Brief Bio and (PR)²: Problems & Pitches – Rants & Raves by Michael Lajiness

About me
Mic Lajiness is a Research Advisor at Eli Lilly. His interests are in developing and applying novel methodologies to understand and exploit the relationship between molecular structure and biological activity as well as developing broad-based informatics systems to facilitate Drug Discovery. He has worked in the pharmaceutical industry for over 30 years. His work in the interface between mathematics, computer science, statistics, and chemistry partially led to the development of cheminformatics as a field. In particular, Mic’s work in the area of Molecular Diversity and Similarity became known and respected throughout the world. In addition, his pioneering efforts in the design and implementation of integrated chemical and biological information management systems was highly regarded at Upjohn, Pharmacia and now Eli Lilly. Cousin (later called ChemLink) was one of the first such proprietary systems and was developed internally at Upjohn in collaboration with T. Hagadone. At Eli Lilly, Mic led the development and application of Mobius that is widely loved and used by over 1,500 scientists.

In recognition of his impact, Mic was awarded the prestigious Upjohn Award for outstanding scientific achievement in the area of cheminformatics; and the Eli Lilly Presidents Award for the development of the Mobius System.

Mic has authored more than 20 scientific papers and chapters and has given numerous presentations at universities and at national and international meetings in the above scientific areas. He also serves on a number of scientific advisory and editorial boards.

Publications
- Zhu,Q; Lajiness,M.S.; Ding,Y; Wild,DJ. (2010).” WENDI: A tool for finding non-obvious relationships between compounds and biological properties, genes, diseases and scholarly publications” J Cheminform. 2010; 2-6

Questions
1. What are your main interests in attending the workshop?
I want to find out more about how others are semantically exploiting big data and what is relevant to my interest in small molecule Drug discovery. Of particular interest is how to aggregate information down to a level where it is relatively easy to identify unexpected relationships or insights.

2. What ideas, methods and tools would you like to share at the workshop?
NA

3. What do you think are the biggest opportunities or unmet needs in any of: translational medicine, drug discovery, semantic technologies, data visualization, or healthcare information? (feel free to pick those with which you have the most interest/experience)

4. What are the biggest road blocks to realizing these opportunities?
A big concern now in pharma and other “businesses” is security and confidentiality. We need to balance those risks against the potential gains arising from our ability to discover new relationships and insights.
5. In which of the main areas of emphasis of the workshop (semantics, translational medicine, drug discovery, big data, semantic technologies, visualization and networks) do you work?
   drug discovery, visualization

6. What are the biggest challenges in your work currently?
   Finding effective ways to wade through large amounts of data to find the few nuggets of information that can lead to novel insights.

7. What are the main sources of funding for your work? How difficult do you consider it to get funding in your area, and why?
   NA

8. What would you like to learn and achieve at the workshop?
   I want to find out more about how others are semantically exploiting big data and what is relevant to my interest in small molecule Drug discovery. Of particular interest is how to aggregate information down to a level where it is relatively easy to identify unexpected relationships or insights.