

Curriculum Vitae 更新:112-08-17



姓名:王昭仁 Chau-Zen Wang



czwang@kmu.edu.tw



: 07-3121101 轉 2140 轉 23

現任 Current Position :

高雄醫學大學 醫學研究所/生理學科 教授(Professor)

經歷 Experience :

國立成功大學醫學院 博士後研究員

高雄醫學大學 生理學科 助理教授 2007~2012

高雄醫學大學 生理學科 行政教師 2008~2013

高雄醫學大學 生理學科 副教授 2012~2016

高雄醫學大學 醫學研究所 副教授 2016~2019

高雄醫學大學 醫學研究所/生理學科 教授 2019~至今

高雄醫學大學 臨床醫學研究部兼任研究人員 2019~至今

屏東科技大學達人學院 合聘教師 2020~至今

學歷 Academic qualifications :

國立成功大學基礎醫學研究所 哲學博士
國立中興大學分子生物研究所 理學碩士
東海大學理學院生物學系 理學士

榮譽 Honor:

2010 年 研究傑出教師
96~109 學年度「教學評量分數績優教師」
105 學年度 技術移轉優良獎
99-110 學年度 科技部獎勵特殊優秀研究人才
107 學年度科技部獎勵特殊優秀教學人才
107~108 年科技部計畫複審委員
108 學年度 專利獲證優良獎
109 學年度 專利獲證優良獎
2020 年 研究績優教師優秀論文獎

專長 Expertise :

幹細胞再生醫學 Stem cell biology
基因轉殖鼠研究 Transgenic mice
細胞訊息傳遞研究 Cell signal transduction
轉譯醫學研究 Translational medicine
細胞生理研究 Cell physiology
骨關節肌肉與肌腱之發育及再生醫學 Development and Regeneration medicine of musculoskeletal system
膠原蛋白接受體 DDR 功能研究 Discoidin domain receptor study

研究方向 Research direction :

- ◇ 研究幹細胞於骨骼肌肉系統之再生醫學研究 (Study the mechanisms of mesenchymal stem cells in the regenerative medicine of skeletomuscular system)
- ◇ 物理治療於骨骼肌肉系統之再生醫學研究(Study the effect of physical therapy in the regenerative medicine of skeletomuscular system)
- ◇ 基因轉殖鼠模式研究細胞膜上膠原蛋白接受器 Discoidin domain receptor 功能與訊息傳遞機制 (Study the roles and mechanisms of Discoidin domain receptors by using transgenic mice)
- ◇ 骨關節肌肉與肌腱之發育及再生醫學(Development and Regeneration medicine of musculoskeletal system)

興趣 Interest：音樂欣賞、電影、藝術欣賞

ORCID 帳號: <https://orcid.org/0000-0001-6393-2188>

論文發表

1. 2023 Lin Kang, Ai-Lun Yang, Chao-Han Lai, Tsan-Ju Chen, Sung-Yen Lin, Yan-Hsiung Wang, Chau-Zen Wang, Edward M. Conway, Hua-Lin Wu, Mei-Ling Ho, Je-Ken Chang, Chung-Hwan Chen* and Tsung-Lin Cheng*. Chondrocyte thrombomodulin protects against osteoarthritis. INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES. 24(11): 9522.
2. 2022 Hsin-Chiao Chou[†], Sung-Yen Lin[†], Liang-Yin Chou, Mei-Ling Ho, Shu-Chun Chuang, Tsung-Lin Cheng, Lin Kang, Yi-Shan Lin, Yan-Hsiung Wang, Chun-Wang Wei, Chung-Hwan Chen* and Chau-Zen Wang*. Ablation of Discoidin Domain Receptor 1 Provokes an Osteopenic Phenotype by Regulating Osteoblast/Osteocyte Autophagy and Apoptosis. Biomedicines. 10(9):2173. (通訊作者)
3. 2021 Yi-Hsiung Lin[†], Liang-Yin Chou[†], Hsin-Chiao Chou, Chung-Hwan Chen, Lin Kang, Tsung-Lin Cheng and Chau-Zen Wang*. The Essential Role of Stathmin in Myoblast C2C12 for Vertical Vibration-Induced Myotube Formation. Biomolecules. 11:1583. (通訊作者)
4. 2020 Liang-Yin Chou, Chung-Hwan Chen, Shu-Chun Chuang, Tsung-Lin Cheng, Yi-Hsiung Lin, Hsin-Chiao Chou, Yin-Chih Fu, Yan-Hsiung Wang, Chau-Zen Wang*. Discoidin domain receptor 1 regulates Runx2 during osteogenesis of osteoblasts and promotes bone ossification via phosphorylation of p-38. International Journal of Molecular Sciences. 21(19); E7210. (通訊作者)
5. 2020 Hsin-Chiao Chou, Chung-Hwan Chen, Liang-Yin Chou, Tsung-Lin Cheng, Lin Kang, Shu-Chun Chuang, Yi-Shan Lin, Mei-Ling Ho, Yan-Hsiung Wang, Sung-Yen Lin *, Chau-Zen Wang*. Discoidin domain receptors 1 inhibition

