



University of California
San Francisco

New IACUC Member Orientation

5/23/2018

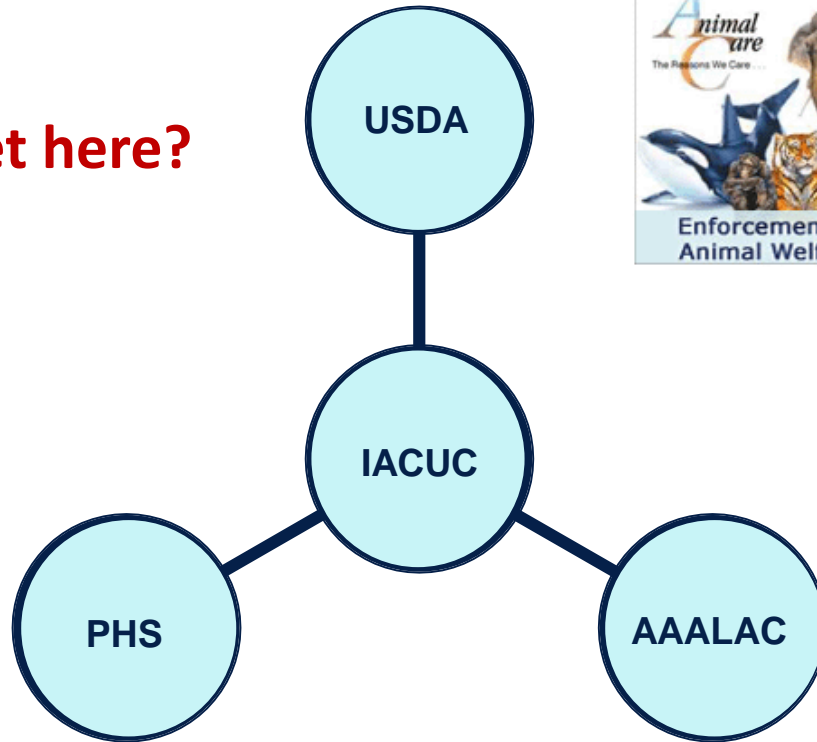
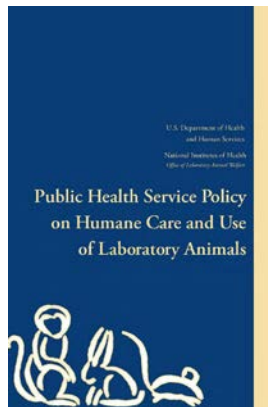
Presentation Goals

1. **Why:** Evolution of IACUC
2. **What:** Applicable laws, regulations & guidance
3. **How:** IACUC Policies, Guidelines, and Practices
4. **References:** All available in UCSF Box

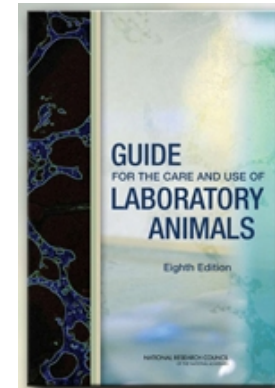
<https://ucsf.box.com/s/904e4ul1y0t5rlz00vqxttxf14zzdabi>

Animal welfare regulations - US

How did we get here?



Animal Welfare Act



Protectionists, scientists, & veterinarians plant the seeds

Nineteenth century US and Europe

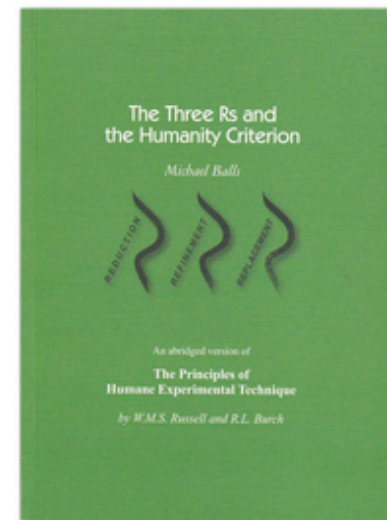
- Society for Prevention of Cruelty to Animals
- Passage of the first "anti-cruelty" laws in Britain.

