

國立臺灣海洋大學海洋中心湯森林榮譽講座教授學經歷及著作

一、基本資料

姓名	中文：湯森林	英文：Sen-Lin Tang
出生年	民國 57 年/1968 年	

二、主要學歷

畢/肄業學校	國別	主修學門系所	學位	起訖年月
墨爾本大學	澳大利亞	微生物免疫學研究所	博士	民國 87 年 03 月 至民國 91 年 12 月
台灣大學	台灣	微生物免疫研學究所	碩士	民國 80 年 09 月 至民國 82 年 06 月
中興大學	台灣	植物病理學系	學士	民國 76 年 09 月 至民國 80 年 06 月

三、現職及與專長相關之經歷（按時間先後順序由最近經歷開始填寫）

服務機關	服務部門 / 系所	職稱	起訖年月
現職：			
中央研究院	生物多樣性研究中心	研究員	民國 105 年 10 月 至迄今
台灣珊瑚礁學會		理事長	民國 109 年 3 月 至迄今
帛琉國際珊瑚研究中心		董事委員	民國 112 年 10 月 至迄今
國立臺灣海洋大學	台灣海洋基因體中心	執行長	民國 112 年 至迄今
台灣八所大學	台灣大學、台灣師範大學、臺灣海洋大學、中興大學、嘉義大學、中山大學、東華大學、東海大學	合聘教授	迄今
台灣海洋法政學會		理事	民國 115 年 至迄今
台灣微菌聯盟		監事	民國 109 年 至迄今
國際環境科學中華民國委員會		委員	民國 107 年 至迄今
國際海洋科學會中華民國委員會		委員	民國 114 年 至迄今

5 屆未來地球委員會中 華民國委員會		委員	民國 113 年 至迄今
經 歷：			
中央研究院	生物多樣性研究中心	副主任	民國 107 年 至民國 108 年 12 月 民國 101 年至民國 105 年
中央研究院	生物多樣性研究中心	副研究員	民國 101 年 至民國 105 年
中央研究院	生物多樣性研究中心	助研究員	民國 95 年 至民國 101 年
中央研究院	中研院生物多樣性國際學程	召集人	民國 95 年 至民國 96 年
台灣微生物生態學會		理事	民國 109 年 至民國 111 年
墨爾本大學	獸醫研究所	博士後研 究員	民國 91 年 06 月 至民國 95 年 2 月

四、專長請自行填寫與研究方向有關之學門及次領域名稱。

1. 海洋微生物生態	2. 多源微生物基因體	3. 珊瑚微生物學	4. 珊瑚保育與復育
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五、學術著作目錄 (若篇幅不足請另附同尺寸之紙張繕寫)

[Research Papers] I have published 148 research papers. Of them, I mainly focus on marine microbiome and biology researches, especially the bacterium *Endozoicomonas* and its ecological roles or functions in corals. In addition, collaborating with other labs, I also studies microbiomes in other ecosystems, such as lake water or soil, and developed bioinformatic tools for microbiome studies.

1. Chuang PS†, Hsu TC †, Lu CY, Yu SP, Liu PY, Lim SL, Chen YH, Chiou YJ, Yang SH, Wang PL, **Tang SL ***, Metabolic interactions between coral animal and endolithic bacterial communities, 2025, ISME communication, 5:ycaf193.
2. Ramen Das R*, Tavakoli-Kolour P, **Tang SL**, Reimer JD, Does Shading reverses Cyanobacterial patch to Black Band Disease (CP like to BBD) transition on Montipora? 2025, Diversity 17, 732.
3. Iwaki Y*, Hamamoto K, Gösner F., Li C, Jolly J, Tang SL, Ravasi T, Reimer JD, Bacterial community formation on plastic and glass in coral reefs, 2025, Coral Reefs, 44:2117-2134
4. Lim SL, Chin CH, Chiou YJ, Hsu MT, Chiang PW, Chen HJ, Tu YC, and **Tang SL***, Unveiling the Special Ecofunctional Traits of *Endozoicomonas*: A Pan-Genome Perspective, 2025, Environmental Microbiology, 27: e70191.
5. Jeon HB, Won H, Lim HJ, Kim SH, Chen Y, Long J, **Tang SL**, Bathigae S, Park KI*, Microbiome of wild oysters: assessing diversity and detecting potential pathogens using a metabarcoding approach, BMC Microbiology, 2025, 25:700.
6. Buttari F, Arah N, Tsai S, Huang CL, Zhi-Hong Wen, **Tang SL**, Lin C*, Induced Bleaching Enhances Cold Tolerance in Coral Larvae: A Potential Strategy for Cryopreservation Optimization 2025, Coral Reefs, 44:2083-2099

