Corday, Chris Shaffer, Melissa Haendel,

10:20am **Ontology Mapping and Integration**

Chairs: Christopher Mungall (Lawrence Berkeley National Labs) and Robert Stevens (University of Manchester)

- [Mapping Composition for Matching Large Life Science Ontologies](#)
Anika Groß, Michael Hartung, Toralf Kirsten, Erhard Rahm
- [Generic Semantic Relatedness Measure for Biomedical Ontologies](#)
João D. Ferreira, Francisco M. Couto
- [Aligning the Parasite Experiment Ontology and the Ontology for Biomedical Investigations Using AgreementMaker](#)
Valerie Cross, Cosmin Stroe, Xueheng Hu, Pramit Silwal, Maryam Panahiazar, Isabel F. Cruz, Priti Parikh, Amit Sheth
- [A Case Study of ICD-11 Anatomy Value Set Extraction from SNOMED CT](#)
Guoqian Jiang, Harold R. Solbrig, Robert J.G. Chalmers, Kent Spackman, Alan L. Rector, Christopher G. Chute
- [The HL7 Approach to Semantic Interoperability](#)
Jobst Landgrebe, Barry Smith

1:30pm **NCBO Technology in Support of Clinical and Translational Science**

Speakers will include [John Gennari](#), [Parsa Mirhaji](#), [Mark Musen](#) (Moderator), [Nigam Shah](#) and [Rob Wynden](#)

Invited Panel sponsored by the National Center for Biomedical Ontology (NCBO) · <http://www.bioontology.org/>



6:00pm **Software Demonstrations 2:**

Chair: Patricia L. Whetzel (Stanford University)

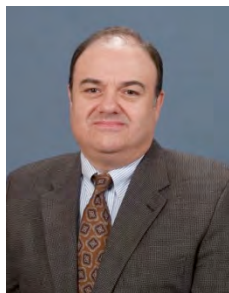
- [The Vitro Integrated Ontology Editor and Semantic Web Application](#)
Brian Lowe, Brian Caruso, Nick Cappadona, Miles Worthington, Stella Mitchell, Jon Corson-Rikert, and VIVO Collaboration
- [The BioPortal Import Plugin for Protégé](#)
Jithun Nair, Tania Tudorache, Trish Whetzel, Natalya Noy, Mark Musen
- [The Biomedical Ontology Applications \(BOA\) Framework](#)
Bruno Tavares, Hugo P. Bastos, Daniel Faria, João D. Ferreira, Tiago Grego, Catia Pesquita, Francisco M. Couto
- [The NCBO Annotator: Ontology-Based Annotation as a Web Service](#)
Patricia L. Whetzel, Clement Jonquet, Cherie Youn, Michael Dorf, Ray Ferguson, Mark Musen, Nigam Shah
- [OntoFox and its Application in Development of Brucellosis Ontology](#)
Zuoshuang Xiang, Yu Lin, Yongqun He

7:00pm **Dinner & Keynote Lecture**

Chair: Olivier Bodenreider (NIH National Library of Medicine)

Roberto Rocha

[Practical Applications of Ontologies in Clinical Systems](#)



Dr. Roberto Rocha is the Senior Corporate Manager for Knowledge Management and Clinical Decision Support in the Clinical Informatics Research & Development (CIRD) group at Partners HealthCare, and a Lecturer in Medicine at the Brigham and Women's Hospital, Harvard Medical School. At Partners, Dr. Rocha leads a team of over 20 clinical knowledge engineers responsible for the implementation and maintenance of knowledge bases integrated with clinical systems and accessible to clinical providers. Dr. Rocha's current academic activities include informatics teaching and research, particularly in the areas of knowledge modeling and representation, processes and software tools for knowledge engineering, and healthcare interoperability standards.

Saturday July 30

8:30am Ontology and the Electronic Health Record

Chairs: Christopher Chute (Mayo Clinic) and
Kent Spackman (International Health Terminology Standards Development Organization)

- [Representing the Reality Underlying Demographic Data](#)
William R. Hogan, Swetha Garimalla, Shariq A. Tariq
- [Information Models and Ontologies for Representing the Electronic Health Record](#)
Daniel Karlsson, Martin Berzell, Stefan Schulz
- [The CHRONIOUS Ontology Suite: Methodology and Design Principles](#)
Luc Schneider, Mathias Brochhausen
- [River Flow Model of Diseases](#)
Riichiro Mizoguchi, Kouji Kozaki, Hiroko Kou, Yuki Yamagata, Takeshi Imai, Kayo Waki, Kazuhiko Ohe

10:30am Panel: Problems with Existing EHR Paradigms and How Ontology Can Solve Them

Speakers will include [William Hogan](#) (Moderator), [Christopher Chute](#), [Roberto Rocha](#) and [Kent Spackman](#)
[Question and Answer Session](#)

1:00pm Principles of Ontology Development

Chairs: Alexander Diehl (University at Buffalo) and Melissa Haendel (Oregon Health & Science University)

- [Applying Rigidity to Standardizing OBO Foundry Candidate Ontologies](#)
A. Patrice Seyed, Stuart C. Shapiro
- [Higgs Bosons, Mars Missions, and Unicorn Delusions:
How to Deal with Terms of Dubious Reference in Scientific Ontologies](#)
Stefan Schulz, Mathias Brochhausen, Robert Hoehndorf
- [Towards an Ontology for Conceptual Modeling](#)
James P. McCusker, Joanne Luciano, Deborah L. McGuinness
- [What's in an 'is about' Link? Chemical Diagrams and the Information Artifact Ontology](#)
Janna Hastings, Colin Batchelor, Fabian Neuhaus, Christoph Steinbeck

2:45pm Panel: Collaborative Ontology Development: Why? and How?

Moderated by with opening comments by [Alan Ruttenberg](#)
Speakers will include [Chimezie Ogbuji](#), [Stephan Schürer](#), Bjoern Peters and Barry Smith
[Question and Answer Session](#)

4:00pm Closing Remarks · Barry Smith (University at Buffalo)
