



EHSO | EXCELLENCE THROUGH
INTEGRITY, COOPERATION AND LEADERSHIP

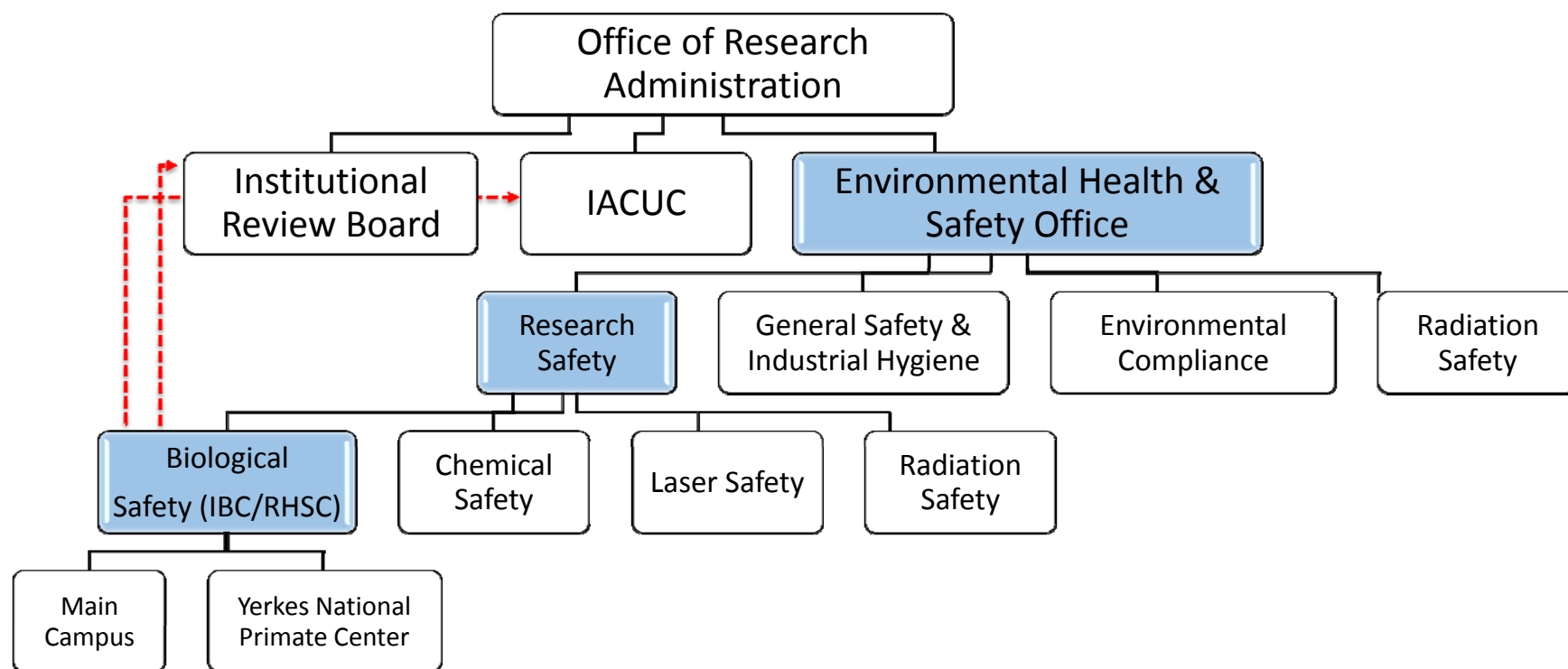
A Holistic Approach to Research Safety Improves Laboratory Safety Culture

