



Summer research fellowship (SRF) Sharing Session

LEE Sze Yuen, Shadow

2022 SRF Participant, Major: Molecular biology and Biotechnology



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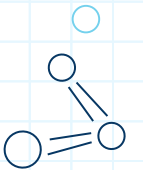
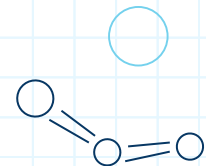
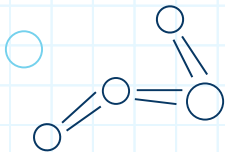
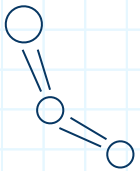
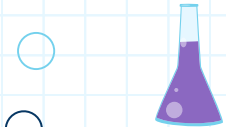
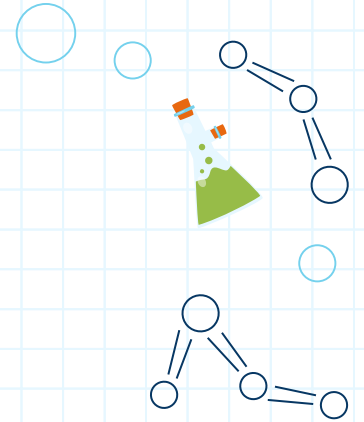
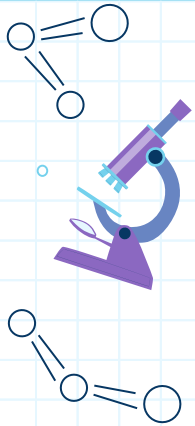
Approaching
supervisors

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Encounter
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Lessons I learned





01

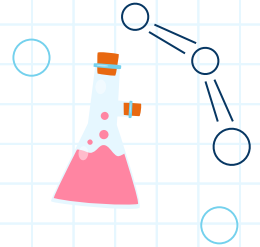
My research project



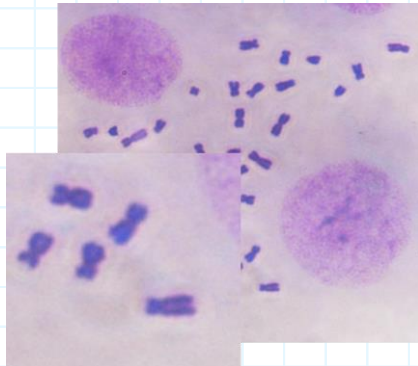
My research project

Function of FANCM in DNA damage response (DDR)

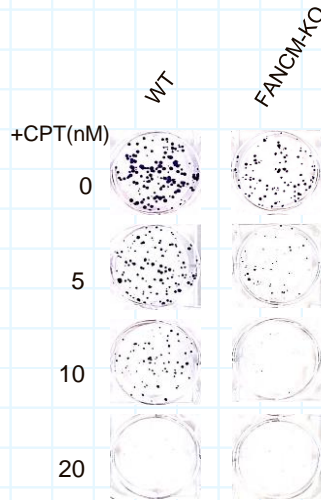
Supervisor : Dr. CHAN, Gary Ying Wai



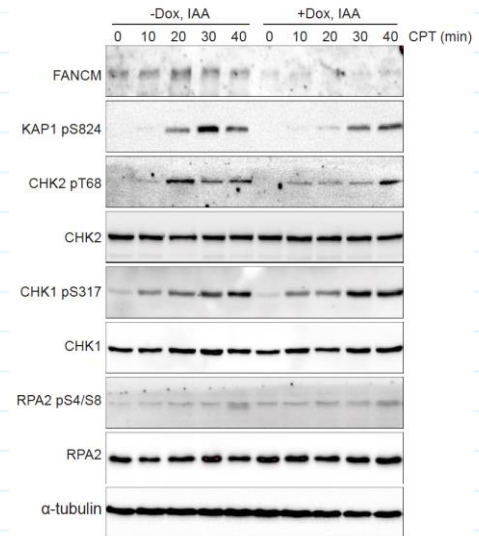
- Treating cell with DNA damage agent
- Carry out a series of experiments:



