Dear PhD Supervisors (Current and Future)

One of the most important outputs from our work at the university are the young people we train. Probably these have more direct importance for Denmark than the science we do (no matter how excellent our science). It is critical to remember that a PhD is an education, a chance to train, to practise and to improve. That means that we as supervisors have a responsibility long beyond being the project leader of their research programme.

Most of the students in the Nanoscience programme have a solid environment, but not all. Almost all students have a tough time at various points during their PhD and without a good supervisor-student interaction this can lead to real stress, depression and dropping out. It not always obvious to either the student or the supervisor when things start to get serious. In the last 12 months I have seen enough real cases to take it seriously.

As supervisors of PhD students you each have a responsibility to help each of your students to learn in a way that is appropriate for them. Since the reality is that few of those students will end in academic positions we need to help them to get prepared for research jobs in different environments. Not all students are the same nor are all supervisors the same so it is up to you to talk to the student and find a good way.

As a help for us the PhD students on our committee (Fiona and Beatrice) have collated a list of examples of things that stress students at iNANO. The top ten list is attached and cover topics such as <u>Understeering/Oversteering</u>, <u>Access to</u> <u>Supervisor</u> and <u>Competition/Recognition</u>

There are a number of elements that are common to good PhD educations which should be part of your plans with your student. You need to make sure there is time and space for these elements in both the students and your schedules.

- 1. Discussion of expectations from the PhD education/project (from both sides)
- 2. Regular meetings with a time set aside to discuss issues not related to the experiments/papers (courses, conferences, study trips, career ...)
- 3. Regular attendance at conferences (for presenting science and getting external feedback and networking)
- 4. Extended stay at another laboratory (To get a perspective of another lab/culture)
- 5. Teaching
- 6. Development of the student in decision making, planning and independence
- 7. Scientific development of the student as an expert (knowledge, responsibility/ethics), as a science communicator (writing papers, making oral presentations).

The Nanoscience programme has a broader scope than the other PhD programmes at ST and as part of that I would ask that you encourage and give space to your students to get the benefits from it. In particular it is important that they see the purpose in attending talks outside their PhD project subjects (like the iNANO talks), in attending the iNANO Autumn school each year and that you are open to them interacting with the other PhD students in the research groups at iNANO with other approaches, interests and directions.

This letter is sent out to current supervisors as well as a copy to the current PhD students. A copy of the email sent to the students is attached here. Perhaps you can use it as an opportunity to talk over the supervision situation with each of your students.

Regards

Duncan Sutherland

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