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BIOGRAPHICAL

Date of Birth: November 15, 1969
City of Birth: Taipei, Taiwan
Citizenship: Taiwan

EDUCATION

1996/07-1999/05 Ph.D. in Chemical Engineering, University of Maryland, College Park, MD.
1993/09-1996/06 MS in Chemical Engineering, University of Maryland, College Park, MD.
1988/10-1992/06 BS in Chemical Engineering, National Taiwan University, Taipei, Taiwan.

RESEARCH INTERESTS

- Gene therapy
- Cell and tissue engineering
- Vaccine development
- Biomaterials
- Synthetic biology, metabolic engineering and biorefinery

PROFESSIONAL EXPERIENCE

2024/08–present	歐盟研究委員會 計畫審查委員會專家 European Research Council Expert
2024/08–present	中華民國生醫材料及藥物釋放學會 理事長 President, Society for Biomaterials and Controlled Release
2024/08–present	清華大學工學院代理院長 Acting Dean, College of Engineering, National Tsing Hua University
2023/10–present	Fellow Nomination Review Committee, American Institute for Medical and Biological Engineering (AIMBE)
2022/12–present	台灣化工學會 理事 Board member, Taiwan Institute of Chemical Engineers
2022/10–present	亞洲生物技術聯盟 副理事長 Vice President, Asian Federation of Biotechnology (AFOB)
2022/08–2024/08	清華大學工學院副院長

	Vice Dean, College of Engineering, National Tsing Hua University
2021/12-present	Associate Editor, Frontiers in Bioengineering and Biotechnology (IF 5.8)
2021/04-present	Co-Chair, Division of Tissue Engineering and Biomaterials, 亞洲生物技術聯盟(AFOB) Co-Chair, Division of Tissue Engineering and Biomaterials, Asian Federation of Biotechnology
2019/08-2020/12	國際組織工程與再生醫學學會 亞太分會 獎章委員會委員 Award committee member, TERMIS-AP Council
2019/07	Co-Chair, 2019 亞洲生物技術聯盟(AFOB)會議(900 attendees) Co-Chair, 2019 Asian Congress of Biotechnology
2019/08-present	清華講座教授 Tsing Hua Chair Professor, National Tsing Hua University
2018/11-2020/11	台灣化工學會 學術委員會 主任委員 Chair, Academic Affairs Committee, Taiwan Institute of Chemical Engineers
2018/01-2020/12	科技部化工學門召集人 Coordinator, Chemical Engineering Division, Ministry of Science and Technology
2018/03-2020/07	台灣再生醫學學會 理事 Board member, Formosa Association of Regenerative Medicine
2018/03-2020/07	中華民國生醫材料及藥物釋放學會 理事暨學術委員會 主任委員 Board member, Biomaterials and Controlled Release Society, Taiwan
2016/07-2019/07	台灣生物技術與生化工程學會 副理事長 Vice President, Biotechnology and Biochemical Engineering Society of Taiwan, BEST
2017/01-2019/12	國際組織工程與再生醫學學會 亞太分會 理事 Council member, Tissue Engineering International & Regenerative Medicine Society (TERMIS)-Asia Pacific (TERMIS-AP) Council
2016/09	國際組織工程與再生醫學學會 亞太分會 會議執行主席 Program Chair, 2016 TERMIS-AP meeting (850 attendees)
2016/09-2019/12	國際組織工程與再生醫學學會 亞太分會 會議委員會委員 Meeting committee member, TERMIS-AP Council
2015/07-present	Deputy Editor, Journal of Taiwan Institute of Chemical Engineers (IF 5.477)
2014/12-2016/12	台灣化工學會 理事 Board member, Taiwan Institute of Chemical Engineers
2014/12-present	亞洲生物技術聯盟(AFOB) 執行理事

	Executive Board Member, Asian Federation of Biotechnology
2014/12–2016/07	台灣生物技術與生化工程學會 監事 Board member, Biotechnology and Biochemical Engineering Society of Taiwan, BEST
2013/08–2016/07	清華大學化工系 系主任 Chairman, Department of Chemical Engineering, National Tsing Hua University (NTHU)
2013/01–2015/12	國際組織工程與再生醫學學會 亞太分會 理事 Board member, TERMIS-AP Pacific Council
2010/08–2019/07	清華大學 特聘教授 Distinguished Professor, National Tsing Hua University
2011/11–2013/12	台灣化工學會 國際事務與聯誼委員會 主任委員 Coordinator, International Relationship Committee, Taiwan Institute of Chemical Engineers
2010/09–2011/09	清華大學 副國際長 Vice Dean, Office of International Affairs, National Tsing Hua University
2008/08–2010/07	清華大學 諮商中心主任 Director, Counseling Center, National Tsing Hua University
2007/08–2010/07	清華大學化工系 教授 Professor, Department of Chemical Engineering, National Tsing Hua University
2009/06–2009/09	訪問教授, 加州大學聖地牙哥分校 Visiting Professor, Department of Bioengineering, University of California San Diego
2003/08–2007/07	清華大學化工系 副教授 Associate Professor Department of Chemical Engineering, National Tsing Hua University
2000/08–2003/07	清華大學化工系 助理教授 Assistant Professor Department of Chemical Engineering, National Tsing Hua University
1999/06–2000/06	美國國家衛生研究院 博士後研究員 Visiting Fellow, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health.
1994/09–1999/05	美國馬里蘭大學 兼任研究助理 Graduate Research Assistant, Center for Agricultural Biotechnology, University of Maryland Biotechnology Institute.

HONORS AND AWARDS

2024	英國皇家化學會會士 Fellow Royal Society of Chemistry
2023	台灣化工學會 會士 Fellow, Taiwan Institute of Chemical Engineers (TwIChE)
2023	國際先進材料學會 會士 Fellow, International Association of Advanced Materials
2023	台灣生物技術與生化工程學會 會士 Fellow, Biotechnology and Biochemical Engineering Society of Taiwan (BEST)
2022	中華民國生醫材料及藥物釋放學會 研究學者獎 Research Scholar Award, Society for Biomaterials and Controlled Release
2022	台灣化工學會 傑出論文獎 Outstanding paper award, Taiwan Institute of Chemical Engineers
2021	李昭仁教授基金會研究學者獎 Research Scholar Award, Professor Lee Foundation
2020	科技部工程司產學合作計畫成果發表優良獎 Outstanding Academic-Industry Collaboration Award, Ministry of Science and Technology (MOST)
2020	台灣化工學會 毛高文教授獎 Professor Mao Gao-Wen Award, Taiwan Institute of Chemical Engineers
2020	國際生醫材料科學與工程學會聯盟 會士 Fellow Biomaterials Science and Engineering (FBSE), International Union of Societies for Biomaterials Science and Engineering
2019	第 16 屆國家新創獎 學研新創獎 National Innovation Award
2019	台灣化工學會 金開英獎 Jin Kai-Yin Award, Taiwan Institute of Chemical Engineers
2018	科技部 特約研究計畫
2018	科技部 未來科技突破獎 Future Technology Award, MOST
2017	李長榮福聚教育基金會學術研究傑出教授獎 LCY Foundation Outstanding Research Professor Award
2016	Editorial Board Member, Journal of Tissue Engineering and Regenerative

	Medicine (IF 4.71)
2016	台灣生物技術與生化工程學會 生物技術與生化工程獎章 BEST Biochemical Engineering Achievement Award (Biotechnology and Biochemical Engineering Society of Taiwan, BEST)
2016	Program Chair, TERMIS (Tissue Engineering & Regenerative Medicine International Society)-2016 AP Chapter Meeting
2015	Deputy Editor, Journal of Taiwan Institute of Chemical Engineers (IF 5.8)
2014	科技部傑出研究獎 Outstanding Research Award (Ministry of Science and Technology)
2014	清華大學傑出產學研究獎 Outstanding Academia-Industry Research Award, National Tsing Hua University
2014	清華大學工學院傑出產學合作獎 Outstanding Academic-Industry Collaboration Award, College of Engineering, National Tsing Hua University
2012	TERMIS-AP 理事 Board member, TERMIS-AP Council
2012	國科會優秀年輕學者計畫 Outstanding Young Scholar Project, National Science Council
2011	美國醫學與生物工程學會 會士 Fellow, American Institute for Medical and Biological Engineering
2011	日本化工學會 亞洲研究獎 Asia Research Award, Society of Chemical Engineers, Japan
2011	台灣化工學會賴再得獎 Professor Tsai-Te Lai Award, Taiwan Institute of Chemical Engineers
2010	清華大學特聘教授 Distinguished Professor, National Tsing Hua University
2010-present	國科會獎勵特殊優秀人才
2010	Associate Editor, Current Gene Therapy
2010	Most Highly Cited Paper Award, Acta Pharmacol. Sin.
2009	Outstanding Teaching Award (College of Engineering, National Tsing Hua University)
2007	國科會傑出研究獎 Outstanding Research Award, National Science Council
2007	45 屆十大傑出青年 Ten Outstanding Young Persons Award (only 1-2 recipients in the