Mitotic Spread



Clonogenic Assay



Western Blot



02

Personal Experiences



Personal experiences

Prenetics™
NEXT GENERATION DNA TESTING

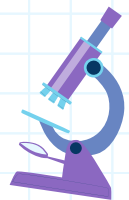
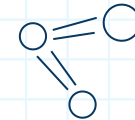
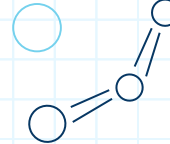
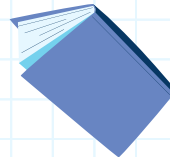
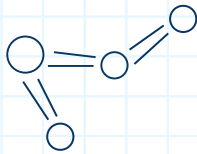
CHAN
LAB

As a part-time assistant technical officer

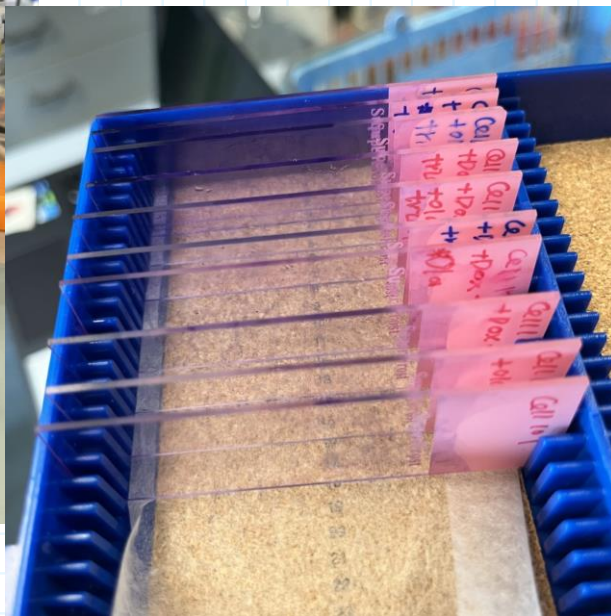
- COVID-19 testing
- Assist MLT for the specimens' pre-processing steps
- Aliquot sample

As a student research assistant in Dr. Chan, Gary Ying Wai's laboratory

- work on a research project related to FANCM starting from year 2 sem 1
- determine whether FANCM is a potential target of cancer therapy





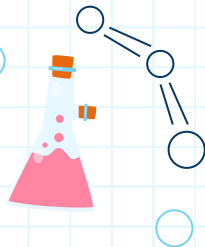




03

Approaching supervisors

Teaching staff profile @scifac.hku.hk



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Dr. ASHTON, Louise Amy
Assistant Professor, School of Biological Sciences
2299 0313

Dr. BAKER, David Michael
Associate Professor, School of Biological Sciences
2299 0606

Professor BONEBRAKE, Timothy Carlton
Professor
2299 0675

Dr. CHAN Kit Yan Janet
Lecturer, School of Biological Sciences
2299 0614

Dr. CHAN Kit Yan Janet
Assistant Professor, School of Biological Sciences
2299 0614

Teaching Areas

- Conservation Biology
- Environmental Data Analysis
- Urban Ecology

Research Interests

- Tropical climate change impacts
- Pangolins and pathogens
- Endangered species management
- Urban biodiversity
- Snakes and One Health
- Night-time ecology



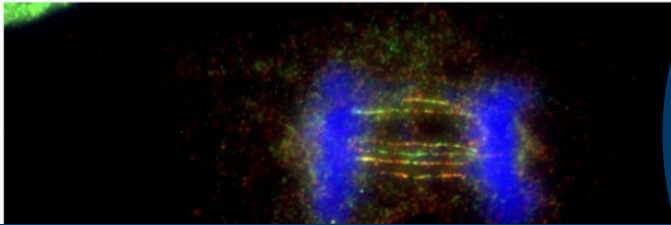
Chan lab@SBS HKU

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Recombination and Chromosome Segregation Laboratory

We aim at understanding:

- Interplay between DNA repair, chromosome segregation and genome instability
- How the formation and resolution of anaphase bridges influence genome stability in normal and cancer cells
- Mechanism of nucleases involved in DNA repair and segregation



Regulation of mitotic chromosome resolution of ultrafine anaphase bridges

Primrose Chanboonyasitt & Ying Wai Chan

Pages 2077-2090 | Received 11 Mar 2021, Accepted 16 Aug 2021, Published online: 16 Sep 2021

Download citation <https://doi.org/10.1080/15384101.2021.1970877>

Full Article

Figures & data

References

Citations

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ABSTRACT

To ensure genome stability, chromosomes need to undergo proper resolution of sister chromatids from prophase to prometaphase, followed by anaphase.