- alleviates osteoarthritis via enhancing autophagy. *International Journal of Molecular Sciences*. 21; 6991. (通訊作者)
6. 2020 Liang-Yin Chou[#], Chung-Hwan Chen[#], Yi-Hsiung Lin, Sung-Yen Lin, Yin-Chi Fu, Je-Ken Chang, Mei-Ling Ho*, Chau-Zen Wang*. Discoidin domain receptor 1 regulates endochondral ossification through terminal differentiation of chondrocytes. *FASEB Journal*. 34(4):5767-5781. (通訊作者)
 7. 2019 Pei-Lin Shao, Shun-Cheng Wu, Zih-Yin Lin, Mei-Ling Ho, Chung-Hwan Chen and Chau-Zen Wang*. Alpha-5 Integrin Mediates Simvastatin-Induced Osteogenesis of Bone Marrow Mesenchymal Stem Cells. *International Journal of Molecular Sciences*. 24;20(3). (通訊作者)
 8. 2019 Chen ST, Kang L, Chau-Zen Wang, Huang PJ, Huang HT, Lin SY, Chou SH, Lu CC, Shen PC, Lin YS, Chen CH *. (-)-Epigallocatechin-3-Gallate Decrease Osteoclastogenesis via Modulation of RANKL and Osteoprotegrin. *Molecules*. 24(1):156.
 9. 2019 Lin SY, Kang L, Chen JC, Chau-Zen Wang, Huang HH, Lee MJ, Cheng TL, Chang CF, Lin YS, Chen CH *. (-)-Epigallocatechin-3-gallate (EGCG) enhances healing of femoral bone defect. *Phytomedicine*. 55: 165-171.
 10. 2018 Chau-Zen Wang, Yan-Hsiung Wang, Che-Wei Lin, Tien-Ching Lee, Yin-Chih Fu, Mei-Ling Ho, Chih-Kuang Wang*. Combination of a bioceramic scaffold and simvastatin nanoparticles as a synthetic alternative to autologous bone grafting. *International Journal of Molecular Sciences*. 9(12), 4099. (第一作者)
 11. 2018 Chia-Hsin Chen, Yi-Hsiung Lin, Chung-Hwan Chen, Yan-Hsiung Wang, Ming-Long Yeh, Tsung-Lin Cheng and Chau-Zen Wang*. Transforming growth factor beta 1 mediates low-frequency vertical vibration enhanced tenomodulin and type I collagen for improving the stiffness of rat Achilles tendon. *PLOS ONE*. 13(10): e0205258 (通訊作者)
 12. 2018 Zong-Sheng Wu, Jing-Jou Lo, Sheng-Hua Wu, Chau-Zen Wang, Rong-Fu Chen, Su-Shin Lee, Chee-Yin Chai, Shu-Hung Huang*. Early Hyperbaric Oxygen Treatment Attenuates Burn-Induced Neuroinflammation by Inhibiting

the Galectin-3-Dependent Toll-Like Receptor-4 Pathway in a Rat Model. *International Journal of Molecular Sciences*: 9(8), 2195.

13. 2018 Chau-Zen Wang; Rajalakshmanan Eswaramoorthy; Tzu-Hsiang Lin; Chung-Hwan Chen; Yin-Chih Fu; Chih-Kuang Wang; Shun-Cheng Wu; Gwo-Jaw Wang; Je-Ken Chang^{#*}; Mei-Ling Ho^{#*}. Enhancement of chondrogenesis of adipose-derived stem cells in HA-PNIPAAm-CL hydrogel for cartilage regeneration in rabbits. *Scientific Reports* 8:10526| DOI:10.1038/s41598-018-28893. (第一作者)
14. 2018 Sung-Yen Lin, Lin Kang, Chau-Zen Wang, Han Hsiang Huang, Tsung-Lin Cheng Cheng, Hsuan-Ti Huang, Mon-Juan Lee, Yi-Shan Lin, Mei-Ling Ho, Gwo-Jaw Wang, Chung-Hwan Chen*. (-)-Epigallocatechin-3-gallate (EGCG) enhance osteogenic differentiation of human bone marrow mesenchymal stem cells. *Molecules*. 23(12), 3221.
15. 2018 Shih-Tse Chen, Lin Kang, Chau-Zen Wang, Peng-Ju Huang, Hsuan-Ti Huang, Sung-Yen Lin, Shih-Hsiang Chou, Cheng-Chang Lu, Po-Chih Shen, Yi-Shan Lin, Chung-Hwan Chen*. (-)-Epigallocatechin-3-gallate decrease osteoclastogenesis via modulation of RANKL and osteoprotegrin. *Molecules*. 24, 156.
16. 2018 Sung-Yen Lin, Lin Kang, Jian-Chih Chen, Chau-Zen Wang, Han-Hsiang Huang, Mon-Juan Lee, Tsung-Lin Cheng, Chi-Fen Chang, Yi-Shan Lin, Chung-Hwan Chen*. (-)-Epigallocatechin-3-gallate (EGCG) enhances healing of femoral bone defect. *Phytomedicine* (55): 165-171.
17. 2017 Yi-Hsiung Lin, Chung-Yi Chen, Liang-Yin Chou, Chung-Hwan Chen, Lin Kang, Chau-Zen Wang*. Enhancement of bone marrow-derived mesenchymal stem cell osteogenesis and new bone formation in rats by obtusilactone A. *International Journal of Molecular Sciences* 18(11). 2422. (通訊作者)
18. 2017 Chung-Hwan Chen, Tsang-Hai Huang, Tsung-Lin Cheng, Chi-Fen Chang, Chau-Zen Wang, Meng-Hsing Wu, and Lin Kang*. Exercise training ameliorates glucosamine-induced insulin resistance in ovariectomized rats. *Menopause: The Journal of the North American Menopause Society*. Vol. 24, No. 6, pp. 617-623