	Science/Education field in Taiwan)
2006	國科會吳大猷獎 Wu Ta-Yu Memorial Award (National Science Council)
2006	臺灣化工學會最佳論文獎 Outstanding Paper Award (The Taiwan Institute of Chemical Engineers)
2004	清華大學新進人員研究獎 Outstanding Young Investigator Award (National Tsing Hua University)

ASSOCIATE EDITOR/EDITORIAL BOARD MEMBERS

2022	Guest Editor, Biomolecules (IF 6.064)
2022	Editorial board member, Synthetic Biology and Engineering
2021	Associate Editor , Frontiers in Bioengineering and Biotechnology (IF 6.064)
2021	Editorial board member, Biomolecules (IF 6.064)
2020	Guest Editor, Frontiers in Cell and Developmental Biology (IF 6.081)
2019	Guest Editor, Biotechnology Journal (5.726)
2018	Editorial board member, Biotechnology and Bioprocess Engineering
2018	Editor , Scientific Report (IF 4.996)
2018	Editorial board member, Tissue Engineering and Regenerative Medicine
2016	Editorial Board Member, Journal of Tissue Science & Engineering
2016	Editorial Board Member, Journal of Tissue Engineering and Regenerative Medicine
2015	Deputy Editor , Journal of Taiwan Institute of Chemical Engineers (IF 5.477)
2014	Editorial Board Member, Journal of Vaccines and Immunology
2011	Editorial Board Member, World Journal of Stem Cells
2011	Editorial Board Member, World Journal of Medical Genetics
2010	Associate Editor , Current Gene Therapy
2007	Editorial Board Member, Recent Patents on Biotechnology

INVITED SPEECHES (International Conference)

1. Invited speaker, 2024 Sep. 8th Biotechnology International Congress, Bangkok, Thailand.
2. Keynote speaker, 2024 Aug. International Symposium on Engineering and Technology for Regenerative Medicine. Kyoto, Japan.
3. Invited speaker, International Symposium for Genome Editing and Precision Medicine. BioAsia Taiwan, Taipei, Taiwan.

4. Keynote speaker, 2024 June. European Congress of Biotechnology. Rotterdam, Netherland.
5. Keynote speaker, 2024 June. 3rd International Forum on Chemical Engineering and Catalysis (CECFORUM2024), Porto, Portugal.
6. Invited speaker, 2024 May. World Biomaterials Congress 2024, Daegu, Korea.
7. Invited speaker, 2024 May. The 24th International Annual Meeting of Korean Tissue Engineering and Regenerative Medicine Society. Jeju, Korea.
8. Keynote speaker, 2024 March. 38th Joint Annual Conference of Biomedical Science. Taipei, Taiwan.
9. Keynote speaker, 2024 March. EFB-AFOB joint meeting. Online meeting.
10. Keynote speaker, 2024 March. International Conference of Formosa Association of Regenerative Medicine. Taipei, Taiwan.
11. Keynote speaker, 2023 Nov. 2023 Annual Meeting of Taiwan Institute of Chemical Engineers. Taipei, Taiwan.
12. Keynote speaker, 2023 Oct. The World Conclave on Materials, Energy & Climate. Stockholm, Sweden.
13. Keynote speaker and session organizer, 2023 Oct. Asian Congress of Biotechnology. Ho Chi Min City, Vietnam.
14. Keynote speaker, 2023 July. 2023 eCM meeting on Bone and Fracture Repair. Davos, Switzerland.
15. Invited speaker, 2023 May, Controlled Release Society (CRS) Local Chapter Webinar.
16. **Plenary speaker**, 2022 Nov. The 13th Science Conference, VNUHCM-US. Ho Chi Min City, Vietnam.
17. Invited speaker, 2022 Nov. Australia-Taiwan Life Science Symposium. Virtual Conference.
18. Keynote speaker and session chair. 2022 Oct. 2022 TERMIS-AP Meeting, Korea
19. **Plenary speaker**, 2022 Oct. Kyungpook National University Hospital (KNUH) International Conference. Daegu, Korea.
20. Invited speaker, 2022, March. Annual Meeting of Formosa Association of Regenerative Medicine. Taipei. Taiwan.
21. Keynote speaker and session chair, 2021 Nov. AFOB virtual conference, Korea
22. Invited speaker, 2021 Oct. Korea-Taiwan-Japan Joint Symposium on Chemical Engineering, Korea.
23. Keynote speaker, 2021 Oct. Annual Meeting of the Taiwan Neuroimmunology Medical Society and Society for Neurological Rare Disorders. Taipei, Taiwan.
24. Keynote speaker, 2021 July. The 26th BEST conference and International Symposium on Biotechnology and Bioengineering. Taichung. Taiwan.
25. Keynote speaker, 2021 June. 2021 Annual Meeting of Agricultural Chemical Society of Taiwan. Taipei, Taiwan.
26. Chair Lecture, 2020 Nov. National Cheng Kung University, Tainan, Taiwan
27. Invited speaker. 2020 Nov. International Conference on Emergent Functional Matter Science 2020. Suao, Taiwan.
28. Keynote speaker, 2020, Aug. Annual Meeting of Biomaterials and Controlled Release Society in Taiwan. Taipei, Taiwan.
29. Invited speaker, 2019, Dec. International Symposium of Gene Therapy for Hereditary Diseases, Taipei, Taiwan.
30. Invited speaker, 2019, Nov. 10th Asian Symposium on Innovative Bio-production and

- Biorefinery (i-BioT 2019 Conference). Taichung, Taiwan.
31. Keynote speaker, 2019, Oct. TERMIS-AP meeting, Brisbane, Australia.
 32. Keynote speaker, 2019, Aug. Cross Strait Chemical Engineering Forum. Kaoshung, Taiwan.
 33. Invited speaker, 2019, May. Symposium for “Biology for Chemical Production”. Taipei, Taiwan.
 34. Invited speaker, 2019, March. 3rd Bilateral workshop between National Tsing Hua University and Vietnam National University. Ho Chi Minh City, Vietnam.
 35. **Plenary speaker, 2018, Sep, 2018 TERMIS World Congress, Kyoto, Japan (2500 participants)**
 36. **Plenary speaker**, 2018, Aug. 2018 Cross Strait Chemical Engineering Forum. Taiyun, China.
 37. Keynote speaker, 2018, July. 18th European Congress on Biotechnology, Geneva, Switzerland.
 38. Invited speaker, 2018 May. 19th International Meeting of the Korean Tissue Engineering and Regenerative Medicine Society (KTERMS). Seoul, Korea.
 39. Invited speaker, 2018 Jan, Bowie Research Conference, Hsinchu, Taiwan.
 40. **Plenary speaker**, 2017 Nov, 3rd National Congress on Regenerative Medicine, Moscow, Russia.
 41. Invited speaker, 2017 Oct, 8th International Conference on Materials Engineering for Resources (ICMR), Akita, Japan.
 42. Keynote speaker, 2017 Oct, 2017 International Conference on Biofabrication (BF2017). Beijing, China.
 43. Keynote speaker, 2017 Sep, 2017 TERMIS-AP meeting, Nantong, China.
 44. Invited speaker, 2017 Sep, The third international conference: Innovations in cancer research and regenerative medicine. Ho Chi Minh City, Vietnam.
 45. **Plenary speaker**, 2017 Aug. 2017 International Symposium of Materials on Regenerative Medicine (ISOMRM). Chunli, Taiwan.
 46. Invited speaker, 2017 July, 2017 Asian Congress of Biotechnology (ACB 2017). Khon Kaen, Thailand.
 47. Keynote speaker, 2017, June, TERMIS-EU meeting, Davos, Switzerland.
 48. **Plenary speaker**, 2017 June. 18th International Meeting of the Korean Tissue Engineering and Regenerative Medicine Society (KTERMS). Daegu, Korea.
 49. Invited speaker, 2017, Apr. KSBB-BEST Joint Symposium. Gyeongju, Korea.
 50. Invited speaker, 2017, March. 82nd Society of Chemical Engineering, Japan (SCEJ) Annual Meeting, Tokyo, Japan.
 51. Invited speaker, 2016 Dec. 1st International Conference on Applied Microbiology. Ho Chi Minh City, Vietnam.
 52. **Plenary speaker**, 2016 Nov. Third International Symposium of Tissue Engineering and Regenerative Medicine. Suwon, Korea.
 53. Keynote speaker, 2016 Sep. 2016 TERMIS-AP meeting, Tamsui, Taiwan.
 54. **Plenary speaker**, 2016 Aug. 10th Annual Meeting of Chinese Biochemical Engineering Society. Harbin, China.
 55. Keynote speaker, 2016, June, 2016 TERMIS-EU meeting, Uppsala, Sweden.
 56. **Plenary speaker**, 2016, June. The 21th Biotechnology and Biochemical Engineering Society of Taiwan (BEST) conference. Chung-Li. Taiwan.
 57. Invited speaker, 2016, Apr. KSBB-BEST Joint Symposium. Gyeongju, Korea.
 58. Keynote speaker, 2016 Apr. EMN Meeting on Biomaterials 2016. Phuket. Thailand.

