

CA-1 Research Rotation: Animal Models – 1 or 2 week rotation

Dates: _____ Name: _____

Activities for 1 or 2 week rotation:

- Obtain an overview of basic science and translational studies conducted in the department through meeting with PIs and project coordinators and reading study protocols
- Obtain an overview of regulations and compliance issues associated with the use of animal models
- Learn basic rodent biotechnology (handling and restraint, blood collection, drug administration, anesthesia, euthanasia)
- Exposure to aseptic surgical principles and perioperative care in rodents by learning minor surgical procedures (gonadectomy, hormone implantation, catheter placement)
- Obtain an overview to the Institutional Animal Care and Use Committee (IACUC) process through meetings with project coordinators and review of IACUC forms and approved protocols
- Observe data collection related to research studies and investigator initiated projects being conducted in the department
- Learn how to conduct database searches (i.e. Medline, Pubmed) and retrieve articles from electronic journals through the OHSU library
- Attend relevant research conferences and seminars that are occurring during the rotation
- Select and complete a project
Options include:
 - 1) Critically select and review a research article published by one of the research faculty
 - 2) Draft an IACUC protocol
 - 3) Put together a targeted literature search examining a specific topic or question relevant to animal model based research
 - 4) Develop an individualized project

Activities for 2 week rotation:

- Learn and perform all aspects of an animal model of disease (focal ischemic stroke – rat or mouse; cardiac arrest – mouse; perioperative stroke – mouse)
- Observation of functional and behavioral assessments in ischemic mice

Conferences/Seminars:

Anesthesia Research Conference
Wednesdays, 9-10 AM
3NW Classroom

Research Journal Club
3rd Tuesday of the month, 4-5 PM
OGI, Paul Clayton Bldg, room 401
Coordinator: Paco Herson, PhD (hersonp@ohsu.edu)

Other: _____

PIs:

Stephanie Murphy, VMD, PhD

Patricia Hurn, PhD

Richard Traystman, PhD

Kamila Vagnerova, MD

Ansgar Brambrink, MD

Michael Hutchens, MD, MA

Matthias Merkel, MD

Project Coordinators:

Susan Parker, OGI, 503-748-1172, parkersu@ohsu.edu

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GUIDELINES FOR JOURNAL ARTICLE CRITIQUE

Choosing an article:

1. The article should be a hypothesis-driven original article (no review articles) indexed on Medline and published within the past 5 years in a major journal in the field by one of the research faculty. An original scientific article should contain the following elements:
 - Introduction that contains information, which provides support and serves as a basis for the study.
 - A statement of the hypothesis or question under study.
 - A materials and methods section that delineates how the study was conducted.
 - A section containing results of the study.
 - A section that analyzes the results of the study.
 - A conclusion, summary or abstract that concisely states the findings of the study and places them in perspective.
2. The article should include the use of an animal model.
3. A copy of the article should be given to the faculty PI/mentor for his/her independent review and critique.

Critiquing the article:

1. Provide a written critique that includes strengths and weaknesses of the article
2. In the critique, the following areas should be considered:
 - Design and methods
 - Is the design appropriate to the research question?
 - Is the animal model appropriate to the research question?
 - Innovativeness of the study
 - Analysis of data: does it seem appropriate
 - Interpretation of results
 - Are figures and tables presented clear and support stated results?
 - Do you agree with the authors' interpretation of the results?
 - Clarity of presentation: is there a logical flow from the background, hypotheses, methods, results, and discussion
 - Attention to relevant literature

GUIDELINES FOR IACUC PROTOCOL

Choosing a species and model:

1. Choose a species and animal model of interest that has relevance to the research interests of the department

Preparing a protocol:

1. Forms and appendices are posted on the J drive at J:\ANES Research\Lab Operations and Administration\Lab Administration\IACUC\IACUC Forms – 2005, or at the IACUC website at <http://www.ohsu.edu/research/rda/forms.shtml#animal>.
2. Use the following forms for preparing your IACUC protocol:
 - Animal Usage and Administrative Review Form
 - Appendix A: Surgery/Procedures

GUIDELINES FOR LITERATURE SEARCH

1. Choose a topic of interest to you that has relevance to basic science or translational research in the field of anesthesiology
2. Develop appropriate search terms
3. Set appropriate search parameter limits
 - Publication year range
 - Language
 - Animal
 - Age or gender
4. Select appropriate articles based on your search and print out abstracts (no more than 25 abstracts)