7. Liu PY[#], Chiu WC[#], Lim SL, Chen HJ, Chen YH, Wang HI, Yang CY, Chen CC, Nozawa Y, Yamashiro H, Sakai K and **Tang SL***, Genomic analysis reveals broad adaptability of coral-killing sponge (*Terpios hoshinota*) under environmental stress, BMC Genomics, 2025, 26: 830
8. Chen Y, Kim SH, Long J, Bathige S.D.N.K., Kim HJ, **Tang SL**, Park KI*, 2025, First report of *Thraustochytrium caudivorum* isolated from the undulated surf clam (*Paratapes undulatus*): Morphological, molecular, and ecological insights under climate change, Protist, 126128
9. Nakayama K, Hung MC, Chiu CY, **Tang SL**, Hsueh ML, Wu CC, Hung IH, Liu YH, Tsai JW*, 2025, Optical properties of dissolved organic matter play pivotal roles in mediating trace metal forms in a mangrove-dominated tidal estuary. Mar Pollut Bull. 222:118594. doi: 10.1016/j.marpolbul.2025.118594.
10. Chen CC, Hsu TH, Lu HY, **Tang SL**, Ho YN * 2025, High-quality chromosome-level genome of three *Meretrix* species using Nanopore and Hi-C technologies. Sci Data 12, 1141. <https://doi.org/10.1038/s41597-025-05454-2>
11. Hsieh YE.; Yang SY., Liu SL., Wang SW., Wang WL., Tang SL, Yang SH.*., 2025, Microbial Community Shifts and Nitrogen Utilization in Peritidal Microbialites: The Role of Salinity and pH in Microbially Induced Carbonate Precipitation, Microbial Ecology, 88(1):31
12. Chuang PS, Kao WC, Yu ZR, Lin TC, Shih KN, Yang WY, Leung YY, Hsu MT, Chen TY, Shikina S*, **Tang SL ***, Cheng JY*, Innovative Microfluidic Chips for Coral Cultivation: Enhanced Flexibility and Experimental Applications, Methods in Ecology and Evolution 2025. 16(4):707-714
13. Chen, C.C., Xie QY., Chuang PS, Darnajoux R., Chien YY, Wang WH, Tian X, Tu CH, Chen BC, **Tang SL**, and Chen KH *, A thallus-forming N-fixing fungus-cyanobacterium symbiosis from subtropical forests. Science Advances, 2025.doi:10.1126/sciadv.adt4093
14. Kamata M, Kitano YF, Iguchi, A, Nozawa Y, Nagai S, Chen C.; Wada, N, **Tang, SL**; Yamakita, T Taninaka H, Yasuda N.*. Genetic divergence of pocillopora damicornis between temperate and subtropical regions: the need to monitor hidden genetic lineage distribution with regard to migration-load risks under climate change. Bulletin of Marine Science, 2025. 101: 91-104.
15. Vidanaarachchi R., **Tang SL**., Halgamuge S.: CoPR: Collective Pattern Recognition-a Framework for Microbial Community Activity Analysis, bioRxiv, 2024. <https://doi.org/10.1101/2024.06.30.601456>
16. Chuang P.S., Wang TH, Lu CY, Tandon K, Shikina S., **Tang SL***: Microbiome heterogeneity in tissues of the coral, Fimbriaphyllia (Euphyllia) ancora, Environmental Microbiology Reports, 2024. 16 (4), e13310
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18. Hirose Y, **Tang SL**, Yamashiro H., Arrangement and development of spicules in the coral-killing sponge, Terpios hoshinota, Zoological Studies 2024, 63
19. Suraphan P, Wu WK, Chang CT, Wada N, Ho HC.,...**Tang SL**,...et al., 2023, Reassessing the safety of dietary emulsifiers through the lens of gut microbiota, Communication Biology, 2024 <https://doi.org/10.21203/rs.3.rs-2731923/v1>.
20. Chuang PS, Yu SP, Liu PY, Hsu, MT, Chiou YJ., Lu CY, **Tang SL***, A gauge of coral physiology: re-examining temporal changes in *Endozoicomonas* abundance correlated with natural coral bleaching, 2024 ISME Communication, ycae001