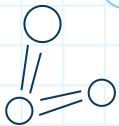
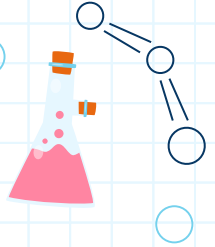
Emerging evidence has shown that persistent DNA entanglements between sister chromatids lead to the formation of ultrafine anaphase bridges.

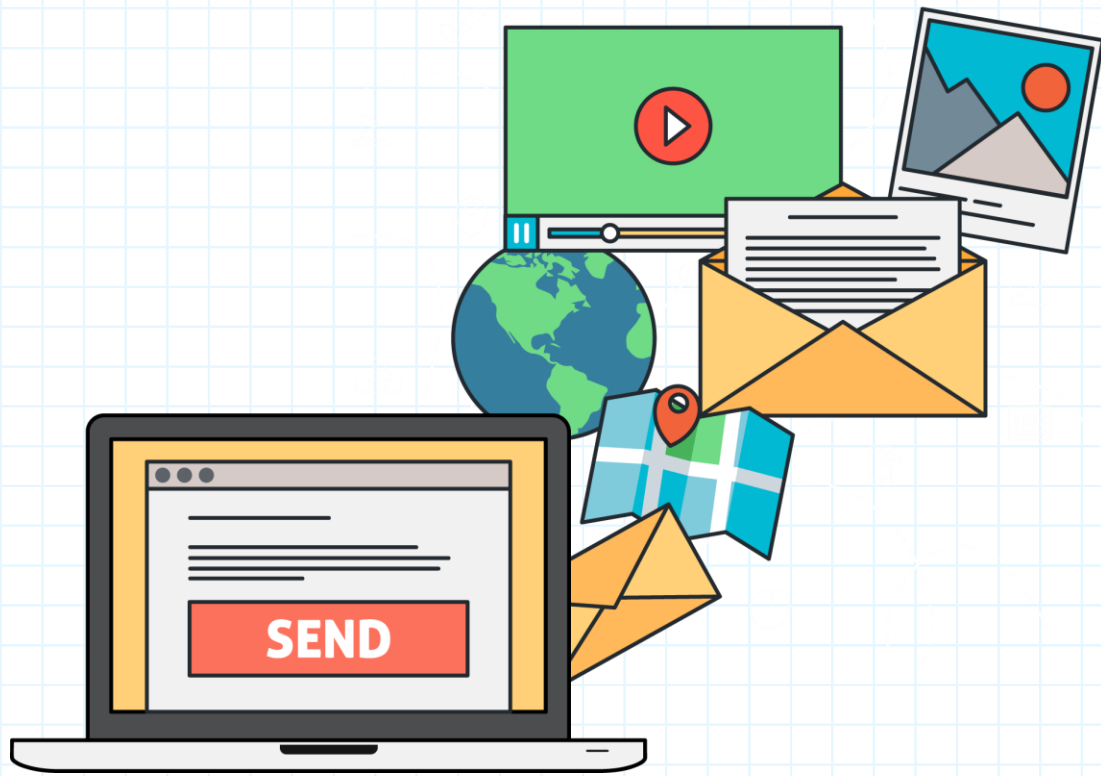
These bridges, if not resolved, can lead to chromosome breakage and genomic instability.

After anaphase, they can induce chromosome breakage and genomic instability.

One type of ultrafine anaphase bridge (UAB) is a DNA translocation.

Website & publications





Send email (Don't hesitate !)

Please state:

1. Your major and your year
2. Your purpose (SRF/student volunteer/student research assistant)
3. Your interest in research (related to the projects in their lab)

Example:



LEE, Sze Yuen <lsy2000@connect.hku.hk>

to gywchan ▾

Fri, Nov 13, 2020, 10:31 AM



Dear Dr. Chan,

I am a **year one student** from the science faculty intended to major in **molecular biology and biotechnology**. I am interested in taking part in research and planning to apply for postgraduate education in the future. As a result, I am searching for opportunities to gain more lab experience.

I am interested in your current research area about the chromosome. Would you like to recruit any **student volunteer** for your lab in the next semester? Although I do not have many lab experiences at this moment, I am passionate and willing to learn.

Thank you.

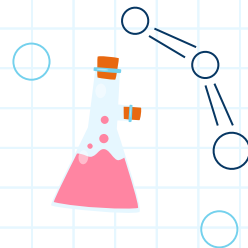
Best regards,

LEE Sze Yuen, Shadow



It's normal to be rejected by supervisors

Try to approach the same supervisor again when you have more experiences.
Approaching them by replying to the email you sent!



