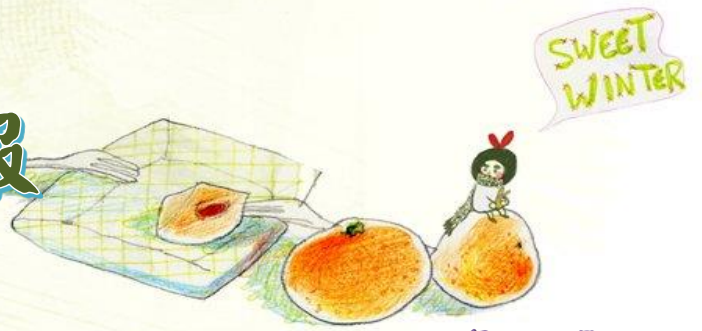


生命科學院電子報



111年11月版

榮譽榜

- ◇ 生化科技學系生醫材料教師團隊「綠色溶劑在植物萃取產業之應用」榮獲2022年**第19屆國家新創獎**。
- ◇ 水生生物科學系系學會榮獲111年度高教深耕特色週自主學習獎勵計畫**特優獎**。

活動紀要

◆ 辦理單位：生命科學院、微生物免疫與生物藥學系

辦理日期：111年11月15日

活動名稱：生命科學院師生研發「嘉大臺南2號清酒」、「精釀啤酒」、「鮮麥汁」產品品評會

負責教師：賴弘智院長、朱紀實老師、王紹鴻老師

活動內容：

本院於11月15日舉辦「生命科學院師生研發產品品評會」，推出「嘉大臺南2號清酒」、「火龍果精釀啤酒」及「火龍果無酒精麥汁」，邀請本院院師生及業界人士共同參與品評，並提供寶貴意見。

賴弘智院長表示，學院教師與在地農業進行產學合作，帶領學生研發多元產品，協助在地小農將農特產品多元化利用，善盡大學社會責任，同時提供機會讓學生與產業合作，未來與產業無縫接軌，畢業即就業。

農藝學系黃文理老師與農委會臺南區農業改良場羅正宗博士及陳榮坤分場長共同利用稈稻與臺灣原生陸稻雜交，以分子標誌技術輔助耐旱特性選種，育成3支優秀耐旱水稻「嘉大臺南1號」、「嘉大臺南2號」及「嘉大臺南3號」。其中嘉大臺南2號具有釀酒潛力，去年即與嘉農酒莊合作開發蒸餾酒，今年再度以低溫釀造方式研發精米度50%、70%及90%之「嘉大臺南2號清酒」，該日分別就不同精米度清酒之口感與香氣進行風味感官品評。



嘉農酒莊陳總經理表示，清酒為米製的釀造酒，發酵比較複雜，為糖化和醱酵並行，將精白米、米麴、酵母菌及水依一定比例混合，藉著米麴的酵素分解成澱粉，提供酵母菌養分，使酵母增殖進而讓酒精發酵，同一批原料在相同的發酵桶中生產而得的酒其等酒值也會有差異，所以需藉由品評和不同的調合技術來克服。

朱紀實教授現場進行品酒講解，就「50%」、「70%」、「90%」精米度逐一品評及評分。品嚐時著重於香氣的華麗程度、品質、香辛料的香氣程度、麴味、有無酸化或劣化。口感上則濃淡、刺激度、酸味、甜味、苦味、澀味及甘味等五味的有無，也是評分重點。希望透過品評後，進一步開發出大眾歡迎的精米度「臺灣清酒」。

當天現場同時展示微生物免疫與生物藥學系王紹鴻主任精心研發，採用鮮榨特選豔紅成熟火龍果果汁，混合富含果香啤酒二酵熟成，開發具有在地特色且富含香氣的「火龍果精釀啤酒」，以及健康訴求零酒精之「火龍果無酒精麥汁」，刷新對麥汁的想像，增加生活情趣。



- ✚ 辦理單位：生化科技學系
- 辦理日期：111 年 11 月 23 日
- 活動名稱：「生化科技趨勢論壇」學術研討會
- 負責教師：張心怡主任
- 活動內容：

111 年 11 月 23 日 13:00-17:00 於國立嘉義大學蘭潭校區圖書館 B1 演講廳，由本院生化科技學系舉辦「生化科技趨勢論壇」學術研討會，特別邀請本系合聘教授蒞臨指導，與本系師生約 160 人共同分享學術研究成果。受邀合聘教授為中央研究院分子生物研究所蕭傳鏗研究員、王廷方研究員及薛一蘋研究員，以及國家衛生研究院冷治湘研究員，針對古細菌參與染色體分離蛋白 3D 結構剖析、木黴菌減數分裂調控機制的基因體研究、藉助動物模式針對自閉症偏差的精準營養治療策略、以及目前世界疫苗發展的生技策略定位等議題進行深度報告、討論及分享。各研究員以深入淺出方式闡述對生科議題的研究成果，給師生深刻了解到以多樣科學研究方式，強化思考寬廣度及研究企圖心。的確提升了本系師生在科學研究的層次，有助於強化研究成果。當然也提供本系與國家研究院間的科研合作及師生研究交流的機會，未來還會定期舉辦相關學術交流活動。



