



**Neuroscience Graduate Program  
Student Handbook  
2016-17**

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# The Graduate Program in Neuroscience

## UNIVERSITY OF CALIFORNIA, RIVERSIDE STUDENT HANDBOOK 2016-17

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### Introduction

Neuroscience is a multidisciplinary approach to understanding nervous systems at levels ranging from the molecular and cellular to the whole organism. The goal of the Neuroscience Graduate Program is to prepare students for careers in research, teaching and/or scientific administration. Students are expected to learn the fundamentals of neuroscience, starting with a required course sequence to become knowledgeable concerning a range of research methods, and to demonstrate capability in original research. The specific research training received by a graduate student is the responsibility of the faculty supervisor/mentor, under whose guidance and in whose laboratory the student carries out research projects leading to the degree. Our students benefit from an interdisciplinary training approach, tailored by the faculty supervisor but enriched by the readily available expertise and laboratory facilities of program faculty with backgrounds ranging from chemistry through molecular biology to psychology. In addition to this training, regular Neuroscience Colloquia (NRSC 287) make students aware of current scientific advances as well as the range of opportunities open to neuroscientists whose interests and talents can lead to careers in academia as well as the biotechnology industry and science administration. This handbook is designed to guide your development as a graduate student in the Neuroscience Program at the University of California, Riverside.

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### The Academic Program (Ph.D.)

Requirements for conferral of the Ph.D in Neuroscience include completion of:

- basic coursework
- two quarters of teaching
- research proposal and qualifying examination
- Ph.D. dissertation
- dissertation defense

Normative time for completion of the Ph.D. degree requirements is fifteen quarters (5 years), although this is somewhat flexible, depending upon the specific research area and preferences of the faculty supervisor. Students are *strongly* encouraged to identify a faculty supervisor and begin laboratory research as soon as possible after arriving at UCR. Most coursework and preparation for qualifying examinations is completed during the first two years, while maintaining research as the highest priority. The remaining 2-3 years are devoted to research and to the writing and defense of the dissertation, although students continue to participate in graduate seminars and may take additional coursework during this period.

Briefly, students are expected to advance through several milestones according to the following recommended timetable: 1) Beginning of the 1<sup>st</sup> quarter: plan 3-5 laboratory rotations in consultation with the graduate advisor for enrolled students and/or Director of the Neuroscience Program, 2) End of 3<sup>rd</sup> quarter: Finish rotations, identify your faculty supervisor, and set up the faculty guidance committee, 3) Beginning of the 4<sup>th</sup> quarter: Begin work

on the research proposal in consultation with the faculty supervisor, 4) End of the 6<sup>th</sup> quarter: Complete coursework and written research proposal; set up the oral qualifying committee, 5) 7<sup>th</sup> Quarter: Pass the qualifying examination 6) End of 15<sup>th</sup> quarter: Finish dissertation and file with Graduate Division.

The following provides detailed information about each of these goals and other requirements:

1. **Schedule your laboratory rotations.** You are encouraged to engage in rotations during the first year as a way of learning more about Neuroscience research underway at UCR and to broaden your perspective regarding different scientific problems, questions, and experimental approaches. Lab rotations may be 5-10 weeks in duration, depending on mutual agreement with faculty involved. Rotations are not absolutely required: if you arrive at UCR with the firm commitment of a faculty supervisor and your own preference to begin work in a particular area right away, this is perfectly acceptable.
2. **Choose your Faculty Supervisor.** Choice of faculty supervisor is critically important and must be done thoughtfully and carefully. This is the faculty member who will be primarily responsible for your scientific training. Your research direction will be shaped by the direction of research conducted in the laboratory of this faculty member. In addition to providing the critical role of mentor in your scientific development, the faculty supervisor will serve as Chair of your Guidance Committee and Dissertation Committees and provide research facilities, intellectual guidance, and financial support required to complete the dissertation. Since you cannot truly begin your own research until you have selected a faculty supervisor, it is critical that you make this decision as soon as possible, by the end of the 3<sup>rd</sup> quarter at the very latest. There are two important principles to understand: (1) you need the commitment of a faculty supervisor to work in their lab, and (2) you are permitted to switch labs and faculty supervisor, provided that you reach agreement with the *new* supervisor and graduate advisor for enrolled students.

It is also strongly recommended that new students **join the Society for Neuroscience (SFN)** before the end of their first quarter. See the SFN webpage for membership benefits and applications: <http://web.sfn.org/>.

3. **Meet with your Guidance Committee as soon as possible**, preferably during your initial quarter of study. Guidance committees typically are composed of the faculty supervisor and two additional faculty members with expertise in your area of interest. Formation of this committee is accomplished in consultation with the faculty supervisor and approved by the Graduate Advisor for enrolled students. The Guidance Committee is chaired by the student's faculty supervisor. The committee provides advice on coursework and research approaches and monitors progress during the quarters preceding the qualifying examination. More specifically, the committee provides guidance and evaluation regarding: (a) satisfaction of any course deficiencies, (b) fulfilling Program course requirements, (c) preparation of the student for research, (d) student performance. The Committee should meet minimally once per year and more often as the need arises. The Graduate Advisor is not expected to attend Guidance Committee meetings, but should receive a written summary following each meeting. In addition, the Graduate advisor and/or Program Director have the right to attend these meetings.
4. **Complete course requirements**, including (1) Fundamentals of Neuroscience 200A, B and C; (2) at least one Research Methods course; (3) at least two courses or one course sequence from one of the following three areas: [i] behavioral science, [ii] physiology and pharmacology, [iii] biochemistry, cell & molecular biology; (4) enrollment and participation in the Colloquium in Neuroscience (NRSC 287) each quarter in academic residence. Additionally, every student will enroll in Special Topics in Neuroscience (NRSC 289, 2 units) during Fall and Spring Quarters. Following completion of the qualifying exam, students are required to enroll in NRSC 289 only once per year. Students in the Ph.D. program must normally have completed a Bachelor's degree in one of the biological sciences, with a preparation deemed equivalent to that required for the bachelor's degree from UCR.

Students who are admitted to graduate standing with deficiencies in preparation may be required by their faculty supervisor and Guidance Committee to take appropriate courses to correct such deficiencies.

**5. Complete the teaching requirement.** A minimum of two quarters of service as a Teaching Assistant in Neuroscience or related-area courses is required regardless of whether financial support comes from Fellowship or Research Assistantships, etc. All students will participate in the Teaching Assistant Development Program (TADP) sponsored by the Graduate Division. Prior to the TAship assignment, you are required to attend (1) the New TA Orientation and (2) the TADP's TA training seminars and workshops. See the TADP website for schedules and contact information: <http://www.graddiv.ucr.edu/TADPtoc.html>. You can also contact the TADP Coordinator by e-mail: [admintadp@ucr.edu](mailto:admintadp@ucr.edu).

All international students must take the SPEAK test and obtain a passing grade before they can be appointed as a TA. Students receiving a "clear pass" on the SPEAK test (scores  $\geq 50$  out of 60) have no further requirements and can be appointed to TA positions. Students receiving a "conditional pass" (scores of 40-45) can be appointed as a TA for three quarters, but are required to take English classes at the Learning Center and retake the test. Their TA appointment is on a probationary basis with the approval of the Graduate Dean. Students receiving a "no pass" (scores of 20-35) may not be appointed as a TA until they have retaken the test and obtained a clear or conditional pass. Contact the UCR Extension Center for more information regarding the SPEAK test: (951) 827-1701 ([esl@ucx.ucr.edu](mailto:esl@ucx.ucr.edu)).

**6. Qualifying Examination.** After completing course requirements and no later than the 7<sup>th</sup> quarter in residence, the student will be given a qualifying examination in two parts. Work on Part I will begin by the 4<sup>th</sup> quarter in residence. A brief description is provided here. **Please see pages 30-35 of this handbook for a more detailed description of the Written Qualifying Exam procedure.**

In **Part I** the student will prepare a research proposal on questions and specific aims relevant to the research area chosen. The format should follow current guidelines provided by either the NIH or NSF. Forms and information specific to particular agencies are not required (e.g., budget, resources, animal protocols, hazardous waste management). Regarding page limits, the current 12-page limit specified by NIH is flexible for the qualifying exam proposal, and may be exceeded in the interest of providing a thorough literature review relevant to the specific aims proposed. Students must demonstrate an ability to integrate material from primary research literature, provide information regarding background and significance, and delineate a detailed experimental research plan with clearly defined hypotheses and a consideration of potential pitfalls and alternative approaches. The proposal must be provided to all members of the qualifying exam committee at least two weeks prior to the oral exam. Students are expected to discuss at least the broad outlines of their research proposal with each of their qualifying exam committee members well in advance of submitting their written proposals. Students are encouraged to take the qualifying examination prior to the seventh quarter in residence (not including summer quarters). If the examination has not been scheduled prior to the start of the ninth quarter, a detailed justification must be provided to the Graduate Advisor.

**Part II** will be the oral qualifying examination conducted by the Qualifying Committee in accordance with the regulations set forth in the UC Riverside Graduate Student Handbook. The Qualifying Committee, consisting of at least five members, will be nominated by the Graduate Advisor in consultation with the student and faculty supervisor and must be approved by the Graduate Dean. The Faculty Supervisor typically is not a member of the Qualifying Committee, although exceptions can be made under appropriate circumstances. Under no circumstances will the faculty supervisor serve as Chair of the Qualifying Committee. One member of the Qualifying Committee, not from the Neuroscience Program, will be designated as the outside member. The Committee reads and evaluates the research proposal and conducts the examination. The student is expected to

articulate and defend the research proposal as well as answer general knowledge questions. Oral exams typically last ~2-3 hours, consisting of a short (20-30 minutes) presentation of the research proposal by the student, followed by a question and answer period. **No more than two attempts to pass the oral examination will be allowed.** [See pages 30-35 of this handbook for a more detailed description of the Written Qualifying Exam procedure.]

