

Proceedings  
of  
THE FIRST  
INTERNATIONAL WORKSHOP  
ON  
DRUG INTERACTION KNOWLEDGE  
REPRESENTATION  
(DIKR 2014)

*Proceedings  
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## Preface

Optimizing drug interaction knowledge representation is a pressing need. Currently, the combination of poor quality evidence and a general lack of drug-drug interaction (DDI) knowledge by prescribers results in many thousands of preventable medication errors each year. While many sources of DDI evidence exist to help improve prescriber knowledge, no meta-data standard currently exists that is built based on the requirements derived from an analysis of the information synthesis workflows of pharmacists and drug compendium editors. Such a metadata standard could enable a more effective synthesis of DDI evidence during tasks such as consulting and guideline development.

The First International Workshop on Drug Interaction Knowledge Representation, held on October 6<sup>th</sup> 2014, brought clinical and ontology development experts together to discuss:

- a) potential DDI knowledge representation solutions that reflect the state-of-the-art of both the clinical understanding of DDIs and biomedical ontology development,
- b) how to best link DDI ontologies to pre-existing drug terminology efforts, and
- c) roadblocks to the adoption of ontology-driven solutions such as coverage, usability, and scalability. Our aim is to shape the workshop into an annual event that addresses issues of optimizing representation of drug interaction for meaningful use. The workshop's focus is on discussing solutions to bridging the gap between the representation of drug interaction in knowledge managements systems and the requirements by those using that information in clinical practice.

To ensure the clinical relevance of state-of-the-art knowledge representation for drug interactions doesn't get overlooked the workshop started with a keynote lecture by Daniel Malone (University of Arizona) entitled *Jumping the crevasse between assertions of drug interactions and clinical relevance*. (<http://www.slideshare.net/boycer/keynote-maloneclinicalrelevanceofddievidence> )

## Acknowledgments

One of the aims of the workshop organizers was to start cooperation between groups developing ontologies related to drug interactions. We greatly appreciated the input of all of participants on the interactive panel discussion:

### Panelists:

**Moderator:** William R. Hogan (University of Florida)

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Mathias Brochhausen (University of Arkansas for Medical Sciences)  
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