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Ling-Hua Chang , Ph.D.

現職：

高雄醫學大學 再生醫學及細胞治療研究中心 博士後  
研究員

高雄醫學大學 醫學院骨科學研究中心 博士後研究員

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#### Education and Training :

PHD of Science, the institute of Basic Medical Sciences, National Cheng Kung University

Master of Science, Department of Physiology, the institute of Medical Science, Kaohsiung  
Medical University

Bachelor, Department of Nursing, Kaohsiung Medical University

#### Experience :

- Posterdoctoral Fellow, Regenerative Medicine and Cell Therapy Research Center (RCC), Kaohsiung Medical University (2019~)
- Project Development Director, PharmTech Health CO., LTD. (2017-2019)
- Posterdoctoral Fellow, Orthopedics Center, Kaohsiung Medical University (2013-2016)
- Posterdoctoral Fellow, Regenerative Medicine and Cell Therapy Research Center (RCC), Kaohsiung Medical University (2019~)
- Project Development Director, PharmTech Health CO., LTD. (2017-20119)
- Posterdoctoral Fellow, Orthopedics Center, Kaohsiung Medical University (2013-2016)
- Posterdoctoral Fellow, Department of Pharmacology, Kyoto University Faculty of Medicine, Japan (2012-2013)
- Research Assistant, Orthopedics Center, Kaohsiung Medical University (2005-2007)
- Nursing Teacher, Kao-Mei Medical& Management College ( 1999-2004 )
- Teaching Assistant, Department of Physiology, Kaohsiung Medical University
- Par-time Surveyor & Research Assistant, National Science Commission

#### Thesis

Ph.D. Thesis:

Investigation of Inducible Inflammatory Factor CEBPD in Molecular Pathogenesis of Alzheimer' s Disease and Rheumatoid Arthritis

Adviser: Professor Huei-Sheng Huang

Master Thesis :

# Effects of Anti-inflammatory Drugs on the Expressions of Normal Functional Genes and Marker Genes of Terminal Differentiation in Cultured Human Articular Chondrocytes

**Adviser: Professor Mei-Ling Ho**

Work catalog

A. The work in biotech/pharm Company

Responsible for a new drug development from preclinical study to clinical study. Organizing and writing the preclinical study that include the pharmacology study, pharmacokinetic study, toxicology study. Responsible for clinical study design of osteoarthritis. FDA IND application and submission.

B. The work in post-doctor

Independence for design the experiment, analysis the data, conclude the results and writing the paper. Responsible for management the project and finishing the report. Leading a 4-5 persons research group. Application for research programs in college, IDB, MOST and DOIT.

**C. Paper publication**

1. Chang JK, Chang LH, Hung SH, Wu SC, Lee HY, Lin YS, Chen CH, Fu YC, Wang GJ, Ho ML: Parathyroid Hormone 1–34 Inhibits Terminal Differentiation of Human Articular Chondrocytes and Osteoarthritis Progression in Rats. *Arthritis and rheumatism* 2009, 60(10):3049-3060.

(2009 IF: 7.332, RHEUMMATOLOGY Ranking =2/26 (7.7%))( Second author)

2. Ko CY, Chang LH, Lee YC, Sterneck E, Cheng CP, Chen SH, Huang AM, Tseng JT, Wang JM. CCAAT/enhancer binding protein delta (CEBPD) elevating PTX3 expression inhibits macrophage-mediated phagocytosis of dying neuron cells. *Neurobiology of aging* 2012, 33(2):422 e411-425.

(2012 IF: 6.634, GERIATRICS & GERONTOLOGY Ranking =2/44 (4.55%), NEUROSCIENCES Ranking =23/243 ((9.4%)) (Co-first author)

3. Chang LH, Huang HS, Wu PT, Jou IM, Pan MH, Chang WC, Wang DD, Wang JM. Role of macrophage CCAAT/enhancer binding protein delta in the pathogenesis of rheumatoid arthritis in collagen-induced arthritic mice. *PLoS one* 2012, 7(9):e45378.