**7. Work on the Dissertation.** Once a student has advanced to candidacy by passing the Qualifying Examinations, a Dissertation Committee of three faculty members will be nominated by the student and supervisor and appointed by the Graduate Dean. The Dissertation Committee is chaired by the faculty supervisor. The Dissertation Committee meets with the student at least once per year to review progress and provide advice. It is the responsibility of the Dissertation Committee to evaluate the dissertation, provide advice, and eventually sign off on the completed document. The student must provide a draft of the dissertation at least 3 weeks prior to the Dissertation Defense.

**8. Dissertation Defense.** Before the dissertation is given final approval, the student must present a public lecture on the dissertation research to faculty and students in the program. Following the public lecture, the student will meet with the Dissertation Committee for an oral defense in accordance with regulations of the Graduate Division.

**Please refer to the timetable found at the end of this handbook.**

### **Satisfactory Academic Progress**

Normative time for the Ph.D. degree in Neuroscience is fifteen quarters (five years). Normative time is defined as the period of full-time registration required to earn the degree, assuming that the student enters with a bachelor's degree and has no course deficiencies or need to take any remedial work. For most programs at UCR, this falls between five and seven years. Because the Ph.D. is a research degree, the University gives programs considerable latitude in establishing degree requirements. As stated above, the program of study for Neuroscience students is planned in consultation with the Guidance Committee, which supervises the student's progress prior to the appointment of the dissertation committee. After the student advances to candidacy, the Dissertation Committee oversees the student's progress in the final stages of the degree program.

For all students, evaluations of progress are carried out each Spring/Summer by the faculty supervisor. Ideally, the Guidance or Dissertation Committee meets with the student and assesses progress over the past year. A written progress report is prepared by the faculty supervisor in consultation with the student and submitted to the Graduate Advisor for Enrolled Students. All evaluations are reviewed by the Graduate Advisor, who is responsible for making specific recommendations to the Graduate Division concerning the student's progress. The Graduate Advisor may also approve exceptions to the normal time schedule occasioned by unusual circumstances. Students are notified in writing of the results of the annual evaluation, and copies are forwarded through the Graduate Secretary to the Graduate Division.

**Unsatisfactory Academic Progress.** Reasonable progress in achieving necessary milestones in the degree program is expected. Failing to do so may have serious consequences for your career in graduate school. If you do not meet suggested deadlines such as qualifying exams in a timely fashion, if your GPA drops below the minimum level of 3.00 (3.50 for Fellowship recipients), if you have 12 or more units of "I" grades, or if your faculty advisor feels that you are not advancing as you should, the Graduate Division can and will block your registration. In addition, opportunities for receiving funding through the Program become severely limited.

**M.S. Degree.** A Thesis Plan (Plan I) or Non-Thesis Plan (Plan II) M.S. degree in Neuroscience is available under special circumstances, when work leading to the Ph.D. degree cannot be completed. Whether either of these options is appropriate will be decided by the Guidance Committee. See General University requirements for Plan I and Plan II M.S. degrees: <http://graduate.ucr.edu/masters.html>.

## **NEUROSCIENCE GRADUATE STUDENT ASSOCIATION (NGSA)**

Neuroscience graduate students, with the support of the faculty, have formed the Neuroscience Graduate Student Association (NGSA). This association is intended to provide a means for graduate students to become involved in institutional issues and to promote social and scholarly activities amongst members of the UCR neuroscience community. A NGSA representative is a full member of the Neuroscience Graduate Program's Admission and Seminar Committees, and is invited to attend and vote on issues in Program faculty meeting, enabling neuroscience graduate students to take a proactive role in their education. Graduate students interested in the neurosciences are encouraged to join NGSA. To do so or to obtain more information, contact the 2015-16 NGSA President Zoe Thompson and her e-mail address is [zoe.thompson@email.ucr.edu](mailto:zoe.thompson@email.ucr.edu).



## Advancement to Candidacy Oral Qualifying Exam Procedures for the Ph.D.

- **Nominating Qualifying Committee:** Five committee members are nominated by the student in consultation with the faculty supervisor. Such members are voting members of the UC Academic Senate unless special arrangements are made. One member of the Qualifying Committee, designated as the “Outside Member”, is not a member of the Neuroscience Graduate Program. Exceptions must be supported by a memo of justification from the Graduate Advisor.
  
- At least 4 weeks prior to the Qualifying Exams, send your nomination to Perla Fabelo, Graduate Student Affairs Officer, by completing the online form at: <https://ucrbgsac.wufoo.com/forms/nrscphd-oral-exam-request-form/>. The Qualifying Committee must be approved by the Graduate Advisor and the Graduate Division prior to the examination.
  
- Note: International students must advance to candidacy before the first day of instruction of the 7<sup>th</sup> quarter to qualify for elimination of non-resident tuition.
  
- The Graduate Student Affairs Officer completes the Report of Departmental Requirements for the Ph.D. degree. The Graduate Advisor certifies that the student has fulfilled all course requirements and notes any remaining requirements.
  
- The Graduate Student Affairs Officer prepares the “Report of the Qualifying Examination” (Form ‘3’) and provides the form and the student’s academic file to the Chair of the student’s Qualifying Committee a few days before the oral exam.
  
- Upon completion of the Qualifying Examination, the Committee Chair obtains signatures of all the committee members on Form ‘3’ report and returns it with the student’s file to the Graduate Student Affairs Officer, who then forwards it to the Graduate Division. This must be done within 48 hours after the exam is completed. Advancement to Candidacy paperwork is then processed.

The Dissertation Committee should be nominated upon passing the Oral Qualifying Examination to avoid registration holds. You may send the following form to the Graduate Secretary:

<https://ucrbgsac.wufoo.com/forms/nrscphd-dissertation-defense-request-form/>

## General Admissions Requirements

Applicants must meet the general admissions requirements of the Riverside Division of the Academic Senate and the UCR Graduate Council as set forth in the Graduate Studies section, including completion of an undergraduate degree (B.S. or B.A.). Applicants should have adequate background in biological sciences and physical sciences, ideally including courses in the following or equivalent areas: General Biology (1yr), Genetics, General Chemistry (1yr), Organic Chemistry, Physics, Calculus, and Statistics. Additionally, at least 20 quarter-units of courses distributed among the following areas are required, although applicants may be admitted with limited course work deficiencies and required to make up deficiencies as specified by the admissions committee: Biochemistry; Cell Biology; Molecular Biology; Physiology; Animal Behavior; Learning and Memory; Perception; Computer Science; and Neuroscience, Neurobiology, or Physiological Psychology, with laboratory.

## Graduate Division

- Graduate Division website: <http://www.graduate.ucr.edu/>
  - Graduate Student Handbook, published by the Graduate Division [http://graduate.ucr.edu/pub\\_forms.html](http://graduate.ucr.edu/pub_forms.html)
  - Graduate Studies section of the UCR General Catalog <http://www.catalog.ucr.edu>
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## Tuition and Fees

For the 2014-2015 academic year, per quarter tuition and fees for graduate students at UCR are as follows:

Student Service Fees	340.00
Tuition	3,740.00
Recreation Center Fee	59.00
Student Center Fee	110.00
New Rec Center Fee	149.00
GSA Fees	24.18
Health Insurance Fee (if applicable)	1,137.30
Student Services Fee	<u>6.00</u>
<b>Total California Residents</b>	\$5,583.48

**Non-Resident Tuition** 5,034.00

**Technology Fee:** 2.00 *per unit*

**NOTE:** For nonresident Ph.D. students advanced to candidacy, nonresident tuition is waived for a maximum of 9 academic quarters (3 calendar years).

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## Graduate Student Financial Assistance

### **Funding Sources**

Graduate Students are supported from a variety of sources. Information on various types of funding is provided below:

**Fellowships:** UCR offers a variety of multi-year fellowship packages for incoming students that may include stipends, full or partial payment of tuition and fees, and appointment as TA or GSR. An applicant is judged on the quality of previous academic work, on evidence of ability to do research and other creative accomplishments, and on promise of becoming a productive scholar. Contributions to campus goals of achieving a diverse student body may also be considered.

**Graduate Division Stipend:** Usually awarded as part of a larger fellowship package, these funds are provided by Graduate Division through the Financial Aid System. The student receives paychecks at the beginning of each quarter starting October 1).

**Graduate Student Researcher (GSR):** An employment title for graduate students conducting research (either independent or directed). Student appointments may not exceed 49% during the academic year. During academic breaks and summers, students may be appointed up to 100%.

GSR appointments at 25% or more during the academic year are entitled to GSHIP and PFR (see below). Financial support for GSR employees is provided by faculty extramural grants and departmental general funds. Students are paid in arrears (just like other university employees) and receive their first check after their first month of work. (I.e. a student who begins work in fall quarter does not get a check until November 1)

**Teaching Assistantships (TAs):** Also known as *Academic Student Employee (ASE)*. This employment title is for graduate students who are teaching part of a course (normally labs or discussion sections) under the guidance of a faculty member/instructor. Students may not be appointed at more than 50% during the academic year. If they are appointed at 25% or more time during an academic quarter, they are entitled to GSHIP and PFR (see below). There are many rules that are associated with this title now that there is an employee contract. See the United Auto Workers Union Contract for more information. TA funds are distributed to the Departments by the CNAS Dean's Office. Students are paid in arrears (just like other university employees) and receive their first check after their first month of work. (I.e. a student who starts work in fall quarter does not get a check until November 1)

**Summer support:** Students conducting research during the summer months typically receive financial support through grant funding from the Faculty Supervisor.

