BLOCK LAB – TRAINEE MENTORING COMPACT **7-11-22**

INTRODUCTION: Please read this document carefully if you are an existing member of my research group or if you have recently been invited to join my research team. I am delighted to have the chance to work together with you and assist your development as a scientific scholar. It is extremely important to me to support and advance the careers of my mentees, both throughout their time in my research group and also after they have left my program.

PURPOSE: The agreements between mentors (faculty supervisor) and trainees (***undergraduate students, postbaccalaureate researchers, graduate students, research associates, and postdoctoral scientists***) are often ambiguous, where assumptions can sometimes erroneously drive critical decisions and interactions. Defining these expectations upfront can help prevent misunderstandings and ensure trainee research career development that is both productive and mutually rewarding.

LABORATORY GOALS: Our research team strives to understand how different environmental exposures and unique peripheral immune responses result in both disease-specific and common mechanisms responsible for microglial driven CNS pathology (Alzheimer's disease, Parkinson's disease, and Gulf War Illness), with the goal of understanding how to therapeutically intervene in these processes. We seek to publish high quality papers in the best journals and present our research at the best conferences. We want our research to advance the conceptual understanding of basic microglia biology, explain how environmental exposures may drive disease, and provide foundational research that could eventually impact environmental policy. We will always strive to do exceptional science.

MY COMMITMENT TO MENTEES: I sincerely look forward to working with you on my research team. I take my role as a mentor seriously. I understand and respect that mentoring needs are unique to the individual and that these needs may change over time. I am ambitious and have high standards for myself, thus I expect the same from you. As such, I commit and dedicate myself to the following:

- **I will be accessible, encouraging, supportive, equitable, and respectful to all trainees.** I will strive to foster all trainees' professional confidence, encouraging intellectual development, creativity, critical thinking, and curiosity.
- **I will demonstrate respect for all trainees as individuals, without regard to national origin, religion, disability, gender, race, or sexual orientation.** I will strive to cultivate a culture of tolerance and inclusion in the laboratory.
- **I am committed to providing financial resources for graduate students to conduct their thesis/dissertation research.** Towards this goal, I have a successful track record of federal grant funding (NIH, DOD, the VA). I will also work with trainees to help guide fellowship/grant applications when they are eligible.
- **I am also committed to providing financial resources for postdocs and other non-student trainees to conduct their research**. I will also work with these trainees to help guide fellowship/grant applications when they are eligible.
- **I will be committed to the trainee's research project.** I will work with each trainee to help guide and plan the research project, set attainable goals, and a timeline for completion of the project.
- **I am committed to routine one on one meetings with all trainees, where I will regularly review the trainee's progress, provide timely feedback, and discuss goal setting advice.** These individual meetings to discuss your research will occur every two weeks. If my door is open, you can also stop in. We will generate an Individual Development Plan (IDP) for each trainee and jointly review progress and goals every year.

- **If I am concerned about your research progress, I will be transparent and directly address this with you.** If I notice a pattern of poor research productivity or time management, I will address these in a timely manner through a one-on-one conversation. We can jointly plan for how to get back on track. You aren't alone, you have my support, and this feedback is an important part of that support.

- **I will promote the acquisition of professional skills needed for a successful career for the trainee.** These skills include, but are not limited to, oral and written communication, grant writing, management and leadership, collaborative research, responsible conduct of research, teaching, and mentoring. I will encourage trainees to seek opportunities to develop skills in these areas outside the lab as well. While supported opportunities may include non-traditional career choices, while in the laboratory, a trainee's research responsibilities will also always need maintained due to the federal research support for the trainees.

- **I am dedicated to creating a safe environment in which trainees can discuss and explore career opportunities/paths consistent with their skills, values, and interests.** I will be supportive of trainee career path choices. I will be accessible to give advice, feedback, and guidance/networking opportunities to help prepare for trainee career goals. I will provide letters of recommendation for the trainee's next phase of professional development and after they leave the lab.

- **I will encourage trainees to seek input from multiple mentors.** I will help guide trainees in finding appropriate external mentors. I will introduce trainees to colleagues and members in the field at conferences for networking. A team of individuals (a village) is necessary to help provide feedback and expertise for a trainee's career. These external mentors will be your network as you move forward in a scientific career. However, it is up to the mentee to cultivate these relationships.

- **If a postdoc trainee seeks an academic position, I will work with this trainee to define an independent project to take with them.**

TIME CONSTRAINTS AND GENERAL INFORMATION ABOUT ME

- As a senior professor, I have many other responsibilities that require my time, including various obligations for teaching, scholarship, and service. Setting up an appointment will always help you secure my time.