Esmeralda Meyer
Kalyn Jones
Kalpana Rengarajan
Patty Olinger

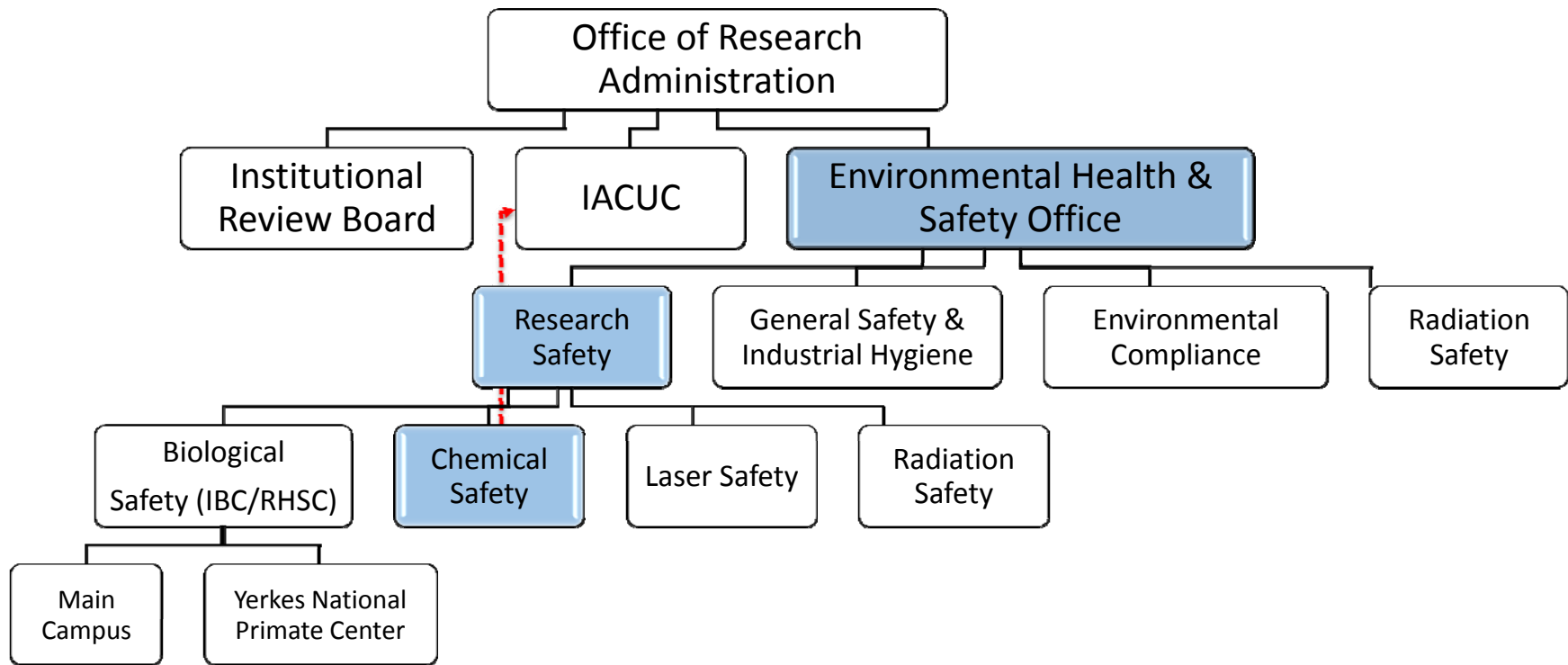
Objectives

1. To analyze how different areas of research laboratory safety intersect
2. To discuss why the different areas of research laboratory safety should not be handled in silos
3. To illustrate how Emory University uses an electronic platform to increase oversight

