

<b>FOURTH YEAR ELECTIVE TITLE</b> <b>RESEARCH IN MOLECULAR GENETICS, VIROLOGY, CELL BIOLOGY AND GENETIC ENGINEERING</b>		<b>COURSE NUMBER</b> MICR 9000	<b>LOCATION</b> ROBERT WOOD JOHNSON MEDICAL SCHOOL
<b>ELECTIVE DIRECTOR</b> GARY BREWER, PHD	<b>ELECTIVE FACULTY</b> RWJMS DEPARTMENT OF BIOCHEMISTRY & MOLECULAR BIOLOGY; PHARMACOLOGY	<b>ELECTIVE CONTACT</b> GARY BREWER, PHD  BIOCHEMISTRY & MOLECULAR BIOLOGY RWJMS R-735(P)	<b>CONTACT PHONE/FAX/EMAIL</b>  PH. 732-235-3473  FAX 732-235-5223 <a href="mailto:brewerga@rwjms.rutgers.edu">brewerga@rwjms.rutgers.edu</a>
<b>BLOCKS AVAILABLE</b> ALL	<b>DURATION/WEEKS</b> MIN: 12; MAX: NONE	<b>HOURS PER WEEK</b> 40	<b>STUDENTS</b> MAX 11
<b>LECTURES/SEMINARS</b> YES	<b>OUTPATIENT</b> No	<b>INPATIENT</b> No	<b>HOUSESTAFF</b> No
<b>NIGHT CALL</b> No	<b>WEEKENDS</b> YES	<b>LAB</b> YES	<b>EXAM REQUIRED</b> No

**OVERALL EDUCATIONAL GOAL OF ELECTIVE**

To provide the student with an understanding of how a medically related problem is approached using the tools of modern molecular biology.

**OBJECTIVES**

- Become proficient in background literature search of a specific problem
- Gain experience in planning experimental approaches to the solution of a specific problem in molecular genetics or microbiology
- Acquire expertise in the modern techniques needed to carry out the proposed experiments
- Learn to interpret experimental data in terms of the problem approached

**BRIEF DESCRIPTION OF ACTIVITIES**

Interferons, other cytokines, and their receptors (Dr. Langer); HIV, HTLV, and retroviral vectors (Dr. Rabson); arthropod-borne viruses (Dr. Langer); post-transcriptional control of protein synthesis: ribosome function, mRNA capping, mRNA stability (Drs. Brewer, Copeland); molecular biology of cancer cells (Drs. Brewer, Rabson); bacterial toxin/anti-toxin systems (Dr. Woychik).

**METHOD OF STUDENT EVALUATION**

Individual evaluation by the research sponsor, based upon level of understanding of the research problem, level of technical skill achieved and experimental results obtained.

**ARE THERE ANY PREREQUISITES FOR THIS ELECTIVE?** No

**IS THIS ELECTIVE AVAILABLE TO THIRD YEAR MEDICAL STUDENTS AS WELL?** No