- I may be slow to respond to emails on the weekend/late at night or be unable to provide last minute feedback/assistance without sufficient prior notification. Deadlines and appointments will always help you secure my time. While I will always try to respond when I can, please call if there is an emergency.

- I am able to provide the best feedback when trainees organize data and presentations before meeting with me. This is why it is required to bring the "project binder" to one on one meetings and the list describing what you did and what you plan to do is also required for our individual meetings. If my door is open, even partially, it is OK to come in and ask questions. I am here to help. Providing a frame of reference for the questions needing addressed as a "walk in" will drastically increase the likelihood I can provide helpful information.

- I love to discuss science with my trainees and bounce ideas around. While we don't want to waste time troubleshooting an unnecessary change in an already working protocol, I am open to taking a different approach to achieve a goal if you are able to effectively communicate why the other one doesn't work and your approach is better. Scientific disagreements and even being incorrect are a normal part of both learning and researching something interesting; you can tell me if you think I am wrong. As scholars, our goal is always respect, the correct answer, and the best way to address a question.

- I like to celebrate lab successes by taking the group out to lunch or dinner together, which may sometimes be at my house. Your first, first author publication in the lab is typically commemorated with a giant coffee mug with the top of the journal article on it. We also typically have a yearly Halloween party at my house.

TRAINEE RESPONSIBILITES AND LAB POLICIES: I expect trainees in the lab to:

Time management, Organization, & Work Ethic

- **Acknowledge that you have the primary responsibility for successfully completing your degree (ex. Graduate student) and performing the necessary research to successfully attain your career goals (all trainees).** For students, this includes a commitment to the lab and coursework. Other trainees are responsible for driving their own progress to their career goals, typically with research in the lab. All trainees are expected to maintain a high level of motivation, professionalism, ethical standards, engagement, and scientific curiosity.

- **Graduate students will work with me and the program to select a thesis/advisory committee.** Ultimately, your committee is your choice, but use all resources you have to help you decide. Graduate students will commit to meeting every 6 months with their thesis/research committee to discuss research/degree progress and be responsive to feedback and constructive criticism from the meetings.

- **Ensure that you are prepared to meet with me during our bi-monthly meetings (2x month).** Bring your laboratory notebook with you to our meeting. Prepare presentations and questions ahead of time. Bring your project binder to our meeting. Bring your list of past accomplishments/problems and future plans to explain any new ideas or problems you need assistance with. This is YOUR time to drive your project, ask for help, and brainstorm with me- the better organized you are, the more helpful this time is. Given that I have many responsibilities and help manage multiple projects, providing a refresher as to where we left off with the project to frame the meeting will be helpful.

- **Try to figure out answers on your own before approaching me.** Resourceful trainees will come up with potential experimental designs and approaches to ask me about before our meeting. If you have tried and need help, I am here to help.

- **Be knowledgeable about the policies, deadlines, requirements of the lab, SNRI, the graduate program (if applicable), school, department, and university.** Graduate students must comply with the policies of their graduate program. For all trainees, you must follow rules related to the lab such as: IACUC, chemical safety, DEA requirements, immunocompromised mouse protocols, and biosafety. You should read and comply with the lab's most recent approved version of the IRB and IACUC protocols. Follow all SNRI rules.

- **Be around the laboratory during general working hours.** I expect that trainees are committed to the lab and *in general* are around (except during class/seminar and etc.) during general 9-5 PM working hours. Be cognizant of wasting time. Taking breaks during the day is important, but if you are not disciplined and multitasking, it can take you 60 hours to complete what a disciplined trainee can in 35-40 hours. I expect that people are actively working ~ 40h per week (reading/writing, etc is part of this). Sometimes it is necessary to put in extra time to meet deadlines. Also, trainees may sometimes need to come in to the lab move experiments along on rare occasions in the evening or possibly during the weekend. However, it really should go without saying that planning 24H shifts is unacceptable. There are also rare occasions that lab members may ask to write at home (including myself) or practice for a talk at home, which occurs with prior agreement and defined goals. Physically being in the lab is important, as daily scientific interactions with lab members are critical for trainee career development, along with the ability to move projects forward in the lab doing experiments.