59. Invited speaker, 2016 March. The 15th Congress of the Japanese Society for Regenerative Medicine. Osaka, Japan.
60. Invited speaker and session chair, 2015 Nov. BIT's 8th World Congress of Regenerative Medicine & Stem Cell 2015. Shanghai, China.
61. Invited speaker and session chair, 2015 Nov. 12th Asian Congress on Biotechnology (ACB 2015). Kuala Lumpur, Malaysia.
62. **Plenary speaker** and advisory board member, 2015, Oct. The 2nd International Conference in Chemical Engineering, Food and Biotechnology-ICCFB2015, Ho Chi Minh City, Vietnam.
63. Keynote speaker and session chair, 2015 Oct. The 8th Sino-US Joint Conference of Chemical Engineering. Shanghai, China.
64. Invited speaker, 2015 June. 20th Annual Conference of the Chinese Biopharmaceutical Association- USA, LianYunGang, Jiangsu, China.
65. Invited Speaker. 6th AFOB Regional Symposium. 2015 Depok, Indonesia.
66. Invited speaker, ISBiotech 5th Annual Meeting, 2015, March. Washington DC, USA.
67. Invited speaker, 5th Asian Symposium on Innovative Bio-production and Biorefinery (i-BioT 2014 Conference), 2014, Nov. Tainan, Taiwan.
68. Keynote speaker and session chair, 2014 Sep. 2014 TERMIS-AP meeting, Daegu, Korea.
69. Invited speaker, ISBiotech 4th Annual Meeting, 2014, March. Washington DC, USA.
70. Keynote speaker, Annual Meeting of Taiwan Institute of Chemical Engineers. 2013, Nov. Taiwan.
71. Keynote speaker and session chair, 2013 Oct. 2013 TERMIS-AP meeting, Shanghai, China
72. Keynote speaker, 2013 Oct. The 7th Sino-US Joint Conference of Chemical Engineering. Beijing, China.
73. Invited speaker, 2013 Oct. Cross-Strait Chemical Engineering Conference. Zhongli, Taiwan.
74. Invited speaker at Zhongmu Institute of China Animal Husbandry Industry Group, 2013, May. Beijing, China.
75. Invited speaker, 76th Society of Chemical Engineering, Japan (SCEJ) Annual Meeting, 2013, March. Osaka, Japan.
76. Invited speaker, ISBiotech 3rd Annual Meeting, 2013, March. Rosslyn, VA, USA.
77. Invited speaker, International Symposium on Advanced Biological Engineering, 2012, Oct. Guilin, China.
78. Invited speaker, Annual Meeting of American Institute of Chemical Engineers. 2012, Oct. Pittsburg, USA.
79. Keynote speaker, International Congress of Entomology (ICE). 2012, Aug. Daegu, Korea.
80. Keynote speaker, 75th SCEJ Annual Meeting. 2012, Mar. Tokyo, Japan.
81. Keynote speaker, Annual Meeting of Taiwan Institute of Chemical Engineering. 2011, Nov. Taiwan.
82. Invited speaker, 17th Young Asian Biochemical Engineers Meeting, 2011, Oct. Incheon. Korea.
83. Invited speaker and session chair, Asian Congress on Biotechnology. 2011, May. Shanghai, China.
84. Invited speaker, 16th Triennial Congress of the Asia Pacific Orthopedic Association. 2010, Nov. Taiwan.
85. Invited speaker, Symposium for "Viral Vectors in Gene Therapy: Applications and Novel Production Methods. 2010, Aug. Kuopio, Finland.
86. Invited speaker, 15th Biochemical Engineering Conference. 2010, June. Taiwan.

87. Invited speaker, World Vaccine Congress, 2010, March. Beijing, China.
88. Invited speaker, Queensland Protein Symposium. 2010, March. Brisbane, Australia.
89. Invited speaker at GlaxoSmithKline Company, 2009, Sep. Belgium.
90. Invited speaker at MedImmune, 2009, Aug. California, USA.
91. Invited speaker, APEC Conference for the Surveillance, Treatment, Laboratory Diagnosis and Vaccine Development of Enteroviruses. 2009, Aug. Taipei, Taiwan.
92. Invited speaker, Symposium for Vaccine and Infectious Diseases. 2009. July. Taipei, Taiwan.
93. Invited speaker and session chair, 2008 Annual Conference of Tissue Engineering and Regenerative Medicine International Society (TERMIS)–Asian Pacific Region. 2008, Nov.
94. Invited speaker, BacMam Summit 2008. 2008, Sep. Portland, USA.
95. Invited speaker, 3rd SBE International Conference on Bioengineering and Nanotechnology. 2007, Aug. Singapore.
96. Invited speaker, 2007 Annual meeting of Formosa Society of Regenerative Medicine. 2007, Mar. Taipei.
97. Keynote speaker, 2006 International Symposium of Nanotechnology, 2006, Oct.
98. Keynote speaker, 12th Symposium of Young Asian Biochemical Engineers' Community. 2006, Nov. Kaoshung, Taiwan.

INTERNATIONAL COMMITTEE/ORGANIZER

1. **Conference Chair**, Annual Meeting of Biomaterials and Controlled Release Society in Taiwan & International Advanced Drug Delivery Symposium. Hsinchu, Taiwan.
2. Scientific Programme Committee, European Congress of Biotechnology. 2024 June. Netherlands.
3. Symposium organizer, TERMIS (Tissue Engineering International & Regenerative Medicine Society) World Congress, Seattle, USA.
4. Organizing committee member, 3rd International Forum on Chemical Engineering and Catalysis. 2024 June. Porto, Portugal.
5. International advisory board. World Congress of Biomaterials, 2024 May. Daegu, Korea.
6. Organizer and session chair, Asian Congress on Biotechnology. 2023. Ho Chi Min City, Vietnam.
7. Organizer and session chair, AFOB-EFB joint meeting. 2023 March. Virtual conference.
8. Chair, International Advisory Board, TERMIS -Asia Pacific Chapter (TERMIS-AP), 2022. Jeju, Korea.
9. Scientific organizing committee member, 2021 AFOB Virtual Conference, Nov. 2021, Korea
10. Co-chair, Tissue Engineering and Biomaterials division, AFOB.
11. International advisory board. TERMIS-World Congress, 2021. Maastricht, Netherland.
12. International advisory board. TERMIS-AP meeting, 2020. Malaysia.
13. Organizing committee, Biomaterials International conference 2020, Kenting, Taiwan.
14. **Conference Chair, 14th Asian Congress on Biotechnology. 2019.**
15. International Advisory Committee. TERMIS-America meeting, Florida, 2019.
16. International Advisory Committee. TERMIS-World Congress, Kyoto, Japan, 2018.

17. International Advisory Committee. TERMIS-America meeting, 2017.
18. Symposium organizer, 2017 TERMIS-AP meeting
19. Symposium organizer, 2017 TERMIS-EU meeting
20. International Advisory Committee. The Collaborative Conference on Microbes 2016. Melbourne, Australia.
21. Council member, TERMIS-AP (2017-2019)
22. Organizing committee member, 21th Biotechnology and Biochemical Engineering Society of Taiwan (BEST) conference.
23. Finance committee member, TERMIS-AP Council
24. Board member, Asian Federation of Biotechnology (AFOB)
25. **Program Chair, TERMIS-AP Meeting (2016)**
26. Steering Committee. The 2nd International Conference on Chemical Engineering, Food and Biotechnology - ICCFB2015
27. Council member, TERMIS-AP (2012-2015)
28. Symposium organizer, 2015 TERMIS-World Congress meeting
29. Technical Program Committee, 2014 International Conference on Biological Engineering and Biomedical (BEAB 2014)
30. Symposium organizer, 2014 TERMIS-AP meeting
31. Symposium organizer, 2013 TERMIS-AP meeting
32. Technical Program Committee. The 2012 International Conference on Bioengineering, Chemistry and Environment Science. (2012)
33. Organizing Committee, ISABE Conference 2012 (2012)

PROFESSIONAL AFFILIATIONS

1. American Institute for Medical and Biological Engineering
2. American Society of Cell and Gene Therapy
3. Taiwan Institute of Chemical Engineers
4. Biotechnology and Biochemical Engineering Society of Taiwan
5. Tissue Engineering International & Regenerative Medicine Society (TERMIS)
6. American Chemical Society
7. American Institute of Chemical Engineers
8. Biomaterials and Controlled Release Society, Taiwan
9. Formosa Association of Regenerative Medicine