心得分享

111 學年度外藉生在台學習心得分享

Agus Triawan, BSc

Place of Birth : Banyuwangi, East Java - Indonesia
Date of Birth : August 10, 1991
Sex : Male
Marital Status : Single
Height, Weight : 163 cm, 68 kg
Address of Origin : Jl. Baitora Pasar Bolu, Tallunglipu, North Toraja, South Sulawesi
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哈囉

My Name is Agus Triawan from Indonesia. My Chinese name is 崔阿古. I am a Bachelor of Science (B.Sc) in Biology who graduated from Airlangga University, specializing in Environmental Microbiology. My undergraduate study was fully funded by the government of Indonesia through Bidik Misi scholarship

During my undergraduate study, I was involved on various student activities including student research competitions. Two of our research proposals were granted funding from Directorate General of Higher Education of Indonesia (DIKTI) titled “Usage of *Neopisesarma mederi* as Bio-indicator of Crude Oil Contamination in Kenjeran Beach, East Java” and “Screening and Bioassay of Mold Isolates from East Java as Controller Agents of Root Knot Nematodes (*Meloydogine spp.*)”.

My thesis entitled “Effects of the Combination between Bio-Surfactant Product Types and Washing Times on the Removal of Crude Oil in Nonwoven Fabric” focused on the exploration of potential bacteria isolated from Indonesia such as *Bacillus subtilis* 3KP, *Pseudomonas putida* T1-8, *Micrococcus sp.* L II 61 and *Acinetobacter sp* P 2(1) and the application of hydro-carbon biodegradation.

After graduated, I have 6 years of working experience in various manufacturing companies including **Yung Shin Pharmaceutical Industries** as Laboratory Analyst. Generally, my responsibilities were to do chemical and microbiological analyses of water quality, raw materials and finished products to ensure the products met with the quality standards. After having 6 years of work experiences, I decided to continue my study. Currently, I am pursuing master degree in Department of Aquatic Biological Science, School of Life Science, under the supervision of Prof. Hong-Thih Lai and supported by the National Chiayi University Scholarship. I recently started my project about the valorisation of food waste which focuses on using food waste residue in aquaculture. Food waste is generally nutrient-rich feedstock for animal that comprises carbohydrates, protein and lipids. It can be used directly as aquaculture feed or feed for prey organisms such

as probiotic microorganisms, zooplanktons etc. I am excited to do this project because it leads to a sustainable alternative to reduce food waste-related problems not only in Taiwan, but also the rest of the world, including my own country, Indonesia as one of the biggest food waste producers globally.

A Month Living in Chiayi, Taiwan-外國青年來臺蹲點計畫心得分享

Hello! Let us introduce ourselves. Our names are Riza Ambar Sari and Fina Luthfiana. You can call us Riza and Fina. Currently, we are second-year master students at the Faculty of Pharmacy, the Universitas Airlangga, which is located in Surabaya, Indonesia. Our major is Pharmaceutical Science. Actually, this is our first experience of going abroad, and Taiwan is the first country we have visited. After submitting application forms for Taiwan Experience Education Program (TEEP) in National Chiayi University and got a news that it has been accepted, we are so glad for that precious opportunity. For these two months, we are doing our final master's thesis about in vitro study with RAW264.7 macrophages and 7F2 osteoblasts in Applied Tissue Engineering and Drug Delivery Laboratory, Department of Biochemical Sciences and Technology, College of Life Sciences. Around this two months, we live in the guest house but before that we stayed at a dorm for a week. Near the dorm, there is a lake called Lantan Moon Reflection Lake Sky that have a dancing water show every hour started at 06.30 pm-09.30 pm. It is a nice experience to see the dancing water accompanied by beautiful instruments and lighting. On every weekend, we are going to the market either traditional market or modern market like Carrefour and RT Mart. The transportation to going everywhere is very convenient. There are always U-Bike that free for 30 minutes and the Chiayi Bus like green or blue color from National Chiayi University that free if we tap an easy card or pay 10 NTD if we forget to bring it. On November 16th 2022, we also attended opening ceremony of sport day which includes a series events of 103 university anniversary. We met a lot of international students including from Indonesia and talk a lot about living experience in Chiayi. In the Minxiong campus, we see a races with legs tied in a group of 10 people because our friend follow the race and it's so much fun. There are also a lot of taiwanese traditional food seller and try some food like sweet potato ball and chou tofu. We think sweet potato ball is delicious but the taste of chou tofu is little weird. We have going to turkey restaurant with Prof Cindy and other student in the lab, it is recommended halal restaurant. We have drunk milk tea that a special drink from different store in Chiayi. We also eat delicious dessert with many topping like red bean, sweet potato, boba, pudding, brown sugar, and milk in the top of shaved ice at Wenhua Night Market area and NCYU Xinmin Campus. Last week, on Friday we attend a music violin concert in the lake that decorated with many lights called Korean Shadow Lightening Shibuya and it's look elegant. On the Saturday, we invited to have a lunch with official and alumni especially college of life science. We are so amazed with the menu that consist of 10 taiwanese meals because 10 means completion and perfection. Living on for almost a month, dealing with different situations and culture, without parents or anyone when we are at home, really makes us grow up.