19. 2016 Tsung-Lin Cheng, Chao-Han Lai, Shyh-Jou Shieh, Yin-Bo Jou, Jwu-Lai Yeh, Ai-Lun Yang, Yan-Hsiung Wang, Chau-Zen Wang, Chung-Hwan Chen, Guey-Yueh Shi, Mei-Ling Ho*, Hua-Lin Wu* Myeloid thrombomodulin lectin-like domain inhibits osteoclastogenesis and inflammatory bone loss, *Scientific Reports* 6:28340
20. 2015 Shun-Cheng Wu, Hsu-Feng Hsiao, Mei-Ling Ho, Yung-Li Hung, Je-Ken Chang, Gwo-Jaw Wang, Chau-Zen Wang*. Suppression of discoidin domain receptor 1 expression enhances the cell survival and chondrogenesis of adipose-derived stem cells. *Am J Physiol Cell Physiol*. 308: C685–C696. (通訊作者)
21. 2014. Chau-Zen Wang, Yi-Jen Chen, Yan-Hsiung Wang, Ming-Long Yeh, Mao-Hsiung Huang, Mei-Ling Ho, Jen-I Liang and Chia-Hsin Chen*. Low-level laser irradiation improves functional recovery and nerve regeneration in sciatic nerve crush rat injury model. *PLOS ONE*. 9(8): e103348 (第一作者)
22. 2014. Chau-Zen Wang#, Yin-Chih Fu#, Yan-Hsiung Wang, Po-Len Liu, Shih-Ciang Jian, Mei-Ling Ho, Chih-Kuang Wang*. Synthesis and characterization of cationic polymeric nanoparticles as simvastatin carriers for enhancing the osteogenesis of bone marrow mesenchymal stem cells. *Journal of Colloid and Interface Science*. 432C:190-199. (# 共同第一作者)
23. 2014 Chih-Hsiang Chang, Chau-Zen Wang, Je-Ken Chang, Che-Yu Hsu, Mei-Ling Ho*. The Susceptive Alendronate-Treatment Timing and Dosage for Osteogenesis Enhancement in Human Bone Marrow-Derived Stem Cells *Plos One*. 9(8): e105705.
24. 2014. Chia-Hsin Chen, Chau-Zen Wang, Yan-Hsiung Wang, Wei-Ting Liao, Yi-Jen Chen, Chang-Hung Kuo, Hsuan-Fu Kuo* and Chih-Hsing Hung*. Effects of Low-Level Laser Therapy on M1-related Cytokine Expression in Monocytes via Histone Modification. *Mediators of Inflammation*. 2014(2014): 625048
25. 2014. Yi-Jen Chen, Yan-Hsiung Wang, Chau-Zen Wang, Mei-Ling Ho, Po-Lin Kuo, Mao-Hsiung Huang, Chia-Hsin Chen*. Effect of low level laser therapy on chronic compression of the dorsal root ganglion. *Plos One*. 9(3): e89894.