REVIEWER FOR INTERNATIONAL GRANTS

- The National Medical Research Council (Singapore) grant review
- The NSERC (Canada) grant review

- The Polish National Science Center grant review
- Netherlands Organisation for Scientific Research (NWO) grant review
- Grant review for Research Grant Council, Hong Kong
- Grant review for European Research Council

REVIEWER FOR INTERNATIONAL JOURNALS

- Acta Pharmacologica Sinica
- Acta Biomaterialia
- Applied Microbiology and Biotechnology
- BioEssays
- Biomaterials
- Biotechnology and Bioengineering
- Biotechnology and Applied Biochemistry
- Biotechnology Advances
- Current Gene Therapy
- Current Trends in Biotechnology
- Drug Discovery Today
- Expert Review of Vaccines
- Gene Therapy
- Journal of Biotechnology
- Journal of Taiwan Institute of Chemical Engineers
- Journal of Controlled Release
- Molecular Therapy
- Molecular Cancer
- Metabolic Engineering
- Nucleic Acids Research
- Nature Biomedical Engineering
- Nature Review Rheumatology
- Nature Communications
- Scientific Reports

Publications

***: Corresponding author; IF: 2023 Impact factor**

A. Journal Papers (* Corresponding author)

Submitted and in press

1. Chiang, C.-W., Tung, Y.-T., Huang, S.-C., Chen, Y.-C., **Hu, Y.-C.***. High-titer green synthesis of ω -hydroxydodecanoic acid by engineering *C. viswanathii* with CRISPR/Cas13d. Submitted to Bioresource Technology (**IF 9.7**).
2. Pham, N.N., Wu, Y.H., Dai, T.A. Tu, J., Liang, R.-M., Hsieh, H.-Y., Chang, C.-W., **Hu, Y.-C.***. Auto-inducible synthetic pathway in *E. coli* enhanced sustainable indigo production from glucose. Submitted to Metabolic Engineering. Revision under review. (**IF 6.8**)
3. Truong, V.A., Chang, Y.H., Dang, T.Q., Tu, Y., Tu, J., Chang, C.-W., Chang, Y.H., **Hu, Y.-C.***. 2024. Programmable editing of primary microRNA switches stem cell differentiation and improves tissue regeneration. Nature Communications. Revision under review. (**IF 14.7**)

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4. Chang, C.-W., Truong, V.A., Pham, N.N, **Hu, Y.-C.***. 2024. March. RNA-guided genome engineering: paradigm shift towards transposons. Trends in Biotechnology. Epub ahead of print DOI: 10.1016/j.tibtech.2024.02.006. (**IF 14.3**) **Review paper**

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5. Nguyen, NTK, Lee, H.-S., P.-H. Chen, Truong, V.A., Chang, Y.-H., Pham, N.N., Chang, C.-W., Pham, D.-H., Ngo, DKT, Truong, V.A., Dang, Q.T., Chang, Y.-H., **Hu, Y.-C.***. 2023 Dec. Enhanced calvarial bone repair using ASCs engineered with RNA-guided Split dCas12a system That co-activates Sox5, Sox6 and long Non-coding RNA *H19*. Small. 2306612 (**Invited paper, IF 13**).
6. Nguyen, NTK, Tu, Y., Lee, H.-S., Truong, V.A., Chang, Y.-H., Pham, N.N., Chang, C.-W., Lin, Y.-H., Lai, P.-L., Chen, P.-H., Parfyonova, Y.V., Menshikov, M., Chang, Y.-H., **Hu, Y.-C.***. 2023 June Split dCas12a activator for lncRNA H19 activation to enhance BMSC differentiation and promote calvarial bone healing. Biomaterials. 297:122106. (**IF 12.8**).
7. Pham, N. N., Chang, C.-W., Chang, Y.-H., Tu, Y., Chou, J.-J., Wang, H.Y. and **Hu, Y.-C.***. 2023 May. Rational genome and metabolic engineering of *Candida viswanathii* by split CRISPR to produce hundred grams of dodecanedioic acid. Metabolic Engineering. 77:76-88. (**IF 6.8**).
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B. Book Chapters

1. Wu, H.-C., **Hu, Y.-C.**, Bentley, W.E. 2016. Tubular bioreactor for probing baculovirus infection and protein production. In "Baculovirus and Insect Cell Expression Protocols". Volume 1350 of the series *Methods in Molecular Biology* (David Murhammer, Ed.) pp 461-467. Springer Protocols. Springer New York (ISBN-978-1-4939-3042-5)
2. Lin, C.-Y., Chen, C.-L., Sung, L.-Y., Li, K.-C., Yeh, C.-L., **Hu, Y.-C.***. 2015 Jan. Baculovirus as a gene delivery vector for bone and cartilage tissue engineering. In "Gene and Cell Therapy: Therapeutic Mechanisms and Strategies" 4th Ed. (Nancy, S. Templeton, Ed.), CRC Press/Taylor & Francis. p. 237-258 (ISBN-13: 9781466571990)
3. **Hu, Y.-C.***. 2014. Jan. Gene therapy for cartilage and bone tissue engineering. *SpringerBriefs in Bioengineering*. Springer. (ISBN: 978-3-642-53922-0).
4. Lo, W.-H., **Hu, Y.-C.***. 2010. Regulation of baculovirus-mediated gene expression. In "Regulation of Viral Gene Expression" (Eli B. Galos, Eds), Nova Science Publishers, Hauppauge. p.279-298. (ISBN: 978-1-60741-224-3)
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8. Chung, Y.-C., **Hu, Y.-C.***. 2007. Baculovirus expression vectors. In "Virus Expression Vectors" (Hefferon, KL, Ed.). pp. 319-338. Transworld Research Network (ISBN: 81-7895-273-4).
9. **Hu, Y.-C.***, Bentley, WE*. 2007. Alternative molecular and reactor strategies probing infection and production. In "Baculovirus and insect cell expression protocols", (*Methods in Molecular Biology*, Vol. 388) 2nd Ed. (Murhammer DW, Ed.), Humana Press, Totowa, NJ. pp. 419-425. (ISBN: 1-58829-537-0)
10. **Hu, Y.-C.***. 2006. Baculovirus vectors for gene therapy. In "Insect Viruses: Biotechnological Applications" (Bonning BC, Ed.), Elsevier, New York. *Advances in Virus Research* Vol. 68, pp. 287-320 (ISBN: 978-0-12-039868-3)

11. 胡育誠, “生技醫藥”於吳文騰主編『生物產業技術概論』, 清華大學出版社, 新竹, pp 1-32.
12. 胡育誠, “基因與蛋白質工程”於周更生主編『二十一世紀的新化學工程』, 五南圖書出版公司, 台北, pp 175-198.

