NCHU Ambassador- 2024 Winter Vacation-
International Students' Life Experience

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Taichung memories: Grow together in NCHU

It was 2 A.M in the morning and I still cannot close my eyes to sleep. I feel like this life is too monotone and no contentment. From the very first time, after graduated from bachelor's degree, I always wanted to pursue master degree in Taiwan. The advancement of technology industries around the world has pushed me to learn about genomics and informatics – a hot field that many people want to study about. Learning about genomics is not only about DNA and its function, but also the structure that it was composed of, the biophysical characteristics, and also it effects to human body. I remember the reason why I want to study genomics and bioinformatics is because I fall in love with the structure of DNA and how its component can be deciphered as a code that produce RNA and then produce protein that command over all cells on our body. Changing or doing a mutation in a single base of DNA can make a 180o difference in different species. With modifying DNA structure, we can change the allele that bring a disease in human body into a new normality. Bioinformatics is the combination between biology and informatics, and is very advantageous because using technologies and database-related to biology, we can accelerate the process of research.
Therefore, joining to Professor Hou's lab at National Chung Hsing University (NCHU) is a dream-come true that I am proud of to learn genomics and bioinformatics.

The faculty of Life Sciences includes Ecological Diversity, Animal and Plant Physiology, Biotechnology, Molecular Biology, Biochemistry, Biomedicine, Genomics and Bioinformatics and Translation Medicine. When I was joining the Institute of Genomics and Bioinformatics, there is no requirement such as recruitment examination and interview. However, as requirements to graduate, the minimum total number of credits (excluding credits from physical education and national defense education courses) is 30 credits. The 30 credits are including subjects and thesis, are 24 and 6 courses respectively. We should take 10 mandatory courses and 14 elective courses.

Not only we expand our knowledge by taking courses but also, we all trained to have the ability to speak English by presenting our seminar paper every semester in English. The seminar allowed me to develop my critical analysis, only take the eminent things from the papers, and managed to create a story from two or more papers so it can be understood by the listeners. Every year biotechnology department with my department held an international conference. When it comes to conference, many speakers were invited to talk with up to date topics so it is always been glad to me when conference because I can gain many unprecedented knowledge.

My department consist of six laboratories with different focus in it. The first one is Dr. Li-Ching Hsieh's laboratory, whom focused on computational biology, evolutionary biology comparative genomics, NGS data analysis. There is Dr. Jyung-Hurng Liu immersed on structural bioinformatics, x-ray crystallography. And there is Dr. Yu-Ting Chen researching on molecular biology, plant transgenic, plant functional genomics, bioenergy. Dr. Ying-Tsong Chen focused on microbial genomics, functional genomics, comparative genomics, plasmids. Another is Dr. Yen-Wei Chu concentrated on bioinformatics algorithms,

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precision medicine, intelligent agriculture, big data analysis, artificial intelligence. And the last is Dr. Ming-Hon Hou who focused on DNA-binding drug design, the study of function and structure of viral nucleocapsid protein, antiviral drug development.

There are so many valuable experiences while I study in NCHU, Taichung. Firstly, I have gained specialist knowledge of my subject through the courses, seminars and conference that are part of my master study. By the end of my degree, I will also have managed an in-depth research project and written a dissertation. Whenever I get confused, there are many friendly lab mates that willing to help me. All professors also are willing to answer our questions outside the class so if there is additional question, we can ask them whenever we want. Secondly, I have acquired specific technical skills relevant to my study and improved valuable academic and work-related skills, such as independently managing a research project, being able to apply critical thinking before doing an experiment, communicating my ideas effectively to people with different levels of knowledge, being a self-motivated learner and practice problem-solving. Furthermore, having professional and work ethics in lab also the first thing I will always remember and bring wherever I go. Subsequently, I have gained unprecedented work-related experiences such as being a conference organizer for two times. I also participated in OIA's (Office of International Affairs) activities such as group singing competition, cultural trip where we are introduced by traditional culture in every part of Taiwan such as celebrating moon cake festival, dragon boat festival, NCHU birthday, teacher's day, and so on. These experiences will have enhanced my skills in areas that will be interest to employers, including communication, team working and leadership.