LEE, Sze Yuen <lsy2000@connect.hku.hk>
to gywchan ▾

Nov 18, 2020, 2:29 PM



Dear Dr. Chan,

Thank you for your reply and advice.

Best regards,
Shadow Lee



LEE, Sze Yuen <lsy2000@connect.hku.hk>
to gywchan ▾

Jul 6, 2021, 10:46 AM

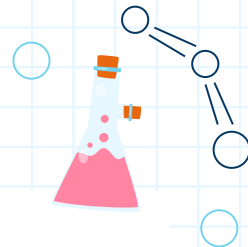


Dear Dr. Chan,

I am a coming year 2 student majoring in molecular biology and biotechnology, and I am writing to ask about opportunities for undergraduate student helper in your lab in the next semester 1.



Unable to stick to my original plan



Title: Effect of FANCM in PARP inhibitor resistance

Name (UID): LEE Sze Yuen (3035779715)

Curriculum: BSc (4), Year 2

1. Abstract

Previous study and our lab preliminary data showed that FANCM deficient cells are hypersensitive to PARP inhibitor (PARPi) (1), indicating that FANCM should be investigated as a potentially druggable target. Throughout this project, clonogenic assays will be carried out to determine the key domains of FANCM that are responsible for the resistance to PARPi. Therefore, full length and truncated FANCM -expressing cell lines will be generated and their responses to PARPi will be investigated.

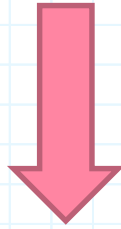
- Cell line cannot be generated due to the delay and continuous failure of cloning for almost one year
- Need further trouble shoot
- Cannot start the experiments suggested on my proposal



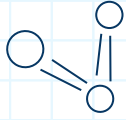
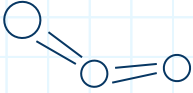
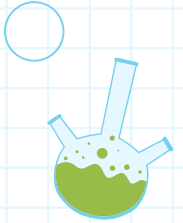
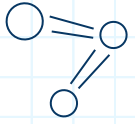
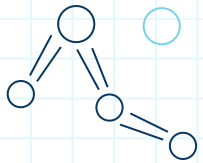
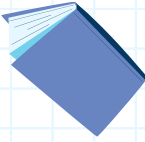
Discuss with your supervisor

Can try to modified the title of your poster

**The effect of FANCM in PARP
inhibitor resistance**

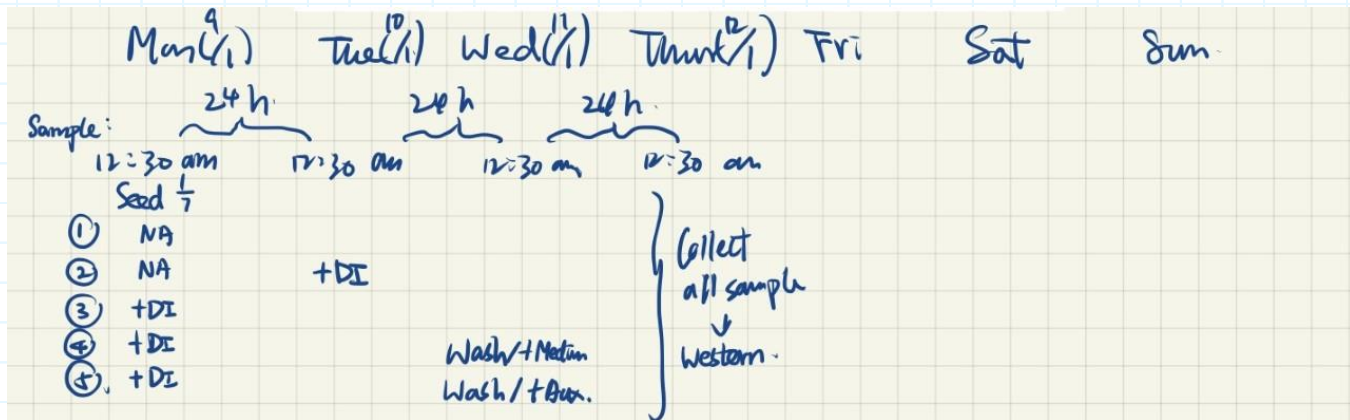
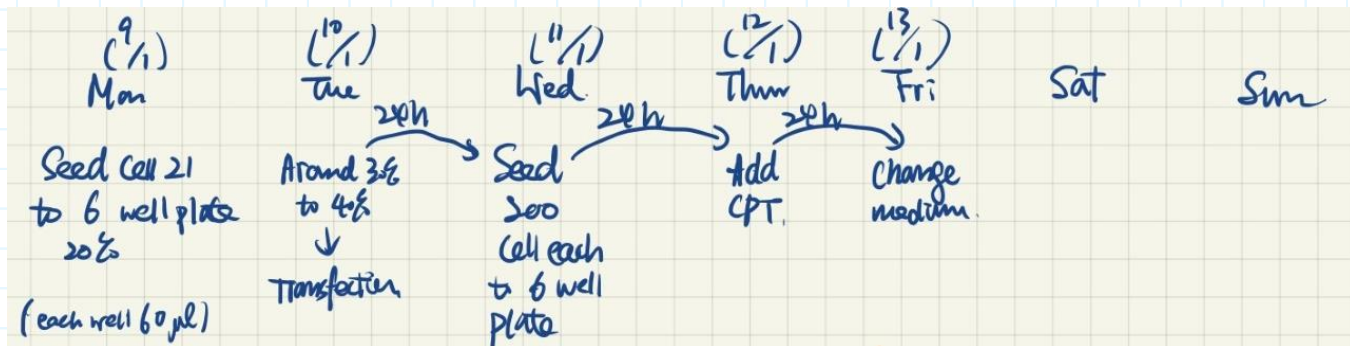