C. Conference Presentations

1. **Hu, Y-C.** 2022 Oct. Keynote speaker and session chair, 2022 TERMIS-AP Meeting, Korea
2. **Hu, Y-C.** 2022 Oct. Invited speaker, 2022 Kyungpook National University Hospital (KNUH) International Conference. Daegu, Korea.
3. Chang, C.-W.; **Hu, Y.-C.** 2022 June. 27th BEST Conference & International Symposium on Biotechnology and Bioengineering. BEST oral presentation award. Taoyuan, Taiwan
4. **Hu, Y-C.** 2022 March. Invited speaker, Annual meeting of FARM. Taipei, Taiwan
5. **Hu, Y-C.** 2021 Nov. Keynote speaker and session chair, AFOB virtual conference, Korea
6. **Hu, Y-C.**, 2021 Oct. Keynote speaker. Annual Meeting of the Taiwan Neuroimmunology Medical Society and Society for Neurological Rare Disorders-Taiwan. Taipei, Taiwan.
7. **Hu, Y-C.** 2021 July. Keynote speaker. The 26th BEST conference and International Symposium on Biotechnology and Bioengineering. Taichung. Taiwan.
8. **Hu, Y-C.** 2021, June. Keynote speaker. 2021 Annual Meeting of Agricultural Chemical Society of Taiwan. Taipei, Taiwan.
9. **Hu, Y-C.** 2020 Dec. Invited Speaker. Nanomicelle Delivery of Self-Amplifying mRNA as a Porcine Vaccine. International Conference on Emergent Functional Matter Science 2020. Suao, Taiwan.
10. **Hu, Y-C.**, 2020 Aug. Gene Therapy for Tissue Regeneration. Keynote speaker. Annual Meeting of Biomaterials and Controlled Release Society in Taiwan. Taipei, Taiwan.
11. **Hu, Y-C.**, 2019 Dec. CRISPR Technology for Tissue Regeneration. Keynote speaker. International Symposium of Gene Therapy for Hereditary Diseases. Taipei, Taiwan.
12. **Hu, Y-C.**, 2019 Oct. CRISPR Technology for Tissue Regeneration. Keynote speaker. TERMIS-AP meeting. Brisbane, Australia.
13. **Hu, Y-C.**, 2019 July. CRISPR Technology for Tissue Regeneration. NTHU-SNU Bilateral Symposium. Seoul. Korea.
14. **Hu, Y-C.**, 2019 July. CRISPR Technology for Metabolic Engineering and Tissue Regeneration NTHU-VNU Bilateral Symposium. Ho Chi Minh City, Vietnam.
15. **Hu, Y.-C***. 2018 Sep. Delivery of anabolic genes, miRNA and CRISPR systems for stem cell fate modulation and tissue regeneration. **Plenary speaker**. TERMIS-World Congress. Kyoto, Japan.
16. K.-L., Huang, M.-N., Hsu, Truong, Vu A., **Hu, Y.-C***. 2018 Sep. CRISPR activation for stem cell engineering and enhanced calvarial bone healing. TERMIS-World Congress. Kyoto, Japan.
17. M.-N., Hsu, K.-L., Huang, Truong, Vu A., **Hu, Y.-C***. 2018 Sep. Adipose-derived stem cell sheets functionalized by hybrid baculovirus for prolonged GDNF expression and improved nerve regeneration. TERMIS-World Congress. Kyoto, Japan.
18. Truong, Vu A., K.-L., Huang, M.-N., Hsu, **Hu, Y.-C***. 2018 Sep. CRISPR-mediated dual programming of bone marrow-derived mesenchymal stem cell for calvarial bone defect regeneration. TERMIS-World Congress. Kyoto, Japan.
19. C.-W., Chang, L.-S., Wang, C.-C., Shen, **Hu, Y.-C***. 2018 Aug. Development and application of a new Cre/loxP-based long-term gene expression system in single recombinant baculovirus. Asian Federation of Biotechnology Malaysia Chapter International Symposiums 2018 (AFOBMCIS

- 2018), Sarawak, Malaysia.
20. **Hu, Y.-C***. 2018 Aug. Bacterial engineering and production of chemicals using CRISPR technology. **Plenary speaker**. Cross-strait Chemical Engineering Forum. Taiyun, China.
 21. **Hu, Y.-C***. 2018 July. Delivery of RNA therapeutics and CRISPR systems for stem cell engineering and tissue regeneration. **Keynote speaker**. European Congress of Biotechnology. Geneva, Switzerland.
 22. M.-N., Hsu, **Hu, Y.-C***. 2018 Jun. Adipose-derived stem cell sheets functionalized by hybrid baculovirus for prolonged GDNF expression and improved nerve regeneration. 2018 BEST Conference & International Symposium on Biotechnology and Bioengineering, Taipei, Taiwan.
 23. K.-L., Huang, **Hu, Y.-C***. 2018 Jun. CRISPR activation for BMSC and ASC engineering and enhanced calvarial bone healing. 2018 BEST Conference & International Symposium on Biotechnology and Bioengineering, Taipei, Taiwan.
 24. C.-W., Chang, **Hu, Y.-C***. 2018 Aug. Development and Application of A New Cre/loxP-based Long-Term Gene Expression System In Single Recombinant Baculovirus. 2018 BEST Conference & International Symposium on Biotechnology and Bioengineering, Taipei, Taiwan.
 25. M.-W., Lin, **Hu, Y.-C***. 2018 Jun. Synthetic Circuit-based Baculovirus for Transgene Expression Control and Selective Killing of Hepatocellular Carcinoma Cells. 2018 BEST Conference & International Symposium on Biotechnology and Bioengineering, Taipei, Taiwan
 26. C.-C., Shen, **Hu, Y.-C***. 2018 Jun. Reduce CRISPR Off-target Effects by Synthetic Switch and Self-Restricting Cas9. 2018 BEST Conference & International Symposium on Biotechnology and Bioengineering, Taipei, Taiwan.
 27. **Hu, Y.-C***. 2018 May. Roles of RNA therapeutics and CRISPR systems for stem cell engineering and tissue regeneration. Invited speaker. 19th International Meeting of the Korean Tissue Engineering and Regenerative Medicine Society (KTERMS). Seoul, Korea.
 28. **Hu, Y.-C***. 2018 Jan. Roles of chemical engineers in metabolic and tissue engineering. Invited speaker. Bowie Science Conference. Hsinchu, Taiwan.
 29. **Hu, Y.-C***. 2017 Nov. RNA therapeutics and anabolic gene delivery for tissue regeneration. **Plenary speaker**. 3rd National Congress on Regenerative Medicine, Moscow, Russia.
 30. **Hu, Y.-C***. 2017 Oct. RNA therapeutics and anabolic gene delivery for tissue regeneration. Invited speaker, 2017 International Conference on Biofabrication (BF2017). Beijing, China.
 31. **Hu, Y.-C***. 2017 Sep. RNA therapeutics and anabolic gene delivery for tissue regeneration. 2017 TERMIS-AP meeting. Keynote speaker, Nantong, China.
 32. Hsu, M.-N., **Hu, Y.-C***. 2017 Sep. Baculovirus-engineered adipose stem cell sheet persistently expressing GDNF enhance sciatic nerve regeneration. 2017 TERMIS AP, Nantong, China.
 33. Truong, Vu A., Li, K.-C., Chang, Y.-H, **Hu, Y.-C***. 2017 Sep. Using baculovirus-mediated miR-214 sponges switch osteoporotic ASCs from adipogenesis to osteogenesis for osteoporotic bone defects repair. 2017 TERMIS AP, Nantong, China.
 34. **Hu, Y.-C***. 2017 Sep. RNA therapeutics and anabolic gene delivery for tissue regeneration. The third international conference: Innovations in cancer research and regenerative medicine. Invited speaker, Ho Chi Minh City, Vietnam.
 35. **Hu, Y.-C***. 2017 Aug. RNA therapeutics and anabolic gene delivery for tissue regeneration. 2017 International Symposium of Materials on Regenerative Medicine (ISOMRM). Plenary speaker. Chunli, Taiwan.
 36. C.-C., Shen, L.-Y., Sung, M.-W., Lin, **Hu, Y.-C***. 2017 July. CRISPR interference (CRISPRi) system for CHO cell engineering and product yield improvement. 2017 Asian Congress of Biotechnology (ACB 2017). Khon Kaen, Thailand.

37. L.-Y., Sung, Yi, Tu, H. Tu, **Hu, Y.-C***. 2017 July. Development of a CRISPR/CRISPRi hybrid system for metabolic engineering of E. coli and succinate production. 2017 Asian Congress of Biotechnology (ACB 2017). Khon Kaen, Thailand.
38. **Hu, Y.-C***. 2017 July. RNA therapeutics and anabolic gene delivery for tissue engineering and regenerative medicine. 2017 Asian Congress of Biotechnology (ACB 2017). Invited speaker, Khon Kaen, Thailand.
39. **Hu, Y.-C***. 2017 June. RNA therapeutics and anabolic gene delivery for tissue engineering and regenerative medicine. Keynote speaker. Davos, Switzerland.
40. **Hu, Y.-C***. 2017 June. RNA therapeutics and anabolic gene delivery for tissue regeneration. 18th International Meeting of the Korean Tissue Engineering and Regenerative Medicine Society (KTERMS). Plenary speaker. Daegu, Korea.
41. Li, H., **Hu, Y.-C***. 2017 Jun. CRISPR/Cas9 for the genome engineering of cyanobacteria and succinate production. 2017 BEST Conference International Symposium on Biotechnology and Bioengineering, Yunlin, Taiwan.
42. C.-C., Shen, L.-Y., Sung, M.-W., Lin, **Hu, Y.-C***. 2017 Jun. CRISPR interference (CRISPRi) system for CHO cell engineering and product yield improvement. 2017 BEST Conference International Symposium on Biotechnology and Bioengineering, Yunlin, Taiwan.
43. Truong, Vu A., Li, K.-C., Chang, Y.-H, **Hu, Y.-C***. 2017 Jun. Using baculovirus-mediated miR-214 sponges switch osteoporotic ASCs from adipogenesis to osteogenesis for osteoporotic bone defects repair. 2017 BEST Conference International Symposium on Biotechnology and Bioengineering, Yunlin, Taiwan.
44. M.-W., Lin, **Hu, Y.-C***. 2017 May. Incorporating synthetic circuits into baculovirus vector for stringent control of miRNA and apoptosis-inducing gene expression in hepatocellular carcinoma cells in vitro and in vivo. Washington DC, USA.
45. **Hu, Y.-C***, K.-C. Li, M.-N., Hsu, M.-W., Lin. 2017 May. Baculovirus-mediated miR-214 suppression shifts osteoporotic ASCs differentiation towards osteogenesis and improves osteoporotic bone defects repair. Washington DC, USA.
46. **Hu, Y.-C***. 2017 April. Bacterial Engineering and Production of Chemicals using CRISPR Technology. 2017 KSBB Spring Meeting and International Symposium. **Invited speaker.** Gyeongju, Korea.
47. **Hu, Y.-C***. 2017 March. CRISPR technology for microorganism engineering and production of chemicals. 82nd Annual Meeting of Society of Chemical Engineers, Japan. **Invited speaker.** Tokyo, Japan.
48. **Hu, Y.-C***. 2016 Dec. CRISPR-Cas9 for the engineering of microorganisms and production of chemicals. International Conference on Applied Microbiology. **Invited speaker.** Ho Chi Minh City, Vietnam.
49. **Hu, Y.-C***. 2016 Nov. 3rd International Symposium of Tissue Engineering and Regenerative Medicine. Delivery of miRNA Therapeutics and Anabolic Genes for Bone Engineering. **Plenary speaker.** Suwon, Korea.
50. Li, H., Shen, C.R., Huang, C.-H., Sung, L.-Y., Wu, M.-Y., Chung, M.-E., Yeh, I.-H., **Hu, Y.-C.***. 2016, Nov. CRISPR-Cas9 for the genome engineering of cyanobacteria and succinate production. AICHE Annual Meeting. San Francisco, USA.
51. Li, H., **Hu, Y.-C***. 2016 Nov. CRISPR/Cas9 for the genome engineering of cyanobacteria and succinate production. 63rd TwICHE Annual Conference, Taoyuan, Taiwan.
52. Hsu, M.-N., **Hu, Y.-C***. 2016 Nov. Baculovirus-engineered adipose stem cell sheet persistently expressing GDNF enhance sciatic nerve regeneration. 63rd TwICHE Annual Conference, Taoyuan,