26. 2014. Yan-Hsiung Wang, Jyun-Yi Wu, Pei-Jung Chou, Chung-Hwan Chen, Chau-Zen Wang, Mei-Ling Ho, Je-Ken Chang, Chia-Hsin Chen*, Ming-Long Yeh*. Characterization and evaluation of the differentiation ability of human adipose-derived stem cells growing in scaffold-free suspension culture. *Cytotherapy*. 16(4): 485-95.
27. 2013. Yin-Chih Fu, Chung-Hwan Chen, Chau-Zen Wang, Yan-Hsiung Wang, Je-Ken Chang, Gwo-Jaw Wang, Mei-Ling Ho*, Chih-Kuang Wang*, Preparation of porous bioceramics using reverse thermo-responsive hydrogels in combination with rhBMP-2 carriers: In Vitro and in vivo evaluation. *Journal of the Mechanical Behavior of Biomedical Materials*. 27: 64-76.
28. 2013. Jyun-Yi Wu, Chia-Hsin Chen, Chau-Zen Wang, Mei-Ling Ho, Ming-Long Yeh*, Yan-Hsiung Wang*. Low-power laser irradiation suppresses inflammatory response of human adipose-derived stem cells by modulating intracellular cyclic AMP level and NF- κ B activity. *PLOS ONE*. 8(1): e54067.
29. 2013. Hui-Min Wang, Yi-Ting Chou, Zhi-Hong Wen, Chau-Zen Wang, Chun-Hong Chen, Mei-Ling Ho*. Novel biodegradable porous scaffold applied to skin regeneration. *PLOS ONE*. 8(6): e56330.
30. 2013. Yan-Hsung Wang, Yin-Chih Fu, Hui-Chi Chiu, Chau-Zen Wang, Shao-Ping Lo, Mei-Lin Ho, Po-Len Liu, Chih-Kuang Wang*. Cationic nanoparticles with quaternary ammonium functionalized PLGA-PEG-based copolymers for potent gene transfection. *Journal of Nanoparticle Research*. 15(1):2077-2092.
31. 2013. Chung-Hwan Chen, Yi-Shan Lin, Yin-Chih Fu, Chih-Kuang Wang, Shun-Cheng Wu, Gwo-Jaw Wang, Rajalakshmanan Eswaramoorthy, Yan-Hsiung Wang, Chau-Zen Wang, Yao-Hsien Wang, Sung-Yen Lin, Je-Ken Chang, Mei-Ling Ho*. Electromagnetic fields enhance chondrogenesis of human adipose-derived stem cells in a chondrogenic microenvironment in vitro. *Journal of Applied Physiology*. 114(5): 647-655.
32. 2012. Jyun-Yi Wu, Yan-Hsiung Wang, Gwo-Jaw Wang, Mei-Ling Ho, Chau-Zen Wang, Ming-Long Yeh, Chia-Hsin Chen*. Low-Power GaAlAs Laser Irradiation Promotes the Proliferation and Osteogenic Differentiation of Stem Cells via

IGF1 and BMP2. PLoS One. 7(9): e44027.

33. 2011. Chau-Zen Wang, Mei-Ling Ho, Wen-Cheng Chen, Chien-Chih Chiu, Yung-Li Hung, Chih-Kuang Wang*, Shun-Cheng Wu. Oct. Characterization and enhancement of chondrogenesis in porous hyaluronic acid-modified scaffolds made of PLGA(75/25) blended with PEI-grafted PLGA(50/50). Materials Science and Engineering C -Mater. Biol. Appl, 31(7):1343-1351. (第一作者)
34. 2010. Chau-Zen Wang, Shih-Mao Chen, Chung-Hwan Chen, Chih-Kuang Wang, Gwo-Jaw Wang, Je-Ken Chang* and Mei-Ling Ho*. The Effect of the Local Delivery of Alendronate on Human Adipose-Derived Stem Cell-Based Bone Regeneration. Biomaterials. 31: 8674-8683. (第一作者)
35. 2010. Chau-Zen Wang, Gwo-Jaw Wang, Mei-Ling Ho, Yan-Hsiung Wang, Yen-Hui Chang, and Chia-Hsin Chen*. Low-magnitude vertical vibration enhances myotube formation in C2C12 myoblasts. Journal of Applied Physiology. 109(3): 840-848. (第一作者)
36. 2010. Eswaramoorthy R., C.K. Wang, W.C. Chen, M.J. Tang, M.L. Ho, C.C. Hwang, H.M. Wang and Chau-Zen Wang*. Aug. DDR1 regulates the stabilization of cell surface E-cadherin and E-cadherin-mediated cell aggregation. J Cell Physiol. 224: 387-397. (通訊作者)
37. 2010. Chang Y.H#., Chau-Zen Wang#, C.C. Chiu, L.Y. Chuang, C.C. Hwang. Contributions of active site residues to cofactor binding and catalysis of 3 α -hydroxysteroid dehydrogenase/carbonyl reductase. Biochimica et Biophysica Acta-Proteins & Proteomics. 1804(1): 235-241. (#:Equal contribution of the first author) (共同第一作者)
38. 2010. Hui-Min Wang*, Chung-Yi Chen, Chun-Yen Chen, Mei-Ling Ho, Yi-Ting Chou, Hou-Chien Chang, Chih-Hung Lee, Chau-Zen Wang, I-Ming Chu. (-)-N-Formylanonaine from *Michelia alba* as human tyrosinase inhibitor and antioxidant. Bioorganic & Medicinal Chemistry, 18(14): 5241-5247.
39. 2010. C. K. Wang, Chau-Zen Wang, J.C. Wang, C.C. Hung, W.Y. Li, and W.C. Chen*. Jan. Preparation and Characterization of Calcium Phosphate Deposited on Gold Nanoparticles. Journal of Non-Crystalline Solids. 356:927-932.

