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POSITION

Dean / Office for Operation of Industry and University Cooperation, Kaohsiung Medical University

Director / Orthopaedic Research Center, Kaohsiung Medical University

Professor / Department of Physiology , Kaohsiung Medical University

EDUCATION

1993.09-1999.06 Ph.D., Graduate Institute of Medicine, Kaohsiung Medical College

1983.09-1986.06 M.S., Graduate Institute of Medicine, Kaohsiung Medical College

1973.09-1977.06 B.S., School of Pharmacy, Kaohsiung Medical College

EXPERIENCES

2015.08-present Dean, Office for Operation of Industry and University Cooperation, Kaohsiung Medical University

2001.11- present Director, Orthopaedic Research Center, Kaohsiung Medical University

2008.02-present Professor, Department of Physiology, Kaohsiung Medical University

2006.08-2015.07 Chair, Department of Physiology, Kaohsiung Medical University

1996.08-2007.01 Associate Professor, Department of Physiology, Kaohsiung Medical University

1992.02-1993.01 Research Fellow, Department of Orthopaedics, University of Virginia, USA

1986.08-1996.07 Instructor, Department of Physiology, Kaohsiung Medical College

SPECIALITIES

Bone cell biology, Physiology, Pharmacology, Stem cell/ Regenerative medicine

HONORS& AWARDS

- 2011 National Innovation Award / Institute for Biotechnology and Medicine Industry, Taiwan
- The Prize of Excellent Thesis Competition (2010, 2011, 2013, 2014) / Taiwan Orthopaedic Research Society
- Top Industry Corporation Award (2015)/ Kaohsiung Medical University
- Excellence in Technology Transfer Award (2015)/ Kaohsiung Medical University

- Outstanding Research Award (2008-2010, 2012-2015)/ Kaohsiung Medical University
- Outstanding Award of Patent Proved (2014-2015)/ Kaohsiung Medical University
- Award of Patent Proved (2008-2013)/ Kaohsiung Medical University
- Award of Industry Corporation (2008, 2012-2014)/ Kaohsiung Medical University
- Award of Technology Transfer (2010)/ Kaohsiung Medical University
- The Second Prize of Oral Presentation (2002) / Taiwan Orthopaedic Association

RESEARCH GANTS (recent 5 years)

- The study of combined use of simvastatin/PLGA microspheres with hyaluronan scaffold for articular cartilage defect regeneration. (科技部國家型產學合作計畫-開發型/和康生技), 2015.11-2016.10, NT\$1,800,000
- Researches for Regeneration Medicine on Muscular Skeletal System. (Kaohsiung Medical University), 2014.08-2016.09, NT\$32,933,000
- Development of a novel cross-linked hyaluronan (HA) for adipose derived stem cells (ADSCs)-based tissue engineering in articular cartilage-Biomaterials providing chemical signal and transferring physical stimuli. (科技部), 2014.08-2017.07, NT\$4,650,000
- Develop a medical device for auto-fast isolation in MSCs. (南部生技醫療器材產業聚落發展計畫), 2014.06-2015.05, NT\$1,423,000
- Development of Novel Drugs, Biomaterials and Medicine Devices for Bone and Cartilage Regeneration. (經濟部學界科專計畫), 2011.11-2016.10, NT\$73,500,000
- A innovative research for articular cartilage regeneration-Combined use of hyaluronic acid and non-proteinous drugs as bio-factors to enhance chondrogenesis of stem cells for tissue engineering. (NSC), 2011.05-2014.04, NT\$7,125,000
- The study for the roles of cyclooxygenase-2 in proliferation and differentiation of osteogenic cells and bone development. (NSC), 2010.08-2013.07, NT\$3,246,000
- Project A3 & Core of "Development of Innovative Techniques for Regeneration of Bone & Cartilage" (經濟部學界科專計畫), 2008.07-2011.06, NT\$15,887,000

INDUSTRY CORPORATION PROJECTS (recent 5 years)

- Trauma reconstruction implants for animal experiment. (財團法人金屬工業研究發展中心), 2015.05-2015.12, NT\$900,000
- Surface Modification of Magnesium Alloy Medical Implants for Enabling Degradation and Enhancing Bone Healing- The Animal Study. (財團法人金屬工業研究發展中心), 2015.01-2015.05, NT\$300,000
- Surface Modification of Magnesium Alloy Medical Implants for Enabling Degradation and Enhancing Bone Healing - The Animal Study. (財團法人金屬工業研究發展中心),

2014.06-2014.12, NT\$600,000

- 「TSH-N002」(東生華製藥股份有限公司), 2014.03-2014.12, NT\$120,000
- 仿生理之可塑性細胞培養專用矽膠培養皿開發計畫 (承洺科技有限公司), 2013.09-2014.02, NT\$235,000

