SENIOR RESEARCH PROJECT GUIDELINES

I. MISSION STATEMENT
The requirement:
In the PGY-IV residency year, each trainee shall produce, as one of the requirements for graduation, an in-depth, hypothesis-driven scholarly examination of an area of basic neuroscience or a clinical question relevant to psychiatry.

The rationale:
The purpose of Senior Research Project is to develop critical thinking skills and provide a basis for continued learning and scholarly pursuit of which will last throughout the trainee’s career. This project represents an opportunity for residents to work closely with UCSD faculty who conduct leading research programs in every major area of psychiatry.

II. TYPES OF PROJECTS
We are enthusiastic about a wide variety of trainee-initiated projects, provided that the work can be completed within the time-frame of the residency. However, we expect that most residents will work on a project related to the ongoing work of their research mentor, usually a Department of Psychiatry faculty member. Working on an aspect of the mentor’s research is desirable as long as the resident’s project deals with a question that has not already been substantially addressed by the mentor.

Laboratory research: Residents are encouraged to do “wet lab” research for their senior thesis. Any aspect of basic neuroscience of molecular psychiatry is acceptable, and residents may seek faculty mentors within the Department of Psychiatry, or from other departments or institutions in the San Diego research community.

Residents who plan to start a laboratory project in their senior year and continue this work in a subsequent fellowship must provide a clearly defined set of goals in their proposal of which they intend to complete by the end of their PGY-IV year. These may be only interim goals with respect to the entire project. The project report should include the work accomplished during the residency, discussed in the context of the overall research plan.

Patient-based clinical studies: A majority of residents will probably complete their project in the area broadly defined as “clinical research”. The ongoing clinical research in the Department of Psychiatry is the ideal starting point for these projects, including the clinical research programs in mood disorders, late-life psychosis and antipsychotics, geropsychiatry and alcoholism. The active clinical research programs of individual psychiatry faculty are based at both the VA and University hospitals, the outpatient clinic, and the child psychiatry program. As discussed for laboratory research projects above, residents who plan to continue their senior research project as a clinical fellow should use their proposal to define a set of goal to be completed by the end of the PGY-IV year, described in the context of the overall project.

Literature review: Scholarly review of the literature can form the basis of a successful project, even without the generation of new data. However, there are some important special considerations for these projects. First, the literature review must be hypothesis driven. There must be a substantial question to be resolved by the re-examination of published data, which was not fully addressed by the prior studies. It is not sufficient to merely find and summarize existing articles where no new insights are derived.

The format for a proposal based on literature review should be the same as any other research proposal, including hypothesis, background, and methods of procedure. The thesis report for a literature review should conclude with a proposal for further research in the area examined—an outline of what studies or experiments are the next logical step in the field.

III. DUE DATES FOR THE SENIOR RESEARCH PROJECT
July 1 - Selection of research mentor. You should seek your research mentor in the spring quarter of the PGY-III year.

September 1 - Title and abstract of research proposal
October 1 - Project proposal
June 1 - Project report (prior to completion of PGY4 year)
Late May or Early June of PGY4 year - Presentation or oral exam
These dates require a written report to the Residency Research Committee. By July 1, the name of the research mentor should be sent to the Chair of the Residency Research Committee. By Sept. 1 you should submit a brief Abstract that includes the Title, Hypothesis, Specific Aims and basic Methodology of the project (one-half to one page). The format of the Project Proposal, due October 1, and the Project Report, due prior to completion of the residency, are outlined below. We have established these deadlines for progress on the project so the members of the Committee can offer advice along the way.

IV. THE FORMAT OF THE PROJECT PROPOSAL
The model or standard for the proposal: The proposal should meet standards suitable for an NIMH research fellowship application.

The outline for the proposal will be:
• Abstract (1-2 paragraphs)
• Introduction (1-2 paragraphs)
• Hypothesis and Specific Aims
• Background and Rational (typically a few pages)
• Experimental Methods (a few paragraphs to a few pages, depending on the complexity and novelty of the methods. Established methods can be summarized briefly, with reference to relevant papers. The publications containing key methods may be attached to the proposal).
• References

Hints for a successful proposal:
• Engage your research mentor early and often. If your mentor seems unavailable, aloof, incompetent, or less than enthusiastic, contact the Chair of the Residency Research committee before too much time slips away.
• Make sure that your project has a clear testable (refutable) hypothesis and well defined specific aims.
• Keep it simple. We expect that the research project will represent the equivalent of a month or two of effort, distributed over the PGY-IV year. Don’t propose more than you can realistically do in this amount of time.
• If the project will continue in post-graduate training, define specific interim goals for the PGY-IV year.
• Make sure the resources (lab space, patients, computer time, etc.) for your project are available. Most often these resources will come from your mentor’s funded research. Confirm this before submitting the proposal.
• Clearly define and do not overstate your contribution to the project. We are looking for a small, specific, time-limited project actually performed by the trainee, not a restatement of your mentor’s center grant. Address the overall context of the project in “Background and Rationale”.

V. THE FORMAT OF THE PROJECT REPORT
The model or standard for the report: We recognize that only a subset of the Senior projects will actually be published, but the standard for the length and quality of the project report should be a manuscript appropriate for publication in a peer-reviewed psychiatric or basic science journal. Formats for different journals vary. If the research project is actually to be submitted for publication, use the format for the target journal. If not, use the outline below:
I. Abstract
II. Introduction
III. Materials and Methods
IV. Results
V. Discussion
VI. References

Oral presentations: It is highly desirable for trainees to present their research at the annual Residency Research Conference in the spring. Presentations are expected to cover the highlights of the project coherently for a general psychiatric audience, and are expected to last 15-30 minutes, plus questions. The trainee making the best presentation each year will be awarded the Lewis Judd Research Prize.