CSU COVID Guidance
Covid protocol changed as of May 11, 2023, coinciding with the end of the Federal Covid-19 Public Health Emergency Declaration. For current guidance, visit the Centers for Disease Control’s About Covid-19 website. For local guidance, visit the Larimer County Health and Environment website. For Colorado State University offices outside of Larimer County, please consult your local health department.

If you have questions or concerns regarding Covid at Colorado State University, or if you need to report a positive Covid case, contact the CSU Public Health Covid line at 970-491-4600, or use the online Public Health Reporter on the Environmental Health Services’ Public Health website.

Instructor: Chaoping Chen, MRB 233, 491-0726 (office), Chaoping.Chen@colostate.edu

Teaching/learning style/venue:
• Class meets F2F at MRB 312 on Fridays 10-11:50 am, Feb 16th through Apr 19th (8 weeks)
• A MS Teams link is available for students to join in virtually and synchronously when justified necessary.
• This course will encompass a mixture of lectures, in-class and Canvas discussions, case studies, and online RCR training.

Audience:
All M.S. and Ph.D. students in Biochemistry. Postdocs, research scientists, research associates, etc. who are interested and/or required to fulfill the University (and Federal) requirements for face-to-face RCR training.

Student learning outcome and goals:
• Students will obtain a framework for principled decision making applicable to their scientific endeavors as they specifically relate to research in the biomedical sciences. This training is critical for students who are beginning their research careers in the biological sciences, and to all researchers in the field who have not received RCR training or require an updated RCR course.
• Participants will develop an understanding of the many facets of responsible conduct in research, specifically as they relate to research in the field of Biochemistry and the Biomedical Sciences. The following topics, in part, will provide exposure to biases that arise in the execution of research and in the ethical activities related to research:
  1) Ethical reasoning in issues related to the collection of biochemical data, publishing, reviewing, and grant writing
  2) Proper treatment of experimental data, including data recording, analysis, bias, and reproducibility
  3) Data management, including use of image altering software (Adobe Photoshop, etc.), cropping of gels, and maintenance of accurate and traceable research notebooks
  4) Publication practices and authorship; awareness of research misconduct: Falsification, Fabrication, and Plagiarism
  5) Ethical and humane treatment of research animals: 3 R’s (replacement, reduction, refinement).
  6) Rigor and reproducibility
Class schedule:

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<thead>
<tr>
<th>Date</th>
<th>Instructor</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Feb 16</td>
<td>Chaoping Chen</td>
<td>Introduction and Course Overview</td>
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<tr>
<td>Mar 1</td>
<td>Moti Gorin, PhD – CSU Bioethicist</td>
<td>Moral theories, Ethical frameworks</td>
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<tr>
<td>Mar 8</td>
<td>Mara Sedlins, PhD – Data Management Specialist, Morgan Library</td>
<td>Data management</td>
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<td>Mar 22</td>
<td>Kimberly Cox-York, PhD – CSU RCR Coordinator</td>
<td>RCR at CSU (human subjects, animal use, infectious agents, rDNA, lab safety, etc.) and Research Misconduct</td>
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<td>Mar 29</td>
<td>Chaoping Chen</td>
<td>WB data acquisition and analyses</td>
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<td>April 5</td>
<td>Chaoping Chen</td>
<td>Group discussion on selected topics and cases</td>
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<tr>
<td>April 12</td>
<td>Chaoping Chen</td>
<td>Group discussion on selected topics and cases</td>
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<tr>
<td>April 19</td>
<td>Chaoping Chen</td>
<td>Group discussion on selected topics and cases; Online RCR training due</td>
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Assessment/Grading:
Traditional letter grades will be determined by attendance, participation, and written assignments:
1) Regular attendance is mandatory. Any excused absence must be cleared with the instructor in advance. Each unexcused absence results in a reduction of one letter grade.
2) Active engagement and participation in group discussions are required.
3) All homework assignments must be completed in time.
4) Students must complete the required online RCR training via CITI Program and submit the certificate by the last day of the class (Apr 19, 2024).

Academic Integrity
This course adheres to the Academic Integrity Policy of Colorado State University as outlined at http://tilt.colostate.edu/integrity/resourcesStudents/. This includes agreeing to the Student Honor Pledge “I have not given, received, or used any unauthorized assistance.” Academic dishonesty will not be tolerated and may result in disciplinary action and the grade of U. This includes cheating, falsification of information, plagiarism, abuse of academic material, and complicity in academic dishonesty.

Resources/Background reading:
- Responsible Conduct of Biomedical Research: A Handbook for Biomedical Graduate Studies Students.
- https://oir.nih.gov/sourcebook/ethical-conduct/responsible-conduct-research-training
- https://poynter.indiana.edu/
- Responsible Conduct of Research; Adil E. Shamoo and David B Resnik.
- Research Ethics: A Reader; Deni Elliott and Judy E. Stern, Editors.
- “Truth and Consequences” (Science report on the Goodwin case)
- The Moral Instinct, NY Times article by Steven Pinker
- The Double Blind Gaze by Steven Bratmann
- The collaborative Institutional Training Initiative (CITI program)