

Curriculum vitae

何櫻寧 (Ho, Ying-Ning)

Assistant Professor

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EDUCATION AND POSITIONS

2019 Sep-Present	Assistant professor	Institute of Marine Biology, National Taiwan Ocean University
2018 Nov-2019 Aug	Postdoctoral Fellowships (JSPS)	Graduate School of Environmental Studies, Department of Environmental Studies for Advanced Society Tohoku University, Japan
2018 Aug-2018 Nov	Regular Postdoctoral Scholar	Agricultural Biotechnology Research Center, Academia Sinica, Taiwan
2015 Aug-2018 Jul	Postdoctoral Research Scholar	Agricultural Biotechnology Research Center, Academia Sinica, Taiwan
2014 Sep-2015 Jul	Postdoctoral Fellow	National Chung Cheng University, Taiwan
2013 Oct.-2014 Sep.	Military Service	Ocean Guard Headquarters, CGA
2008-2013	Ph. D. in Life Science	National Chung Hsing University, Taiwan.
2006-2008	M. S. in Life Science	National Chung Hsing University, Taiwan.
2002-2006	B. S. in Life Science	National Chung Hsing University, Taiwan.

Curriculum vitae

SCIENTIFIC PUBLICATIONS

Peer-Reviewed Journals (IF: 2020 (5-year impact factor))

1. **Ying-Ning Ho***, Yu-Ling Chen, Ding-Yang Liu. **2021**. Portable and rapid sequencing device with microbial community guided culture strategies for precious field and environmental samples. *mSystems*. (IF: 6.496, Ecology, Evolution, Behavior and Systematics) (Accepted)
2. Shang-Tse Ho†, **Ying-Ning Ho**†, Chih Lin, Wei-Chen Hsu, Han-Jung Lee, Chia-Chi Peng, Han-Tan Cheng and Yu-Liang Yang*. **2021**. Integrated Omics Strategy Reveals Cyclic Lipopeptides Empedopeptins from *Massilia* sp. YMA4 and Their Biosynthetic Pathway. *Marine drugs*, 19,209. (IF: 5.118, Chemistry) (**Co-first author**)
3. **Ying-Ning Ho**, Sin Yong Hoo, Bo-Wei Wang, Chi-Ting Hsieh, Ching-Chih Lin, Chi-Hui Sun, Chia-Chi Peng, Chih Lin, Yu-Liang Yang*. **2021**. Specific inactivation of an anti-fungal bacterial siderophore by a fungal plant pathogen. *The ISME Journal*. <https://doi.org/10.1038/s41396-020-00871-0> (IF: 10.302, Microbiology).
4. Chongyang Yang; **Ying-Ning Ho**; Chihiro Inoue; Mei-Fang Chien*. **2020**. Long-term effectiveness of microbe-assisted arsenic phytoremediation by *Pteris vittata* in field trials. *Science of the Total Environment*. **740**. (IF: 7.9, Environmental Sciences).
5. Chongyang Yang, **Ying-Ning Ho**, Ryota Makita, Chihiro Inoue, Mei-Fang Chien*. **2020**. *Cupriavidus basilensis* strain r507 , a potential toxic arsenic extraction helper, increases the accumulation of arsenic in *Pteris vittata*. *Ecotoxicology and Environmental Safety*. **190** (IF: 6.29, Environmental Sciences)
6. Chongyang Yang, **Ying-Ning Ho**, Ryota Makita, Chihiro Inoue, Mei-Fang Chien* **2020**. A multifunctional rhizobacterial strain with wide application in different ferns facilitates arsenic phytoremediation. *Science of the Total Environment*. **712** (IF: 7.9, Environmental Sciences)
7. Mei-Fang Chien, **Ying-Ning Ho**, Hui-Erh Yang, Masaru Narita, Keisuke Miyauchi, Ginro Endo, Chieh-Chen Huang*. **2019**. Identification of a Novel Arsenic Resistance Transposon Nested in a Mercury Resistance Transposon of *Bacillus* sp. MB24. *Microorganisms*. **7(11)**: 566. (IF: 4.128, Microbiology)
8. Chongyang Yang, Mei-Fang Chien, **Ying-Ning Ho**, Chihiro Inoue. **2019**. Phosphorus- and iron-deficiency stresses affect arsenic accumulation and root exudates in *Pteris vittata*. *International Journal of Environmental Science and Development*. 10: 12
9. Mei-Fang Chien, **Ying-Ning Ho**, Hui-Tzu Lin, Kuo-Hsing Lin, Ginro Endo, Chieh-