After World War II

- Growing number of consumer products and drugs.
- Explosive growth in animal experiments.
- Scientists and veterinarians begin to establish animal welfare guidelines.

1959 Turning Point - Russell and Burch

- British researchers
- [The Principles of Humane Experimental Technique](#)
- Defined principles which shape lab animal science and regulation:
 - Humane practices → Reduce scientific variables → Improve science
 - Consideration of Alternatives - foundation of best practices
 - **Alternatives = The 3 R's:**



The 3 R's:

1. **Reduction:** The right number of animals
2. **Refinement:** Methods which alleviate pain and enhance well-being.
3. **Replacement:** Use of a non-animal model

How to implement...



- USDA APHIS [Animal Care Policy #12](#)
- [Animal Welfare Information Center \(AWIC\) NAL](#)
 - AWIC brochure

Lit Search Requirement at UCSF

1. PI performs search - **two sources** (preferred by UCSF IACUC, and listed section E. (Alternatives) of RIO protocol):
 - [National Agricultural Library's AGRICOLA](#)
 - [University of California Center for Animal Alternatives](#)
 - [Animal Welfare Information Center \(AWIC\)](#)
 - [Alternatives to Animal Testing](#)
 - [PubMed](#)
 - Commercial search engines such as [Google](#) or [Yahoo](#)
2. **Suggested keywords** include: pain, distress, alternative, anesthesia, analgesia, non-animal. Keywords that pertain to the specific species, research model, research project and project specific painful or distressful procedures.
3. **Suggested range** for years searched – 10 years
4. PI summarizes search results in protocol, Section E.
 - **Sources** (databases, date of search, rang of years searched)
 - **Methods** (keywords used, keyword strategy)
 - If feasible alternatives will not be used, PI must justify
5. IACUC evaluates PI's summary
 - Did PI made a good faith effort to **consider** alternatives?

1960s

- Public concern in U.S. is gaining momentum,
- Pressure builds on lawmakers to regulate commercial use of animals, including use of experimental animals,
 - **Life magazine article** exposed animal abuse and pet theft by animal dealers. 1966
 - Convinced the public and lawmakers of the urgent need for regulation...

1966 Congress passes *Animal Welfare Act (AWA)*

1. Defines minimum standards of care and use.
2. Covers animals bred for sale, used in research, exhibited
3. Prevents trade of lost or stolen animals.
4. Prohibits animal fighting ventures.
5. Any institution conducting animal research:
 - **Institutional Animal Care and Use Committee**
 - Oversight of experimental animal use
 - Ensure compliance with AWA

AWA

1. Federal Law (mandatory)
2. Applies to U.S. institutions using animals in research, teaching, and testing.
3. Animal: all warm-blooded; excludes rats, mice, birds.
4. IACUC:
 - No less than 3 members:
 - Chairperson, Veterinarian, Non-affiliated

Animal Welfare Act Implementation

Animal Welfare Act Regulations

- “Blue Book” updated Sept 2013 (USDA)

[Link - Animal Welfare Act and Animal Welfare Act Regulations](#)

licensees whose licenses have been suspended or revoked.

- § 2.10 Licensees whose licenses have been suspended or revoked.
- § 2.11 Denial of initial license application.
- § 2.12 Termination of a license.

Subpart B – Registration

- § 2.25 Requirements and procedures.
- § 2.26 Acknowledgment of regulations and standards.
- § 2.27 Notification of change of operation.

Subpart C – Research Facilities

- § 2.30 Registration.
- § 2.31 Institutional Animal Care and Use Committee (IACUC).
- § 2.32 Personnel qualifications.
- § 2.33 Attending veterinarian and adequate veterinary care.
- § 2.34 [Reserved]
- § 2.35 Recordkeeping requirements.
- § 2.36 Annual report.
- § 2.37 Federal research facilities.
- § 2.38 Miscellaneous.

Subpart D – Attending Veterinarian and Adequate Veterinary Care

- § 2.40 Attending veterinarian and adequate veterinary care (dealers and exhibitors).

Subpart H – Compliance With Standards and Holding Period

- § 2.100 Compliance with standards.
- § 2.101 Holding period.
- § 2.102 Holding facility.