- **Strive to meet deadlines and manage your progress.** Multitasking isn't innate and you will need to plan your work to be successful. Plan for the entire week ahead of time. Make a list of critical experiments that need done each week and allot time for them. Leave time to trouble shoot and for mistakes. Keep a running list of smaller experiments/tasks to do as well, tasks that you can do during incubation times/etc. Multi-task while you are in the lab to maximize your research output. I also recommend physically checking necessary reagents for the work week well ahead of time and securing them to make certain that someone else doesn't get to them first and leave you empty handed.

- **As a postdoc trainee, work to make the transition from trainee to expert**. As a postdoc, you are expected to be a leader in the lab. This means you should be a primary intellectual driver of your own project and point of contact for junior scientists in the lab.

- **Share common laboratory responsibilities and use resources carefully and frugally.** Our lab has a chore list and an ordering list that each individual is responsible for.

- **Work with me to disseminate all relevant research results in a timely manner.** Don't sit on your data: data analysis must be done in a timely fashion. We don't want to do another experiment without knowing the answer to the first study. Know that the key to good writing is revision, where in writing, the fear of not being perfect is the enemy of done. Start writing and dedicate time to it each day. If you need tips to get over writing blocks, I have several!

- **Notify me in advance of any planned absences when possible and apprise me of any unexpected absences due to illness or other issues.** It is lab policy that I need to receive email notice a minimum of two weeks before a planned absence of 1 week or less and as soon as possible for an illness. When an absence of greater than a week is planned, at least a months' notice is necessary.

- **Acknowledge that original notebooks, digital files, and tangible research materials belong to the institution and will remain in the lab when your training is complete and you leave the lab, so that other individuals can reproduce and carry on related research, in accordance with institutional policy.** Only with the explicit approval from the trainee's research mentor and in accordance with institutional policy may a trainee make copies of notebooks and/or digital files and have access to tangible research materials, including those the trainee helped generate.

- **Plan a good work-life balance: it is important.** Work smart, don't work yourself to death. Take time for your physical and mental well-being. Do at least 1 thing unrelated to lab that is something you enjoy each day. Don't work seven days a week; you will burn out, be unhappy, and be less creative. If you are disciplined and focused, you can do exceptional research and have a good work-life balance.

Vacation Time (Play Hard): ***Take vacations and breaks***. In addition to the 10 university holidays (New Years Day, Martin Luther King Day, Campus Holiday, Memorial Day, Juneteenth, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving, Christmas Day), each person is given vacation time specified by their position, as documented with HR. Graduate student time off is not stipulated by the graduate school, but our lab has a generous policy of 15 days leave per year, which resets in July. Please plan accordingly. For graduate students, sick days are included in the 15 day leave time. Let our lab manager know when you are planning on going on vacation so he can put it in the calendar. Lab members must also give me notice by emailing me ahead of time if you are going to be absent from the lab. I need to know at least two weeks in advance of a one-week vacation, and longer if you plan on taking a longer break. ***You are responsible for organizing the care of your experiments and responsibilities while you are out.*** None of us get summers off or spring break off. (Instead, this will be part of your vacation allotment if you chose to take time off then.). Also, most lab members opt to take off after Christmas through to New Year's Eve, which is vacation time. It's up to you to plan how you want to use your time off.

Research Presentation Meetings

- **Attend and actively participate in group lab meeting.** Lab meeting occurs weekly (every Monday). Be prepared for each meeting. Be engaged and ask scientific questions. If you are presenting, have your slides organized and practice ahead of time.
- **Attend the Stark Seminar, Thursdays at noon.**
- **Pharmacology & Toxicology Students/Trainees must attend the departmental seminar.**
- **Attend the monthly neurodegeneration group lab meeting.**
- **Attend the monthly neurodegeneration journal club.**
- **Attend PharmTox Student Presentations.**

Scientific Recordkeeping and Lab Notebooks

- We keep data on the backed-up server and each student will be assigned a main folder with private access. Data must be copied off local machines in a timely fashion.
- Large datasets (genomics, sc-RNAseq, proteomics, Nanostring) will be stored on our lab server space.
- In the past, we have organized our research data in hardback laboratory notebooks, but we are now switching to a new electronic lab notebook system on the LabGuru platform. You must follow the lab notebook policy. I will evaluate your lab notebook formally twice a year to make sure it is organized properly, but I will likely see your notebook more frequently with it being online, searchable, and accessible to all lab members. I will work with you if you need guidance.
- We have a lab data integrity policy that you must sign and you must follow it. I am a stickler for data integrity, this is one cornerstone of reproducible research. I find it difficult to work with individuals who do not have their data organized and have difficulty providing it on request.