There are also many activities that students can take part into, for example extracurricular that cover from sport to art, including basketball, badminton, instrumental music, pottery and many much more. I ever joined pottery club and it is so exciting! We are given clay to be shaped as we want and the tutor will help us to burn it. The next week we can start to paint the clay by ourselves and coat the pottery with pottery glazes, fire once again and it is done.

During my study at NCHU, I want that not only focus on school, but also delve into the beauty of Taiwan so, me and my friends also try to explore many places such as night markets inside and outside Taichung, hike Mount Ali, try traditional cuisine, take photos on scenic area and tourist spot around Taiwan including Jiufen, Taipei 101, Shifen, Qing-jing market, playing bicycle in Hsinchu. Every thing we prepare all the itinerary and booked train or bus tickets by ourselves. Sometimes I feel like are we native Taiwanese because we can prepare and explore many places by ourselves?

Sudah jam 2 pagi dan saya masih belum bisa tertidur. Saya merasa hidup ini terlalu monoton dan tidak terasa penuh. Dari awal, setelah lulus dari universitas, saya ingin melanjutkan pendidikan S2 di Taiwan. Kecepatan perkembangan industri teknologi di dunia telah mendorong saya untuk belajar mengenai genomik dan informatika - sebuah bidang ilmu yang sedang naik daun dan banyak orang ingin mempelajarinya. Belajar mengenai genomik itu tidak hanya mengenai DNA dan fungsinya, tetapi juga struktur

penyusunnya, karakteristik biofisika dan juga efeknya terhadap tubuh manusia. Saya ingat alasan mengapa saya ingin mempelajari genomik dan informatika adalah karena saya jatuh cinta terhadap struktur DNA dan bagaimana penyusunnya dapat diartikan sebagai kode yang memproduksi RNA dan kemudian menghasilkan protein yang bekerja dengan mengomandoi seluruh sel dalam tubuh. Merubah atau melakukan mutas terhadap satu basa DNA saja dapat membuat perubahan 180 derajat di berbagai spesies. Dengan memodifikasi struktur DNA, kita dapat merubah alel yang menjadi pemicu penyakit pada tubuh manusia menjadi sebuah kenormalan yang baru. Bioinformatika adalah kombinasi antara biologi dan informatika, dan sangat berguna karena dengan menggunakan teknologi dan database terkait biologi, kita dapat mempercepat proses pencarian. Maka dari itu, saya bergabung dalam laboratorium Profesor Hou di National Chung Hsing University (NCHU) adalah impian yang menjadi nyata demi mempelajari tentang genomik dan informatika.

Fakultas Life Sciences terdiri dari Diversitas Ekologi, Fisiologi Binatang dan Tanaman, Bioteknologi, Molekular Biologi, Biokimia, Biomedik, Genomik dan Bioinformatika dan Kedokteran Translasi. Ketika saya bergabung dengan Insitut Genomik dan Bioinformatika, tidak ada persyaratan yang harus saya lengkapi seperti ujian masuk dan interview. Tetapi, sebagai syarat kelulusan, minimum total kredit yang harus diambil (kecuali olah raga dan pertahanan negara) adalah 30 kredit. Dari 30 kredit yang diambil, 24 kredit anya adalah mata kuliah 6 kredit adalah tesis. Mahasiswa juga diwajibkan untuk mengambil 10 kredit mata kuliah wajib dan 14 kredit mata kuliah pilihan.

Kami tidak hanya memperluas pengetahuan dengan mengambil mata kuliah tetapi juga dilatih untuk berbicara bahasa Inggris dengan mempresentasikan seminar setiap semesternya dalam bahasa Inggris. Seminar juga memperbolehkan saya untuk mengembangkan analisis kritis, hanya mengambil bagian yang penting dari jurnal, dan membuat cerita dari dua atau lebih jurnal sehingga dapat lebih mudah dimengerti oleh pendengar. Setiap tahun departemen bioteknologi dan departemenku mengadakan konferens internasional.
Ketika diadakan konferens, banyak narasumber yang diundang dengan topik terkini sehingga saya selalu senang ketika pergi ke konferens karena saya bisa mendapatkan ilmu yang baru.