Curriculum vitae

- Chen Huang*. **2019**. MerB3, an organomercurial lyase of *Bacillus* as an antidote against organomercurial poisoning. *Journal of Environmental Biotechnology*. 19(1): 73-80.
10. **Ying-Ning Ho**, Hsin-Chi Tsai, Bing-Mu Hsu*, and Chien-Shun Chiou. **2018**. The association of *Salmonella enterica* from aquatic environmental and clinical samples in Taiwan. *Science of the Total Environment*. 15(624): 106-113. (IF: 7.9, Environmental Sciences)
 11. **Ying-Ning Ho**, Lin-Jie Shu and Yu-Liang Yang*. **2017**. Imaging mass spectrometry for metabolites: technical progress, multimodal imaging and biological interactions. *Wiley interdisciplinary Reviews: Systems Biology and Medicine*. Doi: 10.1002/wsbm.1387. (Review paper) (IF: 4.275, medicine, research & experimental)
 12. **Ying-Ning Ho**, Ming-Yuan Chou, Hsin-Chi Tsai, Tung-Yi Huang, Cheng-Wei Fan, and Bing-Mu Hsu*. **2017**. Empirical testing of modified *Salmonella* MLST in aquatic environmental samples by *in silico* analysis. *Science of the Total Environment* 581-582:378-385. (IF: 7.9, Environmental Sciences)
 13. Wen-Chien Huang, Yi-Pen Chou, Po-Min Kao, Tsui-Kang Hsu, Hung-Chang Su, **Ying-Ning Ho**, Yi-Chun Yang, Bing-Mu Hsu*. **2016**. Nested-PCR and TaqMan real-time quantitative PCR assays for human adenoviruses in environmental waters. *Water Science and Technology*. 73(8): 1832-4. DOI: 10.2166/wst.2016.004 (IF: 1.53, Water Resources)
 14. Wen-Chien Huang, Bing-Mu Hsu*, Po-Min Kao, Chi-Wei Tao, **Ying-Ning Ho**, Chun-Wei Kuo, Yu-Li Huang. **2016**. Seasonal distribution and prevalence of diarrheagenic *Escherichia coli* in different aquatic environments in Taiwan. *Ecotoxicology and Environmental Safety*. 124:37-41. (IF: 6.29, Environmental Sciences)
 15. Chi-Wei Tao, Bing-Mu Hsu*, Po-Min Kao, Wen-Chien Huang, Tsui-Kang Hsu, **Ying-Ning Ho**, Yen-Ju Lu and Cheng-Wei Fan. **2016**. Seasonal difference of human adenoviruses in a subtropical river basin based on one-year monthly survey. *Environmental Science and Pollution Research*. 23:2928–2936 (IF: 3.056, Environmental Sciences)
 16. Zhon-Min Huang, Bing-Mu Hsu*, Po- Min Kao, Tien-Yu Chang, Tsui-Kang Hsu, **Ying-Ning Ho**, Yi-Chun Yang, Yu-Li Huang. **2015**. Prevalence, quantification and typing of human adenoviruses detected in river water in Taiwan. *Environmental Science and Pollution Research*. 22(11): 8359-8366. (IF: 3.056, Environmental Sciences)