### **Funding Definitions:**

**Partial Fee Remission (PFR):** Students who are appointed at 25% or more time during an academic quarter as a GSR or TA are entitled to PFR. This entitlement pays part (but not all) of the students' mandatory university fees. The Graduate Student Affairs Officer provides Graduate Division with a list of the students who are eligible for this entitlement before the student bills are printed. If an award is placed on the system after bills are printed, the student's bill will not reflect the correct fees they owe.

**Graduate Student Health Insurance (GSHIP):** Students who are appointed at 25% or more time during an academic quarter as a GSR or TA are entitled to have their GSHIP fees paid for them. The Graduate Student Affairs Officer provides Graduate Division with a list of the students who are eligible for this entitlement before the student bills are printed. If an award is placed on the system after bills are printed, the student's bill will not reflect the correct fees they owe. The actual dollar amount of GSHIP changes as the insurance prices change

from year to year. Students who have private Health Insurance comparable to the University's coverage can apply for waivers of the GSHIP fees. If a student has comparable health insurance coverage s/he may apply for an exemption of the GSHIP premium by filing the appropriate paperwork with the Health Center. Deadline dates for petitioning for exemption from GSHIP are firm. Contact the Student Health Insurance coordinator at (951) 827-5683 or (951) 827-3031 for information.

***Non-Resident Tuition Remission (NRT or NRTR):*** Non-residents of California (either Domestic or International) who are appointed at 45% or more as a GSR are entitled to have their Non-Resident Tuition paid for them. The Graduate Student Affairs Officer provides Graduate Division with a list of the students who are eligible for this entitlement before the student bills are printed. If an award is placed on the system after bills are printed, the student's bill will not reflect the correct fees they owe. International Students cannot ever establish residency and will owe Non-Resident Tuition for their entire student careers. (However, when a student Advances to Candidacy, his/her Non-Resident Tuition is reduced to 0% for a period of nine quarters.) Domestic non-resident students must establish California residency by the second year of study. You must petition in person at the Office of the Registrar, Student Services Building, for a change of classification from nonresident to resident status. All changes of status **MUST** be initiated before the first day of classes for the term for which you intend to be classified as a resident. Students planning to file for residence status after their first year should talk with the Residence Deputy well before the appropriate residence determination date, preferably during their first few weeks in California.

***Fee Differential:*** The left-over university mandatory fee amount for a student with a PFR and GSHIP and NRTR entitlements. This dollar amount changes as GSHIP and PFR go up. Most students are required to pay this.

***Departmental Grant In Aid (DGIA):*** Departments or individual faculty members with unrestricted funds (many federal grants will not allow payment of student fees) can grant fellowship-like awards to individual students. This is most often used to pay the student's Fee Differential. The Graduate Student Affairs Officer provides Graduate Division with a list of the students who are to receive these awards indicating the account and fund information. Graduate Division then pulls the money out of the account and awards it to the student through the Financial Aid System.

**NOTE:** TAs and GSRs must be making acceptable progress toward their degree objective, must be advanced to candidacy within 12 quarters after entry, and must have fewer than 8 units of incomplete grades. In addition, TAs and GSRs must maintain a 3.00 GPA. Graduate students may not be employed more than 50% time or 20 hours per week during the academic year in any combination of appointments. During quarter breaks and in the summer they may be employed full-time.

### **Other Sources Of Funding**

In addition to the fellowships, assistantships, grants, and loans administered by the University, graduate students may also be eligible for other types of support provided by federal agencies and private foundations. Organizations that have awarded fellowships and research support to UCR students include the National Science Foundation, National Institutes of Health, U.S. Public Health

**Graduate Student Association (GSA) Minigrants** help to pay the travel expenses of students who have been invited to present scholarly papers or posters at regional and national professional conferences. The program is administered by the Graduate Student Association and requires that departments agree to provide matching funds. Contact the GSA or the graduate student affairs officer for minigrant applications.

## CAMPUS FUNDING

### *Dissertation-Year Fellowships Graduate Diversity Programs*

The Dissertation-Year Fellowship Program provides financial support during the final year of dissertation work. Recipients must demonstrate high potential, promise and the desire for an academic career. Faculty mentors assist fellows in acquiring skills necessary to become candidates for faculty positions at major universities. Support is also provided to enable fellows to present their research at other UC and CSU (California State University) campuses.

Students may be nominated for the following fellowships:

1. Graduate Research Mentorship Programs (GRMP)
2. Dissertation-Year Fellowship Awards (DYFA)
3. Chancellor's & College Dissertation Fellowships (C&CDF)

For more information on Graduate Diversity Programs, contact the Director, **Maria Franco-Gallardo** at (951) 827-3680 or e-mail [maria.franco-gallardo@ucr.edu](mailto:maria.franco-gallardo@ucr.edu)

### **Dissertation Research Grants**

Dissertation Research Grants provide funds to doctoral candidates for research expenses associated with the dissertation. Applicants must be advanced to candidacy and plan to be registered during the period of the award. These funds may not be used for preparing the dissertation copy or as a stipend for personal support.

Deadlines to apply for Dissertation Research Grant funding are usually in October, January, and April. The Graduate Division sends announcements by email with deadlines and application instructions.

Service, U.S. Department of Education, Fulbright Program, Phi Beta Kappa Alumni Scholarships for International Scholars, and Sigma Xi. If students wish to explore these sources of support for study, they should consult the *Annual Register of Grant Support* and other similar directories either at the reference department of the Science library or through the Financial Support section in the Graduate Division (<http://www.graddiv.ucr.edu/FinSuptoc.html>). There are many sites on the World Wide Web devoted to various sources of aid for graduate students.

- \* California Student Aid Commission Home Page: <http://www.csac.ca.gov/>
- \* Financial Aid Information Page: <http://www.finaid.org>  
(check FASTWEB)
- \* National Science Foundation: <http://www.nsf.gov/>
- \* U.S. Department of Education Student Guide, Financial Aid:  
[http://www.ed.gov/prog\\_info/SFA/StudentGuide/index.html](http://www.ed.gov/prog_info/SFA/StudentGuide/index.html)
- \* The Foundation Center's Home Page: <http://www.fdncenter.org/>
- \* Purdue University (includes general listings): <http://www.purdue.edu/DFA/>
- \* FellowshipOffice National Research Council: <http://www.nas.edu/subjectindex/fel.html>

For more information contact Karen Smith at ([karen.smith@ucr.edu](mailto:karen.smith@ucr.edu)) with the UCR Graduate Division.

### **Extramural Support**

There are many opportunities for Graduate Students from outside funding sources from federal agencies and private foundations. UCR subscribes to several searchable databases listed on the Office of Research Affairs web site at [www.ora.ucr.edu](http://www.ora.ucr.edu):

UCLA also offers a comprehensive database called GRAPES (Graduate and Post doctorate Extramural Support).

The web address is

<http://www.gdnet.ucla.edu/grpinst.htm>

## **CURRENT PROGRAM OFFICERS**

### **Program Director**

Dr. Michael E. Adams (3107 Biological Sciences Building), [michael.adams@ucr.edu](mailto:michael.adams@ucr.edu), (951) 27-4746.

Overall responsibility for ensuring that the Neuroscience Program meets its goals of recruiting and providing the best possible training for its graduate students. Administers Program resources, makes committee appointments and provides leadership in setting policy as well as oversight of recruitment.

### **Graduate Advisor for Enrolled Students**

Dr. Scott N. Currie (2380 Spieth Hall), [scott.currie@ucr.edu](mailto:scott.currie@ucr.edu), (951) 827-2411. Responsible for oversight and advising of enrolled students, including annual progress reports.

### **Graduate Advisor for Admissions/Recruitment**

Dr. Kelly Huffman (2117 Psychology Bldg.), [kelly.huffman@ucr.edu](mailto:kelly.huffman@ucr.edu), (951) 827-4805. Responsible for recruitment of incoming graduate students and assembly of financial packages in consultation with the Graduate Dean. Organizes recruitment weekend (February).

### **Graduate Student Services Advisor**

Perla Fabelo (1140 Batchelor Hall), [perla.fabelo@ucr.edu](mailto:perla.fabelo@ucr.edu), (951) 827-4716. Program coordinator processing admissions, financial support, enrollment, tracking of student advancement, maintains student records, program event planning, interpreting and implementing of University policies and regulations.

**NGSA President** – Zoe Thompson, [zoe.thompson@email.ucr.edu](mailto:zoe.thompson@email.ucr.edu).

Neuroscience Program Web Site: <http://neuro.ucr.edu>

**CNAS GRADUATE STUDENT AFFAIRS CENTER STAFF**  
1140 Batchelor Hall

Housed in the College of Natural & Agricultural Sciences, the CNAS Graduate Student Affairs Center supports the majority of the graduate programs in the college. We assist you with all aspects of completing your graduate program (class registration, program requirements, Graduate Division policies, and fellowship and employment matters (TA/GSR)). We will often be your first stop when you need help or are just looking for a good listener. We work with Faculty Graduate Advisors and Major Professors to ensure your success. You usually see the staff member who supports your graduate program, but feel free to contact any Center staff when your Student Affairs Officer is unavailable.