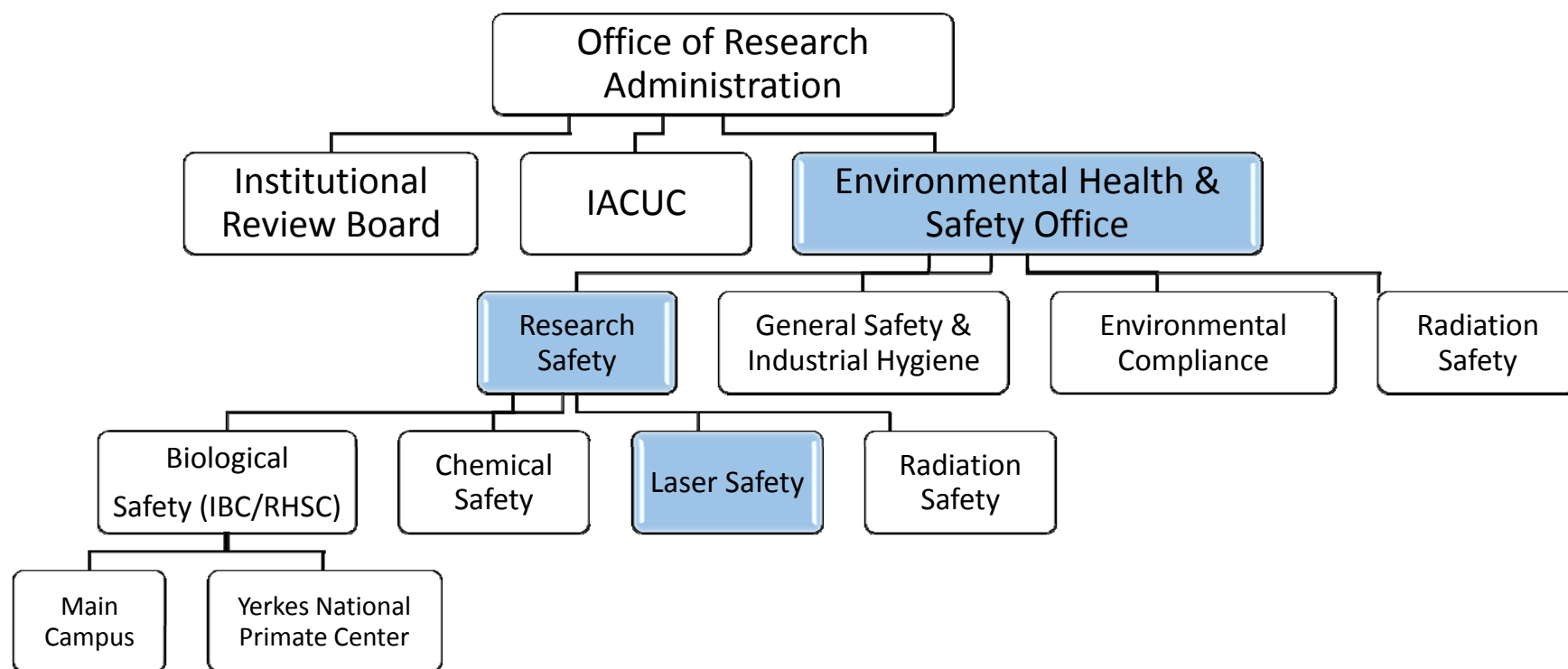
Hierarchical structure



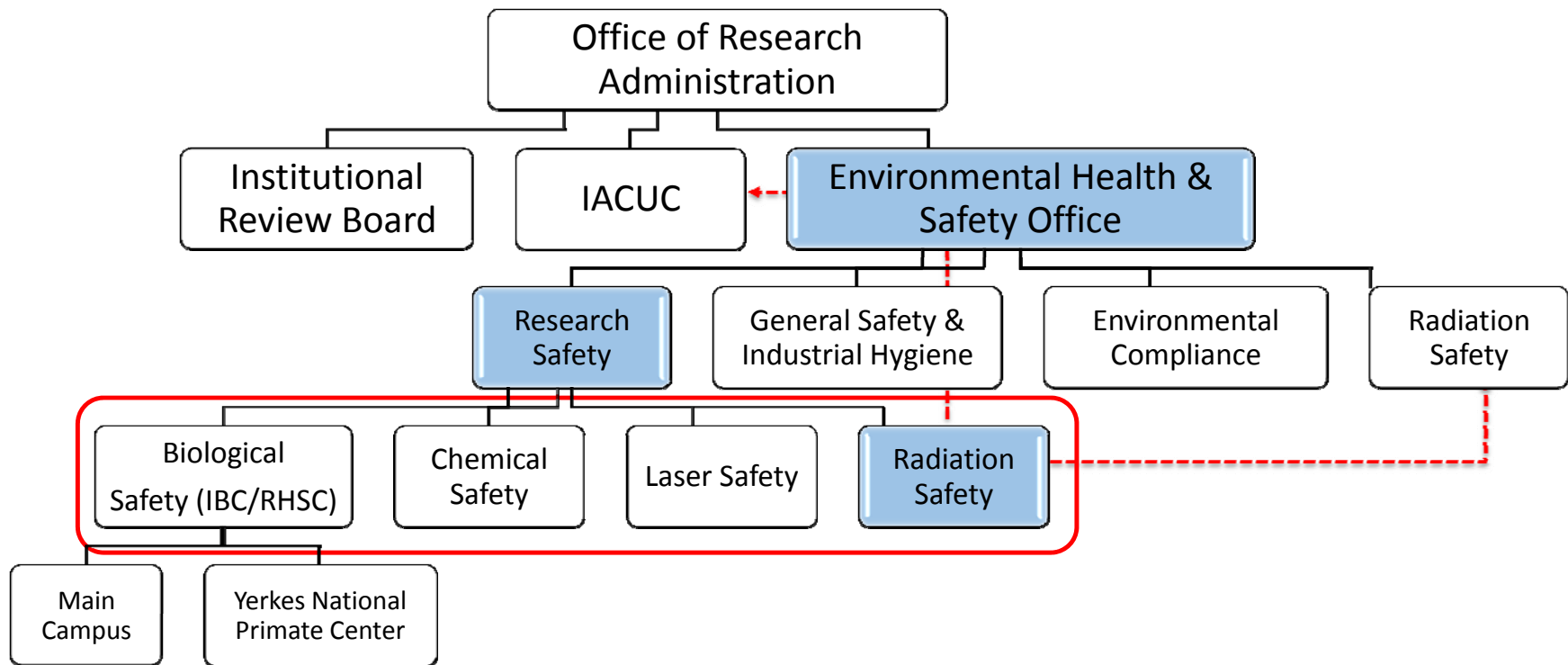
Hierarchical structure



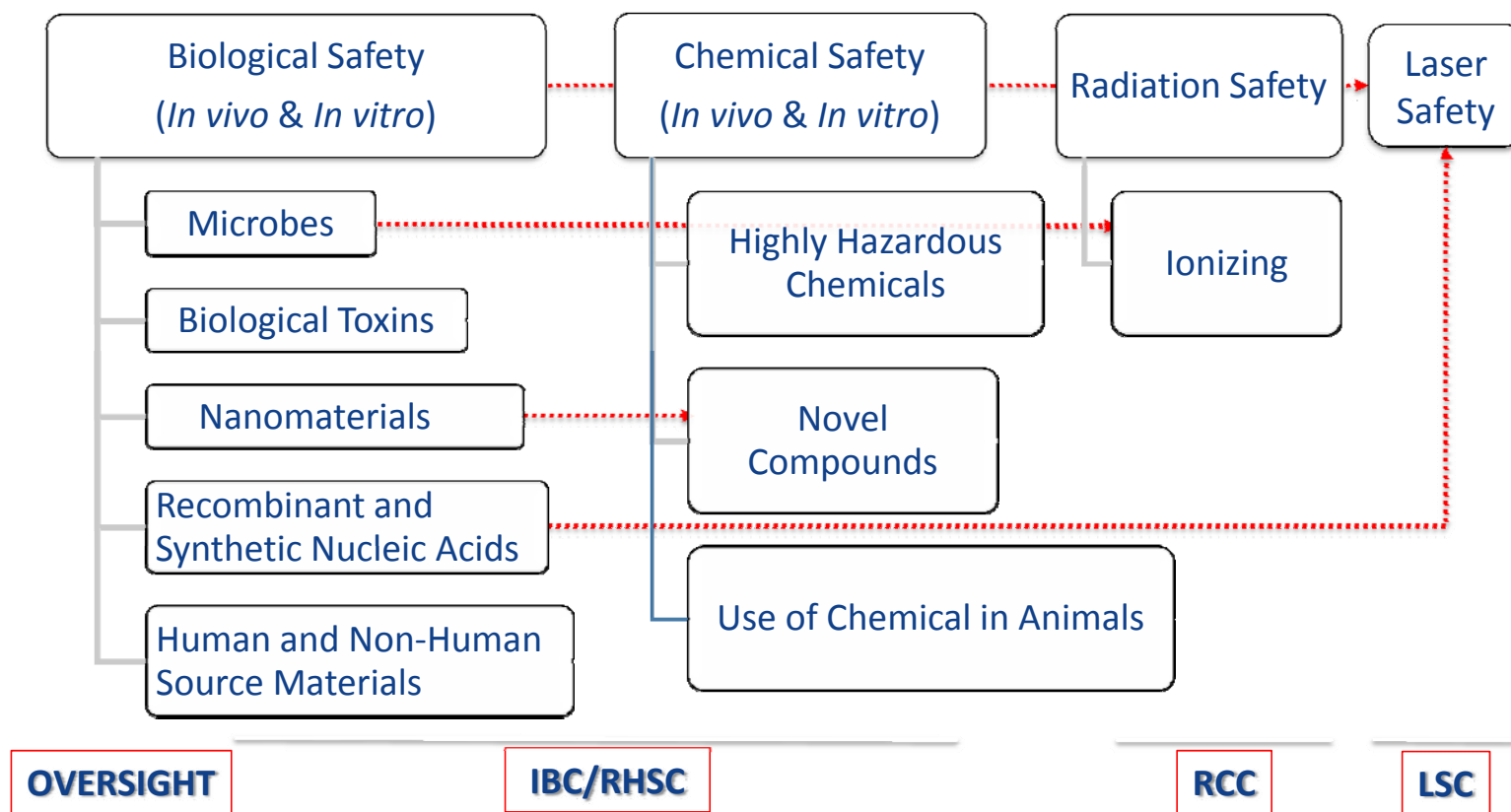
Hierarchical structure



Hierarchical structure



Research Safety Interactions



Electronic Management Platform*

EMORY UNIVERSITY | Welcome, Kalyan D. Jones | Home | Support | Logout

View | Edit | Dashboard | Members | Bio | Chem | Rad

Snapshot | Biological Summary | Projects | Cell Lines | Tissues | Plants | Microbes | Biological Toxins | rDNA | NIH Guidelines

Find Individual or Group | Search