PUBLICATIONS (recent 5 years)

1. Shu-Chun Chuang, Chung-Hwan Chen, Yin-Chin Fu, I-Chun Tai, Ching-Ju Li, Li-Fu Chang, **Mei-Ling Ho***, Je-Ken Chang*
Estrogen receptor mediates simvastatin-stimulated osteogenic effects in bone marrow mesenchymal stem cells.
Biochemical Pharmacology (Accepted) (IF:5.009; Ranking: 23/255 in PHARMACOLOGY & PHARMACY)
2. Yin-Chih Fu, Yan-Hsiung Wang, Chung-Hwan Chen, Chih-Kuang Wang, Gwo-Jaw Wang, **Mei-Ling Ho***
Combination of calcium sulfate and a simvastatin-controlled release microsphere enhances bone repair in critical-sized calvarial bone defects.
International Journal of Nanomedicine (Accepted) (IF:4.383; Ranking: 30/255 in PHARMACOLOGY & PHARMACY; 23/80 in NANOSCIENCE & NANOTECHNOLOGY)
3. I-Chun Tai, Yao-Hsien Wang, Chung-Hwan Chen, Shu-Chun Chuang, Je-Ken Chang*, **Mei-Ling Ho***
Simvastatin enhances Rho/actin/cell rigidity pathway that contributing to mesenchymal stem cells osteogenic differentiation.
International Journal of Nanomedicine 2015 Sep; 2015:10 5881–5894 (IF:4.383; Ranking: 30/255 in PHARMACOLOGY & PHARMACY; 23/80 in NANOSCIENCE & NANOTECHNOLOGY)
4. 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.
American Journal of Physiology-Cell Physiology 2015 May 1;308(9):C685-96 (IF:3.674; Ranking: 17/81 in PHYSIOLOGY; 81/185 in CELL BIOLOGY)
5. Chau-Zen Wang, Yin-Chih Fu, Shih-Ciang Jian, Yan-Hsung Wang, Po-Len Liu, **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 2014 Oct;432:190-9 (IF: 3.552; Ranking: 38/136 in

CHEMISTRY, PHYSICAL)

6. Kuang-Chan Hsieh, Chai-Lin Kao, Chien-Wei Feng, Zhi-Hong Wen, Hsin-Fang Chang, Shu-Chun Chuang, Gwo-Jaw Wang, **Mei-Ling Ho**, Shou-Mei Wu*, Je-Ken Chang*, Hui-Ting Chen*
A Novel Anabolic Agent: A Simvastatin Analogue without HMG-CoA Reductase Inhibitory Activity.
Organic Letters 2014 Sep;16(17):4376-9 (IF: 6.324, Ranking: 3/58 in CHEMISTRY, ORGANIC)
7. Chih-Hsiang Chang, Chau-Zen Wang, Je-Ken Chang, **Mei-Ling Ho***
The susceptible alendronate-treatment timing and dosage for osteogenesis enhancement in human bone marrow-derived stem cells.
PLOS ONE 2014 Aug;9(8):e105705 (IF: 3.534; Ranking: 8/55 in MULTIDISCIPLINARY SCIENCES)
8. Yin-Chih Fu, Chih-Chun Lin, Je-Ken Chang, Kao-Chi Chung, Chung-Hwan Chen, I-Chun Tai, Gwo-Jaw Wang, **Mei-Ling Ho***
A novel single pulsed electromagnetic field stimulates osteogenesis of bone marrow mesenchymal stem cells and bone repair.
PLOS ONE March 2014, Volume 9, Issue 3, e91581 (IF: 3.534; Ranking: 8/55 in MULTIDISCIPLINARY SCIENCES)
9. 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 March 2014, Volume 9, Issue 3, e89894 (IF: 3.73; Ranking: 7/56 in MULTIDISCIPLINARY SCIENCES)
10. 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 April 2014, 16(4) 485-95 (SCI) (IF: 3.055; Ranking: 45/160 in BIOTECHNOLOGY & APPLIED MICROBIOLOGY ; 10/17 in CELL & TISSUE ENGINEERING; 97/185 in CELL BIOLOGY; 26/67 in HEMATOLOGY; 42/121 in MEDICINE, RESEARCH & EXPERIMENTAL)
11. Yan-Hsung Wang, Yin-Chih Fu, Hui-Chi Chiu, Chau-Zen Wang, Shao-Ping Lo, **Mei-Ling 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 (2013) 15:2077 (IF: 2.175; Ranking: 53/152 in CHEMISTRY, MULTIDISCIPLINARY ; 57/241 in MATERIALS SCIENCE, MULTIDISCIPLINARY; 31/69 in NANOSCIENCE & NANOTECHNOLOGY)