Data Analyses

- I expect bar charts and other charts to include raw data points.
- Any statistical analyses presented on a slide/figure should be accompanied with a description of n, statistical test, etc.
- If you are unsure of how to analyze your data, first try to figure out what you think the best approach is. Then contact me with your rationale and questions.
- To help troubleshooting, bring the data to meetings, not just the finalized figures for review.

Professional Interactions

- I expect you to treat other scientists with respect and use professional e-mails.
- If you are taking the lead on communicating with other groups outside of the lab for a research project, I expect to set up the initial collaboration. I expect to be ‘ccd on important e-mails. We should discuss ahead of time what constitutes an important communication.
- Remember that you represent the lab and that each person outside of the lab that you interact with will judge not just the lab, but your ability to serve as a good ambassador for your colleagues.
- Good communication in the lab is critical and this requires feedback. If I email you about something, please read the email and acknowledge that communication occurred by responding to that email. Simply saying “I’m on it” or “I received this, thank you” is all that is necessary, is quite helpful, and is appropriate professional etiquette. Please feel free to just stop in and ask about anything unclear.

Good Citizenship

- I expect you treat other lab members with respect.
- Lab members are expected to complete the assigned chores in a timely manner and alert the lab manager when you are unable to complete them. (Do not blow them off.)
- Keep common spaces clean in the lab. Keep public spaces outside of the lab in SNRI clean (ex. the ledge by the door and the break room). Remember that your behavior represents the entire lab.
- You should be respectful of, tolerant of, and work collegially with all laboratory personnel. You will be an active contributing member to all team efforts and collaborations and will respect individual contributions. As such, you will contribute to an environment that is safe, equitable, and free of harassment or exclusion.
- If you have issues with a particular lab member, think about the best way to approach the situation and try to have a conversation about your frustrations when you are calm. If you need help to manage these situations, talk to me.
- I expect you to keep your bench clean.
- If you are the last to use a common reagent, make more and report it to the lab manager if they need to order more of a common reagent, before it's gone.
- Sign up for equipment use and treat equipment with care.
- Put in orders to the lab manager before the last box is opened.
- Make sure you follow up on and are on time for your weekly report of commonly used items to the lab manager.
- Write protocols if you bring a new technique to the lab and when you train others in the lab, train them to be able to work independently from you.
- Behaviors that are not acceptable from staff, faculty, or trainees: ignoring requests and responsibilities; dishonesty; undermining others; excluding other lab members from training/lab events during work hours; withholding credit; hiding mistakes.

Developing a Research Network/Scientific Presence and Conference Presentations

- Branch Out at Home: Good citizenship is valuable not only for the research group but also for the department and university. Please don't hide in your office/lab. Get out there and meet people at group, SNRI, and departmental events. Introduce yourself to other scientists who you think can help with your research project, actively seek out external mentors. Ask questions at research presentations.
- External Presentations at Conferences: Push to present your research at least once per year outside of our lab meetings (ex. Scientific Poster). We have the SNRI research science day and many local conferences you should also take advantage of.
- The lab will pay $1,500 per year towards travel for one conference for each trainee that can present research. What conference that is depends upon the federal institute funding the research, so get your conference and travel approved with me first before you purchase tickets. Notably, it is typically better to have the travel agency purchase the tickets.
- Join Scientific Societies (not funded by the lab). SOT (Including NTSS) and the Society for Neuroscience are the two big ones for our lab. Join the trainee leadership for these societies.
- Compete in all speaking, science, poster competitions possible. It helps build your CV!
- Because your research represents the lab, public research presentations outside of class need to be approved by me. Show me your abstract, slides, talk, or poster draft at least a week in advance.

Authorship, Publications, and Sharing Materials

- Typically, the person who drives the project is first author. I am always last communicating author on manuscripts that come from our lab. If you are interested in having authorship on a project, please let me know upfront so that we can be sure to get you involved in the early phases. After a manuscript is submitted, it is very difficult to modify authorship.
- I expect the first author to perform most of the work and take the lead on writing the paper. I will work with each trainee to help plan how to write each section, sketch out figures, provide general feedback, and polish each paper.
- We have a *lab policy on authorship*. Please make sure that you read it, as this is what we abide by.
- All transcriptomic data sets should be published, per journal specifications.

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Signature - Mentor (Faculty Supervisor) Date

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Signature - Trainee Date

Note: This document is modified and adopted from the AAMC compact and the Coaker Laboratory at UC Davis compact.