

Microfluidics Innovated Bio-applications



# **MIB Survival Kit**

Last updated @ November 3, 2017

Inspired by the Weitz Lab @ Harvard



- We are a young research group
- I cannot answer all your questions, but there is someone on campus who can answer the questions you have → actively approach the experts in the field
- Completely open group
  - ✓ We share all our data as we collect it.
  - ✓ We share all our equipment
  - ✓ We welcome collaborations, visitors, interactions



- We compete with people outside our group, NOT with people in our group
- We interact and collaborate with EVERYONE in the group
  - ✓ We have to, otherwise we will fail
- We reasonably share credit and authorship
- We seek out collaborations with other groups
  - ✓ If I am the only faculty member you talk to, you waste a great opportunity



- We do not have all equipment necessary
  - ✓ It probably can be found somewhere else
  - ✓ Use other's equipment judiciously and show your gratitude

- Some central facility equipment may be available, though may be expensive
  - ✓ Use it judiciously, but use it when you need it.



## Everyone must attend

- ✓ No excuses not to attend
- ✓ Please inform me ahead of time with justification, if you can't attend the group meeting

## Group meetings are for current results

- ✓ Meaning you are not expected to understand everything
- ✓ Everyone should participate by posing questions and comments
- ✓ Get help from others
- Students take turns to present and host the meetings



## A pre-arranged schedule for everyone

- ✓ You get to talk to me every week for at least 1 hour
- ✓ You can opt out the meeting if you do not have anything to discuss.
- ✓ Bring in new data or new findings from literatures
- ✓ Never skip the individual meeting for two consecutive weeks, unless you have unexcused reasons

### If you have more to discuss

- ✓ Make an appointment
- ✓ Get help early and get help often
- Any concerns are welcome (scientifically or personally)



- Conference exposure is very important
  - ✓ Everyone is encouraged to attend one conference per year
  - ✓ You MUST present a paper to go to a conference
  - ✓ Please travel as economically as possible
    - Cheaper travel → more meetings



- We have a lean budget
  - ✓ Salaries are our major expense
- Research does require funds
  - ✓ Nothing gets done without sufficient funds
  - ✓ Please spend the money judiciously
  - ✓ Purchase only what is needed
  - ✓ Please consult with Melanie before you place the order
- Get my permission for items greater than 2,500HKD

# Safety and Lab Etiquette

- ATTEND the safety training before working in the lab
- Safety always comes the first
  - ✓ There is no room for error
  - ✓ Wear safety glasses, gloves, lab coats
  - ✓ Speak out to remind others
- We share equipment and space with other groups
  - ✓ EVERYONE is responsible for cleaning up and maintaining equipment
  - ✓ If you see something needs repair, fix it!
- Safety problems caused by one → the whole lab is down!



- Data never lie
- ✓ Data are not always AS expected, and one shall not assume it would be
- ✓ Try to understand and learn from the data obtained
- I am happy to be proven wrong

# **Journal Publications**

- Papers are crucial to everyone
  - ✓ Work is NOT completed until paper is published
- It takes a lot of effort to get a paper published
- How to write a scientific paper
  - ✓ Determine the uniqueness of what the paper presents (Two sentences summary)
  - ✓ Compiles the figures from your data
  - ✓ Write an outline
  - ✓ Discuss with me at each step: I am here to help





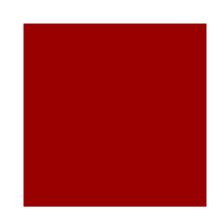
#### Do really good work to show how it is done honestly

- ✓ Keep good record on how your work is done (organize your lab notebook)
- ✓ Presentation (mandatory attendance in the lab meeting) and regular publications
- ✓ Weekly report is highly encouraged if you would like to keep your work on the right track (with this being said, I will comment your weekly report regularly)

#### Good scientists are leaders

- ✓ Serve as a role model for the junior fellows
- ✓ Senior fellows should guide junior fellows
- ✓ Leadership demands humility
  - Many students are smarter than you (and than myself)
  - Honor, respect and encourage their contributions





### Do really good work to show how it is done honestly

- ✓ Keep a good record on how your work is done (learn to use your lab notebook)
- ✓ Bi-Weekly report is mandatory (during the semester)
- ✓ Weekly report is mandatory (in the case of full-time work in the lab)

#### Good scientists are leaders

- ✓ Serve as a role model for the junior fellows
- ✓ Senior fellows should guide junior fellows
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## Contribute contents to the webpage

- ✓ Biography for the new comers
- ✓ Photo of yourself
- ✓ Make sure every paper you publish is posted on the web.
- ✓ Activities, honors, awards

#### Send the information to me

- ✓ Update will be made by end of each month
- ✓ Melanie is helping us on a volunteer basis, so please make sure your contribution is presentable without further editing