Taiwan.

53. Truong, Vu A., Li, K.-C., Chang, Y.-H, **Hu, Y.-C***. 2016 Nov. Using baculovirus-mediated miR-214 sponges switch osteoporotic ASCs from adipogenesis to osteogenesis for osteoporotic bone defects repair. 63rd TwICHE Annual Conference, Taoyuan, Taiwan.
54. **Hu, Y.-C***. 2016 Sep. Delivery of miRNA therapeutics and anabolic genes for bone and cartilage engineering. 2016 TERMIS-AP meeting, **Keynote speaker**, Tamsui, Taiwan.
55. Truong, Vu A., Li, K.-C., Chang, Y.-H, **Hu, Y.-C***. 2016 Sep. Using baculovirus-mediated miR-214 sponges switch osteoporotic ASCs from adipogenesis to osteogenesis for osteoporotic bone defects repair. 2016 TERMIS-AP meeting, Tamsui, Taiwan.
56. Hsu, M.-N., **Hu, Y.-C***. 2016 Sep. Baculovirus-engineered adipose stem cell sheet persistently expressing GDNF enhance sciatic nerve regeneration. 2016 TERMIS-AP meeting, Tamsui, Taiwan.
57. **Hu, Y.-C***. 2016 Aug. Roles of chemical engineers in biomedical and biochemical engineering. 2016, Aug. The 10th Annual Meeting of Chinese Biochemical Engineering Society. **Plenary speaker**. Harbin. China.
58. Li, K.-C., Chang, Y.-C., **Hu, Y.-C***. 2016 June. Delivery of miRNA therapeutics and anabolic genes for bone and cartilage engineering. **Keynote speaker**. 2016 TERMIS-EU meeting, Uppsala, Sweden.
59. **Hu, Y.-C***. 2016 June. Roles of chemical engineers in biomedical and biochemical engineering. 2016, June. The 21th Biotechnology and Biochemical Engineering Society of Taiwan (BEST) conference. **Plenary speaker**. Chung-Li. Taiwan.
60. Li, H., **Hu, Y.-C***. 2016 June. CRISPR/Cas9 for the genome engineering of cyanobacteria and succinate production. **Biotechnology and Biochemical Engineering Society of Taiwan 2016 Taoyuan, Taiwan**.
61. Li, H., **Hu, Y.-C***. 2016 June. Enhanced integration of large DNA into *E. coli* chromosome by CRISPR/Cas9., **Metabolic Engineering 11**. 2016. Kobe, Japan.
62. Hsu, M.-N., **Hu, Y.-C***. 2016 June. Baculovirus-engineered adipose stem cell sheet persistently expressing GDNF enhance sciatic nerve regeneration. **Biotechnology and Biochemical Engineering Society of Taiwan 2016 Taoyuan, Taiwan**.
63. Lin, G.-C., **Hu, Y.-C***. 2016 June. Graphene oxide for cancer therapy: Studies of mechanism and applications. **Biotechnology and Biochemical Engineering Society of Taiwan 2016 Taoyuan, Taiwan**.
64. Li, H., **Hu, Y.-C***. 2016 June. CRISPR/Cas9 for the genome engineering of cyanobacteria and succinate production. **Biotechnology and Biochemical Engineering Society of Taiwan 2016 Taoyuan, Taiwan**.
65. Lo S.-C., **Hu, Y.-C***. 2016 June. The critical-size calvarial defect repair using baculovirus-engineered ASCs co-express BMP-2 and SDF1. **Biotechnology and Biochemical Engineering Society of Taiwan 2016 Taoyuan, Taiwan**.
66. Huang, C.-H., **Hu, Y.-C***. 2016 June. Regulation of gene expression by CRISPRi system in *S. elongatus* PCC7942. **Biotechnology and Biochemical Engineering Society of Taiwan 2016 Taoyuan, Taiwan**.
67. Wu, M.-Y., **Hu, Y.-C***. 2016 June. Modulation of gene network using CRISPR and CRISPRi for 1, 4-Butanediol production. **Biotechnology and Biochemical Engineering Society of Taiwan 2016 Taoyuan, Taiwan**.
68. Lin, G.-C., Tuan, H.-Y., Chen, G.-Y., **Hu, Y.-C***. 2016 Apr. Graphene oxide: biological responses and applications. KSBB-BEST Joint Symposium. **Invited speaker**. Gyeongju, Korea.

69. Lin, G.-C., Tuan, H.-Y., Chen, G.-Y., **Hu, Y.-C***. 2016 Apr. Graphene oxide: biological responses and applications. EMN Meeting on Biomaterials 2016. **Keynote Speaker**. Phuket. Thailand.
70. **Hu, Y.-C***. 2016 Mar. Gene therapy meets cell therapy: Applications in regenerative medicine. Japanese Society for Regenerative Medicine 2016. **Invited Speaker**. Osaka, Japan.
71. Lo S.-C., **Hu, Y.-C***. 2016 Mar. Repair of Critical Size Calvarial Defects Using Adipose-Derived Stem Cell Modulated with miRNA. Japanese Society for Regenerative Medicine 2016. Osaka, Japan.
72. Li, K.-C., **Hu, Y.-C***. 2016 Mar. Baculovirus-Mediated miR-214 Sponges Switch Osteoporotic ADSCs from Adipogenesis to Osteogenesis and Repair Osteoporotic Bone Defects. Japanese Society for Regenerative Medicine 2016. Osaka, Japan.
73. Hsu, M.-N., **Hu, Y.-C***. 2016 Mar. ASCs Sheet Transduced with Baculovirus GDNF Expression Vector Enhance Sciatic Nerve Regeneration. Japanese Society for Regenerative Medicine 2016. Osaka, Japan.
74. **Hu, Y.-C***. 2015 Nov. Engineering mesenchymal stem cells for cartilage and bone regeneration. Invited speaker and session chair, BIT's 8th World Congress of Regenerative Medicine & Stem Cell
75. **Hu, Y.-C***. 2015 Nov. Versatile gene delivery vectors for sustained transgene expression and applications in regenerative medicine. Invited speaker and session chair. 12th Asian Congress on Biotechnology (ACB 2015). Kuala Lumpur, Malaysia.
76. **Hu, Y.-C***. 2015 Oc. Gene therapy meets cell therapy: Applications in regenerative medicine. Plenary speaker and advisory board member. The 2nd International Conference in Chemical Engineering, Food and Biotechnology-ICCFB2015, **Plenary Speaker**. Ho Chi Minh City, Vietnam.
77. **Hu, Y.-C***. 2015 Oct. Gene therapy meets cell therapy: Applications in regenerative medicine. Keynote speaker and session chair. The 8th Sino-US Joint Conference of Chemical Engineering. **Invited Speaker**. Shanghai, China.
78. Li, K.-C., Chang, Y.-H., **Hu, Y.-C***. 2015 Sep. Healing of osteoporotic bone defect by genetically engineered osteoporotic BMSCs expressing MicroRNA sponge. 2015 TERMIS World Congress. Boston. USA.
79. **Hu, Y.-C***. 2015 June. Development of virus-like particle vaccine against enterovirus 71. **Invited speaker**. 20th Annual Conference of the Chinese Biopharmaceutical Association-USA, LianYunGang, Jiangsu, China.
80. Li, K.-C., Chang, Y.-H., **Hu, Y.-C***. 2015 May. The use of osteoporotic BMSCs engineered by baculovirus-mediated microRNAs sponge to heal osteoporotic bone defect. **Invited Speaker**. 6th AFOB Regional Symposium. Depok, Indonesia.
81. Li, K.-C., Chang, Y.-H., **Hu, Y.-C***. 2015 May. The use of osteoporotic BMSCs engineered by baculovirus-mediated microRNAs sponge to heal osteoporotic bone defect. 18th Annual Meeting of American Society of Gene and Cell Therapy. New Orleans. USA.
82. **Hu, Y.-C***. 2015 March. Development of hybrid baculoviruses for sustained expression: Applications in regenerative medicine and cancer therapy. **Invited speaker**, ISBiotech 5th Annual Meeting. Washington DC, USA.
83. Lin, S.-Y., Chung, Y.-C., **Hu, Y.-C***. 2014 Nov. Development of recombinant baculovirus for high yield production of enterovirus 71 virus-like particle vaccine. 2014 Annual Meeting of AIChE. Atlanta, USA.
84. **Hu, Y.-C***. 2014 Nov. Development of enterovirus 71 vaccine: From expression system design to production, purification and animal experiments. **Invited Speaker**. 5th International Symposium