Olinger Lab Biologicals

Summary (edit)

Principal Investigator: [Patricia L. Olinger](#)
Delegated(s): [Kalyan D. Jones](#)

Assigned Biosafety Level:
Review Frequency: 1 Year

Dual Use Research of Concern: No
Ships Biomaterials: No

	Number
Projects	2
Viral Vector Forms	0
Pathogen Forms	0
Tissues	0
Plants	0
Microbes	0
Biological Toxins	0
rDNA	0

View or Update Biological Usage Summary

Biological Materials (edit)

Primate Materials

- Human Body Fluids
- Human Organs
- Human Tissues
- Non-Human Primate Source Materials
- Non-Human Primates

Non-Primate Materials

- Amphibians
- Arthropods
- Bloodborne Pathogens
- Fish
- Lab Animal Source Materials (Non-Primate)
- Lab Animal Tissues (Non-Primate)
- Lab Animals (Non-Primate)
- Non-Pathogenic Microorganisms
- Pathogenic Microorganisms
- Plants

Other Biological Source Materials

- Ritological Toxins
- Infectious Proteins
- Mutagenic Agents
- Recombinant or Synthetic Nucleotides
- Select Agent Biological Toxins
- Viral Vectors

Registration Summary

Submission: **Current** | **Not Started**

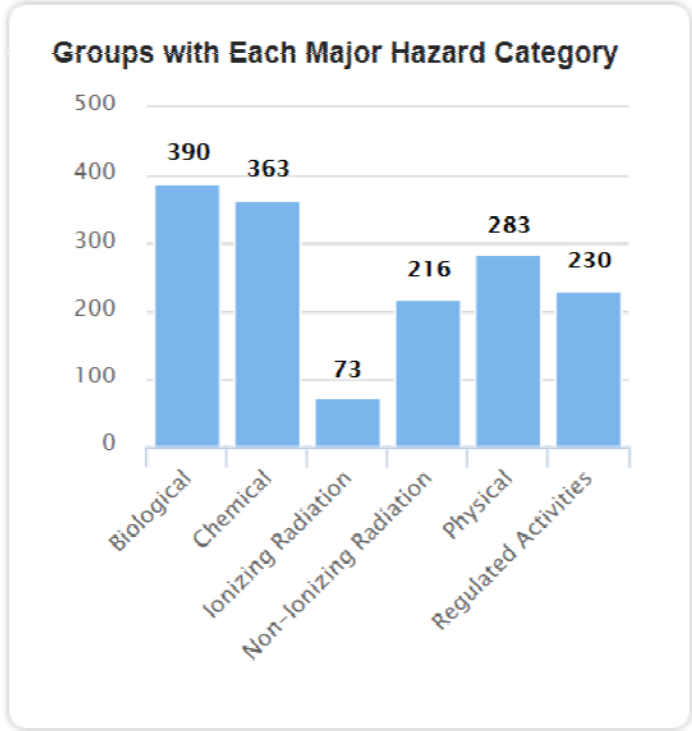
Registration Started: --
PI Last Certified: --
Registration Approved: --

