

CBS Safety Committee Update

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Genetics, Cell Biology, and Development

April 25th, 2019



UNIVERSITY OF MINNESOTA

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Overview

- Introduction to CBS
- Divisions and DSOs
- Safety Challenges
- College Initiatives
- Future Work

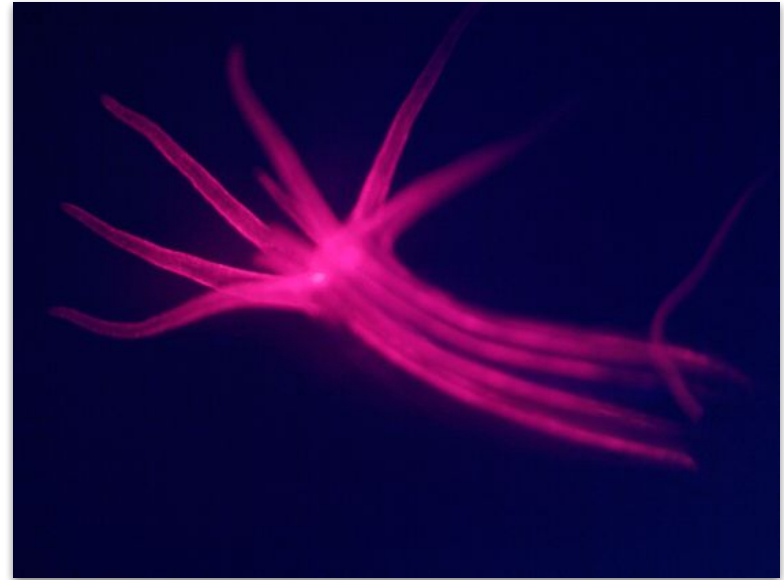


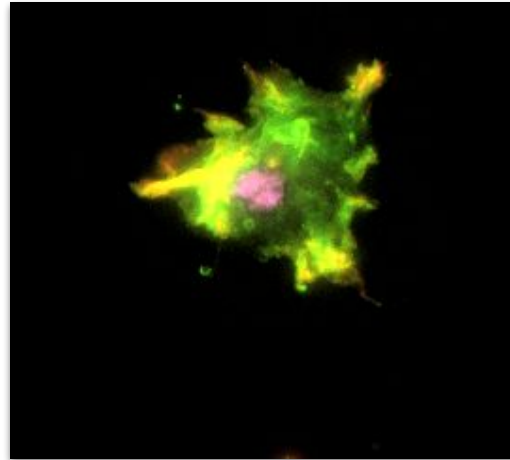
Image of *Nematostella* expressing RFP-MHC from the Titus Lab (GCD)

College Structure and Research

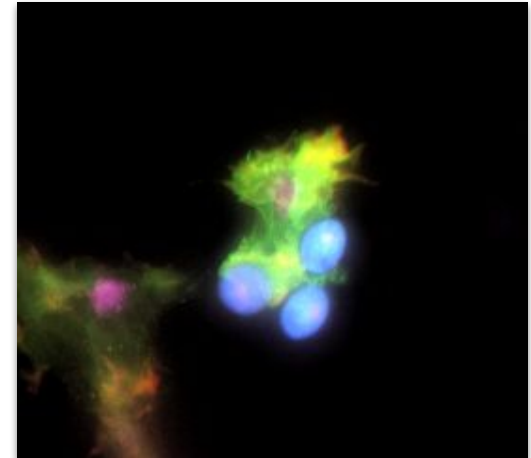
One of only two colleges in the country dedicated to the biological sciences, the College brings together researchers who are advancing knowledge of life at every scale from molecules to ecosystems.

Snapshot of CBS

- [8 undergraduate majors](#)
- [5 graduate programs](#)
- [5 departments](#)
- [2 research field stations](#)
- 2,190 undergraduates [fall 2017]
- 258 graduate students [fall 2017]
- 141 tenured and tenure-track faculty



Images of Dicty with DdMyo7 (green) actin (red) nuclei (magenta) & Yeast (blue) from the Titus Lab (GCD)



CBS Departments

Biochemistry, Molecular Biology and Biophysics

- David Okita (Minneapolis)
- Tony Dodge (St Paul)

Biology Teaching and Learning

- Sandy Mand

Ecology, Evolution and Behavior

- Will Harcombe

Genetics, Cell Biology and Development

- Kelly Bower

Plant and Microbial Biology

- Min Ni



CBS Institutes and Research Stations

Field Research Stations:

Cedar Creek

- Kally Worm
- Jim Krueger

Itasca Biological Station

- Lesley Knoll

CBS Institutes:

Biotechnology Institute

- Tony Dodge (CBS labs)



Safety Challenges

Breadth of research

Within our 5 departments, the research covers everything from the molecular mechanisms of how cells divide through the social interactions of chimpanzees in Africa. We also have 2 research field stations, the Cedar Creek Ecosystem Science Reserve where they focus on the understanding the fundamental processes and principles that govern the dynamics and functioning of communities and ecosystems. And the Itasca Biological Station and Laboratories which is a living laboratory of undisturbed coniferous forest, eastern deciduous forest tallgrass prairie ecosystems and prairie biomes. The headwaters of the Mississippi River which itself is a rich source for field biology research and education are located within the 50 square miles Itasca State Park.