Subpart I – Miscellaneous

- § 2.125 Information as to business; furnishing of same by dealers, exhibitors, operators of auction sales, intermediate handlers, and carriers.
- § 2.126 Access and inspection of records and property; submission of itineraries.
- § 2.127 Publication of names of persons subject to the provisions of this part.
- § 2.128 Inspection for missing animals.
- § 2.129 Confiscation and destruction of animals.
- § 2.130 Minimum age requirements.
- § 2.131 Handling of animals.
- § 2.132 Procurement of dogs, cats, and other animals; dealers.
- § 2.133 Certification for random source dogs and cats.
- § 2.134 Contingency planning.

Authority: 7 U.S.C. 2131-2159; 7 CFR 2.22, 2.80, and 371.7.



Animal Care Policies

- Further detail on how to implement certain AWA regs

Animal Care Policy Manual

<u>Policy Number</u>	<u>Date</u>	<u>Table of Contents</u>
1.	October 16, 2015	Control of Tuberculosis in Regulated Elephants (Rescinded)
2.	February 1, 2013	Submission of Traveling Exhibitor Itinerary (Rescinded)
3.	March 14, 2014	Veterinary Care
4.	October 16, 2015	Necropsy Requirements
5.	March 25, 2011	Regulation of Wild/Exotic Animal Auctions Under the Animal Welfare Act
6.	March 25, 2011	Space and Exercise Requirements for Traveling Exhibitors
7.	March 25, 2011	Brachiating Species of Nonhuman Primates
8.	March 25, 2011	Criteria for Licensing Hoofstock Dealers
9.	March 25, 2011	Adequate Enclosures for Flying Species and Aquatic Species
10.	March 25, 2011	Specific Activities Requiring a License or Registration
11.	March 25, 2011	Painful and Distressful Procedures
12.	March 25, 2011	Consideration of Alternatives to Painful/Distressful Procedures
13.	May 23, 2016	Animal Identification
14.	March 25, 2011	Major Survival Surgery Dealers Selling Surgically-Altered Animals to Research
15.	March 25, 2011	Institutional Official and IACUC Membership
16.	March 25, 2011	Proper Diets for Nondomestic Felids
17.	March 25, 2011	Regulation of Agricultural Animals
18.	March 25, 2011	Health Certificate for Dogs, Cats, and Nonhuman Primates
19.	March 25, 2011	Capture Methods of Prairie Dogs
20.	March 25, 2011	Licensing Sales of Dead Animals



https://www.aphis.usda.gov/animal_welfare/downloads/Animal%20Care%20Policy%20Manual.pdf

AWAr's

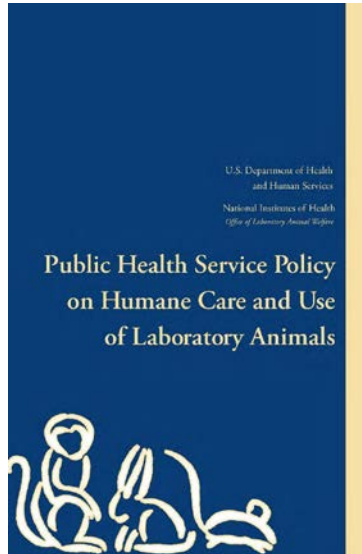
Define responsibilities for IACUC

1. Review the animal care and use program at least once every six months.
2. Inspect animal facilities at least once every six months.
3. Prepare reports of IACUC evaluations and submit to IO (Institutional Official), including minor or significant deficiencies and plan for correction.
4. Review concerns involving the care and use of animals at the institution.
5. Make recommendations to the IO regarding any aspect of the animal program, facilities or personnel training.
6. Review animal care and use activities.
7. Be authorized to suspend an activity involving animals.

AWAr Enforcement

- USDA's Animal Plant Health Inspection Service (APHIS)
- **Unscheduled inspections at least 1x/ year:**
 1. Physical plant, animals, medical records, and...
 2. **IACUC records**
 - **Protocols, Amendments, Annual Renewals**
 - **Documentation from review to full approval for each of the above**
 - **Meeting Minutes**
 - **Semiannual Facility Inspection Reports**
 - **Semiannual Program Reviews**
 - **Semiannual Letters to the Institutional Official**
 - **IACUC Policies and Guidelines**

1973 Public Health Service (PHS)



- PHS is part of DHHS
- Institutions that receive NIH grants
- Must obtain an “Assurance,” describing compliance w/ PHS Policy.