40. 2009. Chau-Zen Wang, Y.C. Yeh, and M.J. Tang*. Aug. DDR1/E-cadherin complex regulates the activation of DDR1 and cell spreading. Am. J. Physiol.-Cell Physiol. 297(2): C419-429. (第一作者)
41. 2009. Yeh, Y.C., Chau-Zen Wang, and M.J. Tang*. Discoidin domain receptor 1 activation suppressed alpha2beta1 integrin-dependent cell spreading through inhibition of Cdc42 activity. J Cell Physiol. 218(1):146-156.
42. 2008. Wei W.C., Y.C. Hsu, W.T. Chiu, Chau-Zen Wang, C.M. Wu, Y.K. Wang, M.R. Shen and M.J. Tang*. Mar. Low substratum rigidity of collagen gel promotes ERK phosphorylation via lipid raft to augment cell migration. J Cellular Biochem. 103(4): 1111–1124.
43. 2006. Chau-Zen Wang, H.W. Su, Y.C. Hsu, M.R. Shen, and M.J. Tang*. A discoidin domain receptor 1/SHP-2 signaling complex inhibits $\alpha 2\beta 1$ -integrin-mediated signal transducers and activators of transcription 1/3 activation and cell migration. Mol Biol Cell. 17:2839-52. (第一作者)
44. 2005. Chau-Zen Wang, Y.M. Hsu, and M.J. Tang*. Function of discoidin domain receptor I in HGF-induced branching tubulogenesis of MDCK cells in collagen gel. J Cell Physiol. 203:295-304. (第一作者)
45. 2003. Wang, Y.K., Y.H. Wang, Chau-Zen Wang, J.M. Sung, W.T. Chiu, S.H. Lin, Y.H. Chang, and M.J. Tang. Rigidity of collagen fibrils controls collagen gel-induced down-regulation of focal adhesion complex proteins mediated by alpha2beta1 integrin. J Biol Chem. 278:21886-92. [SCI, IF: 6.696 in subject of Biochemistry & Molecular Biology]

產學合作計畫

年度	產學合作類別	產學合作計畫名稱	教師姓名	期間	產學合作金額
101	高醫-裕強生技股份有限公司產學合作計畫(第一期)	開發具有促進骨生長 Simvastatin 藥物之新型硫酸鈣骨移植材料	王昭仁	101/06/01 ~ 101/09/30	100 千元
102	高醫-裕強生技股份有限公司產學合作計畫(第二期)	評估含有 Simvastatin 之新型硫酸鈣骨材促進骨生長的能力: 活體測試	王昭仁	102/03/1~102/7/31	100 千元

技術移轉:

1. 發明人: 何美玲、王國照、張瑞根、陳崇桓、傅尹志、王志光、陳惠亭、王昭仁、王彥雄、曾誠齊、張玲華、王耀賢。PTH 應用於早期退化性關節炎創新性治療技術。106/07/20。技轉金額: 1.2 億。技轉公司: 華醫康公司。

專利申請:

- 發明人: 王昭仁、何美玲、路卡曼、吳順成、王國照、張瑞根、傅尹志、曾誠齊。玻尿酸水膠及其用途。(中華民國專利號:100124778; 美國專利號:100124778)
- 發明人: 王昭仁、林逸翔、陳中一、陳崇桓、周亮吟。專利名稱: 促骨新生及骨缺損修復藥物 Obtusilactone A 之用途。中華民國專利號:I666017, 公告日: 2019-07-21。
- 發明人: 王昭仁、陳崇桓、周亮吟、周妤、何美玲、林逸翔。專利名稱: 盤基蛋白結構域受體 1 的抑制劑及活化劑及其用途。中華民國專利號: I676482, 公告日: 2019-11-11。
- 發明人: 王昭仁、陳崇桓、周亮吟、周妤、何美玲、林逸翔。專利名稱: METHODS TREATIN OR ALLEVIATING JOINT DISEASES BY ADMINISTERING AN INHIBITOR OF DISCOIDIN DOMAIN RECEPTOR I (DDRI) 盤基蛋白結構域受體 1 的抑制劑及活化劑及其用途。美國專利號: US10946021B2, 公告日: 2021-03-16。

研討會發表與指導論文:

- Chau-Zen Wang, Hsu CY, Chang JK, Wang GJ, Ho ML. A time course and dose-dependent effect of alendronate on the osteogenic differentiation of human bone marrow derived stem cells (presented at 2009-the 36th Congress of the International Union of Physiological Sciences, Kyoto, Japan).