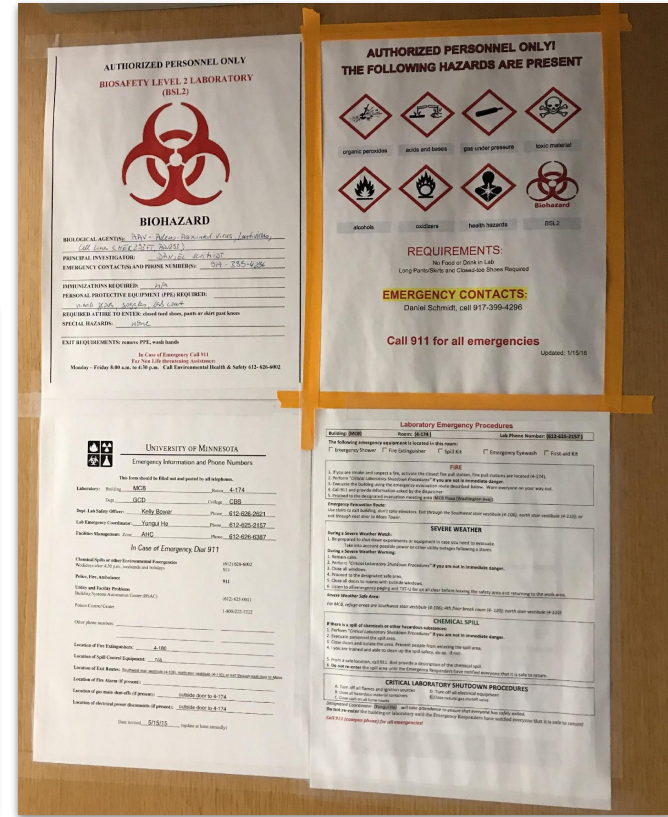
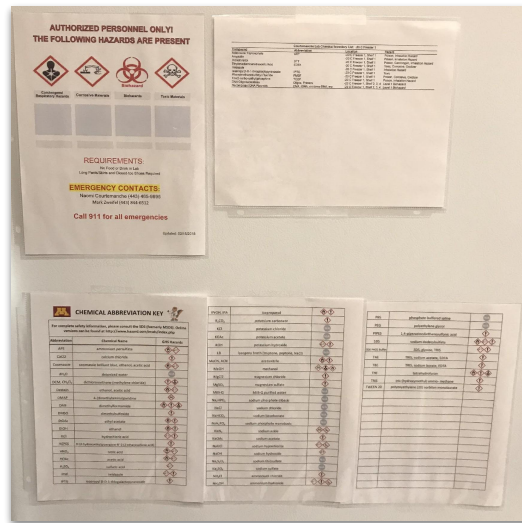
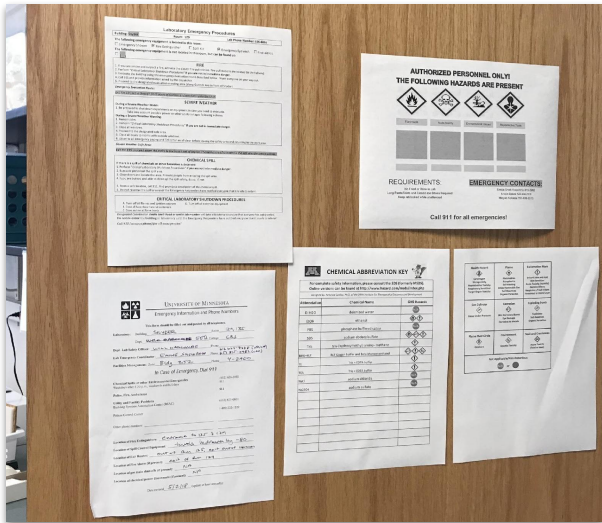
Hazard span

With such a wide array of research, comes an equal wide variety of safety challenges. Everything from radioactive materials to infectious diseases. Highly corrosive chemicals to explosive gasses. Poison Ivy to stampeding elephants. Lasers to tractors. You name it, we have it.

