

**Name of rotation:** Clinical/Basic Research in Gastroenterology at the National Institutes of Health.

**Course director:** Stephen A. Wank, or arranged with research project specific mentors.

**General description of the rotation including educational purpose, rationale or value:**

The fellow will be expected to join one or more current gastrointestinal clinical or basic research projects and either initiate or be involved in the initiation of new research projects whenever possible. The projects will be chosen on the basis of the mutual interest of the fellow and mentor. During this period the fellow will work closely with the faculty so that the fellow can learn first hand the research process while under direct supervision of the mentor. Participating in actual clinical research trials or laboratory research along with theoretical and research project based lectures/conferences will form the foundation of the rotation. During the rotation, the fellow will gain a working knowledge of the design of clinical protocols, the IRB review process, data collection, interpretation/statistical handling, responsible use of informed consent, and attendant ethical standards for the conduct of clinical research.

**Fellow responsibilities:**

The fellow will select a research project and corresponding mentor. The fellow will review the literature and rationale for the research project. The fellow and mentor will meet on a regular basis to discuss the research protocol, the collection/analysis and interpretation of the data. The fellow will read and attend courses/ lectures/ conferences regarding specific methods as well as general theory on all aspects of clinical research. The fellow will learn the research specific methods and laboratory tests and will be expected to collect and record the clinical data and appropriately organize and analyze the data for presentation at research meetings with the research team. Fellows will learn to write abstracts for presentation at scientific meetings and write and submit manuscripts for publication in scientific journals.

**Educational objectives:** An expanded version of the competencies is listed under Core Competencies in Gastroenterology. Those listed here are specific to this rotation.

**During this rotation, the F-2 fellow will:**

**Patient Care**

1. For clinical research – develop an understanding of the relationship and potential conflicts between clinical care and clinical research.

**Medical Knowledge**

1. Expand knowledge base in gastroenterology as it relates to the specific research project

**Practice-based Learning**

1. Learn the principles of research design, methodology, and conduct of experiments.
2. Gain experience in the management and evaluation of experiments (basic research) or of clinical research subjects (clinical research).
3. Learn the basic laboratory skills pertinent to the selected research project.
4. Learn the principles of data analysis as they relate to the selected research project.
5. Learn to write abstracts and manuscripts based on the selected research project.

**Interpersonal and Communication Skills** – see Core Competencies

**Professionalism** – see Core Competencies

**System-Based Practice** – see Core Competencies

**During this rotation, the F-3 fellow will:**

**Patient Care**

1. For clinical research – refine the understanding of the relationship and potential conflicts between clinical care and clinical research.

**Medical Knowledge**

1. Expand knowledge base in gastroenterology as it relates to the specific research project

**Practice-based Learning**

1. Consolidate the principles of research design, methodology, and conduct of experiments.
2. Gain experience in the management and evaluation of experiments (basic research) or of clinical research subjects (clinical research).
3. Use the principles of data analysis as they relate to the selected research project.
4. Write abstracts and manuscripts based on the selected research project.

**Interpersonal and Communication Skills** – see Core Competencies

**Professionalism** – see Core Competencies

**System-Based Practice** – see Core Competencies

**Check all principal teaching methods used during this rotation:**

	Attending teaching rounds		Interdisciplinary rounds
	Patient management discussions	X	Small group discussions
X	Conferences		Bedside clinical rounds
X	Individual instruction of procedures		Review of diagnostic studies, including radiology
X	Other: Research conferences, laboratory training, review of biomedical research literature		

**Describe the most important educational content, including the mix of diseases, patient characteristics, types of clinical encounters, procedures, and services:**

The fellow chooses to work with a faculty investigator with the research skills and project that fits the interest of the fellow. Mentoring is 1:1 in techniques for the conduct of research, either in basic science or clinical research. Fellows will receive training in formulation of hypotheses and specific aims, study design, research methods, and laboratory testing. Fellows are expected to analyze data and prepare abstracts for oral presentation and manuscripts for publication.

**Check the principal ancillary educational materials used:**

	Reading lists		Pathologic material
	Radiologic studies		Other noninvasive studies
X	Handouts on relevant topics	X	Articles from the literature
X	Other: 1:1 mentoring by faculty investigators		Case studies

**Methods used to evaluate the fellow and the rotation:**

X	Evaluation of fellow performance and professionalism
X	Evaluation of attending teaching skills and other attributes
X	Rotation assessment by fellow
	Observation of fellow's clinical competency
	Observation of fellow's leadership and teaching skills
	Review of the fellow's history/physical exam, progress notes, and documentation of procedures
X	Fellow's attendance of rounds and conferences monitored
X	Other: Research aptitude and productivity

**Identify strengths and limitations specific to the resources of the sponsoring institution:**

The Digestive and Liver Diseases Branch of the National Institutes of Diabetes, Digestive and Kidney Diseases, NIH Division of Gastroenterology has more than ten senior clinical and basic science investigators with a long track record of successful mentoring of fellows in research projects. NIDDK, the other institutes and the NIH Clinical Research Center offer a number of research training programs, lectures, courses in all aspects of clinical and basic science research. The NIH clinical center is a unique hospital that offers the infrastructure dedicated to the singular purpose of clinical research. Limitations include a finite number of fellows able to work with any single investigator or single project.

**Conferences or Attending/Patient Care Rounds**

<u>Name</u>	<u>Location</u>	<u>Day</u>	<u>Time</u>
Clinical Research Conference	NIH	Alt./Thursdays	1:00 pm
Clinical Protocol Conference	NIH	Alt./Thursdays	1:00 pm
Clinical Interdisciplinary Conference	NIH	Alt./Thursdays	1:00 pm
Clinical Journal Club Conference	NIH	Alt./Thursdays	1:00 pm

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