**CENTER STAFF MEMBERS**

**Kathy Redd, Director** – oversees the operation of the Center and is the primary contact for the **Cell, Molecular, and Development Biology Graduate Program and Staff Support for TA appointments in the Life Sciences.**

E-mail [kathy.redd@ucr.edu](mailto:kathy.redd@ucr.edu)

Phone: 951-827-5621

**Dawn Loyola, Assistant Director** - is the primary contact for the **Biochemistry and Molecular Biology and Environmental Toxicology** graduate programs.

E-mail [dawn.loyola@ucr.edu](mailto:dawn.loyola@ucr.edu)

Phone: 951-827-7378

**Amy Ricks, Assistant Director** - is the primary contact for the, **Evolution, Ecology, and Organismal Biology and The Joint Doctoral Program in Evolutionary Biology (SDSU/UCR)** graduate programs; she also oversees the Enrollment Management Center for CNAS (EMC<sup>2</sup>) in Webber 1301

E-mail [amy.ricks@ucr.edu](mailto:amy.ricks@ucr.edu)

Phone: 951-827-5913

**Perla Fabelo, Student Services Advisor** - is the primary contact for the **Neuroscience, Statistics and Applied Statistics** graduate programs.

E-mail [perla.fabelo@ucr.edu](mailto:perla.fabelo@ucr.edu)

Phone: 951-827-4716

**John Herring, Student Services Advisor** - is the primary contact for the, **Environmental Science, and Geological Sciences, and Mathematics** graduate programs.

E-mail [john.herring@ucr.edu](mailto:john.herring@ucr.edu)

Phone: 951-827-2441

**Julio Sosa, Student Services Advisor** - is the primary contact for the, **Cell, Molecular & Developmental, and Genetics, Genomics and Bioinformatics** graduate programs.

E-mail [julio.sosa@ucr.edu](mailto:julio.sosa@ucr.edu)

Phone: 951-827-7378

**Jammy Yang, Student Services Advisor** – is the primary contact for the **Microbiology, Plant Biology and Plant Pathology** graduate programs.

E-mail [jammy.yang@ucr.edu](mailto:jammy.yang@ucr.edu)

Phone: 951-827-5688

## **BNN ADMINISTRATIVE UNIT GUIDE - STAFF DUTIES**

Life Sciences Psychology Building (LSP)

### **ADMINISTRATIVE CONTACT INFORMATION:**

**BEVERLY MCNEIL, Financial & Administrative Officer** – [beverly.mcneil@ucr.edu](mailto:beverly.mcneil@ucr.edu) or x2-5902

**JERI HALEY Financial Operations Manager** – [jeri.haley@ucr.edu](mailto:jeri.haley@ucr.edu) or x2-2965

**ESTELLA DAVALOS Administrative Officer**– [debbie.drake@ucr.edu](mailto:debbie.drake@ucr.edu) or x2-5935

**SOPHIA JURISCH, Administrative Assistant** – [sophia.jurisch@ucr.edu](mailto:sophia.jurisch@ucr.edu) or x2-5903

**HEATHER McDERMOTT, Administrative Assistant**

**TARA PASTUCHA (Procurement Supervisor)**– [tara.pastucha@ucr.edu](mailto:tara.pastucha@ucr.edu) or x2-5937

**MAGGIE TELLO-CASE, Financial Services Analyst; Accounting Assistant**– [maggie.tello@ucr.edu](mailto:maggie.tello@ucr.edu) x2-5915

**JESSICA PACHECO, Research Administrator; Biology Contract & Grants**

**POLLY BEATTIE, Research Administrator; CBNS Contract & Grants**

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### **GENERAL FRONT OFFICE DUTIES:**

**SOPHIA** – Answers main BNN phone (x25903); also handles incoming and outgoing mail, Fed Ex, Media Requests, Seminar Announcements and Parking Permits. Approves online room reservations for BSB 1103, LSP 2550, SP 1239 and SP 3365 and is main contact for reserving BSB 2101 and BSB 3101.

**Heather** – Distribution of all unit keys and FOBs (Key hours: 7:30am – 10:30am & 3:00 to 4:00pm) Back-up to above duties.

### **PAYROLL/PERSONEL:**

**ACADEMIC PERSONNEL SERVICE UNIT (APSU)** – Marie Good x24431 and Tavia Rivera x23997 handles all Merit and Promotion files for Faculty in BNN Unit.

**NON-ACADEMIC PAYROLL/PERSONNEL UNIT (NAPSU)** – Jay Palma x24367 and Orlandrea Bryson x24799 are responsible for Staff recruitments and processing Payroll/Personnel transactions for Faculty, Staff, and Student appointments in the BNN Unit.

### **TRAVEL AND OTHER REIMBURSEMENTS:**

**SOPHIA** – Main contact for Travel reimbursements.

**HEATHER** –Main contact for Entertainment requests and other reimbursements, back-up contact for Travel.

### **PRINTING AND REPROGRAPHICS:**

**SOPHIA**- Main contact for all Printing and Reprographic requests

**HEATHER** - Backup for all Printing and Reprographic requests

### **PURCHASING:**

**TARA** – Main Purchasing Agent for unit. Assists with Recharges

### **COMPUTERS:**

**ESTELLA** - Microcomputer support and back-up for Telecommunication assistance.



## **CONTRACTS & GRANTS OR OTHER FINANCIAL MATTERS:**

**MAGGIE** – Monthly financial ledger reconciliation, Vehicle Inventory, Purchasing Card Administrator (ProCard) and transfers, Utility billing management, Web Recharge (with Jeri) for Stem Core Center . Gift processing & misc deposits.

**POLLY** – CBNS Contracts and Grants – Proposals and ongoing managing of PI funds. Responsible for monthly statements to PIs and Stem Cell Center. One of Department SAAs (Systems Access Administrator).

**JESSICA** – Biology Contracts and Grants – Proposals and ongoing managing of PI funds. Responsible for monthly statements to PIs.

**JERI** – Supervisor for Financial Operations for BNN Unit; supervises above employees and back-up for their areas. Responsible for Contracts and Grants for the Natural Reserve System including proposals and ongoing managing of awards. Responsible for monthly statements for Interdepartmental Graduate Programs, Natural Reserve Centers and Departmental Operating Funding for Biology and Cell Biology & Neuroscience. One of Department SAAs. Back-up to Bev (FAO) and in charge for all BNN business in her absence.

## **ROOM RESERVATIONS:**

### **Spieth/BSB/LSP Locations** –

1239 (Darwin Room), 3365 (Moore Room), 1103 and 2550 (CBNS Conference rooms) can be **reserved by logging onto internet reservation site: frs.ucr.edu (no www” required with this address)**. **ALEX** will be primary contact for approval once you submit request through this website with Maggie as backup.

**BSB (additional rooms)** – 2101, 3101 (Conference Rooms) are reserved by emailing [bnnadmin@ucr.edu](mailto:bnnadmin@ucr.edu) and **ALEX** is main contact with Maggie as backup contact.

**GRADUATE STUDENTS AND ACADEMIC APPOINTMENTS:** Bev assigns office space.

## **BIOLOGY SHOP:**

**LAURIE GRAHAM** – Constructs, redesigns and repairs mechanical, electronic and refrigeration equipment for teaching and research on a recharge basis - x22117 or [laurie.graham@ucr.edu](mailto:laurie.graham@ucr.edu)

## **FACILITIES:**

**LAURIE** – Contact for any equipment of mechanical problems.

**SOPHIA** - For problems such as lights, plumbing, or other building maintenance. Or, you can also submit a Trouble Ticket to Physical Plant through rSpace unto the “Tools” section.

**HEATHER**– Backup contact for the above.

**TBA/BEV** – Contact for any renovation or other Physical Plant billable work order.

## **LAB PREP STAFF:**

Assistance with instructing personnel on autoclave use (Spieth), requesting service/repair on autoclaves (Spieth), short term loan of lab equipment, use of teaching labs outside of scheduled classes, trouble tickets for teaching labs. Primary receiving of purchased goods. Located in Spieth 1229; Phone: x23830 and email contact: For general inquiries: [labprepbio@ucr.edu](mailto:labprepbio@ucr.edu) or you can direct your concerns to a specific person: [jon.allen@ucr.edu](mailto:jon.allen@ucr.edu), [mikyong.kim@ucr.edu](mailto:mikyong.kim@ucr.edu), [xinxia.li@ucr.edu](mailto:xinxia.li@ucr.edu), [cora.sargent@ucr.edu](mailto:cora.sargent@ucr.edu), [diana.diaz@ucr.edu](mailto:diana.diaz@ucr.edu).

**If you do not find service you are in need of, please contact Alex in BNN front office at x25903 and he will direct you.**  
**BNN Administrative Unit Guide Sept. 2014.doc**

## **BNN BUSINESS OFFICE GUIDELINES**

(The Interdepartmental Graduate Program in Neuroscience falls under the BNN Department Unit)

The purpose of the BNN Business Office (2840 LSP) is to provide administrative support. To this end, we have established the following guidelines:

**Hours of Operation**- Normal Business Hours are: (7:30a.m.-12:00p.m., 1:00p.m.-4:30p.m.) .

**Office Supplies** - The office supplies available in the business office are for department use only.

**Photocopying** - To enable you to use the applicable department copy machines, please see Alex Branscome in 2840 LSP. He will assign you a number for personal use and for class use. The department does not pick up charges for dissertation preparation. If you are enrolled in a 297 or 299 course, the department will cover up to \$90.00 (900 copies) total copy charges per year. The Unit does have a Fax Machine and there will be a log for students to complete information and Debbie Drake bills for these at the end of each month. Please contact front desk staff or Debbie for more information at your time of need.