2. YL Hung, ML Ho, JK Chang, GJ Wang, Chau-Zen Wang*. The role of discoidin domain receptors in chondrogenesis of human mesenchymal stem cells. (presented at 2009-Annual meeting of Orthopaedic Association ROC, Taipei, ROC, October 24-25),
3. Mei-Ling Ho, Chau-Zen Wang, Shih-Mao Chen, Chung-Hwan Chen, Chih-Kuang Wang, Gwo-Jaw Wang, Je-Ken Chang. Local Delivery of Alendronate Enhances Human Adipose Derived Stem Cell Based Bone Regeneration (presented at 2010-The 7th Combined Meeting of the Orthopaedic Research Societies, Kyoto, Japan, October 16-20).
4. Zih-Yin Lin, Mei-Ling Ho, Je-Ken Chang, Gwo-Jaw Wang, Chau-Zen Wang*. The roles of $\alpha 5$ integrin in the simvastatin-induced osteogenesis in bone marrow mesenchymal stem cells (presented at 2010- 16th Triennial Congress of the Asia Pacific Orthopaedic Association (APOA), Taipei, Taiwan, Nov. 5 – Nov.7)
5. Chia-Hsin Chen, Chau-Zen Wang, Yan-Hsiung Wang, Mei-Ling Ho, Mao-Hsiung Huang. Low-magnitude vertical vibration enhances myotube formation in C2C12 myoblasts (presented at 2011- Orthopaedic Research Societies (ORS) Annual Meeting in Long Beach, California, January 13-16).
6. Chau-Zen Wang. Enhancement chondrogenic differentiation of adipose-derived stem cells by suppression of discoidin domain receptor I. (oral presented at 2011- Hong Kong-Taiwan Physiology Symposium, National Chiayi University, Chiayi City, Taiwan, March 28-29).
7. Chau-Zen Wang, Lin, T. H, Eswaramoorthy, R, Wu, S. C, Chang, J. K, Wang, G. J, Ho, M. L. Development of injectable hyaluronan modified thermo-responsive hydrogel for adipose-derived stem cell based articular cartilage tissue engineering. (Presented at 2012-Orthopaedic Research Societies (ORS) Annual Meeting in San Francisco, California, USA, February 4-7).
8. Chau-Zen Wang, Wang, GJ, Ho, ML, Chen, CH. Enhancement of transforming growth factor beta 1 and type I collagen expressions in tenocytes through low-magnitude vertical vibration stimulation. (Presented at 2012-Orthopaedic Research Societies (ORS) Annual Meeting in San Francisco, California, USA, February 4-7).
9. Chih-Kuang Wang; Yin-Chih Fu; Tzu-Fun Fu; Hung-Jen Wang; Chau-Zen Wang; Mei-Ling Ho. Synthesis and Characterization of Aspartic acid Modify PLGA-g-PEG Nanoparticles for Bone Targeting. (Poster at the ORS 2013 Annual Meeting in San Antonio, Texas, January 26-29 at the Henry B Gonzalez Convention Center.).

10. Chia-Hsin Chen*, Yi-Jen, Chen and Chau-Zen Wang. Low-magnitude vertical vibration enhances transforming growth factor beta 1 and type I collagen expression in tenocytes. (Poster at the 7th World Congress of the International Society of Physical and Rehabilitation Medicine, 102/06/16~102/06/20 at Beijing, China)
11. Chau-Zen Wang*, Chia-Hsin Chen, Mei-Ling Ho. Enhancement of stathmin and phosphoinositide 3-kinase signaling during myotube formation through low-magnitude vertical vibration stimulation. (Poster at the 102年度「形態及生理醫學學門」新知暨學術交流研討會, 102/09/27~102/09/28 at Taichung, Taiwan)
12. Chau-Zen Wang, Tzu-Hsiang Lin, Je-Ken Chang*, Mei-Ling Ho*. Enhancement adipose-derived stem cells chondrogenesis for cartilage regeneration by using thermo-responsive HA-modified poly(N-isopropylacrylamide) hydrogels. (Poster at the 8th FAOPS (Federation of the Asian and Oceanian Physiological Societies) Congress, 2015/11/22~2015/11/25, Bangkok, Thailand, MOST104-2919-I-182A-001-A1)
13. Sai-Sek Li, Liang-Yin Chou, Chung-Hwan Chen, Yen-ting Liao, Mei-Ling Ho and Chau-Zen Wang*. Study to The Role of Discoidin Domain Receptor 1 (DDR1) in Anterior Cruciate Ligament Transection-Induced OA Using Chondrocyte-Specific Ddr1-Knockout Mice. (Poster at presented at 2016 The 31th Joint Annual Conference of Biomedical Sciences, 2016/03/26~2016/03/27 in Taipei, Taiwan.).
14. Liang-Yin Chou, Chung-Hwan Chen, Mei-Ling Ho and Chau-Zen Wang*. Investigate the roles of discoidin domain receptor 1 (DDR1) during skeletal development. (Poster at presented at 2017 Orthopaedic Research Societies (ORS) Annual Meeting in USA).
15. Sai-Sek Li (李世錫), Study the role of discoidin domain receptor 1 in anterior cruciate ligament transection-induced osteoarthritis, Master's thesis of Kaohsiung Medical University, 2017. (Advisor: Chau-Zen Wang *).
16. Yi Hsiung Lin, Yu Chou, Laing Yin. Chou, Chung Hwan Chen, Mei-Ling Ho, Chau Zen. Wang*. Investigation of osteoarthritis using inducible chondrocyte-specific PROTEIN A knockout mouse. (Poster at presented at 2018-Orthopaedic Research Societies (ORS) Annual Meeting in USA).
17. Chung-Hwan Chen; Shu-Chun Chuang; Yi-Hsiung Lin; Liang-Yin Chou; Chau-Zen Wang*. Discoidin Domain Receptor 1 Regulates The Development of Intervertebral Disc (presented at 2020-Orthopaedic Research Societies (ORS) Annual Meeting in Phoenix Convention Center, Phoenix, Arizona, February 8–11, 2020).

