<u>One-to-one Meetings/Format, Style and Expectations</u>

In general, one-to-one meetings would benefit by making use of the following format. While not every person in our lab will be able to attend every one-to-one meeting, please make sure that a policy of nonattendance does <u>NOT</u> develop in your case. I do <u>NOT</u> tolerate the frequent missing of meetings. You can decipher the reasons in the below recommendations. From your perspective, the one-to-one meeting will offer an opportunity to obtain direct feedback regarding the progress of your work. Input from your peers and the P.I. is expected to substantially help your activities in the long run of each project. From my perspective, this meeting will reveal a comprehensive picture of your work to me on a regular weekly basis. It is your responsibility to convey the entire experimental design and its outcomes, including the success and failures of your experiments.

Not all meetings are intense and rich in information, but please make sure that you do the best you can to avoid boring conversations, and neither of us learns anything new. I take these meetings as indications of how much thought and how much effort was employed during the past week. These meetings will also demonstrate your ability (or inability) to convey your own science or research. Therefore, you need to think in advance on the ways that you will drive the one-hour discussion with me.

In general, we try to open new projects that have potential for funding. Your work has a crucial impact on these initiatives. The ideal situation is that a proposed project is quickly funded, and then successfully published in several high-profile professional journals. It is natural that some projects develop more slowly than others. However, we cannot afford to employ so many resources in projects that are NOT funded in a reasonable time frame. Therefore, do the best you can to maximize the success of your project. Unfortunately, in some situations we need to interrupt a project for the lack of success or even bad delays that preclude the success of the project.

Below, I recommend some directions that need to be discussed in one-to-one meetings. The style/format of the meeting strongly depends on an array of factors, such as your experience, expertise, the progress of the project, etc. Please make sure that the one-to-one meeting/discussions will evolve in a positive way, both quantitatively and qualitatively.

- Give a brief outline of the major activities you performed between the last meeting and this one. What questions and directions that had previously been outlined are now addressed? What questions are still unanswered? What technical problems are still persistent?

- I assume that you tried to address previously proposed questions in various ways. If this is the case, please list and elaborate your methods in as much depth as you need. Simply saying "it does not work out" is not a satisfactory answer. You need to build a strong justification of your thoughts and the efforts that you employed to solve the problems. This part of the discussion should be supplemented by your data/trials. Not only will this reveal your strategies to fix a persisting problem, but it will also increase the chance of my providing you with input for tackling it. Remember, this discussion is prioritized in my agenda against other meetings. Therefore, I expect that you will go in the detail that reveals a substantial amount of though and efforts that you put into the project during the last week.

• Provide a rationale on how you obtained the data points. What were the questions and motivations driving these experiments? What experimental conditions were employed? What is the rational behind the experimental conditions? How do your conditions differ from others (if applicable)?

• Remind me what you have done/found so far in the overall project and how this serves as a foundation for future stages of your work. Show data that demonstrates your ability to conduct the most difficult aspects of the project. Show only relevant and representative data and **explicitly highlight their relevance for the future stages of your project. How reproducible are your data points? How many times did you repeat the experiments and what sorts of results were obtained?**

• Be prepared to explain all technicalities for a non-expert. Sometimes, you are requested to provide definitions. I need to know all details that allow me to distil your approach. Show your points by figures and tables. For example, the data can be well summarized in an organized table. Show or discuss the appropriate controls.

• Discuss the required resources, both instrumentation and lab supplies. For example, you may need an instrument that is not available in our lab etc. If you are involved in a collaborative work, please make sure that you effectively provide all materials to collaborators. Please cc all your e-mails/correspondence with them to me.

• Show tentative interpretations of your data, and propose additional evidence by further experiments. This part of the discussion shows that you have (or do not have) a strong ability to critically interpret the preliminary results of your project. If necessary, compare these preliminary data with other findings in the same field. How do these preliminary data generate other questions and hypotheses? How will they be tested?

• You need to correlate preliminary findings with future directions of your work. What are the general conclusions regarding the obtained data and how are they motivating the project? Excellent schematics/charting of preliminary data help.

• Enlist areas that need more work, and have relevance to your project.
⇒ Identify other critical **hypotheses** and ways for testing them
⇒ Identify advantages of the methods used in your project. Discuss the major advantages for addressing the questions raised in your project. What will the methods used in your project tell you that other methods cannot tell you?

• Describe the planned experiments for the coming week
⇒ Present up front and briefly the <u>rationale for each proposed approach in the project</u>.
⇒ Describe the major experimental design for the coming week
⇒ Discuss the next appropriate controls
⇒ Show how your proposed experiments are directed towards mechanisms
⇒ Describe additional experiments to confirm the preliminary results (see above)

• Discuss the experimental challenges, and ways of overcoming them
⇒ What are the challenges and pitfalls of the experimental design?
⇒ What are your alternative strategies/approaches for tackling some experimental barriers?

• How do you **collect and analyze the data**?
⇒Identify possible pitfalls for the data analysis
⇒Provide alternative approaches for the data analysis

• Discuss the **expectations and interpretations your planned experiments**
⇒What results should you expect?
⇒ How will the data be interpreted?
⇒ What will the data tell you in various experimental situations?
⇒ What will <u>NOT</u> the data tell you in the same situations?
⇒ Identify the advantages/limitations of the technique(s) that you will use.
⇒ Are the data going to be analyzed further, or are they simply descriptive? How?
⇒ Show how the results/outcomes will be built upon.
⇒ Describe additional experiments to confirm the preliminary results or a last-minute hypothesis (see above)
⇒ Discuss challenges in the data interpretations and model description.
⇒ What happens, if you **<u>do not get the anticipated results</u>**?
⇒ Discuss **alternative models and other hypotheses**
⇒ Discuss **how the conclusions will be reached**

• Discuss the **<u>Significance of the results</u>** that are to be obtained in the coming week
⇒ Discuss how your efforts and experiments will make dramatic changes or how they will fill the present gaps in your project.

• Discuss the **<u>Future Directions</u>** of these experiments in a long-term plan. These future directions should be connected and complementary to those experiments proposed in the coming week. They should focus on the same goals, but from a different perspective.

• Provide a **Timetable** for the coming week**.** What problems are prioritized against the others? Prioritize the quality over speed. Once in a while, you will need to update the flowchart of your overall project based upon an updated picture of your work.

• During this meeting you may also reveal recent literature you have consulted in the past few days, if any and what was interesting there. Of course, be sure that it is pertinent to your project. You need to be selective and critical with the very large amount of literature that abounds in all fields.