PHS policy (2015 edition)

- How IACUC must function (overlap w/ AWAr)
- Follow Guide and AWAr
- **Animal:** any live vertebrate.
- **IACUC:** No less than 5 members to include:
 - Veterinarian
 - Scientist
 - Nonscientist
 - Community Member

<https://grants.nih.gov/grants/olaw/references/PHSPolicyLabAnimals.pdf>

AWAr

- Establish **acceptable, minimum** animal care standards.
- *Regulated institutions are encouraged to exceed ...*

AAALAC-I

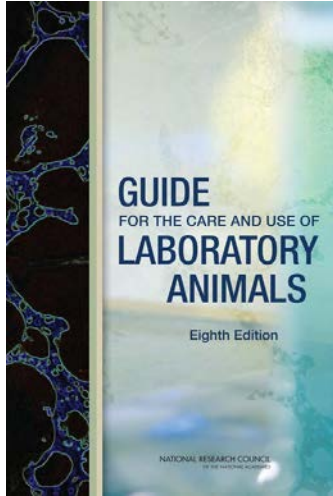
Association for the **A**ssessment and **A**ccreditation of **L**aboratory **A**nimal **C**are - **I**nternational

- A private, nonprofit organization
- Promotes the humane treatment of animals in science
- **Voluntary**
- Demonstrates institution's commitment to the highest standards
- ***Guide for the Care and Use of Laboratory Animals*** (The Guide)
- Once accredited AAALAC-I visits q 3 yr
- Next UCSF visit: 2018

AAALAC-I accreditation process

- Submit a Program Description (PD)
- Describes how institution meets Guide standards
- Site visit (not an inspection):
 - Visit all animal facilities
 - Major focus: In-depth review of IACUC records
 - IACUC Oversight: Rigorous? Rubber stamp?

The Guide, 8th Edition



- Animal: any live vertebrate
- IACUC
 - Must represent the institution's research in size, make-up
 - No more than 3 members same department
 - Must include
 - Veterinarian certification, training, experience in lab animal medicine
 - Practicing scientist experienced in animal research
 - Public member represent general community interests

<https://grants.nih.gov/grants/olaw/Guide-for-the-Care-and-use-of-laboratory-animals.pdf>

AWAr, PHS Policy



Define how IACUC must function:

- Review proposals
- Conduct and document meetings
- Communicate review outcomes to investigators
- Evaluate ongoing or proposed changes to animal activities
- Conduct facility inspections and program reviews
- Notify IO of facility and program deficiencies and correction plans
- Handle complaints
- Handle suspensions

In most cases, the requirements are straightforward...

**Protocol Review
Process
Requirements**
(see handout)

- Review proposals
- Conduct and document meetings
- Communicate review outcomes to investigators
- Suspensions

But IACUC may write a Policy when...

- Requirements are not black & white
- Consistency
- To make practices public

UCSF IACUC Review Process

- Review at convened meetings = Full Committee
- Review outside of convened meetings:
 - Subcommittee Review
 - Annual reviews
 - Modifications
 - Designated Review
 - Reviews that cannot wait for regularly scheduled meeting
 - Proposals that are relatively straightforward; lightens meeting load
 - Administrative Review
 - Personnel modifications, change in funding
 - Administrative w/ Veterinary Verification and Consultation (ARVC)

IACUC Animal Use Protocol (AUP) form

- Question content is driven by AWAr and Guide.
- Organization and wording will differ from institution to institution.
- **RIO** – UCSF IACUC protocol form

Review Process

■ Pre-review

- Starting point for all protocols and amendments, regardless of review track (FCR or DMR)
- Thorough evaluation
- LARC veterinarian & IACUC Staff
 - Animal number calculations
 - Literature search completeness
 - Drug dosages
 - Veterinary care
 - Adverse Effects, Humane Endpoints

