

#### **Microfluidics Innovated Bio-applications**



# **MIB Survival Kit**

Last updated @ September 17, 2019 Revision marked in red

Inspired by the Weitz Lab @ Harvard

# **Group Character**

- 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

# **Group Culture**

- 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

# Resources

- 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

# Weekly Group Meetings

#### 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

Meeting schedule: <a href="http://www.bme.cuhk.edu.hk/ypho/events.php">http://www.bme.cuhk.edu.hk/ypho/events.php</a>

# **Individual 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 Attendance**

## 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

# **Purchasing Policy**

- 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 (see next slide)
- 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!

# **Safety Training**

- ALL the staffs and students working in the lab need to receive safety training from the lab manager
- Research postgraduates are required to attend the general Safety (Part A & Part B) & General Safety examination
- ALL research staffs are required to attend safety trainings and examinations for Chemistry and Biology. If your work involved laser, you are also required to receive the training of Laser Safety

Course schedule: <a href="https://www.cuhk.edu.hk/clear/prodev/ipl.html">https://www.cuhk.edu.hk/clear/prodev/ipl.html</a>

# Scientific Integrity

- 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
- √ Keep good record of experiments in the lab notebook (preferably in English)
- 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

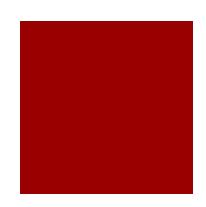
# Expectations for Postdoc, PhD and Master Students

- 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
- ✓ Leadership demands humility
  - Many students are smarter than you (and than myself)
  - Honor, respect and encourage their contributions

# Website Update

## 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