BIOCHEMISTRY SEMINAR

The 3rd Annual Safe Laboratory Practices and Procedures

Dr. David Heeley
Chair, Safety Committee
Department of Biochemistry
Memorial University of Newfoundland

Friday, October 21, 2016
1:00 p.m.
L.A.W. Feltham Room, SN-4015

PLEASE NOTE: This seminar will highlight fundamental aspects of safety and MUN procedures that all new members of the Department need to be aware of.

ALL NEW DEPARTMENT MEMBERS SHOULD BE AT ATTENDANCE IN DARING ANYTHING
Safety structure at MUN

Biochemistry Safety Committee

Marie Codner
Donna Hunt
David Heeley
Craig Skinner

Environmental Health & safety
What is this seminar all about?

1) Getting started - training, Lab Safety Plan

2) Basic safety
   Do’s and Don’ts
   Housekeeping
   Protective clothing
   Chemical, Electrical, Fire

3) Updates
Getting started

► On-line courses - WHMIS
   Lab safety 1000
   Take record of completion to General Office

► Radioisotope and biohazard training
   Rod Hobbs, Radiation and Biosafety officer

► Lab Safety Plan - read and sign
Lab Safety Plan

Safety equipment
First Aid kit
Housekeeping
Hazardous chemicals
Gas cylinders
Flame
‘Buddy’ system
Working after hours
Overnight experiments

Know where it is
Read
Sign
Begin with the basics

Protective clothing
Communication
Housekeeping - clean and tidy
Keep bench tops and aisles CLEAR
Conduct regular checks
Keep a record
Identifying the real hazards
Some things *not* to do:

* Handle chemicals without protective clothing
* Fill sink with glassware
* Leave things lying around
* Not record what you’ve done
* Start 'spur-of-the-moment' experiments late at night
* Use dangerous equipment without asking
* Use dangerous chemicals without asking
* Free-standing gas cylinders
Protective clothing

Lab coat
Gloves
Eye protection  Spectacles, goggles, face shield
Apron
Insulated glove
Shoe cover
Gloves

In stores:

(i) vinyl (powdered and non-powdered)
(ii) nitrile (blue)
(iii) neoprene (black)

* Double glove (radioisotope handling)
* Wet glassware difficult to handle
* Refrain from touching surfaces (eg handles)
Know where they are
Fume Hood

Sash at indicated level (~18 inches)

Uncluttered

Get set - beaker of neutralising solution

Position the chemical ‘far back’

Don’t put your head in!
Cold Room

Labels

Don’t let things accumulate

Keep surfaces (bench and floor) clear

Keep surfaces clean
A hazard:

something that has the potential to cause harm

*Prioritize the real dangers*
Real Dangers

Metabolic poisons (cyanide) - Dr. Sean Brosnan

Flammable solvents (acetone, ether)

Corrosives (acids, alkalis) - Dr. Janet Brunton

Neurotoxins (protease inhibitors) - DHH

Powders (SDS) - DHH

Carcinogens

Microbes and Radioisotopes
Dangerous chemicals - what to do?

Talk to your PI

Ask PI to show you how

Read the MSDS (last 3 yrs)

Plan - protective clothing (COMFORTABLE)
  practice
  bench covering (tray?), shielding, fume hood
  antidote / neutralisation compound
  spill kit / first aid kit
  label / storage
  disposal
Dangerous Equipment
(eg centrifuges, autoclave)

Talk to your PI
Ask PI / Craig Skinner to show you how

Booking system
Plan - start early in the day
Labels

www.mun.ca/biochem/dept_docs/safety/index.php

Read the MSDS

One label per individual chemical.

Stored solutions only

Small vials - label on the container
Electricity safety

Pat St. Croix

* Appliances (eg kettles and toasters) approved by Safety Office

* Re: Extension cords
  CSA only;
  Do NOT link in series;
  1 device per cord;
  Disconnect after use or use power bar

* Ample space between equipment and wall outlet

* Turn off equipment when not in use
Fire Safety

* Flammable liquids stored in cabinet
* Fire extinguisher and blanket
* Evacuate building when fire alarm sounds
* Do NOT use the elevator
* Do NOT gather in the quadrangle
Fire Drill muster points 15B & 17
Active Intruder

Emergency Management

Instructional video

http://www.mun.ca/emergency/emergencyplans/activeintruder.php

RARE
Feeling unwell?

Student Health Center (4th floor UC)
ex-7597 or in person
MCP card
Flu season

Vaccine - From Monday Oct 24th 2016

Student Health Center

Student card & MCP card
Personal Belongings
Valuables, Money, Cards

Keep at home
or
Out of sight (in a drawer)