**Mail Boxes** - Graduate students are assigned mail boxes, which are located in LSP. If you have not been assigned one, see the front desk. The mail is delivered twice a day, once around 10:00 a.m. and once around 2:30 p.m. It is very important to check your box daily. Personal mail is not to be delivered to or from the University and the University's name MAY NOT APPEAR ON PERSONAL CHECKS OR BANKING ITEMS.

**Offices** – The Department makes every attempt to give each graduate student in good academic standing desk space. Assignments are overseen by the Department Administrator in coordination with the appropriate Chair, graduate advisors and the faculty.

**Coursework Boxes** - Teaching Assistants for introductory Biology courses will be assigned locked boxes for collection of coursework. These boxes are located across from the main office and the key for them is kept in a cabinet in Spieth 1118.

**Centralized Facility for Advanced Microscopy and Microanalysis (CFAMM) (B116 Bourns Hall):** The campus has excellent resources for conducting many types of microscopy including electron microscopy. The centralized electron microscopy facility provides state-of-the-art facilities for doing transmission and scanning electron microscopy. The centerpieces of the facility are Philips scanning electron microscopes and transmission electron microscopes, which are capable of digital imaging. The facility is managed by Krassimir Bozhilov (x2-2998 E-mail: krassimir.bozhilov@ucr.edu), who is assisted by Steve McDaniel, the biological specialist. The staff offers training on both instruments. Steve McDaniel can also train students to prepare tissue for both scanning and transmission electron microscopy on a recharge basis. The facility provides all ancillary equipment needed for tissue preparation for these instruments. You may learn more about these microscopes by visiting the microscope web-site: <http://micron.ucr.edu>.

**Microscopy Core Facility:** The campus has an outstanding light microscopy core facility. This facility, run by Dr. David Carter, maintains a comprehensive suite of instrumentation for fluorescence imaging and interactive experimentation, including two high resolution confocal systems (Leica SP2 UV and Zeiss 510), a high speed ocular viewing system (Meridian InSight Point) and a fully automated confocal workstation for chemical compound screening (Atto Pathway HT). In addition the facility supports an inverted Zeiss microscope equipped for micromanipulation and microinjection and a workstation for image processing and analysis. Several high performance software packages are available for image analysis. Free workshops are offered periodically for training on these instruments. For more information about the light microscopy core and training, please see <http://www.cepceb.ucr.edu/facilities/facilities.htm#Microscopy>

## **Vivaria**

Hours are 8:00a.m.-12:00p.m. and 1:00p.m.-5:00p.m., M-F.  
All Vivaria are under the Management of the Campus Veterinarian  
200 University Office Building, (951) 827-5535

If you need to order, receive, or transport animals, you should work closely with your Vivarium Manager. Strict policies exist within the University with respect to guidelines and standards imposed by the National Institutes of Health (NIH) and the Animal Welfare Act.

**Biology Vivarium** - Leslie Karpinski is Manager of the Biology Vivarium (Spieth basement). E-mail: [leslie.karpinski@ucr.edu](mailto:leslie.karpinski@ucr.edu). x2-5912.

**Psychology Vivarium** - Jim Sinclair is Manager of the Psychology Vivarium. (LSP B418) and assists in the Spieth Hall Vivarium. E-mail: [james.sinclair@ucr.edu](mailto:james.sinclair@ucr.edu). x2-4528.

**Boyce East Vivarium** - Linda McCloud is Manager of the Boyce East Vivarium (Boyce Hall, 6<sup>th</sup> floor). E-mail: [linda.mcloud@ucr.edu](mailto:linda.mcloud@ucr.edu). x2-4620.

**Boyce West Vivarium** - Sally Scott is Manager of the Boyce West Vivarium (Boyce Hall, 6<sup>th</sup> floor). E-mail: [sally.scott@ucr.edu](mailto:sally.scott@ucr.edu) x1-5319.

**Campus Veterinarian** - Dr. Akiko Sato, V.M.D., Diplomate ACLAM is our campus-wide Veterinarian, in charge of overseeing all animal care on campus (215 Univ. Office Bldg). E-mail: [akiko.sato@ucr.edu](mailto:akiko.sato@ucr.edu). x2-5845.

**Campus Vet Administrative Assistant** - Gloria Gallego is the Administrative Assistant for the UCR office of the Campus Veterinarian and is responsible for issues of billing for vivarium services. She is located in room 216 University Office Building (UOB). E-mail: [gloriag@ucr.edu](mailto:gloriag@ucr.edu) (951) 827-6332.

Vivarium Operations Manager - Dierk Biggs, [dierk.biggs@ucr.edu](mailto:dierk.biggs@ucr.edu), (951) 827- 4812.

## **OTHER IMPORTANT INFORMATION**

### **Establishing California Residency**

*Domestic non-California resident students* must establish California residency by the second year of study. Students should start planning for this as soon as they arrive. For more information, please go to the Graduate Division website: [http://graduate.ucr.edu/residency\\_status.html](http://graduate.ucr.edu/residency_status.html)

### **R'mail Accounts**

When you enroll at UCR you are automatically assigned a UCR R'Mail account on the Student server. Along with your account you will also receive an electronic generated login name. You cannot change your login name; it will stay the same throughout your time at UCR. However, you may choose to change your password at your own discretion. (Changes in your password will not affect your email address nor will they alter the URL of your home page.) Your initial password is your Permanent PIN number. If you forget it you can go to the Registrar's Office. However, we strongly recommend that you change your password as soon as possible. Occasionally, passwords are stolen and the amount of damage that can be done from a stolen password is considerable. If your password is your Permanent PIN number, the amount of damage increases greatly, because your academic information and financial aid records may also be accessed.

**The University requires that you read your UCR web mail account regularly.** The University and Graduate Student Affairs Officers use e-mail to remind students of important deadlines or to pass on important messages.

### **Enrollment**

It is the student's responsibility to initially enroll in courses and to confirm course enrollment. Failure to enroll by scheduled deadlines may result in the lapse of student status or delay financial aid. R'Web system is the web service for enrolling in courses. Using R'Web students can enroll in classes, confirm course enrollment, view grades, check their financial aid, billing, degree progress, view their Student ID, change their address or PERM PIN number, update privacy restrictions, and get help via the web. On the internet go to <http://www.rweb.ucr.edu/>. To use R'Web you must enter your date of birth, Student ID number, and PERM PIN number.

### **The Permanent Personal Identification Number**

Your **PERM PIN** is a permanent six-digit number that is set by the Office of the Registrar once a student is admitted to the university. Your Perm Pin and Student ID number are located on your Admissions Confirmation Letter.

### **Change Of Address**

Please keep your local address and phone number current. Let your Graduate Student Affairs Officer know when you move. **You must update your addresses (local, billing, next of kin) in R'Web.**

**Keys/Codes** - To receive building keys or access codes to the Vivarium or Biological Sciences Building, obtain a *key record form* from the Business Office and obtain the appropriate signatures from responsible faculty members and/or supervisors, and the Department Chair and/or BNN Administrator. A deposit of \$5.00 per key/code is required (building entry key and TA master key are now \$15.00 each), payable in the Business Office. Keys are issued by Jay Palma in the Business Office. Hours will be posted.

Keys are not issued to the Storeroom. If, during normal working hours, the Storeroom door is locked, an entry key may be checked out from the business office front desk.

Only the Chair or Department Administrator can provide signature authorization to enter the Vivarium. Also, before access is granted, a prospective vivarium user must be endorsed via the Campus Veterinarian's Office. Obtain a copy of the Key Record form, obtain required signatures and pay key deposits. Upon completion of these elements, see front desk for keys and access to the keyless entry system and intrusion alarms.

A copy of the Department Key Policy is available in the business office. If you are issued building keys, **PLEASE, DO NOT LOSE THEM!** Lost keys compromise our building security.

### **UCR Identification Card**

The UCR Card is a multi-functional Campus ID card. It is the Official photo ID of UCR and it provides you with Library privileges as well as access to the Sports Recreation Complex.

Photos are taken at the **UCR Card office which is located at the HUB, Suite 249**, for a fee of \$25. The UCR Card office hours are from 9:00am – 4:00pm Monday through Friday. Bring a valid form of ID, such as a driver's license or passport. Appointments can be made, but are not necessary.

Students: The cost of your card is billed directly to your campus R'Web student account, so you do not need to bring cash. For information on optional UCR card services see: <http://www.ucrcard.ucr.edu/>

## **TEACHING ASSISTANT DEVELOPMENT PROGRAM (TADP)**

UCR has a long history as a distinguished teaching campus and regards Teaching Assistant (TA) training as a crucial part of graduate instruction. TA orientation is required of TAs in all departments. It is offered every fall during the first week of the quarter. Focus workshops are required of all Teaching Assistants who scored a 4.0 or below on any single question on their Teaching Evaluations. Students who score low on their "overall effectiveness as a TA" question must be observed in class by a Mentor TA and prepare an Action Plan for improvement. Students who score low on their English language skills must attend a communication workshop and schedule six half hour sessions to use language software in the TADP Office. Registration is available on the TADP home page beginning Monday of the first full week of classes for the current quarter.