12. Yin-Chih Fu, Chung-Hwan Chen, Chau-Zen Wang, Yan-Hsung 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 Volume 27, November 2013, Pages 64–76 (SCI) (IF: 2.814; Ranking: 15/72 in ENGINEERING, BIOMEDICAL ; 9/25 in MATERIALS SCIENCE, BIOMATERIALS)
13. Yeh-Long Chen, Chih-Hua Tseng, You-Chih Lo, Ru-Wei Lin, Chain-Fu Chen, Gwo-Jaw Wang, **Mei-Ling Ho**, Cherng-Chyi Tzeng*
Synthesis of Aminoalkoxy Substituted 4,5-Diphenylisoxazole Derivatives as Potential Anti-osteoporotic Agents.
Medicinal Chemistry 2013 Aug;9(5):748-55 (SCI) (IF: 1.373; Ranking: 48/81 in CHEMISTRY, MEDICINAL)
14. Rei-Cheng Yang, Chin Hsu, Tzu-Ying Lee, Kung-Kai Kuo, Shou-Mei Wu, Yen-Hsu Chen, **Mei-Ling Ho**, Xing-Hai Yao, Chia-Hsiung Liu and Maw-Shung Liu*
Transcriptional Regulation of the Group IIA Secretory Phospholipase A2 Gene by C/EBP δ in Rat liver and its Relationship to Hepatic luconeogenesis during Sepsis.
Emergency Medicine: Open Access Volume 3 Issue 5 1000151, August, 2013
15. I-Chun Tai, Yin-Chih Fu, Chih-Kuang Wang, Je-Ken Chang, **Mei-Ling Ho***
Local delivery of controlled-release simvastatin/PLGA/HAP microspheres enhances bone repair.
International Journal of Nanomedicine 2013:8 3895-3905 (SCI) (IF: 3.13; Ranking: 26/66 in NANOSCIENCE & NANOTECHNOLOGY ; 70/261 in PHARMACOLOGY & PHARMACY)
16. Shu-Fen Liou., Jong-Hau Hsu, I-Ling Lin, **Mei-Ling Ho**, Pei-Chuan Hsu, Li-Wen Chen, Ing-Jun Chen, Jwu-Lai Yeh*
KMUP-1 Suppresses RANKL-Induced Osteoclastogenesis and Prevents Ovariectomy-Induced Bone Loss: Roles of MAPKs, Akt, NF-kB and Calcium/Calcineurin/NFATc1 Pathways.
PLOS ONE 2013 Jul; 8(7) e69468 (SCI) (IF: 4.125; Ranking: 65/181 in CELL BIOLOGY ; 22/112 in MEDICINE, RESEARCH & EXPERIMENTAL)
17. Shu-Chun Chuang, Hsiu-Jung Liao, Ching-Ju Li, Gwo-Jaw Wang, Je-Ken Chang*, **Mei-Ling Ho***
Simvastatin enhances human osteoblast proliferation involved in mitochondrial energy generation.
European Journal of Pharmacology 2013 Jun 11;714(1-3):74-82 (SCI) (IF: 2.516; Ranking: 108/261 in PHARMACOLOGY & PHARMACY)
18. 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 2013 Jun 10;8(6):e56330 (SCI) (IF: 4.125; Ranking: 65/181 in CELL BIOLOGY ; 22/112 in MEDICINE, RESEARCH & EXPERIMENTAL)