(2012 IF: 4.092, Biology Ranking =12/85 (14.12%))(First author)

4. Ling-hua Chang, Shun-Cheng Wu, Chung-Hwan Chen, Gwo-Jaw Wang, Je-ken Chang, Mei-Ling Ho, Parathyroid hormone 1-34 reduces dexamethasone-induced terminal differentiation in human articular chondrocytes. *Toxicology*. 2016 Aug 10;368-369:116-128.

(2015 IF: 3.817, Pharmacology & Pharmacy Ranking= 51/255 (20%), Toxicology Ranking= 13/90 (14.4%) (First author)

5. Chen CH, Ho ML, Chang LH, Kang L, Lin YS, Lin SY, Wu SC, Chang JK, Parathyroid hormone-(1-34) ameliorated knee osteoarthritis in rats via autophagy. *Journal of applied physiology* 2018, 124(5):1177-1185

(2017 IF: 3.351, Sport Sciences Ranking= 11/81 (13.5%) (Third author)

6. Ling-hua Chang, Chung-Hwan Chen, Shun-Cheng Wu, Je-ken Chang, Mei-Ling Ho, Cyclooxygenase-2 regulates PTHrP transcription in human articular chondrocytes and is involved in the pathophysiology of osteoarthritis in rats. *Journal of Orthopaedic Translation*. 2021, 30: 16-30

(2020 IF: 5.191, ORTHOPEDICS 11/119 (Q1) (First author))

7. C-H. Chen, L. Kang, L-H. Chang, T-L. Cheng, S-Y. Lin, S-C. Wu, Y-S. Lin, S-C. Chuang, T-C. Lee, J-K. Chang, M-L. Ho, Intra-articular low-dose parathyroid hormone (1-34) improves mobility and articular cartilage quality in a preclinical age-related knee osteoarthritis model. *The Bone & Joint Journal*. 2021;10(8):514–525.

(2020 IF: 5.082, ORTHOPEDICS 4/119 (Q1)) (Third author)

8. Shun-Cheng Wu, Chih-Hsiang Chang, Ling-Hua Chang, Che-Wei Wu, Jhen-Wei Chen, Chung-Hwan Chen, Yi-Shan Lin, Je-Ken Chang and Mei-Ling Ho, Simvastatin Enhances the Chondrogenesis But Not the Osteogenesis of Adipose-Derived Stem Cells in a Hyaluronan Microenvironment. *Biomedicines*. 2021, 9(5), 559

(2020 IF: 6.081, BIOCHEMISTRY & MOLECULAR BIOLOGY 65/297 (Q1); MEDICINE, RESEARCH & EXPERIMENTAL 32/140 (Q1)) (Third author)

#### **D. Conference Papers**

1. Anti-inflammatory Drug Effects on the Differentiation Functions of Cultured Human Articular Chondrocytes.

The 51nd Annual Meeting of the Orthopaedic Research Society, Washington DC, USA, February 20-23, 2005

2. Effects of COX-2 inhibitors on the expressions of marker genes in normal and terminal differentiation of cultured human articular chondrocytes.

The 52nd Annual Meeting of the Orthopaedic Research Society, Chicago, USA, March 19-22, 2006

3. Dexamethasone effects on the expressions of marker genes in normal and terminal differentiation of cultured human articular chondrocytes.

The 52nd Annual Meeting of the Orthopaedic Research Society, Chicago, USA, March 19-22, 2006

4. The Influence of COX-2 Inhibitors on Terminal Differentiation Changes in Cultured Human Articular Chondrocytes.

The 53rd Annual Meeting of Orthopaedic Research Society, San Diego, USA, February 11-14, 2007

5. Role of macrophage CCAAT/enhancer binding protein delta in the pathogenesis of rheumatoid arthritis in collagen-induced arthritic mice

2012 Taiwan-Japan Joint Symposium on Cell Signaling and Gene Regulation, November 11-12, 2012

Poster award

6. Up-regulation of Cyclooxygenase-2 in osteoarthritic chondrocytes alters expression of degeneration marker genes

Orthopedic Research Society 2017 Annual Meeting, San Diego, USA, March 19-22, 2017, Abstract accepted for poster presentation.

7. Parathyroid hormone 1-34 (PTH1-34) rescues dexamethasone induced terminal differentiation in human articular chondrocytes

Orthopedic Research Society 2016 Annual Meeting, Orlando, USA, March 5-8, 2016, Abstract accepted for poster presentation