Departemenku terdiri dari enam laboratorium dengan berbagai macam fokus di dalamnya. Pertama, Dr. Li-Ching Hsieh laboratorium yang berfokus pada komputasional biologi, biologi evolusioner komparasi genomik, analisis data NGS. Terdapat laboratorium Dr. Jyung-Hurng Liu dengan fokus bioinformatika struktural dan x-ray crystallography.

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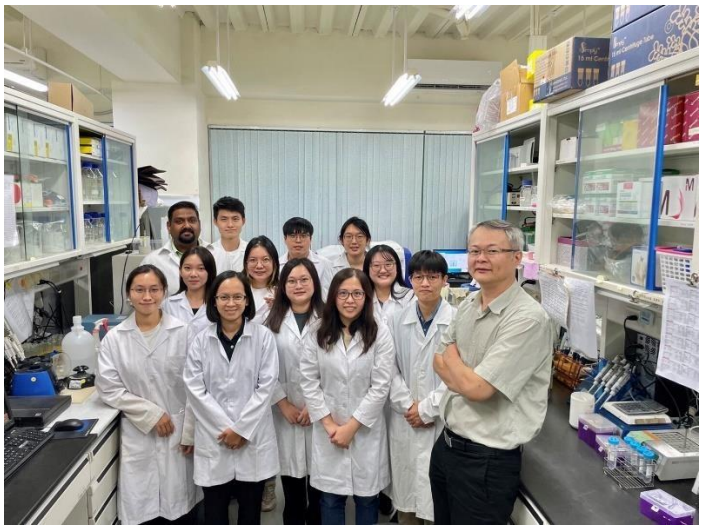
Terdapat laboratorium Dr. Yu-Ting Chen yang berfokus pada riset biologi molekular, tanaman transgenik, fungsional genomik tanaman, dan bioenergi. Dr. Ying-tsong Chen berfokus pada genomik mikroba, genomik fungsional, komparatif genomik, dan plasmid. Selanjutnya, Dr- Yen-Wei Chun berfokus pada algoritma bioinformatika, pengobatan presisi, kecerdasan agrikultur, analisis big data, dan kecerdasan buatan. Yang terakhir .

Photos	**Brief Introduction (maximum of 100 words per photo)**
The illustration depicts my English teacher's polite and thorough instruction on various aspects of English conversation, grammar, and IELTS exam preparation. This opportunity is invaluable for enhancing English proficiency at no cost. Engaging in English conversation practice facilitates cultural exchange and idea-sharing, while targeted preparation for exams like IELTS, TOEFL, and TOEIC ensures	
	Took a group photo together in the first semester with friends and Professor Hou. Foto bersama di semester pertama dengan teman-teman dan Profesor Hou.
	Contributed in Dragon Boat Festival 2023 held by OIA NCHU. Berkontribusi dalam Festival Dragon Boat yang diadakan oleh OIA NCHU.

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	Participated in the meeting between ITB (Institute Teknologi Bandung) from Bandung, Indonesia and NCHU to talk about future cooperation. In photo from left to right: Prof. Liu, Yin-ling, Prof. Chen, Prof. Wei and Prof. Hou. Berpartisipasi dalam pertemuan antara ITB dari Bandung, Indonesia dan NCHU untuk membicarakan mengenai kerja sama di masa depan. Dalam foto dari kiri ke kanan: Prof. Liu, Yin-ling, Prof. Chen, Prof. Wei, dan Prof. Hou.
	Celebrating teacher's day with labmates and Professor Hou. Merayakan hari guru bersama temanteman lab dan Profesor Hou.

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	Celebrating 104th NCHU birthday with international friends. We all were putting on our own cultural clothes. Merayakan hari ulang tahun ke-104 NCHU bersama teman-teman internasional. Kami semua mengenakan pakaian adat kami.