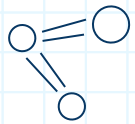
**Function of FANCM in DNA
damage response**



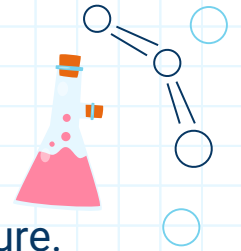
1. Time management

Write a weekly schedule every week before starting my experiments.

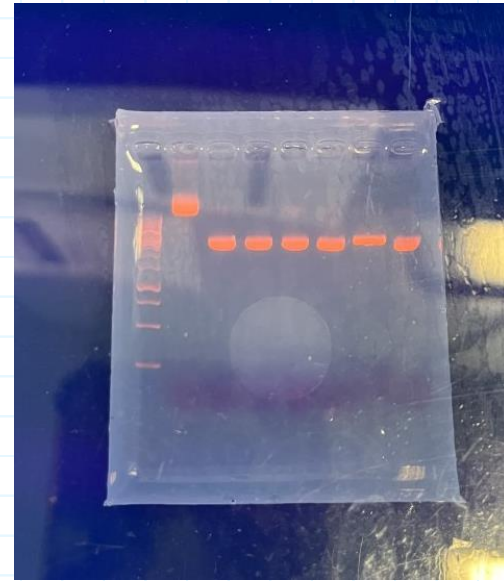
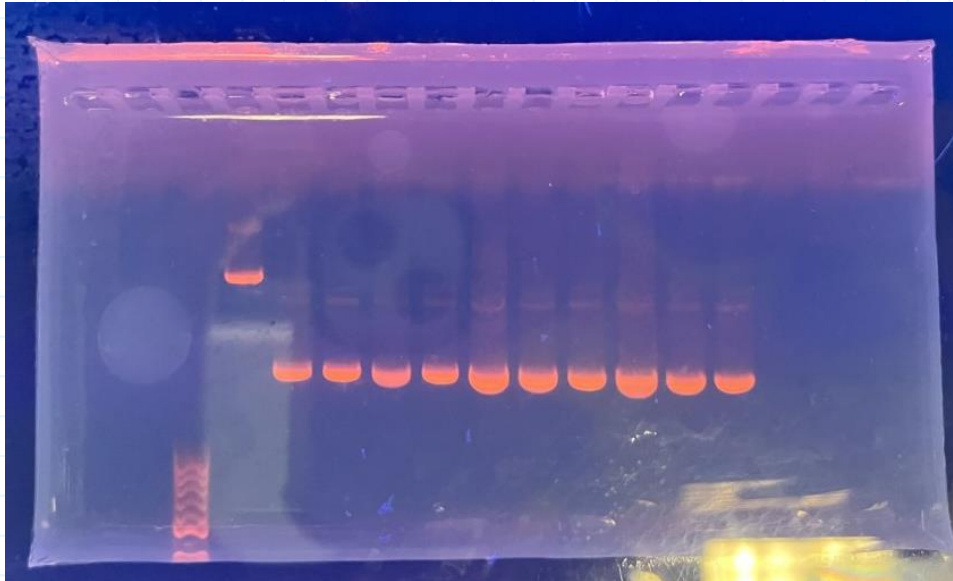