- on Innovative Bioprocess (i-Biot). Tainan, Taiwan.
85. Yeh, C.-L., Li, K.-C., Chang, Y.-H., **Hu, Y.-C.***. 2014 Nov. Genetically modified ASCs that persistently expressed antimicrobial peptides for the treatment of osteomyelitis. 7th World Congress of Preventive and Regenerative Medicine. Taipei, Taiwan.
 86. Li, K.-C., Yeh, C.-L., Chang, Y.-H., **Hu, Y.-C.***. 2014 Nov. The use of bone marrow stromal cells modulated by baculovirus-mediated microRNAs sponge to repair osteoporotic bone defects. 7th World Congress of Preventive and Regenerative Medicine. Taipei, Taiwan.
 87. **Hu, Y.-C.***. 2014 Oct. Genetic engineering and biotechnology applications-Roles of chemical engineers. 2014 Cross-strait Chemical Engineering Conference. Dalian, China. (**Invited speaker**)
 88. **Hu, Y.-C.***. 2014 Sep. Baculovirus-mediated gene delivery for tissue engineering. 2014 TERMIS-AP meeting. Daegu, Korea (**Keynote speaker and session chair**).
 89. Yeh, I.-H., Chung, M.-E., **Hu, Y.-C.** 2014 Sep. High-level expression of secretive endoglucanase in Escherichia coli via chromosomal integration. 2014 SBJ 66th Annual meeting. Sapporo, Japan.
 90. Lin, H.-Y., Lin, L.-L., Kao, Y.-C., Hung, C.-L., Lin, S.-Y., **Hu, Y.-C.** 2014 Sep. Production of porcine circovirus type 2 capsid protein as virus-like particle vaccine by using baculovirus/insect cell expression system. 2014 SBJ 66th Annual meeting. Sapporo, Japan.
 91. Lin, K.-C., Meng, C.-L., Chen, G.-C., Tuan, H.-Y., **Hu, Y.-C.** 2014 Sep. GO Enhances autophagy, nuclear transport of cisplatin and cancer cell necrosis and exerts anti-tumor effects. 2014 SBJ 66th Annual meeting. Sapporo, Japan.
 92. Chung, M.-E., Yeh, I.-H., Hu, Y.-C., **Hu, Y.-C.** 2014 Sep. Long-term PHB expression in E. coli using CRISPR/Cas9 gene editing system and CICHE method. 2014 SBJ 66th Annual meeting. Sapporo, Japan.
 93. Lin, S.-Y., **Hu, Y.-C.***. 2014 July. Development of recombinant baculovirus for high yield production of enterovirus 71 virus-like particle vaccine. 16th European Congress of Biotechnology. Edinburgh, United Kingdom.
 94. Chen, C.-L., Chen, G.-Y., Tseng, Y.-W., Lin, K.-C., **Hu, Y.-C.** 2014 June. Baculovirus-mediated PTENP1 long non-coding RNA modulation for human hepatocellular carcinoma (HCC) therapy. 19th BEST Conference on Biotechnology and Bioengineering. Taichung, Taiwan.
 95. Lin, S.-Y., Chung, Y.-C., **Hu, Y.-C.** 2014 June. Development of recombinant baculovirus for high yield production of enterovirus 71 virus-like particle vaccine. 2014 Virus-like particle & nano-particle vaccines. La Jolla, CA, USA.
 96. Yeh, C.-L., Li, K.-C., Chang, Y.-H., **Hu, Y.-C.** 2014 June. Genetically modified ASCs that persistently expressed antimicrobial peptides for the treatment of osteomyelitis. 19th BEST Conference on Biotechnology and Bioengineering. Taichung, Taiwan.
 97. Chen, C.-L., Yuan, P.-H., Chen, G.-Y., Li, K.-C., **Hu, Y.-C.** 2014 May. Baculovirus-mediated miR-122 and miR-151 modulation suppresses Mahlavu cell proliferation/migration in vitro and tumor growth in vivo. 17th Annual Meeting of American Society Gene and Cell Therapy (ASGCT). Washington DC, USA.
 98. Yeh, C.-L., Li, K.-C., Chang, Y.-H., **Hu, Y.-C.** 2014 May. Genetically modified ASCs that persistently expressed antimicrobial peptides for the treatment of osteomyelitis. 17th Annual Meeting of American Society Gene and Cell Therapy (ASGCT). Washington DC, USA.
 99. Li, K.-C., Yeh, C.-L., Chang, Y.-H., **Hu, Y.-C.** 2014 May. Healing of osteoporotic bone defects using bone marrow stromal cells modulated by baculovirus-mediated MicroRNAs sponge. 17th Annual Meeting of American Society of Gene and Cell Therapy (ASGCT), Washington, DC, USA.
 100. Sung, L.-Y., **Hu, Y.-C.** 2014 May. Efficient genome editing in mammalian cells using a CRISPR/Cas9 hybrid baculoviral vector. 17th Annual Meeting of American Society of Gene and

Cell Therapy (ASGCT), Washington, DC, USA.

101. **Hu, Y.-C.***. 2014 March. Baculovirus as a tool for vaccine development. ISBiotech 4th Annual Meeting. Washington DC, USA. **(Invited Speaker)**
102. **Hu, Y.-C.***. 2013 Nov. The Baculovirus-engineered adipose-derived stem cells for bone defect repair in the porcine model: Preclinical safety evaluation. 60th Annual Meeting of Taiwan Institute of Chemical Engineers. Taipei, Taiwan. **(Invited speaker)**
103. **Hu, Y.-C.***. 2013 Nov. Regenerating articular cartilages by genetically engineered ASCs: Prolonged TGF- β 3/BMP-6 expression improved chondrogenesis, matrix deposition, mechanical properties and restored zonal structure. 2013 Annual Meeting of AIChE. San Francisco, USA.
104. **Hu, Y.-C.***. 2013 Oct. Bone and cartilage tissue engineering. 2013 Cross-strait Chemical Engineering Conference. Zhongli, Taiwan. **(Invited speaker)**
105. **Hu, Y.-C.***. 2013 Oct. Regenerating articular cartilages by genetically engineered ASCs: Prolonged TGF- β 3/BMP-6 expression improved chondrogenesis, matrix deposition, mechanical properties and restored zonal structure. 2013 TERMIS-AP meeting. Wuzhen, China. **(Keynote speaker)**
106. **Hu, Y.-C.***. 2013 Oct. Gene therapy for cartilage and bone tissue engineering. The 7th Sino-US Joint Conference of Chemical Engineering. Beijing, China. **(Invited speaker)**
107. Li, K.-C., Yeh, C.-L., Liao, Y.-H., **Hu, Y.-C.** 2013 October. The adipose-derived stem cells engineered by baculovirus for bone defect repair in the porcine model: preclinical safety evaluation. 2013 TERMIS-AP meeting. Shanghai, China.
108. Yeh, C.-L., Li, K.-C., Chang, Y.-H., **Hu, Y.-C.** 2013 October. Genetically modified ASCs expressing antimicrobial peptide for the treatment of osteomyelitis. 2013 TERMIS-AP meeting. Shanghai, China.
109. Liao, Y.-H., **Hu, Y.-C.** 2013 October. Repair of critical size calvarial defects using adipose-derived stem cell modulated with miRNA. 2013 TERMIS-AP meeting. Shanghai, China.
110. Chen, C.-L., Yuan, P.-H., Li, K.-C., Chen, G.-Y., **Hu, Y.-C.** 2013 September. Simultaneous modulation of miR-122 and miR-151 suppressed hepatocellular carcinoma cell proliferation/migration in vitro and tumor growth in vivo. 2013 SBJ 65th Annual meeting. Hiroshima, Japan.
111. Chen, G.-Y., Tuan, H.-Y., **Hu, Y.-C.** 2013 June. Simultaneous induction of autophagy and Toll-like receptor signaling pathways by graphene oxide. Cold Spring Harbor Asia (CSHAsia) 2012 Conference on Vaccine Design, Suzhou, China.
112. Li, K.-C., **Hu, Y.-C.** 2013 June. Preclinical safety evaluation of adipose-derived stem cells engineered by baculovirus for bone defect repair in the porcine model. 2013 TERMIS-EU meeting. Istanbul, Turkey.
113. Lin, C.-Y., Lu, C.-H., Li, K.-C., Chang, Y.-H., **Hu, Y.-C.** 2013 June. Calvarial bone healing augmented by ASC/Gelatin sponge constructs persistently expressing growth factor. 2013 TERMIS-EU meeting. Istanbul, Turkey.
114. **Hu, Y.-C.***. 2013 Mar. Baculovirus as a versatile gene delivery Vector for bone and cartilage tissue engineering. ISBiotech 3rd Annual Meeting. Rosslyn, VA, USA. **(Invited Speaker)**
115. **Hu, Y.-C.***. 2013 Mar. Graphene oxide: Biological responses and applications. 76th Society of Chemical Engineering, Japan (SCEJ) Annual Meeting. Osaka, Japan. **(Invited Speaker)**
116. Chen, G.-Y., Hwang, S.-M., Su, H.-J., **Hu, Y.-C.***. 2012 Nov. The cellular responses of human mesenchymal stem cells and induced pluripotent stem cells to baculoviral vector transduction. The 13th Federation of Asian and Oceanian Biochemists and Molecular Biologists Congress, Bangkok,