TADP provides services to the more experienced TA as well, including a teaching resource library, teaching portfolio development and assessment consultations, and seminars on professional development. Contact your department or TADP (951-827-3386, [tadp@ucr.edu](mailto:tadp@ucr.edu)) for further information on training requirements and upcoming seminars. You may also visit their website: <http://www.tadp.ucr.edu/>

## **The SPEAK Exam (TOEFL Academic Speaking Test)**

To be appointed a TA, any student **whose native language is not English** must pass an English proficiency exam. This includes not only international students but also **any** student whose first language is not English. The SPEAK exam is scheduled by the International Education Programs in University Extension approximately two weeks before the beginning of every quarter.

Those who score a conditional pass can be appointed as a TA but are required to participate in the appropriate English language classes at the Extension Center and retake the test. Individuals in this range may be appointed as TAs for up to two quarters on a probationary basis with the approval of the Graduate Dean. For those students within the probationary range, a determination of their continuing eligibility to serve as TAs will be made by the Graduate Dean on the basis of:

- Departmental recommendation, including an assessment of the student's academic ability.
- Student teaching evaluations.
- Other evidence of commitment to/performance in teaching (e.g., faculty evaluations or statements of support, videotapes).
- Evidence of a good-faith effort to improve English skills; and Relative proximity to the level of competence represented by a clear pass.

## MONITORING EXAMINATIONS

1. The final responsibility for monitoring of examinations rests with the instructor in charge of the course. A faculty member should be present or immediately available if TAs are proctoring exams. There should always be at least two proctors in the room. If additional proctors are needed, the course instructor should attempt to arrange for faculty or TAs not assigned to the course to serve in this capacity.
2. Proctors should attempt to minimize the opportunity (temptation) for cheating:
  - a. Clearly announce the expected disposition of books, papers, etc. (if they are allowed in the examination room). Make the consequences of violation of the announced procedure clear (see #3 below).
  - b. Space students as far apart as possible.
  - c. Use randomized seating arrangements, seating charts, or multiple versions of exams if appropriate.
  - d. Ask students to move to a different seat if suspicious behavior is observed.
3. If suspicious behavior is observed, it should be confirmed by another instructor/TA, if possible. Suspicious materials present at an examination (i.e., notes, open books not used or disposed of according to announced policy; see #2a) should be taken by the instructor (or by the TA and turned over to the instructor). If suspected of cheating, a student should be informed by the instructor as soon as possible. It is up to the discretion of the instructor whether a student should be allowed to finish an examination if s/he is suspected of cheating. TAs SHOULD NOT MAKE SUCH A DECISION. These incidents should immediately be reported to the Department Chair and the Department Administrator.

## CLASSROOM/LABORATORY SAFETY

You should familiarize yourself with the **Biology IIPP (Injury, Illness and Prevention Program)**, the **Department CHP (Chemical Hygiene Program)**, and the **Emergency Procedures for Spieth Hall/Biology**. Copies are available in the **Business Office** as well as in each major teaching and research laboratory. See **Dan Rios** or **Paula Southard** if have any questions or need additional information.

1. **Proper Attire in a Laboratory Environment** - As a TA in a lab environment, you must set a good example for students. You are required to wear closed toe shoes, no sandals. Short shorts are not allowed. Wear eye protection when appropriate. Safety glasses should have side shields.
2. **Laboratory Safety Training**  
As an employee of the University, you are required to attend Lab Safety Training provided by Environmental Health & Safety (EH&S). Please enroll in a session via their online website: <http://www.ehs.ucr.edu/>. If you have any questions or problems enrolling, please contact the EH&S office at 951-827-5528. Please attend this training as soon as possible. Some graduate students will need to attend additional training depending on their research project. It is very important that you maintain your own records of any training you take in addition to providing proof to your lab manager or faculty member. In the past, sometimes students have had to repeat training if they did not have their own proof that they completed it (unreliable computer records).
3. **Classroom/Laboratory Accidents** - Report all lab accidents to the business office. Fill out a "Report of Injury" form and give the completed form to Valerie in the business office. For minor cuts and abrasions, treat with first aid and send student to Student Health Center. For major accidents, call 9911 Emergency. From the phone in the Teaching Labs call x2-5222 (Campus Police). Hallway and elevator phones are connected directly to Campus Police and may be used for any emergency. Use the shower and/or eye wash if necessary. In case of a serious injury, you should prepare an outline of the circumstances that led to the injury as well as your responses to the accident. This should be done as soon as possible after the class meeting so that the memory of the chain of events is clear in your mind. This outline should include as much detail as possible.
4. **Small Chemical Spills** - A spill kit is provided in each training laboratory. If a spill kit is not found in the lab on the first day, see Jon Allen. As a Teaching Assistant, be knowledgeable about hazardous materials used in the lab. Read the appropriate "Material Safety Data Sheet," commonly referred to as MSDS. In the event of a chemical or radioactive spill or laboratory accident resulting in a potential hazard to personnel or the environment, call EH&S at x2-5528 immediately. After hours/weekends, call University Police at x2-5222. In either case, responsible officials will be dispatched to you as soon as possible.

**Right to Know Law** - The "Material Safety Data Sheet" is required from vendors whenever chemicals are ordered. If such materials required an MSDS, it is sent to the ordering person and must be kept in the lab. The law stipulates that MSDS must be available to users of hazardous chemicals. See your faculty member for the binder or contact Dan Rios (x2-3600), or Environmental Health & Safety (x2-5528) for the materials if you have any questions.

**While working with hazardous materials (either chemicals, micro-organisms or isotopes) in the teaching lab, your knowledge and familiarity with these materials is extremely important! In the event of an accident, your knowledge and understanding of the hazards associated with these materials will determine the appropriate response and, most importantly, may prevent injury to your students and yourself.**



5. **Emergency Evacuation Procedures** - Refer to the evacuation procedures in the "Emergency Procedures for Spieth Hall/Biology" located in each laboratory. Know the best evacuation route. Bring your list of students with you. Assist those who need help. Shut the door where room is located. Guide your students to the designated assembly area and check in with your Building Supervisor for Emergency Conditions (BSEC). Remain in assembly area and await further instructions.
6. **Disposing of Hazardous Waste**
  - (a) Glass: Each lab facility has a separate trash container labeled "GLASS ONLY." Place glass in these containers.
  - (b) Sharps: Other sharp objects (i.e., razor blades, etc.) are to be disposed of in designated containers only!
  - (c) Recyclable: Please deposit waste in proper containers. ("Recyclable" waste consists of paper, cardboard, etc. No food wrappers should be put into these containers.)
  - (d) Non-recyclable: Please deposit waste accordingly into proper containers.

Organic Waste/Animals: Make arrangements through your PI or faculty advisor to burn the material. Use double plastic bags and deposit into the freezer in the pathological incinerator room in the Spieth basement (Room 328). Carcasses contaminated with infectious organisms must be sterilized before they are packaged and placed in the freezer. Check with Environmental Health & Safety about the method to be used to sterilize the carcasses. DO NOT USE YOUR OWN METHOD. <http://www.ehs.ucr.edu/>

Chemical Waste: Note that laws exist that regulate disposal of hazardous material; disposal of "unknowns" is prohibited. To minimize unknowns, it is strongly recommended that you label and date the items and dispose of them before labels peel off or become illegible. Non-radioactive, hazardous waste must be placed in containers marked with the identity of the material. Also, the "Chemical Storage/Disposal Record" of Environmental Health & Safety must be completed, and is available in the Business Office. Use of radioactive materials requires users to obtain a permit through Environmental Health & Safety (see your faculty advisor). Environmental Health & Safety issues special containers to dispose of radioactive waste. Again, consult the Department Chemical Hygiene Plan and Radioactive Waste Manuals.

Microorganisms: When human pathogens are used, check with Esther Valdez in Lab Prep.

Syringes: Laws exist establishing procedures for purchasing, storing, using, and disposing of syringes. Teaching Assistants and lab workers should be particularly careful about accountability and use of syringes in lab courses and projects under their supervision. Syringes and needles shall be stored under lock and key. After use, a hypodermic safety device should be used to destroy the needle and the plastic barrel. Broken syringes must be double-bagged and labeled "CAUTION." Place the labeled bag into the broken glass container, or other designated container, for disposal by the Custodian.

## Ph.D. Degree - Target Outline

Name \_\_\_\_\_

Chair of guidance committee \_\_\_\_\_

Entered degree program \_\_\_\_\_

Target Date                      Date Completed:

### Year 1 – Lab Rotations

Meet with guidance committee                      first quarter                      \_\_\_\_\_

Meet with guidance committee                      third quarter                      \_\_\_\_\_

Annual review of progress by Major Professor                      third quarter                      \_\_\_\_\_

### Year 2 – Establish Home Lab

Name qualifying committee                      Fall quarter                      \_\_\_\_\_

Research proposal to committee                      Winter quarter                      \_\_\_\_\_

Annual review of progress by Major Professor                      Spring quarter                      \_\_\_\_\_

Oral qualifying examination                      Spring or summer                      \_\_\_\_\_

Name dissertation committee                      Spring quarter                      \_\_\_\_\_

### Year 3

Meet with dissertation committee                      Spring quarter                      \_\_\_\_\_

Annual review of progress by Major Professor                      Spring quarter                      \_\_\_\_\_

### Year 4

Meet with dissertation committee                      Fall quarter                      \_\_\_\_\_

Annual review of progress by Major Professor                      Spring quarter                      \_\_\_\_\_

### Year 5

Meet with dissertation committee                      Fall quarter                      \_\_\_\_\_

Dissertation to committee                      Winter quarter                      \_\_\_\_\_

Annual review of progress by Major Professor                      Spring quarter                      \_\_\_\_\_

Defend dissertation                      Spring quarter                      \_\_\_\_\_

**Neuroscience Graduate Program  
Guidance Committee Approval Form**

This form is to be completed in the first quarter in residence.