18. Chou Liang Yin; Chun-Hwan Chen; Yi-Hsung Lin; Mei-Ling Ho and Chau-Zen Wang*. DDR1 in Regulating Osteogenesis of Osteoblasts in Osteoblast Knockout Mice (presented at 2020-Orthopaedic Research Societies (ORS) Annual Meeting in Phoenix Convention Center, Phoenix, Arizona, February 8–11, 2020).
19. Zhou-Yu; Yi Hsiung Lin; Laing Yin Chou; Chung Hwan Chen; Mei-Ling Ho and Chau Zen. Wang*. Inducible Conditional DDR1 Knockout in Articular Cartilage Delays Osteoarthritic Progression in Mice Model. (presented at 109 Annual Physiology and Medicine Seminar and Research Achievement Presentation of the Ministry of Science and Technology, August 16-17, 2020)
20. Hsin-Chiao Chou; Liang-Yin Chou; Sung-Yen Lin; Shu-Chun Chuang; Chung-Hwan Chen and Chau-Zen Wang*. DDR1 Play a Crucial Role in Osteopenia (presented at 2021 The 35th Joint Annual Conference of Biomedical Science, June 26-27, 2021)
21. Hsin-Chiao Chou; Sung-Yen Lin, Liang-Yin Chou; Shu-Chun Chuang; Chung-Hwan Chen and Chau-Zen Wang*. Knockout of Protein A in Osteoblast Triggers Cancellous Bone Loss by Regulating Osteocyte Apoptosis and Autophagy. (presented at 2022 The 36th Joint Annual Conference of Biomedical Science, March 25-27, 2022)
22. Shu-chun Chuang; Yi-Shung Lin; Mei-Hsin Cheng; Cyong-yue Liu; Liang-Yin Chou; Kai-Li Su; Chau-Zen Wang*; Chung-Hwan Chen*. Discoidin Domain Receptor 1 Is Required For Postnatal Intervertebral Disk Growth And Development Via Foxa-shh-gli1/2-pax 1-sox 9. (Podium presented at 2023-Orthopaedic Research Societies (ORS) Annual Meeting in Dallas, Texas, USA. February 10-14, 2023).

執行之研究計畫

計畫名稱	計畫內擔任之工作	起迄年月	補助或委託機構	經費
皮膚角質細胞特異性基因轉殖鼠研究:盤基蛋白受體 1 型的功能評估 (II) NSTC 111-2320-B-037 -008 -MY2	主持人	2022/08/01~ 2024/07/31	國科會	150 萬
探討 DDR1 在椎間盤退化所扮演的角色 110-2314-B-037 -029 -MY3	共同主持人	2021/08/01~ 2024/07/31	國科會	414 萬
應用干擾盤基蛋白接受體 1(DDR1)訊息傳遞於退化性關節炎的治療及機制探討- 第三四年 111-2314-B-037 -056 -	共同主持人	2022/08/01~ 2023/07/31	國科會	92.6 萬

皮膚角質細胞特異性基因轉殖鼠研究:盤基蛋白受體 1 型的功能評估 110-2320-B-037 -003 -	主持人	2021/08/01~ 2022/07/31	科技部	122.5 萬
DDR1 於角質形成細胞促進傷口癒合之研究 109-2320-B-037 -005 -	主持人	2020/08/01~ 2021/07/31	科技部	144 萬
應用干擾盤基蛋白接受體 1(DDR1)訊息傳遞於退化性關節炎的治療 109-2314-B-037 -026 -	共同主持人	2020/08/01~ 2021/07/31	科技部	129.5 萬
研究軟骨細胞盤基蛋白結構域受體 1 在骨骼發育過程中調節軟骨內骨化的功能 108-2320-B-037 -008 -	主持人	2019/08/01~ 2020/07/31	科技部	135 萬
研究盤基蛋白結構域受體 1 在脊椎椎間盤發育之調節機制 108-2314-B-037 -059 -MY3	共同主持人	2019/08/01~ 2022/07/31	科技部	135 萬/年
軟骨再生之創新生醫材料及醫療技術研發－3D 生物列印技術開發仿生骨軟骨支架在關節軟骨組織工程應用(3/3) (107-2314-B-037-042- ; 108-2314-B-037 -007 – ;109-2314-B-037-135 -)	共同主持人	2018/08/01~ 2021/07/31	科技部	145 萬/年
利用軟骨細胞特異性盤基蛋白接受體 1(Ddr1)基因剔除鼠研究退化性關節炎之病因以釐清 Ddr1 基因在退化性關節炎進展的角色探討 (MOST 106-2314-B-037 -050 -MY3)	共同主持人	2017/08/01 至 2020/07/31	科技部	(I)180 萬 (II)180 萬 (III)180 萬
骨母細胞特異性 Discoidin domain receptor 1 (Ddr1)基因剔除鼠研究: 探討在骨骼發育異常及骨缺損再生中 DDR1 接受體之功能研究 (MOST 105-2320-B-037 -017 -MY3)	主持人	2016/08/01 至 2019/07/31	科技部	(I)156 萬 (II)156 萬 (III)156 萬
退化性關節炎於軟骨細胞 Ddr1 基因剔除鼠之機轉研究(KMU-DK106003)	共同主持人	2016/08/01 至 2017/07/31	高醫	92 萬
Discoidin domain receptor-1 (DDR1)基因在骨骼發育,骨質疏鬆症及退化性關節炎模式之角色探討: 骨母細胞特異性 Ddr1 基因剔除鼠及軟骨細胞特異性 Ddr1 基因剔除鼠研究 (MOST104-2320-B-037-034)	主持人	2015/08/01 至 2016/07/31	國科會	135 萬
競爭第三期邁向頂尖大學計畫: B13 子計畫:	子計畫	2016/11/01	高醫	35 萬