21. Yamashiro H.* and **Tang SL**, Rediscovery of *Seriatopora* corals in shallow reefs of Okinawa Island, Japan, *Regional Studies in Marine Science*, 2024 doi: 10.1016/j.rsma.2023.103352
22. Shikina S, Lin TC, Chu YL, Cheng YC, Chang YE, Wada N., **Tang SL**, Iizuka Y, Chiu YL, Culturing reef-building corals on a laboratory dish: a simple experimental platform for stony corals, *Frontiers in Marine Science*, 2023, DOI=10.3389/fmars.2023.1149495
23. Chan YF, Chen YH, Yu SP, Chen HJ., Nozawa Y, and **Tang SL***, 2023, Reciprocal transplant experiment reveals multiple factors influencing changes in coral microbial communities across climate zones, *Science of The Total Environment*, 907: 167929
24. Chiou YJ, Chan YF, Yu SP, Lu CY, Hsiao S SY, Chiang PW, Hsu TC, Liu PY, Wada N, Lee Y, Jane WN, Lee DC, Huang YW, **Tang SL***, 2023, Similar but different: characterization of dddD gene mediated dimethylsulfoniopropionate metabolism among Coral-Associated *Endozoicomonas* dddD-gene mediated DMSP metabolism in *Endozoicomonas*, *Science Advances*, 9: doi=10.1126/sciadv.adk1910
25. Shikina S, Lin TC, Chu YL, Cheng YC, Chang YE, Wada N, **Tang SL**, Iizuka Y, Chiu YL, Culturing reef-building corals on a laboratory dish: a simple experimental platform for stony corals, *Frontiers in Marine Science*, 2023, DOI=10.3389/fmars.2023.1149495
26. Chuang PS*, Yamada Y, Liu PY, **Tang SL**, Mitarai S, Bacterial community shifts during polyp bail-out induction in *Pocillopora* corals, 2023, *Microbiology Spectrum*, e00257-23
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28. Chou† PH, Hu MY†, Guh YJ, Wu GC, Yang SH, Tandon K, Shao YT, Lin LY, Chen C, Tseng KY, Wang MC, Zhang CM, Han BC, Lin CC, **Tang SL**, Jeng MS, Chang CF, Tseng YC*: Cellular mechanisms underlying extraordinary sulfide tolerance in a crustacean holobiont from hydrothermal vents, *Proceedings of the Royal Society B* 2023, <https://doi.org/10.1098/rspb.2022.1973>
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30. Chiou YJ, Chen YH, Chiang PW, Chen HJ, **Tang SL***, High-quality genome sequences of two octocoral-associated bacteria, *Endozoicomonas euniceicola* EF212T and *Endozoicomonas gorgoniicola* PS125T, *Microbiology Resource Announcements* 2023, doi: 10.1128/mra.00877-22.
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37. Tuyet DTA, Hiep LM, Binh HT, Huyen LT, **Tang SL**, Chiang PW, Hao DM: A multi-step nitrifying microbial enrichment to remove ammonia and nitrite in brackish aquaculture systems. *Biodegradation* 2022, 33:373-388.
38. Tandon K, Chiou YJ, Yu SP, Hsieh HJ, Lu CY, Hsu MT, Chiang PW, Chen HJ, Wada N, **Tang SL***: Microbiome restructuring: dominant coral *Bacterium Endozoicomonas* species respond differentially to environmental changes. *mSystems* 2022, 7:e0035922.
39. Liu PY, Yang SY, Lu CY, Wada N, De Palmas S, Yeh SS, Yamashiro H, **Tang SL**, Yang SH*: Ocean currents may influence the endolithic bacterial composition in coral skeletons. *Frontiers in Marine Science* 2022, 9.
40. Hoh DZ, Lee HH, Wada N, Liu WA, Lu MR, Lai CK, Ke HM, Sun PF, **Tang SL**, Chung WH, et al: Comparative genomic and transcriptomic analyses of trans-kingdom pathogen *Fusarium solani* species complex reveal degrees of compartmentalization. *BMC Biology* 2022, 20:236.
41. Hara S, Wada N, Hsiao SS, Zhang M, Bao Z, Iizuka Y, Lee DC, Sato S, **Tang SL***, Minamisawa K*: In vivo evidence of single (13)C and (15)N isotope-labeled methanotrophic nitrogen-fixing bacterial cells in rice roots. *mBio* 2022, 13:e0125522.
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44. Chen YH, Chen HJ, Yang CY, Shiu JH, Hoh DZ, Chiang PW, Chow WS, Chen CA, Shih TH, Lin SH,...**Tang SL***: Prevalence, complete genome, and metabolic potentials of a phylogenetically novel cyanobacterial symbiont in the coral-killing sponge, *Terpios hoshinota*. *Environmental Microbiology* 2022, 24:1308-1325
45. Chan YF, Chen CY, Lu CY, Tu YC, Tandon K, Shikina S, **Tang SL***: A first insight into the heat-induced changes in proteomic profiles of the coral symbiotic bacterium *Endozoicomonas montiporae*. *Frontiers in Marine Science* 2022, 9. <https://doi.org/10.3389/fmars.2022.808132>
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47. Wu YT, Chiang PW, Tandon K, Rogozin DY, Degermendzhy AG, **Tang SL***: Single-cell genomics-based analysis reveals a vital ecological role of *Thiocapsa* sp. LSW in the meromictic Lake Shunet, Siberia. *Microbial genomics* 2021, 7:000712.
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51. Tandon K, Wan MT, Yang CC, Yang SH, Baatar B, Chiu CY, Tsai JW, Liu WC, Ng CS, **Tang SL***: Aquatic microbial community is partially functionally redundant: Insights from an in situ reciprocal transplant experiment. *Science of The Total Environment* 2021, 786:147433.
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53. Huang CY, Hwang JS, Yamashiro H, **Tang SL***: Spatial and cross-seasonal patterns of coral diseases in reefs of Taiwan: high prevalence and regional variation. *Diseases of Aquatic Organisms* 2021, 146:145-156.
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