Preface

ICBO 2019: 10th International Conference on Biomedical Ontology
July 30 - August 2, 2019, Buffalo, NY, USA
(ICBO 2019 website)

The 10th International Conference on Biomedical Ontology (ICBO 2019), was held at the Jacobs School of Medicine and Biomedical Sciences of the University at Buffalo, in Buffalo, NY, USA. It was the 10-year anniversary of the ICBO series, and the return of the conference to Buffalo after the first two ICBO conferences were held in Buffalo in 2009 and 2011.

ICBO 2019 was well attended, with 115 registered attendees and additional walk-ins from the local academic community. The program included excellent keynote talks by Barry Smith, "International Standard Ontology," and Bjoern Peters, "Putting principles into practice: OBO ontologies and applications in immunology," as well as 23 oral presentations, 26 posters, and one software presentation.

There were 53 papers and abstracts submitted for peer-review to ICBO 2019. Each submission was reviewed by three members chosen from the Program Committee. Of these submissions, 43 were accepted for this volume: 19 full papers, 23 poster abstracts, and 1 software demonstration extended abstract. We thank our program committee for their thoughtful reviews. There were also three workshops and four tutorials (listed below) held in conjunction with the main ICBO 2019 meeting.

Organizing Committee of ICBO 2019

Alexander D. Diehl, Ph.D.	University at Buffalo
William D. Duncan, Ph.D.	University at Buffalo (now at Lawrence Berkeley National Laboratory)
Peter L. Elkin, M.D.	University at Buffalo
Werner Ceusters, M.D.	University at Buffalo
Marge Elkin	

ICBO Series Founder and Advisor to Organizing Committee

Barry Smith, Ph.D.	University at Buffalo

ICBO 2019 Proceedings Editors

Alexander D. Diehl, Ph.D.	University at Buffalo
William D. Duncan, Ph.D.	University at Buffalo (now at Lawrence Berkeley National Laboratory)
Gloria Sanso	University at Buffalo

Keynote Speakers

Barry Smith	University at Buffalo
Bjoern Peters	La Jolla Institute for Immunology

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Program Committee	(all affiliations as of 2019)
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William D. Duncan	University at Buffalo, NY, USA
Peter L. Elkin	University at Buffalo, NY, USA
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Jane Lomax	SciBite, United Kingdom
Phillip Lord	Newcastle University, United Kingdom
Kody Moodley	Maastricht University, Netherlands
Christopher J. Mungall	Lawrence Berkeley National Laboratory, CA, USA
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James A. Overton	Knocean, Inc., ON, Canada
Zoe May Pendlington	European Bioinformatics Institute, United Kingdom
Bjoern Peters	La Jolla Institute for Immunology, CA, USA
Alan Ruttenberg	University at Buffalo, NY, USA
Lynn M. Schriml	University of Maryland School of Medicine, MD, USA
Barry Smith	University at Buffalo, NY, USA
Nicole A. Vasilevsky	Oregon Health & Science University, OR, USA
Randi Vita	La Jolla Institute for Immunology, CA, USA
Danielle Welter	European Bioinformatics Institute, United Kingdom
Jie Zheng	University of Pennsylvania, PA, USA

Acknowledgements

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Workshops associated with ICBO 2019

1) 8th International Workshop on Vaccine and Drug Ontology Studies (VDOS-2019)
Organizers: Junguk Hur, University of North Dakata; Oliver He, University of Michigan; Cui Tao, University of Texas Health Science Center at Houston
Wednesday, July 31, 2019 Workshop Page

2) The 3rd international Cells in ExperimentaL Life Science Workshop (CELLS-2019)
Organizers: Oliver He, University of Michigan; Alexander Diehl, University at Buffalo; Sirarat Sarntivijai, ELIXIR Hub, Wellcome Genome Campus, UK
Wednesday, July 31, 2019 Workshop Page

3) First International Workshop on Biomedical Ontologies & Natural Language Processing
Organizers: Jonathan P. Bona, University of Arkansas for Medical Sciences; Peter L. Elkin, University at Buffalo; Daniel R. Schlegel, SUNY Oswego
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Tutorials associated with ICBO 2019

1) An Introduction to Referent Tracking
Organizers: Werner Ceusters, University at Buffalo; William Hogan, University of Florida
Tuesday, July 30, 2019 Description

2) Basic Formal Ontology and Its Applications in Biomedicine
Organizers: Barry Smith and Alan Ruttenberg, University at Buffalo
Wednesday, July 31, 2019 Description Slides

3) A How-To Guide to Create, Manage, and Release an OBO Ontology
Organizers: Nicole Vasilevsky, OHSU; James Overton, Knocean Inc.; Chris Mungall, LBNL; Rebecca Jackson, La Jolla Institute for Allergy and Immunology & University of Maryland
Wednesday, July 31, 2019 Description Materials including links to slides

4) Tutorial: Machine learning with ontologies
Organizer: Robert Hoehndorf, Computational Bioscience Research Center, King Abdullah University of Science and Technology, Saudi Arabia
Tuesday, July 30, 2019 Description

– Alexander D. Diehl, Ph.D., for the organizers