子計畫十三、以基因轉殖鼠模式探討 Discoidin domain receptor 1 於骨質疏鬆症過程中的分子生物學機制 KMU-TP105B13	主持人	至 2017/10/31		
競爭第三期邁向頂尖大學計畫: B12 子計畫: 以基因轉殖鼠模式探討 Discoidin domain receptor 1 於骨骼發育之軟骨內骨化過程的分子生物學機制(KMU-TP104B12)	子計畫 主持人	2015/08/01 至 2016/07/31	高醫	100 萬
競爭第三期邁向頂尖大學計畫: B4 子計畫: 以基因轉殖鼠模式探討 Discoidin domain receptor-1 於骨與軟骨之發育與退化之分子生物學機制(KMUTP103)	子計畫 主持人	2014/08/01 至 2015/07/31	高醫	92 萬
南部生技醫療器材產業聚落發展計畫 (創新型): 人工骨材合併 simvastatin 載體對促進骨生長之加值性研究』(計畫編號: AZ-17-21-53-102)	共同主持人	2013/12/01 至 2014/11/30	國科會	100 萬
肌母細胞中 Stathmin 與 Phosphoinositide 3-kinase 在垂向震動促進肌管生成之機轉研究(101-2320-B-037 -035 -MY3)	主持人	2012/08/01 至 2015/07/31	國科會	(I)125 萬 (II)125 萬 (III)125 萬
研發溫感支架包覆富含血小板血漿及全身振盪於老鼠斷裂阿基里氏肌腱之療法 (101-2314-B-037-002-MY3)	共同主持人	2012/08/01 至 2015/07/31	國科會	(I)50 萬 (II)50 萬 (III)50 萬
經濟部學界開發產業技術計畫-「研發應用於骨與軟骨再生醫學之創新藥物、生醫材料及醫療器材 5 年計畫」 -B2 組 (100-EC-17-A-19-S1-176)	共同主持人	2011/11/01 至 2016/10/31	經濟部	1500 萬/年
體外 3D 培養模式與裸鼠及兔子關節軟骨缺損模式-探討膠原蛋白接受體 Discoidin domain receptors 在脂肪幹細胞軟骨分化機轉之角色與關節軟骨再生研究(KMU-M110006)	主持人	2011/12/15 至 2012/12/31	高醫	
低能雷射治療在神經系統之效應 (NHRI-EX100-9914EC)	共同主持人	2011/1/1 至 2011/12/31	國衛院	
膠原蛋白接受體 Discoidin domain receptor (DDR) 調控人類脂肪幹細胞軟骨分化之機制與關節軟骨組織工程研究	主持人	2011/1/1 至 2011/12/31	高醫	
DDR1/E-cadherin 複合體之功能性研究 (NSC 98-2320-B-037-021)	主持人	2009/8/1 至 2010/7/31	國科會	

骨與軟骨再生之創新醫藥技術研發 (A3組:治療退化性關節炎及關節軟骨再生之 創新研發) 98-EC-17-A-17-S1-041	子計畫 共同主持人	2008/8/1 至 2010/7/31	經濟部	
膠原蛋白接受體(Discoidin domain receptor)對 脂肪幹細胞之促軟骨分化後的軟骨新生之細 胞訊息傳遞研究(Q098005)	主持人	2009/1/1 至 2009/12/31	高醫	
Discoidin domain receptor 1 與 E-cadherin 結 合與交互調節之研究 (NSC 97-2314-B-037-050)	主持人	2008/10/1 至 2009/7/31	國科會	
雙磷酸鹽類藥物對骨髓幹細胞之促骨分化後 的骨質新生之細胞訊息研究 (Q097010)	主持人	2007/8/1 至 2008/7/31	高醫	