Designated Review

- Strict guidance on how to conduct
- Entire committee must first be given a defined period of time in which to request a meeting review
- If no request for a meeting, a subset of IACUC members review on behalf of the full committee

Designated Review Process

1. IACUC Office advances submission to IACUC to (2 bus day polling)
 - IACUC members may enter review comments (clarification requests) during polling period
 - If no requests for a meeting after 2 bus day polling period,
2. Designated Reviewers (DRs) review submission and IACUC comments (1 bus day)
3. IACUC Office sends revisions requested letter to PI
4. PI addresses review comments required to secure approval
5. DRs review PIs edits to assure all review comments were addressed
6. Once DRs agree on approval, they notify IACUC Office
7. IACUC Office changes submission status to approved, and notifies PI.

Full Committee Review Process

- UCSF is a voting committee
- Alternates may vote if voting members are absent
- Minority opinions:

Protocols, Modifications, etc.

- Members may request a minority opinion be recorded in meeting minutes.
- Member may also write a dissenting opinion letter, which must be filed with meeting minutes and protocol.

Semi-annual review reports

- Facility inspections, Program Reviews
- Minority opinions must be filed with the reports

Full Committee Review Process

1 week before meeting

IACUC Office emails:

- Agenda
- Primary/Secondary Reviewer assignments
- Submissions

Primary / Secondary Reviewer Responsibilities

Before meeting

- Notify IACUC Staff and Reviewing Partner ASAP if:
 - You can't attend meeting
 - You must be subtracted from quorum:
 - Conflict-of-interest recusal
 - In most cases, COIs will be obvious to IACUC Staff
 - e.g. you are Protocol PI or Personnel

Primary / Secondary Reviewer Responsibilities

- **Primary and Secondary reviewers**

- Comprehensively evaluate assigned protocols.

- **All members**

- Be familiar with all protocols.
- Raise comments / questions that assigned reviewers missed
 - Significant concerns
 - IACUC staff and assigned reviewers will catch minor errors

All Members - Reviewer Responsibilities

- Focus on protocol sections applicable to role & area of expertise:
 - Non-scientific members → Lay section (Objectives, Alternatives)
 - Veterinarians → Surgical / technical procedures, drug doses
 - EH&S → Personal Protective Equipment (PPE), Safety Practices, Risk Assessment, etc.

All Members - Reviewer Responsibilities

Review comment "Do's and Don'ts"

Do

- Clearly identify section(s) to which comment applies.
- State the problem. Be specific.
- State why it's a problem.
- State how to solve → Action item for PI

Don't

- Ask vague or open-ended questions
- Comment on minor typos or quibbles

Suggested meeting presentation format

Primary Reviewer will (Secondary if Primary is absent):

1. Briefly describe protocol objective (< 5 min)
 - Briefly summarize the goals, experimental methods and animal welfare concerns.
 - 3-year renewal - highlight complications that occurred and any significant changes.
 - Assume other members are familiar with every protocol.
2. Present comments (Primary and Secondary) in broad strokes (< 15min)
 - Highlight significant omissions, incomplete animal welfare or safety info.
 - Scientific design is not the primary area of our review
 - Limit these comments to glaring errors or omissions that affect your ability to understand PI's intent.
 - Address basic science questions or suggestions directly w/ the PI offline.

Suggested meeting presentation format (cont'd)

3. Recommend motion (< 1min)

- After primary reviewer's presentation → other members may raise any concerns.
- At end of discussion, Primary reviewer moves for an action:
 - Approved;
 - Approved subject to Reviewers' approval of the PI's responses to required clarifications;
 - Approval withheld
- Secondary reviewer 'seconds' the motion (if agrees);
- Chair asks if all members are in favor;
- Following a 'yes' from all present, Chair asks if any members oppose
- If all in favor and none opposed, the motion carries.

Post-meeting to Approval



Automatic shift to Designated Review Mode

- IACUC Office notifies PI (in writing) of revisions requested,
- PI modifies protocol accordingly,
- Reviewers (Chair +/- others) review revised protocol,
- If assigned Reviewers approve:
 - Protocol status change to “Approved”
 - PI can begin studies!

Questions?