[View Registration History and Download PDFs](#)

Submission Requests

[Request Classification/Modification](#)
[Submission Request/Reminder](#)
[Delegated to a Lab Member](#)
[Request PI Certification](#)

Last Request Sent: [10/19/2016](#)
[View All Past Requests](#)



Paper - Notice of Intent in 2015
Electronic – Projects in 2017

275
749

* Maintained by BioRAFT

Space Registrations

- Total principal investigator registrations: 461
- Total biological Project Forms: 749 (as of 9/7/17)
- Total Approved projects: 598 (as of May 2017)
- Projects with NIH Guidelines Classification
 - 253 Registrations – III C, III D, III E
- Total registered service cores: 16



Laboratory Inspection

EMORY UNIVERSITY | Environmental Health and Safety Office
 Research Administration | 1762 Clifton Road NE, Suite 1200
 Atlanta, GA 30322
 (404) 737-5877
 FAX: (404) 727-4776

LABORATORY SELF-INSPECTION FORM

Date of Survey: _____ Conducted By: _____
 Building: _____ Room Number: _____ Department: _____
 Principal Investigator: _____

Notes:

- Annual lab self-inspections are a key component of hazard identification and control intended to assist labs in compliance with the Occupational Health and Safety Administration (OSHA), Environmental Protection Agency (EPA), National Institutes of Health (NIH), Centers for Disease Control and Prevention (CDC), Department of Transportation (DOT), International Air Transportation Association (IATA) and Georgia Department of Natural Resources (GDNR) requirements and regulations.
- All forms and guidelines are available on the EHSO website: www.ehso.emory.edu

Instructions:

- Ensure you are using the correct inspection form (see yellow table below)
- Complete this form manually while inspecting the lab.
- Note that CTI stands for connected at time of inspection.
- File the completed Lab Self-Inspection Form in the Lab Safety Binder
- Complete a Corrective Action Plan (CAP) form for each lab space, including cold, tissue culture, and equipment room
- Upload CAP form into BioRAAT. Email biosafe@emory.edu for assistance.

IF YOU WORK:	COMPLY IN SITUATIONS:
In a Biosafety Level 3 Facility	Use the BSL-3 Facility Self-Inspection Form
In an Animal Biosafety Level 3 Facility	Use the ABSL-3 Facility Self-Inspection Form
With USFDA/APHIS Regulated Material With Arthropods	Use this form in addition to the Arthropod, Greenhouse and USDA Form

Item #	Item	Yes	No	CTI	N/A	Comments
1.0 General Safety						
Administrative Controls						
1.1	The external lab doors are posted with EHSO provided signage that reflects the hazards present in the lab and displays current emergency contact information					
1.2	All lab personnel have received training regarding workplace hazards, including applicable EHSO training courses.					
1.3	Personnel are subscribed to and have read the monthly Lab Risk Newsletter					

Laboratory Self-Inspection Form 14 | Revision Date: 28-Jun-17 | 1 of 13

ANNUAL VISIT

EMORY UNIVERSITY | Environmental Health and Safety Office
 Research Administration

Research Safety Inspection Scorecard

PI Name: #N/A Building: #N/A
 Department: #N/A Room(s): #N/A
 Inspector: #N/A

Percentage of Lab Deficiency by Section							
	General Safety	Chemical Safety	Biological Safety	Radiation Safety	Laser Safety	Biosafety	Emergency
Validation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Post Validation	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Total Percent of Lab Deficiency	
Initial Inspection	Follow-up Inspection
N/A	N/A

