SYLLABUS: Current Concepts in Human Health Risk Assessment-Using National and International Databases for Risk Assessment

Autumn Quarter 2015
ENVH 593 (Journal Club)

Credits: 1

Current Quarter Topic:
Using National and International Databases for Risk Assessment: Current Concepts in Human Health Risk Assessment

Instructor:
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Course Times and Locations:
Time & Dates:
Wednesdays from 3:30pm-5:00pm
Four Sessions: September 30th, October 7th, October 14th and November 25th.
Class will be held in 4225 Roosevelt Way NE, Suite 100 in Roosevelt 2228

Course Website: https://canvas.uw.edu/courses/989095/

Course Description:
Students participating in this course will learn about various national and international databases available for risk assessment. Examples include ToxCast, ACToR, Toxnet,
ToxRefDB and The European Union’s Endocrine Disruptor Screening Program and Existing Chemical Regulation Database. During this course students will learn how to access the databases, what types of information are available and how this information can be applied to risk assessment. We will discuss the benefits and limitations of the databases. This course will also serve as a platform to discuss approaches to interpreting the high-throughput data found in most databases.

**Course Learning Objectives:**

Upon completion of this journal club, students shall be able to:
- Identify national and international databases for toxicological information
- Assess the quality and types of information available from these resources
- Discuss the benefits and limitations of using data from these sources
- Assess what additional information is needed, if any, to assess potential human health risks
- Begin discussion on how to incorporate emerging information into policy

**In general:**

1. Think critically about risk assessment by completing reading assignments and participating in class discussions.
2. Communicate the concept of integrated risk assessment and risk communication.
3. Explain the risk assessment framework as it relates specifically to the current quarter topic.
4. Analyze assigned readings and interpret their relevance to not only the quarter topic but also their applicability and generalizability to risk assessment topics at large.
5. Summarize key points from assigned journal articles or other required readings.
6. Prepare and deliver an oral presentation(s) discussing the required reading.
7. Critique risk assessment applications as they relate to the current quarter topic.
8. Identify risk assessment strengths and challenges, as well as the role of uncertainty.
9. Develop skills to think critically about the methods and tools used for assessment, management, and communication of risk.

**Course Session Schedule and Readings:**

**Session 1, September 30th:** Introduction to Using National and International Databases for Risk Assessment: Current Considerations in Human Health Risk Assessment
- Introductions (All)
- Presentation by Dr. Faustman
Session 2, October 7th: ToxCast, ToxPi, ToxRefDB and Endocrine Disruptor Screening Program

To prepare for Session 2, review the websites listed under “Links to Review” and choose one Toxcast and one Endocrine Disruptor article to read discuss in class. Please post your article selections in the Canvas Discussion by the Monday before Class.

Please prepare your top 5 impressions from one of your readings.

You may choose to prepare a few slides summarizing your findings. Please send these to Ashley (Ashleytm@uw.edu) via e-mail at least one hour before the start of class.

Links to Review

http://www.epa.gov/comptox/toxcast/

http://www.epa.gov/comptox/toxrefdb/

http://www.epa.gov/comptox/ToxPi/

http://www.epa.gov/endo/

http://actor.epa.gov/actor/faces/CSSDashboardLaunch.jsp : Use the CSS dashboard to pick one chemical and pull up the results. Try using the chemical explorer tab to do this activity. Was the dashboard easy to use? What types of questions could be answered by using it? Please note that you may need to read some of the documentation associated with the first link to understand the results.

Readings:

Endocrine Disruptor Screening Program


17. Bishop, P.L. and C.E. Willett, The use and acceptance of Other Scientifically Relevant Information (OSRI) in the U.S. Environmental Protection Agency (EPA) Endocrine


Toxcast


Session 3, October 14th: ExpoCast and EJScreen

To prepare for Session 3, review the websites listed under “Helpful Links” and choose one ExpoCast and one EJScreen article to read discuss in class. Please post your article selections in the Canvas Discussion by the Monday before Class.

Please prepare your top 5 impressions from one of your readings.

You may choose to prepare a few slides summarizing your findings. Please send these to Ashley (Ashleytm@uw.edu) via e-mail at least one hour before the start of class.

Helpful Links:

http://www2.epa.gov/ejscreen
http://www.epa.gov/comptox/expocast/

Readings: TBD

Session 4, November 25th: European Union Approaches, Existing Substance Regulation and Substances of Concern

To prepare for Session 4, review the websites listed under “Helpful Links” and choose one Existing Substances and one Substances of Concern article to read discuss in class. Please post your article selections in the Canvas Discussion by the Monday before Class.

Please prepare your top 5 impressions from one of your readings.

You may choose to prepare a few slides summarizing your findings. Please send these to Ashley (Ashleytm@uw.edu) via e-mail at least one hour before the start of class.

Helpful links:


Substances of Concern:
http://ec.europa.eu/environment/chemicals/endocrine/strategy/substances_en.htm#priority_list

Readings: TBD