Curriculum vitae

17. **Ying-Ning Ho**, Chieh-Chen Huang*. 2015. Draft Genome Sequence of *Burkholderia cenocepacia* Strain 869T2, a Plant-Beneficial Endophytic Bacterium. *Genome Announcements*. 12;3(6). pii: e01327-15.doi:10.1128/genomeA.01327-15.
18. Dony Chacko Mathew, **Ying-Ning Ho**, Ronnie Gicaraya Gicana, Gincy Marina Mathew, Mei-Chieh Chien, Chieh-Chen Huang*. 2015. A rhizosphere-associated symbiont, *Photobacterium* spp. strain MELD1, and its targeted synergistic activity for phytoprotection against mercury. *Plos One*. 10(3): e0121178.doi: 10.1371/journal.pone.0121178 (IF: 2.87, Multidisciplinary Sciences)
19. **Ying-Ning Ho**, Hsing-Mei Chiang, Chih-Ping Chao, Ching-Chung Su, Hui-Fang Hsu, Chen-tong Guo, Ju-Liang Hsieh, Chieh-Chen Huang*. 2015. *In planta* biocontrol of soil-borne Fusarium wilt of banana through a plant endophytic bacterium, *Burkholderia cenocepacia* 869T2. *Plant and soil* 387:295-306 (IF: 3.39, Agronomy)
20. **Ying-Ning Ho**, Ju-Liang Hsieh, Chieh-Chen Huang*. 2013. Construction of a plant-microbe phytoremediation system: combination of vetiver grass with a functional endophytic bacterium, *Achromobacter xylosoxidans* F3B, for aromatic pollutants removal. *Bioresource Technology* 145:43-47. (IF: 9.6, Environmental Engineering)
21. **Ying-Ning Ho**, Dony C Mathew, Shu-Chuan Hsiao, Chun-Hao Shih, Mei-Fang Chien, Hsing-Mei Chiang, Chieh-Chen Huang*. 2012. Selection and application of endophytic bacterium *Achromobacter xylosoxidans* strain F3B for improving phytoremediation of phenolic pollutants. *Journal of Hazardous Materials* 219-220:43-49. (IF: 10.588, Engineering, Civil)
22. **Ying-Ning Ho**, Chun-Hao Shih, Shu-Chuan Hsiao, Chieh-Chen Huang*. 2009. A novel endophytic bacterium, *Achromobacter xylosoxidans*, helps plants against pollutant stress and improves phytoremediation. *Journal of Bioscience and Bioengineering* 108: 94. (Part of special issue: APBioChEC2009) (IF: 2.366, Biotechnology & applied microbiology)
23. Fo-Ting Shen, Jyun-Liang Lin, Chieh-Chen Huang, **Ying-Ning Ho**, A.B. Arun, Li-Sen Young, Chiu-Chung Young*. 2009. Molecular detection and phylogenetic analysis of the catechol 1,2-dioxygenase gene from *Gordonia* spp. *Systematic and Applied Microbiology* 32: 291-300. (IF: 3.224, Biotechnology & applied microbiology)

Curriculum vitae

Non-Sci Journals

1. 劉則言、何櫻寧、鍾嘉綾。 2021。都市林裡的隱藏者們 - 朋友或敵人。林業研究專訊。台北：行政院農業委員會林業試驗所。28(3):73-76

Book Chapters

- B1. Ying-Ning Ho, Han-Jung Lee, Chi-Ting Hsieh, Chia-Chi Peng, Yu-Liang Yang* 2018. Chemistry and Biology of Salicyl-capped Siderophores. (Book series: Studies in Natural Product Chemistry, B978-0-444-64179-3, Publisher: Elsevier Science Publishers, Amsterdam, the Netherlands) Doi.org/10.1016/B978-0-444-64179-3.00013-X.
- B2. Ying-Ning Ho, Dony Chacko Mathew, and Chieh-Chen Huang* 2017. Plant-microbe ecology: Interactions of plants and symbiotic microbial communities. (Book: Plant ecology, ISBN 978-953-51-5385-6; Publisher: InTechOpen) DOI: 10.5772/intechopen. 69088.

PATENTS

Invention Patents of Republic of China

- P1. 黃介辰，何櫻寧，葉品賢，邱敏知，吳東諺。植物保護劑及提高植物鹽度耐受性之方法。(中華民國專利: I684411，公開時間：2020.02.11)
- P2. Chieh-Chen Huang, Ying-Ning Ho, Chun-Hao Shih. NOVEL FUNCTIONAL ENDOPHYTE FOR DEGRADING AROMATIC COMPOUNDS AND APPLICATION THEREOF (TW: I384945, From 2013.02 .11 to 2029.11.01)
- P3. Chieh-Chen Huang, Ying-Ning Ho. THE METHOD FOR REAL-TIME QUANTIFICATION AND DETECTION OF PETROLEUM DEGRADING FUNCTIONAL GENES OF *RHODOCOCCUS* SP. (TW: I354027, From 2011.12.11 to 2028.08.26)