19. Mon-Juan Lee, Hui-Ting Chen, **Mei-Ling Ho**, Chung-Hwan Chen, Shu-Chun Chuang, Shao-Hung Hung, Yin-Chih Fu, Gwo-Jaw Wang, Lin Kang, Je-Ken Chang*
PPAR γ silencing enhances osteogenic differentiation of human adipose-derived mesenchymal stem cells.
Journal of Cellular and Molecular Medicine, Sep 2013, 17(9) 1188-1193 (SCI) (IF: 4.753; Ranking: 52/185 in CELL BIOLOGY ; 19/121 in MEDICINE, RESEARCH & EXPERIMENTAL)
20. Shun-Cheng Wu, Chung-Hwan Chen, Je-Ken Chang, Yin-Chih Fu, Chih-Kuang Wang, Rajalakshmanan Eswaramoorthy, Yi-Shan Lin, Yao-Hsien Wang, Sung-Yen Lin, Gwo-Jaw Wang, **Mei-Ling Ho***
Hyaluronan initiates chondrogenesis mainly via CD44 in human adipose derived stem cells.
Journal of Applied Physiology 2013 Jun;114(11):1610-8 (SCI) (IF: 3.753; Ranking: 6/85 in SPORT SCIENCES; 15/79 in PHYSIOLOGY)
21. Chung-Hwan Chen, Lin Kang, Ru-Wei Lin, Yin-Chih Fu, Yi-Shan Lin, Je-Ken Chang, Hui-Ting Chen, Chia-Hsin Chen, Sung-Yen Lin, Gwo-Jaw Wang, **Mei-Ling Ho***
(-)-Epigallocatechin-3-gallate (EGCG) improves bone microarchitecture in ovariectomized rats.
Menopause (2013) Vol. 20, No. 6, pp. 687/694 (SCI) (IF: 3.758; Ranking: 7/79 in OBSTETRICS & GYNECOLOGY)
22. Jyun-Yi Wu, Ming-Long Yeh, Chia-Hsin Chen, **Mei-Ling Ho**, Chau-Zen Wang, 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 2013;8(1):e54067 (SCI) (IF: 4.092; Ranking:12/84 in BIOLOGY)
23. 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: 647-655, 2013 Mar (SCI) (IF: 3.753 in 2011; Ranking:6/85 in SPORT SCIENCES; 15/79 in PHYSIOLOGY)
24. 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 (2012) 7(9): e44027 (SCI) (IF: 4.092; Ranking:12/84 in BIOLOGY)

25. Rajalakshmanan Eswaramoorthy, Chia-Chi Chang, Shun-Cheng Wu, Gwo-Jaw Wang, Je-Ken Chang*, **Mei-Ling Ho***
Sustained release of PTH(1-34) from PLGA microspheres suppresses osteoarthritis progression in rats.
Acta Biomaterialia Volume 8, Issue 6, July 2012, Pages 2254–2262 (SCI) (IF: 4.824; Ranking:3/70 in ENGINEERING, BIOMEDICAL; 3/25 in MATERIALS SCIENCE, BIOMATERIALS)
26. Hui-Ting Chen, Mon-Juan Lee, Chung-Hwan Chen, Shu-Chun Chuang, **Mei-Ling Ho**, Shao-Hung Hung, Yin-Chih Fu, Yan-Hsiung Wang, Hsin-I Wang, Gwo-Jaw Wang, Lin Kang, Je-Ken Chang * (#These authors contributed equally to this manuscript)
Proliferation and differentiation potential of human adipose-derived mesenchymal stem cells isolated from elderly patients with osteoporotic fractures.
Journal of Cellular and Molecular Medicine 2012 Mar;16(3):582-592 (SCI) (IF: 4.608 in 2010; Ranking: 59/177 in CELL BIOLOGY; 18/106 in MEDICINE, RESEARCH & EXPERIMENTAL)
27. Chau-Zen Wang, **Mei-Ling Ho**, Wen-Cheng Chen, Chien-Chih Chiu, Yung-Li Hung, Chih-Kuang Wang*, Shun-Cheng Wu
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. 2011 Oct 31(7) 1343-1351 (SCI) (IF: 2.178 in 2010; Ranking: 15/25 in MATERIALS SCIENCE, BIOMATERIALS)
28. Chih-Hua Tseng, Ru-Wei Lin, Yeh-Long Chen, Gwo-Jaw Wang, **Mei-Ling Ho**, Cherng-Chyi Tzeng*
Discovery of Indeno[1,2-c]quinoline Derivatives as Inhibitors of Osteoclastogenesis Induced by Receptor Activator of NF-kappa B Ligand (RANKL).
Journal Of Medicinal Chemistry 54(8) 3103-3107 Apr-28 2011 (SCI) (IF: 5.207 in 2010 ; Ranking: 3/54 in CHEMISTRY, MEDICINAL)
29. **Mei-Ling Ho***, Je-Ken Chang, Chung-Hwan Chen, Yin-Chih Fu, Chih-Kuang Wang, Chau-Zen Wang, Rajalakshmanan Eswaramoorthy, Shun-Cheng Wu.
Chapter 14: Application of adipose derived stem cells for bone and cartilage regeneration. "Mesenchymal Stem Cells", editor: Yin Xiao, Nova Science Publishers, Inc. Hauppauge, NY 11788, 2011. ISBN:978-61324-669-6
30. Ching-Ju Li, Je-Ken Chang, Gwo-Jaw Wang, **Mei-Ling Ho***
Constitutively Expressed COX-2 in Human Osteoblasts Positively Regulates Akt Signal Transduction via Suppression of PTEN Activity.
Bone 2011 Feb 1;48(2):286-97 (SCI) (IF: 4.601 in 2010 ; Ranking: 26/116 in ENDOCRINOLOGY & METABOLISM)