(Please type or print)

Name \_\_\_\_\_ Date \_\_\_\_\_

I would like to request the following members be appointed to my Guidance Committee.  
They have all agreed to serve on this committee.

\_\_\_\_\_, Chair

\_\_\_\_\_

\_\_\_\_\_

Approved: \_\_\_\_\_ (Guidance Committee Chair) \_\_\_\_\_ (Graduate Advisor)

ANNUAL STUDENT PROGRESS REPORT  
Neuroscience Graduate Program

NAME OF STUDENT: \_\_\_\_\_ DATE PREPARED: \_\_\_\_\_

PROGRAM: M.S.  Ph.D.  DATE ENTERED PROGRAM: \_\_\_\_\_

QUALIFYING EXAM: WRITTEN \_\_\_\_\_ ORAL \_\_\_\_\_

DISSERTATION TITLE:  
\_\_\_\_\_  
\_\_\_\_\_

EXPECTED COMPLETION DATE: \_\_\_\_\_

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**ACADEMIC PROGRESS**  
(Comment on course work, deficiencies, research, etc.)

**COURSE WORK** (Please comment if student has completed core courses and proposed course work to be taken):

Have deficiencies been satisfied?  Yes,  No, If no please state the deficiencies that need to be met:

**RESEARCH:** (Please describe the students research accomplishments this year and indicate goals for next year):

**RESEARCH: *cont.***

**ACCOMPLISHMENTS: (Please indicate any special accomplishments, meetings attended, awards, etc. received by the student this year):**

**SUGGESTIONS/COMMENTS:**

\_\_\_\_\_  
STUDENT SIGNATURE

\_\_\_\_\_  
MAJOR PROFESSOR/CHAIRMAN

\_\_\_\_\_  
GRADUATE ADVISOR

## NRSC Graduate Program – Professional Development Requirement

### ■ Grant and professional writing

- NRSC 200A. Fundamentals of Neuroscience: Molecular and cellular mechanisms (3) F. Lecture, 3 hours. Students are required to submit a short original grant proposal, which is a significant portion of their grade. Feedback and constructive criticism are provided by the Instructor while students are formulating their proposal topic and aims, and after submission of the complete document. [See attached Grant Proposal Guidelines. REQUIRED COURSE.
- Part 1 (Written) Qualifying Exam. Students prepare a research proposal assigned by the Guidance Committee on topics relevant to the student's research area. The format is along the lines of a grant proposal to a major funding agency (NIH, or NSF). The student is required to demonstrate an ability to integrate material from original research papers and review articles and to discuss avenues for future research. **The grant proposal must be given to members of the oral exam committee at least two weeks prior to the oral exam** (Part II). See pg. 3 for further details. DEGREE REQUIREMENT.
- ENTM 242. Development of Hypotheses and Research Design (3) F, W, S. Lecture, 1 hour; discussion, 1 hour; written work, 3 hours. Teaches fundamentals of research topic selection, development of hypotheses, and selection of experimental designs. Students prepare full-length federal grant proposals, then review and rank them in grant panel review format. OPTIONAL, NOT REQUIRED.
- Fellowship Application Preparation and Research Proposal Writing: In Fall 2011 Maggie Curras-Collazo (Graduate Advisor, Recruitment & Admissions) and Mike Adams (Director of NRSC Graduate program) organized a workshop on fellowship proposal writing aimed at NSF Graduate Research Fellowship program, EPA STAR and Ford fellowship programs. The workshop targeted first- and second-year students in the NRSC Graduate program primarily. However, one student in MA lab and 4 from the Graduate Student Mentoring Program, sponsored by the Graduate Division, that were mentees or peer mentors of MCC also participated. Altogether, 11 students were provided training over 2 meeting times (about 8 hrs total). The workshop involved presentation of written proposals by applicants and evaluation and critiques by all participants, and instructors. Instructors also provided one-on-one feedback before and after the workshop. After and before One NRSC student, Matt Valdez, received an NSF GRFP Fellowship award. This activity is being planned for 2012 and faculty have suggested that it be continued in subsequent years as a formal course in professional development for graduate students.

■ Public speaking

- NRSC 289. Special Topics in Neuroscience (Seminar). Students take this seminar twice per year. During Fall, students are required to give oral presentations of papers related to a topic chosen by the instructor. During Spring, they are asked to present their own laboratory research, serving as practice for their oral Qualifying Exam (Part II). REQUIRED COURSE.
- NRSC 200A. Fundamentals of Neuroscience: Molecular and cellular mechanisms (3) F. Lecture, 3 hours. In addition to submitting a written term paper, students are required to give an oral presentation to the class on their term paper topic. This is often a student's first oral presentation in the graduate program. REQUIRED COURSE.
- NRSC 200C. Students are required to make a presentation on a behavioral neuroscience model system not covered in class. The presentations occur during the last few classes of the quarter. Each presentation should be designed to last a maximum of 40 minutes. The student is responsible for providing at least 1 original article about the model at least 1 week prior to the presentation. Everyone is required to read the papers and should actively participate in discussions. REQUIRED COURSE.

■ Pedagogy

- TADP training and 2 quarters of required TA experience. As is other UCR graduate programs, all NRSC students are required to complete TADP training prior to their first TA assignment. Two quarters of TA experience are required for the Ph.D. DEGREE REQUIREMENT.

■ Other

- Outreach to K-12: NRSC faculty have promoted and facilitated opportunities for graduate student involvement in outreach. Since 1999 NRSC program faculty have organized social and educational events during Brain Awareness Week that have engaged the UCR community. More recently, graduate students have been empowered to assist and, in 2012, plan and conduct these events. In March 2012 graduate students under the auspices of the NRSC Graduate Student Association (GSA) organized social and educational events associated with the 2012 Brain Awareness Week. This event included poster presentations, games and activities, and free food/drinks, activities that targeted the local neuroscience community of faculty, graduate students and graduate students and postdocs. Faculty members K.R. and MCC assisted the graduate students in planning and MA provided subsidies that made this large scale event possible. Over 100 persons (of which 60 were UG students) attended this event. These outreach activities by graduate students provides a framework and culture addressing the broader impact requirements of research proposals funded by NSf and other extramural agencies.

THE NEUROSCIENCE GRADUATE PROGRAM  
-REQUIREMENTS-

ENTRANCE REQUIREMENTS:

\_\_\_ Calculus (Math 9A-9B)  
\_\_\_ Physics (Phys 2A-2B-2C)  
\_\_\_ General Chemistry (Chem 1A-1B-1C)  
\_\_\_ Organic Chemistry (Chem 112A-112B)  
\_\_\_ General Biology (Biol 5A-5B)  
\_\_\_ Genetics (Biol 102)  
\_\_\_ Statistics (Stat 100A-100B)

SPEAK TEST:

Clear Pass  
Conditional Pass


\_\_\_ at least 20 quarter-units among the following areas: Biochemistry; Cell Biology; Molecular Biology; Physiology; Behavioral Biology; Learning and Memory; Perception; Computer Science; and Neuroscience; Neurobiology; Physiological Psychology, with laboratory.

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**REQUIREMENT I (Core Courses)**

\_\_\_ NRSC/PSYC 200A \_\_\_ NRSC/PSYC 200B \_\_\_ NRSC/PSYC 200C – Fundamentals of Neuroscience

**REQUIREMENT II**

At least one course from the following:

*RESEARCH METHODS*

___ NRSC 201 – Graduate Neuroscience Laboratory (preferred)	___ CHEM 221C
___ PSYC 233 – Research Methods in Cognitive Science	___ CHEM 221D
___ PSYC 211 – Statistical Inference	___ CHEM 125 – Instrumental Methods
___ CBNS/PSYC 120L – Undergrad, Neuroscience Laboratory	___ CHEM 221A – Advanced Analytical Chemistry
___ CBNS/PSYC 130L – Undergrad, Computational Neuroscience Laboratory	___ PHYS139L – Electronics for Scientists

At least two courses or one course sequence from any of the following three areas:

1. BEHAVIORAL SCIENCE AREA

\_\_\_ CBNS/PSYC 127 – Behavioral Control Systems  
\_\_\_ PSYC 112 – Neural Mechanisms of Animal Behavior  
\_\_\_ PSYC 203A – Experimental Psychology  
\_\_\_ PSYC 203B  
\_\_\_ PSYC 203C

2. PHYSIOLOGY AND PHARMACOLOGY AREA

\_\_\_ BMSC 210A, \_\_\_ BMSC 210B Human Physiology  
\_\_\_ ENTM 201 – Insect structure and function  
\_\_\_ BMSC 220 – Neurosciences  
\_\_\_ CBNS 120 – Cellular Neuroscience

3. BIOCHEMISTRY, CELL & MOLECULAR BIOLOGY AREA

___ BCH 110A, ___ BCH 110B, ___ BCH 110C General Biochemistry	___ BCH/CHEM 241 Bioorganic Chemistry
___ BIOL/CMDB 200, ___ BIOL/CMDB 201 Molecular Biology and Physiology	___ BIOL 203 – Cellular Biophysics
___ CHEM221B	___ GEN 203 – Genetics
	___ CMDB 203 – Developmental Biology

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**REQUIREMENT III** – Must enroll in the Colloquium in Neuroscience each quarter it is offered in residence.