技術轉移案

- M1. 技術明稱『台灣鯛電子舌頭風味指標分級平台與最適萃取化技術』。技轉金額：1,200,000 元

GRANTS AND AWARDS

- 2018 Outstanding Poster Award (Poster Presentation Award), the 33rd Symposium on Natural Products (October 6-7, 2018, Kaohsiung Medical University, Taiwan)

Curriculum vitae

- 2016 Poster Award, The second place prize, The 31st Symposium on Natural Products & Symposium on Pharmacy and Traditional Chinese Medicine. (November 14-15, 2016, Kaohsiung, Taiwan)
- 2015 ELSEVIER recognized reviewer for biological control
- 2013 Student Travel Grant (National Science Council, Taiwan)
- 2012 Student Travel Grant (Ministry of Education, Taiwan)
- 2012 Student Travel Grant (National Science Council, Taiwan)
- 2012 ASM Poster Award, Environmental Microbiology Symposium. (September 14, 2012, National Central University, Taiwan)
- 2011 Student Travel Grant (Ministry of Education, Taiwan)
- 2008 Honorable mention. Crazy idea (Biotechnology R & D Creative Application Competition from Agricultural biotechnology industrialization technology promotion project, Industrial Development Bureau)
- 2005 Outstanding Graduate Award of National Chung Hsing University. (Service Award)
- 2005 Ching-Ah Honor of National Chung Hsing University.

INVITED SPEECHES

- 2015 Title: The application of endophytes for biological control of banana Fusarium wilt. Invited speech of Quangxi Academy of Agricultural Sciences. (2015/8/31~2015/9/3)

ACADEMIC SERVICE

1. ELSEVIER recognized reviewer for *Biological control* (awarded July, 2015)
2. Reviewer of *Biological control* (2015.06.26~2015.07.17)
3. Reviewer of *Critical reviews in Biotechnology* (2015.05.28~2015.06.21)
4. Reviewer of *Biological control* (2015.01.21~2015.02.12)

CONFERENCE PRESENTATIONS

1. Po-Yuan, Cheng and **Ying-Ning, Ho***. Investigation and analysis of attached microorganisms of marine plastics in the tourist hot spots in the Northeast of Taiwan. Taiwan International Conference on Ocean Governance 2021 (TICOG 2021). (Sep. 23, 2021, Taiwan) (Webinar)
2. 劉則言、陳昭翰、楊玉良、**何櫻寧**、鍾嘉綾。褐根病菌與榕樹根部微生物相關聯性分析。109 年度中華民國植物病理學會年會論文集。(2021 年 5 月, 台北)。

