

Senior Design 492 Biweekly Report 2

Date : 2/8/2018

Project title : Patch-clamp microchip testing circuit interface

Client & advisor : Que Long

Team member & Roles :

---- Chenhang Xu - team communication leader

---- Daiyuan Ding - team webmaster

---- Li Qian - team leader & time keeper

---- Ningyuan Zhang - team programmer

---- Yigao Li - team test leader

Weekly summary :

Have the the biweekly meeting meeting with advisor and graduate students. Discuss the process of our project. Finish the setup of PC One, and get the image with square wave(still have some noise).

Past Week Accomplishments

| Member name | Accomplishments |
|----------------|--|
| Chenhang Xu | Finish the PC-ONE set up. Export the image from the device. Start to use the old microchip and try to input the cell into the cell flow channel. |
| Daiyuan Ding | Work on some setups on PC-ONE, get images of the outputs. Discuss about the new microchip we are going to use. Held the presentation, and reviewed for two teams. |
| Li Qian | Have the biweekly meeting with advisor. Finish the setup on PC-one, and get some images of the outputs. Have the presentation for the PIRM review. |
| Ningyuan Zhang | Prepared the PIRM for the first half of semester. Held the presentation during class and wrote reviews for other two teams. Discussed the details of the redesigned microchip with team members. |
| Yigao Li | Talk about the schedule and steps of this semester with members and meet with advisor. Writing the review for other team's presentation. |

Pending issues

| Member name | Accomplishments |
|----------------|--|
| Chenhang Xu | Redesign the new microchip. The electrode does not match our microchip. Try to test it on the old microchip and use the right parameter on the new one. |
| Daiyuan Ding | Discussed the new microchip about where we need to redesign. Working on possible ways to catch the cells. |
| Li Qian | Working on how to redesign the microchip and how to catch the cell. Find other ways to reduce the noise in the room. |
| Ningyuan Zhang | Read documents according to the new designed microchip and the circuit setups. Discussed the probabilities of usage of electrode that will be inserted into the new microchip. |
| Yigao Li | Figure out how to make a new design of microchip and get signal cell successfully. |

Individual contribute

| Name | Individual Contributions | Hours these 2 weeks | Hours Cumulative |
|--------------|--|---------------------|------------------|
| Chenhang Xu | | 8 | 14 |
| Daiyuan Ding | Held the presentation, and PIRM reviewed for two teams. Work on some setups on PC-ONE, get images of | 8 | 14 |

| | | | |
|----------------|---|----|----|
| | the outputs. Discuss about the new microchip we are going to use. | | |
| Li Qian | Have the biweekly meeting with advisor. Finish the setup on PC-one, and get some images of the outputs. Start to do the experiments under the microscope. Have the presentation for the PIRM review. | 13 | 19 |
| Ningyuan Zhang | Read related documents of PC-ONE according to the new setup with redesigned microchip. Wrote biweekly report and held regular group meeting to discuss the problems we will be facing while using the new setups. | 8 | 14 |
| Yigao Li | Done the presentation for the PIRM review and meet with advisor weekly. Setting up on PC-one. | 8 | 14 |

Comments and Extended Discussion

N/A

Plan for Coming Week

For the next week, we will working on the design of microchip and the experiments under the microscope. In order to catch the cell, we still need to read some document relate to it. Our new microchip will arrive in a few weeks, so we will test it on the old microchip. We still need to facing the problem of how to use microchip to add the air into cell flow channel and catch the cell use the electrode

Summary of Weekly Advisor Meeting

Discuss the process we have got and ask some questions in the fields of bioengineering according to catch the cell and use the microscope.