Self Inspection:
#N/A

Strengths:
#N/A

Areas in need of improvement:
#N/A

SCORING		
Percentage of Section Deficiency		
A	0.0%	- 3.0%
B	5.0%	- 10.0%
C	10.0%	- 100.0%

Accountability - Equipment Certification

View Edit Dashboard Members Bio Chem

Summary | Spaces | Documents | Forms | Notes | **Equipment** | Correspondence

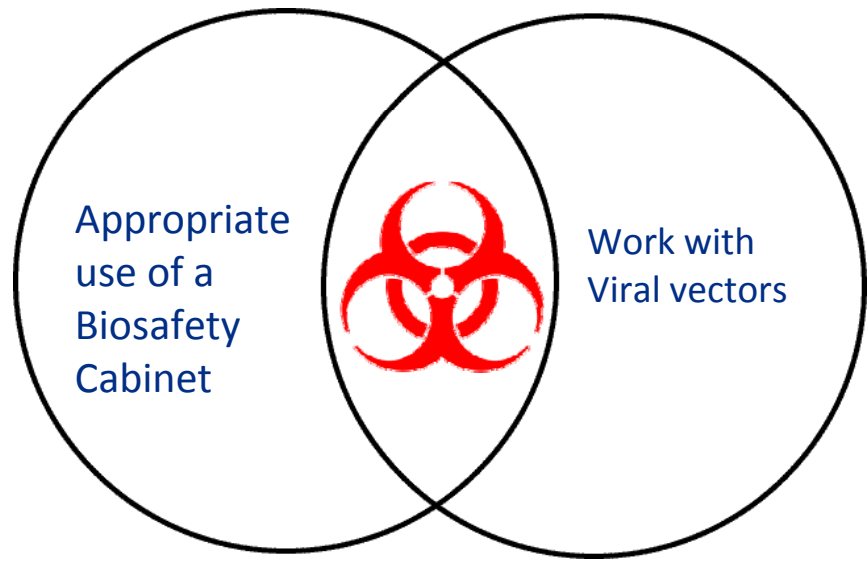
Ignacio Sanz Lab Equipment

Type: Submit

Type	Manufacturer	Model	Serial Number	Building	Room #	Expiration	
Biosafety Cabinet	Baker	SG403A-HE	106718	Whitehead Biomedical Research	222B	04/19/2018	View Remove
Biosafety Cabinet	Labconco	30521	141101813B	Whitehead Biomedical Research	255E	04/19/2018	View Remove
Biosafety Cabinet	Labconco	30241	150103628	Health Sciences Research Building	E208C	04/19/2018	View Remove
Biosafety Cabinet	Labconco	30241	150103637	Health Sciences Research Building	E208C	04/19/2018	View Remove
Biosafety Cabinet	Baker	SG 603AHE	106724	Whitehead Biomedical Research	222A	04/19/2018	View Remove
Biosafety Cabinet	Baker	SG 603	70581	Whitehead Biomedical Research	222A	04/19/2018	View Remove
Hood	Kewaunee		WBRB255A	Whitehead Biomedical Research		07/20/2018	View Remove
Hood	Kewaunee		WBRB255F	Whitehead Biomedical Research		07/20/2018	View Remove

[Add Equipment](#)

[← first](#) [← previous](#) [1](#) [2](#) [3](#)