But we were so lucky to meet a lot of kind people while we are here and we hold memories that we will treasure until the end of time.



Tukey Rice Restaurant



Chiayi Train Station



Yu Shi Traditional Market



Opening ceremony at Minxiong Campus



After unch at Lantan Campus



Lantan Moon Reflection Lake Sky



Korean Shadow Lightening Shibuya



Chiayi Art Museum



Chiayi Bus

水生系學會學生自主學習榮獲特優專訪

水生系學會 110 級以水生週和嘉義市兒福館的科普推動活動，參加學校之學生自主學習競賽，獲得特優之殊榮，希望分享這個喜訊之外，也能供給其他學生社團及系學會參考，讓學生的自主學習成為一個學生另類學習的管道。

水生系學會之所以此次得到特優是因為 109 級系學會在 110 年時拿到這個競賽的獎金，由於按規定 110 這屆系學會需要到兒福館辦活動才能動用這筆錢，因此指導老師吳淑美教授就邀約自動參與的同學共 5 人，開始設計教案，演練兩次，由陳彥旭同學主講水環境生態，題目是“**小魚兒愛回家**”，其他同學包括佩軒，家誠，致睿，霈軒，群智擔認各組的指導小老師，教小朋友製作生態瓶課程，上下午各一場，共 40 位小朋友參加此課程。



另一場水生週活動，則是由致睿擔任總召，其他學生分販賣組，展覽組，器材組，解說組，分設正副兩位小組長，設置展覽主題“**原生種與外來種**”，學生為辦好活動多次開會討論，但是因為疫情怕沒有人來參訪，總召就親送邀請函到嘉義各幼兒園邀請，結果景仁幼兒園每天派一車來參訪，80 位小朋友分三天來參訪學習，因此水生系學生忙的開心，自己也很有收穫。

記得當時，這群大三的同學有一個想法，就是如果能夠把自主學習競賽當作一個傳承，那達成水生週展覽和兒福館科普推動目標就是算有盡到責任了。

水生系學會分享這些過程，可以感受到得獎非意外，這需要很多人的努力，包括陳淑美主任提供資源和吳淑美教授的指導，陳霈瑄會長的用心和黃致睿總召的規畫，而最重要的是水生系學生的自主付出與奉獻。這真的是驗證了一句話“付出最大的受益者是自己”。

這些學生他們從活動中學習到知識，例如設計課程，教學，和佈置水族缸，生態瓶；學習到如何行銷和推廣；也學習到如何與人合作，相信透過這次自主學習經驗，這群學生將更能有服務與合作的精神。





教師介紹

新進教師

生物資源學系

張素菁老師



張老師乃本校97級校友，博士畢業後陸續服務於國立臺灣海洋大學、林口長庚醫院，以及國立海洋科技博物館，並於109年回校服務。

張老師發揮其研究專長以及海洋教育經驗，今年不僅將淺海礁螯蝦分類演化研究成果發表於SCI期刊 (Invertebrate Systematics, Q1)，亦藉由其環境教育人員資格與博物館執行海洋教育的經驗，協助本院執行環境教育跨領域學程，參與高等教育深耕計畫，榮獲校內111年度執行高教深耕計畫績優教師獎。

微生物免疫與生物藥學系

王紹鴻老師



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紹鴻非常幸運的在98學年第二學期加入本校微藥系陣容，以醫學真菌的研究背景獲選需勝任「真菌學」領域相關教學一職。紹鴻的博士論文主題為研究登革病毒核心蛋白質對宿主之影響，博士後則前往美國印第安那大學病理部針對愛滋病人最易罹患的非典型黴菌—肺囊蟲疾病，進行分子病理研究。回國後先服務於義大醫院醫學研究部負責分子醫學研究及教學，再回到陽明大學進行細菌性伺機感染及相關分子機制研究。紹鴻所受訓練的專長領域即為微生物學中的細菌與真菌感染研究，當教學研究等方面站穩腳跟後，在朱紀實教授建議下跨出醫學真菌，涉足真菌應用的教學與研究。

主要教授微生物學與分子生物學課程，並持續經營微生物學實驗課程，同時開設體驗通識課程—「與杜康的邂逅—酒自釀科學」，另以釀酒實作科學在產運處推廣組持續開授勞動部產業人才投資計畫訓練班。儘管多有學生私下抱怨部分課程內容艱難，自己卻樂於教學經營，無論是學生豁然開朗的神情、課後心得與新知回饋，抑或是備課新知的喜悅，在在激勵著自己在教學路上跋山涉水。

紹鴻所主持的分子微生物研究室，研究主軸以分子技術探討微生物致病因子與其機制、以及真菌利用二部分。自從來到嘉義大學任教有幸在溫暖的微藥系與生科院的大家庭成長茁壯，衷心期望在越形艱難的大學教學環境下作育英才，更希望有機會結合更多夥伴積極合作為學生找到更多教學與研究資源，為本校追求卓越的理想盡一己之力！