Thailand.

117. Sung, L.-Y., **Hu, Y.-C.***. 2012 Nov. Engineering of hybrid baculoviral vector for prolonged transgene expression. 59th Annual Meeting of Taiwan Institute of Chemical Engineers. Taichung, Taiwan.
118. Chen, C.-L., Yuan, P.-S., **Hu, Y.-C.*** 2012 Nov. Baculovirus-mediated miRNA regulation for the modulation of hepatocellular carcinoma cell behavior. 59th Annual Meeting of Taiwan Institute of Chemical Engineers. Taichung, Taiwan. **(Invited speaker)**
119. **Hu, Y.-C.*** 2012 Oct. When gene therapy meets cell therapy: Applications in bone tissue engineering. 2012 Annual Meeting of AIChE. Pittsburgh, USA. **(Invited Speaker)**
120. **Hu, Y.-C.*** 2012 Oct. When gene therapy meets cell therapy: Applications in bone tissue engineering. ISABE meeting. Guilin, China. **(Invited Speaker)**
121. **Hu, Y.-C.** 2012 Sep. Regeneration and revitalization of massive bone defects by genetically engineered ASCs. Crete, Greece.
122. **Hu, Y.-C.** 2012 Aug. When cell therapy meets baculovirus-mediated gene therapy: Applications in tissue engineering. The 24th International Congress of Entomology, Daegu, South Korea. **(Keynote Speaker)**
123. Chen, G.-Y., **Hu, Y.-C.***. 2012 Aug. Cellular responses to BV transduction in human mesenchymal stem cells and induced pluripotent stem cells. The 24th International Congress of Entomology, Daegu, South Korea. **(Travel Award)**
124. Lu, C.-H., **Hu, Y.-C.*** 2012 May. Baculovirus as a vector for genetic modification of adipose-derived mesenchymal stem cells and its applications in cartilage tissue engineering. 16th Annual Meeting of American Society of Gene and Cell Therapy (ASGCT). Philadelphia, USA.
125. Sung, L.-Y., Hwang, S.-M., **Hu, Y.-C.*** 2012 May. Development of a recombinase-based hybrid baculoviral vector for sustained transgene expression. 16th Annual Meeting of American Society of Gene and Cell Therapy (ASGCT). Philadelphia, USA.
126. Luo, W.-Y., Lo, K.-W., Hung, C.-L., **Hu, Y.-C.*** 2012 May. Baculovirus administration triggered adaptive immune response and hindered the subsequent transgene expression. 16th Annual Meeting of American Society of Gene and Cell Therapy (ASGCT). Philadelphia, USA.
127. Chen, G.-Y., **Hu, Y.-C.***. 2012 May. Development of enterovirus 71 virus-like particle vaccine. 2012 Joint Presentation on Biomedical Technology Achievement – NTHU, NCTU, ATIT & NHRI. Hsihchu, Taiwan.
128. Hu, Y.-C. 2012. March. Development of baculovirus for gene delivery: applications in tissue engineering and vaccine development”. 75th Annual Meeting of Society of Chemical Engineering, Japan. Tokyo, Japan. **(Invited Speaker)**
129. Lin, S.-Y., Chung, C.-Y., Chung, Y.-C., Chiu, H.-Y., **Hu, Y.-C.***. 2012, Feb 21-24. Development of enterovirus 71 vaccine based on virus-like particles. 14th Asia Pacific Confederation of Chemical Engineering. Singapore.

D. 專利

1. 胡育誠、陳品諺，田庭綸。自組裝奈米粒子、其製備方法及醫藥組合物 (SELF-ASSEMBLING NANOPARTICLE, PREPARATION METHOD THEREOF AND PHARMACEUTICAL COMPOSITION)。中華民國發明專利申請中。申請日：2024/6/5。
2. 胡育誠、范玉南、周俊彥，王興運，劉珈男。維斯假絲酵母的基因編輯系統、其基因編輯方法、生產十二烷二酸的轉型株及生產十二烷二酸的方法。中華民國發明專利申請中。申請日：2022/9/29。

3. 胡育誠、范玉南,周俊彥. 維斯假絲酵母的基因編輯系統、其基因編輯方法及其應用. 中國發明專利申請中. 申請日: 2022/9/29.
4. 胡育誠, 張晉維, 黃靖雯, 周俊彥. 大腸桿菌基因編輯系統及其基因編輯方法. 中華民國發明專利申請中. 申請日: 2022年01月26日
5. 胡育誠, 張晉維, 黃靖雯, 周俊彥. 大腸桿菌基因編輯系統及其基因編輯方法. 中國發明專利申請中. 申請日: 2022年01月26日.
6. Yu-Chen Hu, Ngoc-Nam Pham, Jun-Yen Chou, Hsing-Yun Wang, Jianan Liu. Gene Editing System of *Candida viswanathii*, gene editing method thereof. Transformant for producing dodecanedioic acid and method for producing dodecanedioic acid. **US patent filed on 2023/03/24.**
7. Yu-Chen Hu, Chin-Wei Chang, Chin-Wen Huang, Jun-Yen Chou. Gene editing system of *Escherichia coli* and gene editing method thereof. **US patent filed on 2022/08/04.** US-2023-0235338-A1.
8. Yu-Chen Hu, Yenlin Chen, Hung-Ming Chang. Microbial composition and processing method for wastewater. US patent application filed.
9. Yu-Chen Hu, Yenlin Chen, An-Banh Du. Black yeast *Aureobasidium melanogenum* strain and method of producing succinic acid using the same. US patent application filed.
10. Yu-Chen Hu, Chih-Che Shen. System for over-expressing target protein and method for over-expressing target protein. US patent application published (US-2018-0282759-A1).
11. Yu-Chen Hu, Hung Li, Jun-Hung Huang, Li-Yu Sung, Chih-Che Shen. Gene expression regulation system of *Synechococcus elongates* PCC 7942 and application thereof. China patent application filed.
12. Yu-Chen Hu, Hung Li, Jun-Hung Huang, Li-Yu Sung, Chih-Che Shen. Gene expression regulation system of *Synechococcus elongates* PCC 7942 and application thereof. US patent application filed.
13. Yu-Chen Hu, Ngoc-Nam Pham, Cho-Yi Chen, June-Yen Chou. Transformant for producing 2,5-Furandicarboxylic acid and preparation method for 2,5-furandicarboxylic acid. **US 11578346B2. 2023/02/14-2040/12/01** (extendable to 2041/08/19).
14. 胡育誠, 范玉南, 陳倬翊, 周俊彥. 戀臭假單胞菌 S12 基因編輯系統及其應用. 中華民國發明專利 I739247. (專利權有效期間: 2021/09/11~ 2039/12/19)
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