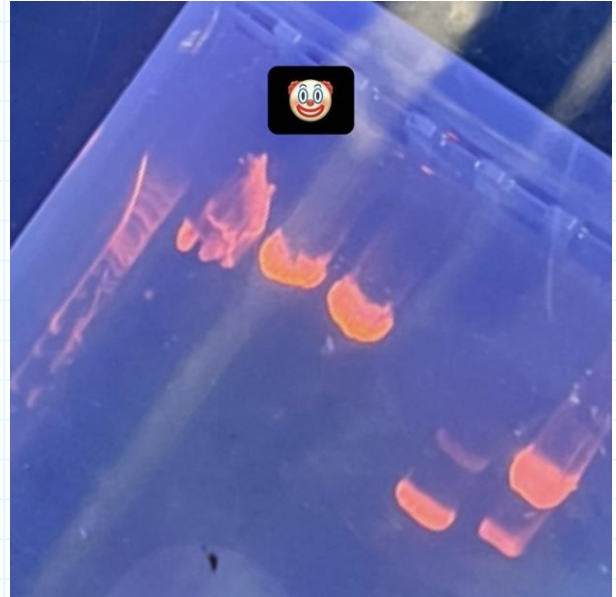
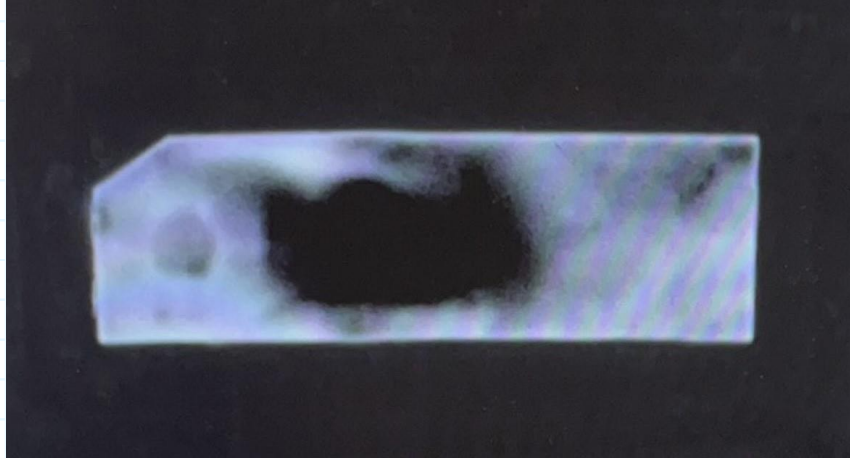
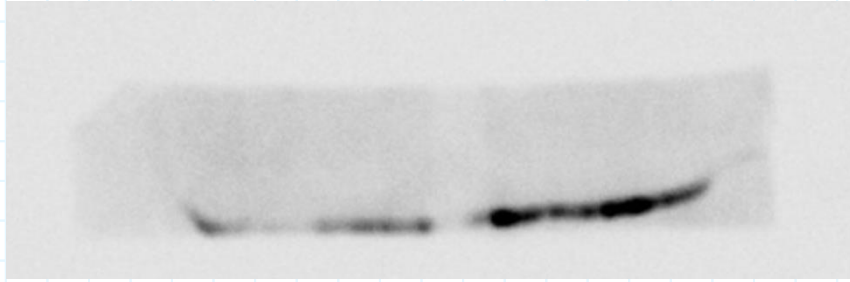
2. Don't focus too much on failure