\_\_\_ NRSC 287 – Colloquium in Neuroscience

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**REQUIREMENT IV** – Must enroll in two seminars Special Topics in Neuroscience per year until passing the oral qualifying exam. One seminar per year is required after passing the qualifying exam.

\_\_\_ NRSC 289 – Special Topics in Neuroscience

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**REQUIREMENT V** – Teaching Assistant service is required for two quarters.

1. Course \_\_\_\_\_ Quarter/Year \_\_\_\_\_; (2) Course \_\_\_\_\_ Quarter/Year \_\_\_\_\_



## **WRITTEN QUALIFYING EXAM PROCEDURE NEUROSCIENCE GRADUATE PROGRAM**

After completing course requirements, students take written and oral qualifying examinations in order to advance to candidacy. The written exam consists of a research proposal relevant to the student's research area. The format should follow current guidelines provided by either the NIH, or NSF. The guidelines below are examples, based on the NIH format. Forms and information specific to particular agencies are not required (e.g., budget, resources, animal protocols, hazardous waste management). Students must demonstrate an ability to integrate material from primary research literature, provide information regarding background and significance, and delineate a detailed experimental research plan with clearly defined hypotheses and a consideration of potential pitfalls and alternative approaches. The proposal must be provided to all members of the qualifying exam committee at least two weeks prior to the oral exam. Students are expected to discuss at least the broad outlines of their research proposal with each of their qualifying exam committee members well in advance of submitting their written proposals.

Students are encouraged to take the qualifying examination prior to the seventh quarter in residence (not including summer quarters). If the examination has not been scheduled prior to the start of the tenth quarter, then a detailed justification must be provided to the graduate advisor.

### **Specific Instructions:**

The research proposal, which serves as the written portion of the Qualifying examination, should be an original proposal written by the student in cooperation with the major professor.

The format should be consistent with the current NIH or NSF format for grant proposals, except for items specified below such as page limits. The following format is an example template:

1. Project summary or abstract (0.5-1 page single spaced).
2. Specific Aims (1 page single spaced).
3. Research Strategy, which has three divisions: Significance, Innovation and Approach (15-25 pages single-spaced).
4. Bibliography (no limit).

Margins and font: All margins should be 1 inch. Font size should be 11 or 12 pt.

The official new format for NIH proposals has much shorter page restrictions, but the Neuroscience faculty require the student to provide an IN-DEPTH discussion of the background literature relevant to the project, a

thorough description of preliminary data, and an in depth research design and methods. Consequently, the page limit is extended to 15-25 single-spaced pages.

Synopsis of section content:

1. The project summary should summarize the goals of the project, the hypotheses and potential significance as it pertains to human health or advancement of scientific research.
2. Specific Aims: this section starts with an introductory paragraph describing the overall topic and stating why the proposal is novel and significant. Make a clear statement regarding the overarching goal of the project. Follow with a list of Specific Aims with relevant hypotheses. End with a summary (short few sentences) describing what is to be learned from the project's results and how this could lead to a future direction.
3. Research Strategy: Thoroughly describe why the research is important, what the goals and hypotheses are, preliminary data, exactly how experiments will be conducted, including a precise description of the experimental design, proposed analyses, statistical procedures (including a consideration of power and, if applicable, corrections for multiple comparisons), and detailed methods. This includes a thorough literature review (background).
4. Bibliography is Literature Cited anywhere within the proposal.

SUGGESTIONS FOR WRITING THE GRANT:

**ABSTRACT/SUMMARY:** The purpose of the Project Summary/Abstract is to describe succinctly every major aspect of the proposed project. It should contain a statement of objectives and methods to be employed, the significance and innovation of the proposed research, relevance to public health (for NIH-format proposals), and broader impacts. Use plain language that can be understood by a general, lay audience.

The abstract should include:

- a brief background of the project;
- specific aims, objectives, or hypotheses for the ENTIRE proposal;
- the significance of the proposed research (all proposals) and relevance to public health (NIH format proposals)
- the unique features and innovation of the project;
- the methodology (action steps) to be used;
- expected results; description of how your results will affect other research areas.

**SPECIFIC AIMS:** The purpose of the specific aims is to describe concisely and realistically the goals of the proposed research and summarize the expected outcome(s), including the impact of the proposed research will exert on the research fields involved.

**Content:** The Specific Aims section should cover:

- broad, long-term goals;
- the specific objectives and hypotheses to be tested;
- summarize expected outcomes; and
- describe impact on the research field.

**Suggestions:**

1. Generally, the Specific Aims section should begin with a brief narrative describing the long-term goals or objectives of the research project and the hypothesis to be tested. This is followed by a numbered list of Aims.
2. List succinctly the specific objectives of the research proposed, e.g., to test a stated hypothesis, create a novel design, solve a specific problem, challenge an existing paradigm or clinical practice, address a critical barrier to progress in the field, or develop new technology.
3. Make sure your specific objectives or hypothesis are clearly stated, are testable, and adequately supported by citations and preliminary data. Be sure to explain how the results to be obtained will be used to test the hypothesis.
4. *Be as brief and specific as possible.* For clarity, each aim should consist of only one sentence. Use a brief paragraph under each aim if detail is needed. Most successful applications have 2-4 specific aims.
5. Include a brief statement of the overall impact of the research studies.
6. This is the most important page of the entire application since it may be the only section the unassigned reviewers (when this is actually submitted to an agency for funding) read to understand approach, impact, and innovation.

## **RESEARCH STRATEGY (Overview)**

**Purpose:** The Research Strategy/Plan is organized into three sections: Significance, Innovation, and Approach.

**Content:** The Research Strategy should answer the following questions:

- What do you intend to do?
- Why is this worth doing or the significance of the research? How is it innovative?
- What has already been done in general, and what have other researchers done in this field? Use appropriate references. What will this new work add to the field of knowledge?
- What have you (and your collaborators) done to establish the feasibility of what you are proposing to do?
- How will the research be accomplished? Who? What? When? Where? Why?

## **RESEARCH STRATEGY SECTION 1: SIGNIFICANCE**

**Purpose:** The Significance section should explain the importance of the problem or describe the critical barrier to progress in the field that is being addressed. Explain how the proposed research project will improve scientific knowledge, technical capability, and/or clinical practice in one or more broad fields. Describe how the concepts, methods, etc., that drive this field will be changed if the proposed aims are achieved. **PLEASE ALSO DO YOUR BACKGROUND RESEARCH DISCUSSION HERE.**

**Content:** The Significance section replaces the previous Background and Significance section. It should cover:

- the state of existing knowledge, including literature citations and highlights of relevant data;
- rationale of the proposed research;
- explain gaps that the project is intended to fill; and
- potential contribution of this research to the scientific field(s) (all proposals) and public health (NIH-format proposals).

### **Suggestions:**

1. Make a compelling case for your proposed research project. Why is the topic important? Why are the specific research questions important? How are the researchers qualified to address these?
2. Establish significance through a careful review of published data in the field, including your own. Avoid outdated research. Use citations not only as support for specific statements but also to establish familiarity with all of the relevant publications and points of view. It is worthwhile to remember that this chapter can eventually be written as a review and submitted for publication.

3. Clearly state public health implications (for NIH-format proposals) and provide a timeline for completion of each aim.

## **RESEARCH PLAN PART 2: INNOVATION**

**Purpose:** Explain how the application challenges and seeks to shift current research or clinical practice paradigms. Describe any novel theoretical concepts, approaches or methodologies, instrumentation or interventions to be developed or used, and any advantage over existing methodologies, instrumentation, or interventions. Explain any refinements, improvements, or new applications of theoretical concepts, approaches or methodologies, instrumentation, or interventions.

**Content:** The innovation section should include the following:

- Explain why concepts and methods are novel to the research field.
- Focus on innovation in study design and outcomes. Summarize novel findings to be presented as preliminary data in the Approach section.

### **Suggestions**

1. Describe how the application differs from current research or clinical practice paradigms.
2. Stress any innovations in YOUR experimental methods (e.g., new strategies, research methods used).
3. Summarize novel findings to be presented as preliminary data in the Approach section.

## **RESEARCH PLAN PART 3: APPROACH**

**Purpose:** The purpose of the approach section is to describe how the research will be carried out. This section is crucial to how favorably an application is reviewed. **THIS SECTION SHOULD INCLUDE PRELIMINARY DATA AND RESEARCH AND DESIGN AND METHODS FROM THE OLD NIH STYLE.**

**Content:** The APPROACH section should include the following:

- preliminary studies and data
- detailed experimental design for each aim
- a description of methods, data collection and analyses to be used to accomplish the specific aims of the project;
- a discussion of expected results, potential difficulties and limitations and how these will be overcome or mitigated;

**Suggestions:**

1. Preliminary data can be presented as the first part of the Approach section.
2. Number the sections in this part of the application to correspond to the numbers of the Specific Aims. For example: (4. APPROACH/ 4.1 PRELIMINARY DATA/ 4.2 AIM 1 EXPERIMENTAL DESIGN/ 4.3 AIM 1 POTENTIAL PROBLEMS AND ALTERNATE STRATEGIES/ 4.4 AIM 2 EXPERIMENTAL DESIGN/ 4.5 AIM 2 POTENTIAL PROBLEMS AND ALTERNATE STRATEGIES/ 4.6 METHODS). Embed expected results in a subsection under design for each aim. It is a good idea to reiterate your hypotheses here).