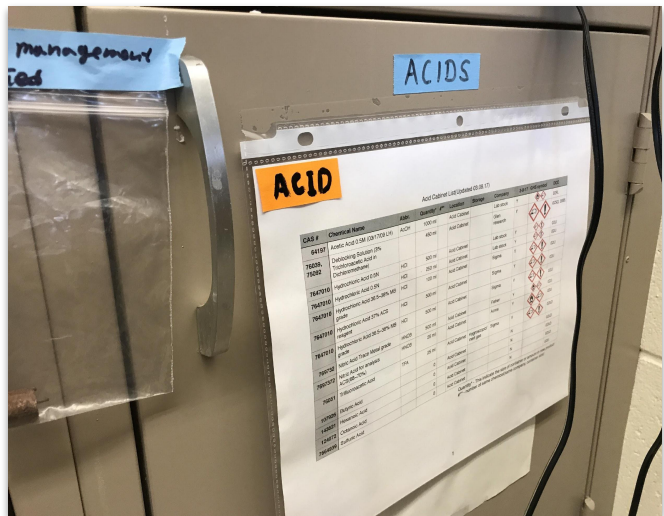


Initiatives - Signage

- Comprehensive hazard door signage
- Hazard communication
- Emergency procedures signage



Initiatives – Chemical Storage



- Organize by hazard class first, then alphabetical
- Segregate incompatible hazard classes by space or in secondary containment trays
- Store in appropriate cabinets or devices

Initiatives – Chemical Labeling



Implemented labeling option:

1. Name and hazard on bottle
2. Stored in an area with hazard communication
3. Hazard communication key

Future Work – Train the Trainer

- Current Issue: Confusion as to the differences between department safety training and lab-specific
- Solution: A train-the-trainer session to inform labs of updates, discuss the annual lab-specific training requirement in detail, and answer any questions



Future Work – Chemical Inventory

CBS-wide implementation of chemical inventory using Chematix

CHEMATIX™ UNIVERSITY OF MINNESOTA

CHEMATIX RadioLogistix Inspection Resources Help Logout

Home Inventory Waste Resources Help

Inventory Report

Activity Status: Success
56 containers found.

Barcode	Laboratory / Storage Unit	CAS #	Container Description	Container Size	Content Size	Status	Expiration Date
<input type="checkbox"/> UMNC00163T	I 100 Fini,Tst24	Desiccator 561	33100-27-5 15-crown-5	25.00 g	25.00 g	Shelved	
<input type="checkbox"/> UMNC00163Y	I 100 Fini,Tst24	Desiccator 561	7681-65-4 Copper (I) iodide	100.00 g	100.00 g	Shelved	
<input type="checkbox"/> UMNC00163Z	I 100 Fini,Tst24	Desiccator 561	865-49-6 dimethyl(2-oxopropyl)phosphonate	25.00 g	25.00 g	Shelved	
<input type="checkbox"/> UMNC00163U	I 100 Fini,Tst24	Desiccator 561	5419-55-6 dimethylformamide dimethyl acetal	100.00 mL	100.00 mL	Shelved	
<input type="checkbox"/> UMNC00163W	I 100 Fini,Tst24	Desiccator 561	7647-10-1 palladium (II) chloride	5.00 g	5.00 g	Shelved	
<input type="checkbox"/> UMNC00163X	I 100 Fini,Tst24	Desiccator 561	7647-10-1 palladium (II) chloride	5.00 g	5.00 g	Shelved	
<input type="checkbox"/> UMNC001640	I 100 Fini,Tst24	Desiccator 561	905459-27-0 PEPPSI-IPR catalyst	5.00 g	5.00 g	Shelved	
<input type="checkbox"/> UMNC00163S	I 100 Fini,Tst24	Desiccator 561	151-50-8 Potassium Fluoride (anhydrous)	25.00 g	25.00 g	Shelved	
<input type="checkbox"/> UMNC00163R	I 100 Fini,Tst24	Desiccator 561	13965-03-2 trans-dichlorobis(triphenylphosphine)palladium (II)	5.00 g	5.00 g	Shelved	
<input type="checkbox"/> UMNC00163V	I 100 Fini,Tst24	Desiccator 561	56804-58-1 Tungsten Carbonyl	5.00 g	5.00 g	Shelved	
<input type="checkbox"/> UMNC001643	I 100 Fini,Tst24	Fridge 561	14602-86-9 (1R)-(-)-Menthyl Chloroformate	25.00 g	25.00 g	Shelved	
<input type="checkbox"/> UMNC001649	I 100 Fini,Tst24	Fridge 561	931-49-7 1-ethynylcyclohexene	5.00 g	5.00 g	Shelved	



