# Chemical Hygiene Plan Appendix J: Suspected Reproductive Toxins

The definition of reproductive toxins according to the *Globally Harmonized System of Chemical Classification and Labeling* includes chemicals that cause adverse effects on sexual function and fertility in adult males and females, as well as adverse effects on development of the offspring including adverse effects on or via lactation. Reproductive hazards may not affect every worker or every pregnancy.

The Center for Disease Control’s (CDC), the National Institute for Occupational Safety and Health (NIOSH), and the Registry of Toxic Effects of Chemical Substances (RTECS) identify seven major categories of adverse effects, with sixty-five specific effects including paternal and maternal effects, fertility effects, effects on the embryo or fetus, developmental effects, tumorigenic effects and effects upon the newborn.

The male reproductive system potential effects include: reduced sperm counts, changes in the shape and performance of the sperm contaminates being carried by the sperm, decreases in sexual performance, or damage of the sperm chromosomes.

Female reproductive system potential effects include: infertility, subfertility, changes in menstrual cycle, miscarriage or premature births, and changes in the pregnancy, fertilized egg and developing fetus.

Potential effects on the fetus/newborn include: Birth defects, developmental disorders or childhood cancers.

**General Procedures**

While everybody who works with reproductive toxins needs to follow standard safety protocols, persons of child bearing age and capacity need to carefully evaluate their work practices in the light of a possible future pregnancy attempt. Expecting parents with a known pregnancy may need to exercise extra precautions.

The presence of any reproductive toxins in the lab does not mean that personnel have been exposed, nor are they likely to experience adverse effects. However, it is very important to recognize the potential risks and intervene early because short term exposures during a critical period can result in long term health effects.

The following standard safety protocols are prudent for everybody who works with potentially harmful chemicals.

* Minimize all chemical exposures
* Review the chemicals in use to identify hazardous chemicals
* Read the Safety Data Sheet (SDS) and follow the recommended precautions. Pay particular attention to Section 8 “Exposure Controls/Personal Protection" and Section 11 “Toxicology Information”
* Label the containers with the chemical name and known hazards
* Before working with them, review the use of these materials with the PI, Departmental Safety Officer or the University Chemical Hygiene Officer.
* Use appropriated PPE (gloves, eyewear, lab coat etc.)
* Notify EH&S of all incidents of exposure or spills

For work involving Reproductive Toxins:

* Review the continuing use of these chemicals annually or when a procedural change is made
* Substitute a less hazardous agent to reduce exposure
* Label the containers with the chemical name and identify it as a reproductive toxin
* Store in an adequately ventilated area in an unbreakable secondary container
* Create a standard procedure for working with the material:
  + Have a designated area (signs or barriers) for their use
  + When possible handle these substances only in a closed system (glass apparatus, instrument plumbing, syringe, gavage, cannula, etc.) or in containment (fume hood or glove box)
  + Create and follow procedures for decontamination of tool and work area after use
* Seek medical attention for known exposures.
* Follow waste disposal procedures

**Specific Procedures for Pregnancies**

Any Individual may contact EH&S in confidence to receive safety information about reproductive or developmental hazards posed by potential exposures any time without declaring actual, suspected, or planned pregnancy.

Confidential Consultation – Persons considering a pregnancy can schedule a confidential consultation with EH&S (the Director and/or the Chemical Hygiene Officer). Bring a list of concerns and the suspected hazards to the consultation.

Declaration of attempt to become pregnant/ Declaration of Pregnancy – A prospective father or mother may formally declare in writing to EH&S and their supervisor that they are attempting or have successfully initiated a pregnancy with their partner. EH&S will work with the prospective parent and their supervisory chain to evaluate the reproductive hazards in their workplace and to identify methods to minimize or eliminate exposures. Such methods may include:

**Administrative Controls**

* Eliminate work tasks involving handling of reproductive toxins, mutagens, teratogens, embryotoxins, or carcinogens
* Restructuring assigned tasks to minimize the amount of time spent in the lab such as:
  + Use job rotation or transfers to reduce exposure
  + Use substitute personnel to perform specific chemicals procedures
* Modify work practices or lab procedures to reduce exposure

**Engineering Controls**

* Ensure that all laboratory personnel perform all chemical manipulations in a properly operating fume hood with the sash in the proper operating position

**Personal Protective Equipment**

* Provide additional PPE for voluntary use by the prospective parent
  + Use of a lab coat
  + N-95 respirator
* Enact a more frequent glove change out schedule

For more information on Suspected Reproductive Toxins refer to the following web site: <https://www.osha.gov/SLTC/reproductivehazards/hazards.html>

The California Proposition 65 list includes chemicals suspected or known to cause birth defects or other reproductive harm: <http://oehha.ca.gov/prop65/prop65_list/files/P65single082515.pdf>