The VDOSME 2012 workshop:

VDOSME stands for:
“Vaccine and Drug Ontology for the Study of Mechanism and Effect”

One-sentence summary of main topics covered in the workshop:
Ontology representations and applications for the study of mechanisms and effects of vaccines and drugs

Website: http://kr-med.org/icbofois2012/vdosme

VDOSME Chairs

- Yongqun “Oliver” He, University of Michigan, Ann Arbor, MI, USA
- Luca Toldo, Merck KGaA, Darmstadt, Germany
- Gully Burns, Information Sciences Institute, Marina del Rey, CA, USA
- Cui Tao, Mayo Clinic, Rochester, MN, USA
- Darrell R. Abernethy, U.S. Food and Drug Administration (FDA), Bethesda, MD, USA.

VDOSME Programme Committee

- Olivier Bodenreider, National Library of Medicine
- Richard Boyce, University of Pittsburgh
- Lindsay Cowell, University of Texas Southwestern Medical Center
- Dingcheng Li, Mayo Clinic
- Asiyah Yu Lin, University of Michigan
- Bjoen Peters, La Jolla Institute for Allergy and Immunology
- Sira Sarntivijai, University of Michigan/US FDA
- Nigam Shah, Stanford University
- Sunghwan Sohn, Mayo Clinic
- Larisa Soldatova, Aberystwyth University
- Stephen Wu, Mayo Clinic
- Yuji Zhang, Mayo Clinic
- Jim Zheng, Medical University of South Carolina
- Qian Zhu, Mayo Clinic
Programme

Saturday, 21 July 2012

8:30 – 9:00 am Registration

9:00 – 9:10 am Welcome Introduction
  • Self-introductions of all attendees
  • Oliver He: briefly introduce the whole day schedule with any possible updates

9:10 - 9:50 am
Session 1: Ontology modeling and analysis
Chair: Gully Burns
  • Yu Lin and Yongqun He.
    Ontology representation and analysis of vaccine formulation and administration and their effects on vaccine immune responses (25 min)
  • Drashti Dave and Gully Burns.
    A lightweight Ontology Design Pattern to curate and represent experimental variables from vaccine protection studies (15 min)

9:50 - 10:40 am
Session 2: Ontology-based knowledge extraction from big data case reports or literature
Chair: Luca Toldo
  • Harsha Gurulingappa, Abdul-Mateen Rajput, Luca Toldo.
    Extraction of Adverse Drug Effects from Medical Case Reports (25 min)
  • Junguk Hur, Arzucan Özgür, Zuoshuang Xiang and Yongqun He.
    Identification of fever and vaccine-associated gene interaction networks using ontology-based literature mining (25 min)

10:40 – 11:10 am Break

11:10 am – 12:00 noon
Session 3: Ontology-based semantic web applications
Chair: Oliver He
  • Qian Zhu, Guoqian Jiang and Christopher Chute.
    Profiling structured product labeling using NDF-RT and RxNorm (25 min)
  • Charalampos Doulaverakis, George Nikolaidis, Athanasios Kleontas and Yiannis Kompatsiaris.
    GalenOWL: Ontology based drug recommendations discovery (25 min)
12:00 noon - 1:30 pm **Lunch break**

1:30 – 2:05 pm  
**Session 4: General Discussion #1**  
**Moderator:** Luca Toldo  
**Topic:** Relation between drug and vaccine ontology informatics (35 min)  
- Similarities and differences between drug and vaccine informatics  
- Collaborations between drug and vaccine ontology informatics fields  
- Collaborations between academia and industry

2:05 – 2:30 pm  
**Session 5: Teleconference Presentation by a presenter from USA**  
**Chair:** Oliver He  
- Cui Tao, Yongqun He, Gregory Poland and Christopher Chute.  
  Time modeling of vaccine adverse events in VAERS for temporal analysis (25 min)

2:30 – 3:30 pm  
**Session 6: General Discussion #2**  
**Moderators:** Melanie Courtot and Oliver He  
**Topic:** Updates on development of adverse event-related ontologies (60 min)  
- Melanie: Updates on the development of the Adverse Event Reporting Ontology (AERO) and related ontologies (short talk: 10-15 min)  
- Oliver: Updates on the development of the Ontology of Adverse Events (OAE) and its applications (short talk: 10-15 min)  
- Further discussion

3:30 - 4:00 pm **Break**

4:00 – 4:45 pm  
**Session 7: General Discussion #3**  
**Moderator:** Gully Burns  
**Topic:** Challenges and opportunities (45 min)  
- Current achievements and challenges  
- International community collaborations  
- Have another workshop next year?  
- Other open issues for discussion

4:45 pm **Workshop ends**