Risk Assessment – Case Study

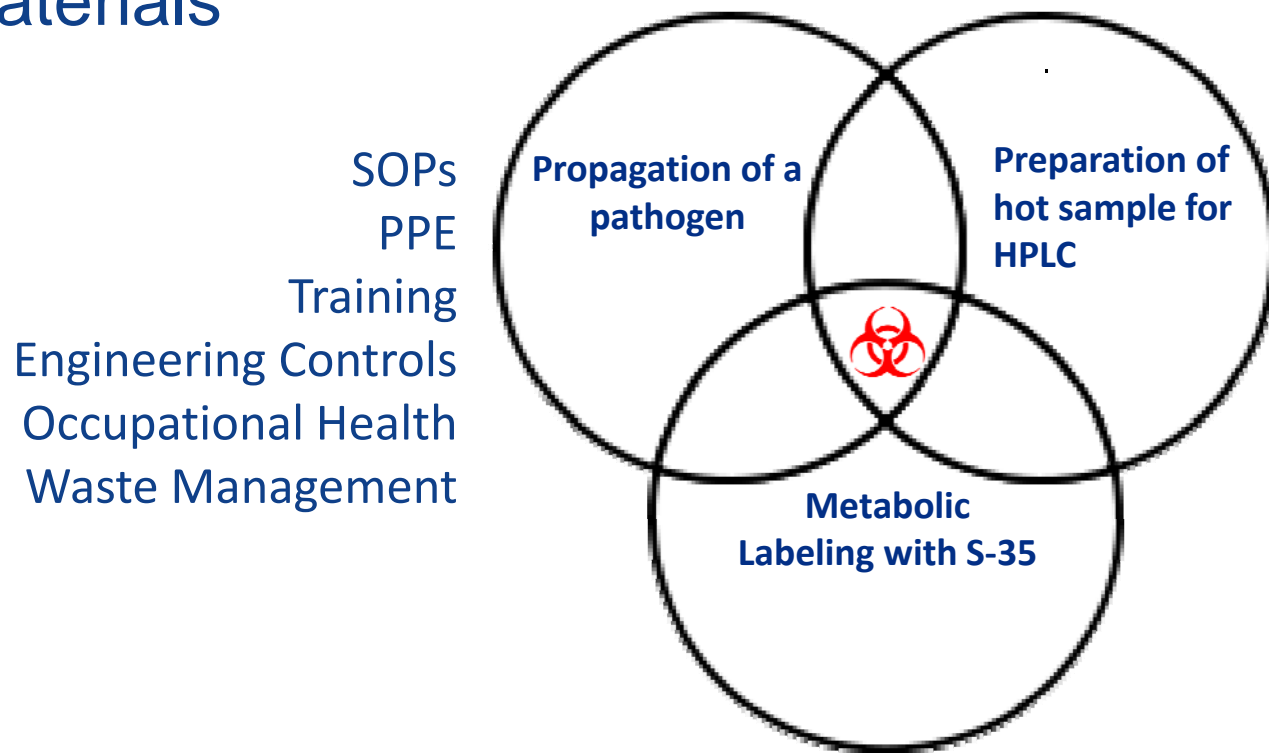
1. Facts

- Investigator has been approved to handle human source materials from human subjects potentially infected with various pathogens
- New study requires that samples from HIV-positive patients be transferred from the hospital setting to the primary research lab and then to a secondary lab for processing with a special piece of equipment
- Investigator contacts Biosafety to ask for guidance

2. The Biosafety Office suggests plan of action



Interactions between Biological, Chemical, and Radioactive Materials



Is the Research Safety Program working?

1. Monthly metrics

- IBC/RHSC approvals reviewed
- Volunteers
- Accident investigations
- Inspections, and many others

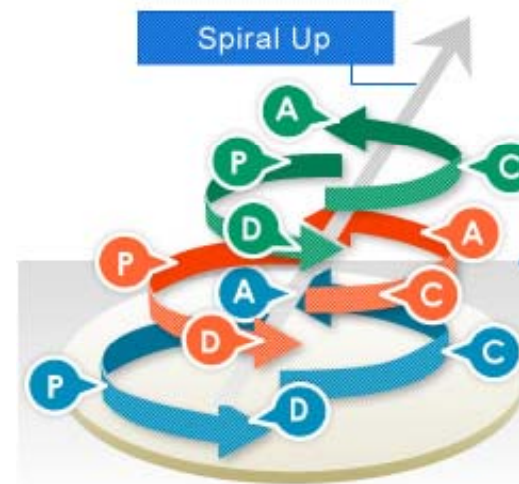
2. Annual report

- Trends

3. Gap Analysis

- Regulations
- Best Practices

Establish priorities and follow the PDCA algorithm



<http://www.konishi-chem.co.jp>

Prioritized Improvement

1. Training
2. Increase space registrations
3. Real-time inspection feedback
4. Establish a Chemical Risk Assessment Process
5. Increase incident reporting and near misses

Thank you

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<http://www.ehso.emory.edu>