Curriculum vitae

3. K.G.Gowri, Li-Chun Tseng, Yu-Ling Chen, **Ying-Ning Ho** * and Jiang-Shiou Hwang *. Associated microbiotas of azooxanthellate scleractinian coral *Tubastraea coccinea* from different marine environments. 2021 年海洋科學年會暨科技部海洋學門成果發表研討會 (2021 年 4 月 28-30 日, 澎湖, 台灣)
4. **Ying-Ning Ho**, Chongyang Yang, Mei-Fang Chien, Chihiro Inoue. Metabolomic analyses of an arsenic hyperaccumulator, *Pteris vittata*, and its arsenic accumulation helper, *Pseudomonas vancouverensis* m318. 第 13 回 細菌学若手コロッセウム in みやぎ蔵王. (August 18-20, 2019, Miyagi, Japan) (Poster).
5. Chongyang Yang, Mei-Fang Chien, **Ying-Ning Ho**, Chihiro Inoue. Characterization of multifunctional rhizobacteria from As hyperaccumulators and their potential in promoting As phytoremediation. ASM Microbe 2019. (June 20-24, 2019, San Francisco, America) (Poster).
6. **Ying-Ning Ho**, Chi-Ting Hsieh, Chia-Chi Peng, Bo-Wei Wang, Chih Lin, Yu-Liang Yang. 2018. The war of bacteria and fungi: bio-enzymatic transformation of the siderophore, pyochelin through imaging mass spectrometry and multi-omics analyses. The 33rd Symposium on Natural Products. (October 6-7, 2018, Kaohsiung Medical University, Taiwan) (**Outstanding Poster Award**).
7. **Ying-Ning Ho**, Lin-Jie Shu, Chi-Ting Hsieh, Yu-Liang Yang. 2017. Microbiome networks of brown root rot disease in trees: the pathogen and its symbionts. 2017 Multi-omics for Microbiomes-EMSL Integration Conference (August 1-3, 2017, Pasco, WA, United States) (Poster)
8. **Ying-Ning Ho**, Chi-Ting Hsieh, Yu-Liang Yang. 2017. Enzymatic transformation of the siderophore, pyochelin through imaging mass spectrometry of bacteria-fungi interaction. 2017 Microbial and Plant Systems Modulated by Secondary Metabolites meeting. (July, 24-26, Walnut Creek, California, United States) (Poster)
9. **Ying-Ning Ho**, Pi-Yu Chen, Ying-Mi Lai, Shih-Neng Lin, Yu-Liang Yang. 2016. More than antibiotics: a novel natural compound combination by exploring the interaction between brown root rot disease pathogen, *Phellinus noxius* and *Burkholderia* sp. 869T2. The 31th Symposium on Natural Products & Symposium on Pharmacy and Traditional Chinese Medicine. (November 14-15, 2016, Kaohsiung, Taiwan) (**Poster Award, The second place prize**) (Poster)
10. **Ying-Ning Ho**, Hsing-Mei Chiang, Hui-Fang Hsu, Ching-Chung Su, Chih-Ping Chao, Chieh-Chen Huang. 2013. Biocontrol of Fusarium wilt on banana by use plant endophytic bacterium, *Burkholderia cenocepacia* 869T2. American Society for Microbiology 113th

Curriculum vitae

- general meeting. (May 18-21, 2013, Denver, Colorado, United States) (**Student Travel grant, National Science Council**) (Poster)
11. **Ying-Ning Ho**, Hsing-Mei Chiang, Hui-Fang Hsu, Chieh-Chen Huang. **2012**. Characteristics and applications of plant endophytic bacterium, *Burkholderia cenocepacia* 869T2, on biocontrol of Fusarium Wilt *in planta*. International Banana Symposium. (November 19-22, 2012, Kaohsiung City, Taiwan) (Talk)
 12. **Ying-Ning Ho**, Chieh-Chen Huang. **2012**. A novel phytoremediation system combination of vetiver grass and endophytic bacteria for removing petroleum pollutants. 15th International Biotechnology Symposium and Exhibition. (September 16-21, 2012, Daegu, Korea) (**Student Travel grant, Ministry of Education**) (Poster)
 13. **Ying-Ning Ho**, Chieh-Chen Huang. **2012**. 去除石油污染物之新型植物與內生菌復育系統組合. 2012 Environmental Microbiology Symposium. September 14, 2012, National Central University, Taiwan) (**ASM Poster Award**) (Poster)
 14. **Ying-Ning Ho**, Dony Chacko Mathew, Hsing-Mei Chiang, Zhang-Gong Hao, Chieh-Chen Huang. **2012**. Construction of a phytoremediation system using vetiver grass and endophytic bacteria, *Achromobacter xylosoxidans* F3B for the remediation of phenolic pollutants. 14th International Society for Microbial Ecology 2012. (August 19-24, 2012, Copenhagen, Denmark) (**Student Travel grant, National Science Council**) (Poster)
 15. **Ying-Ning Ho**, Chun-Hao Shih. **2011**. Bacterial endophyte, *Achromobacter xylosoxidans*-mediated aromatic compounds phytoprotection and phytoremediation. Asian Congress on Biotechnology 2011. (May 11-15, 2011, Shanghai, China) (**Student Travel grant, Ministry of Education**) (Poster)
 16. **Ying-Ning Ho** and Chieh-Chen Huang. **2008**. Using the functional gene of catechol dioxygenase as a bioremediation marker for crude oil contaminated site. 4th International symposium of environmental biotechnology 2008. (August 13-14, 2008, Tainan, Taiwan)