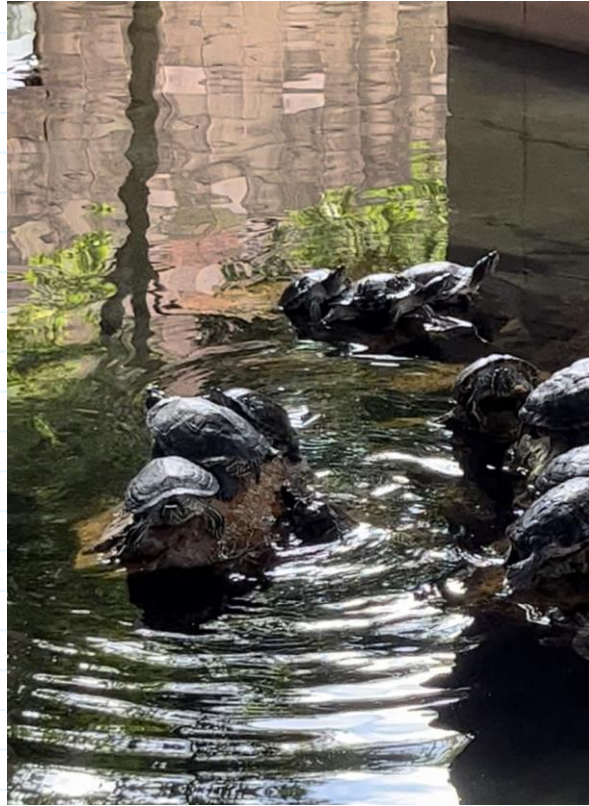
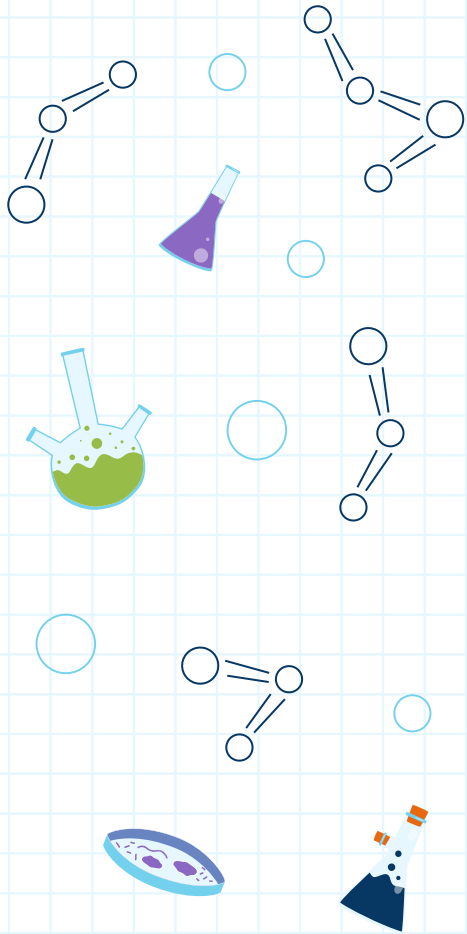


It is normal,
but don't forget to trouble shoot and modify your procedure after your failure.

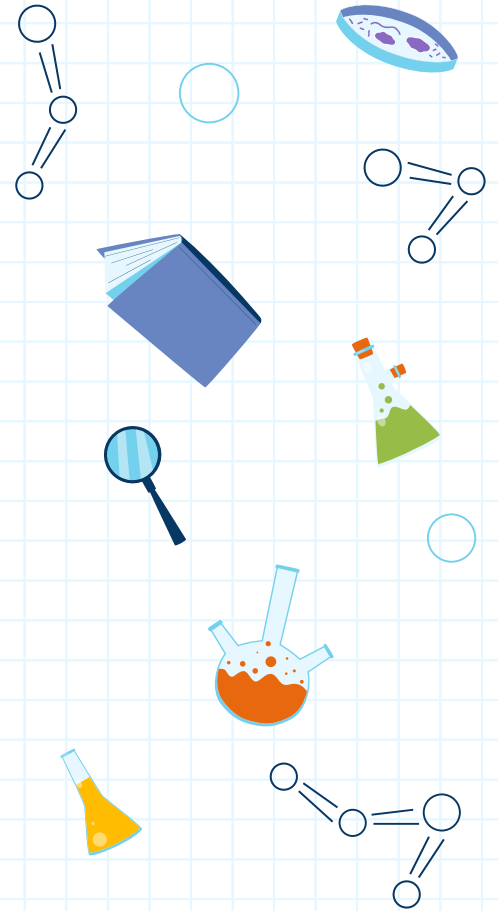


I failed to get the correct clone T-T





Find your happy place



3. Keep a **work-life balance** is important

Good physical health and mental health are the foundation of your road to success



Things I will do after finish my experiments☒



Thank you & good luck

My email: lsy2000@connect.hku.hk

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