

William Chih-Wei Chang BSc (Pharm), MSc, PhD

Assistant Professor • Kaohsiung Medical University

EDUCATION & TRAINING

Postdoctoral Fellow National Cheng Kung University	2020–2021
Visiting Scientist King's College London, UK	2018–2019
PhD Kaohsiung Medical University	2015–2019
MSc Kaohsiung Medical University	2013–2015
Exchange Student University of South California, USA	2012–2012
BSc Chia Nan University of Pharmacy & Science	2009–2013

HONOURS & AWARDS

Scholarships/Grants

PCC2019 Travel Grant , Partnership for Clean Competition, USA (USD 1,900)	2019
Graduate Student Award for Academic Excellence , KMU	2019
Graduate Student Study Abroad Program , MOST (TWD 600,000)	2018
Elite Scholarships , Elite-Well Education Foundation (TWD 220,000)	2017
Postgraduate Merit Scholarships , KMU (TWD 60,000)	2016–2018
5th Place for Excellent Teaching Assistant , KMU	2015
Student Journal Paper Award , KMU (TWD 82,000)	2014–2019
Graduate Student Attending International Conferences , MOST (TWD 229,000)	2014–2019
International Summer Program and Seminar in USC , CNU (TWD 75,000)	2012

Awards

Futuristic Breakthrough Technology Award , 2019 Future Tech (TWD 10,000)	2019
Best Popularity Award (Oral), Taiwan Scientific Symposium in Cambridge	2018
Futuristic Breakthrough Technology Award & Best Popular Tech Award , 2017 Future Tech (TWD 10,000)	2017
Best Paper Award (Poster), 2017 Annual Conference of PE & Sport Academic Societies in Taiwan	2017
Excellent Work (Poster), Cross-University Research and Learning Competition	2016
Gold Medal Award (Poster), Traditional Chinese Medicine International Forum	2016
1st Place (Oral), 2015 International Conference of Nutrition Aids for Athlete Performance (TWD 5,000)	2015
ICN2021 Preparation Committee Award (Poster), 12th Asian Congress of Nutrition (JPY 20,000)	2015
Excellent Intern Award , Tainan Municipal Hospital	2013

CURRICULUM VITAE (FEB 2021)

CERTIFICATION

Professional Certificate

- Pharmacist Certificate by MOHW
- Certified Sports Nutrition Specialist by TSSN
- Doping Control Officer Certificate by CTADA

RELEVANT PROFESSIONAL EXPERIENCE

Journal Reviewer

<i>Complementary Therapies in Clinical Practice</i> [SCI, IF=1.770]	Dec 2020
<i>British Journal of Nutrition</i> [SCI, IF=3.334]	Oct 2020
<i>Pharmaceutical Biology</i> [SCI, IF= 2.971]	Aug 2020
<i>Journal of AOAC International</i> [SCI, IF= 1.510]	Oct 2018, July 2020
<i>Sports Research Review</i>	Apr 2020
<i>Journal of Integrative Medicine</i> [SCI, IF= 2.446]	Mar 2020
<i>Medical Science Monitor</i> [SCI, IF= 1.918]	Feb 2020
<i>Journal of Complementary Medicine Research</i>	May 2018
<i>Physiology International</i> [SCI, IF= 1.410]	Apr 2017
<i>Journal of Intercultural Ethnopharmacology</i>	Apr, Jul & Nov 2016
<i>PloS One</i> [SCI, IF= 2.740]	Apr 2016
<i>Journal of Nutritional Health & Food Science</i>	Mar 2016

PUBLICATIONS

JOURNAL PAPERS

- Chang, W.C.W.**, Wang, P.H., Chang, C.W., Chen, Y.C., Liao, P.C.* (2021). Extraction strategies for tackling complete hair metabolome using LC-HRMS-based analysis. *Talanta*, 223, 121708. (IF=5.339, 11/86 (12.8%), Chemistry, Analytical).
- Chang, W.C.W.**, Chen, Y.T., Chen, H.J.*, Hsieh, C.W., Liao, P.C.* (2020). Comparative UHPLC-Q-Orbitrap HRMS-based metabolomics unveils biochemical changes of black garlic during aging process. *Journal of Agricultural and Food Chemistry*, 68, 14049–14058. (IF=4.192, 4/58 (6.9%), Agriculture, Multidisciplinary).
- Chang, W.C.W.***, Cowan D.A., Walker C.J., Wojek N., Brailsford A.D. (2020). Determination of anabolic steroids in dried blood using volumetric absorptive microsampling and GC-MS/MS: Application to a testosterone gel administration study. *Journal of Chromatography A*, 628, 461445. (IF=4.049, 14/86 (16.3%), Chemistry, Analytical).
- Chang, W.C.W.†**, Wu, H.Y.†, Yeh, Y., Liao, P.C.* (2020). Untargeted foodomics strategy using high-resolution mass spectrometry reveals potential indicators for fish freshness. *Analytica Chimica Acta*, 1127, 98–105. (IF=5.977, 10/86 (11.8%), Chemistry, Analytical).
- Chang, W.C.W.**, Yen, C.C., Wu, Y.T., Hsu, M.C.* (2020). Chinese herbal decoction (Danggui Buxue Tang) supplementation augments physical performance and facilitates physiological adaptations in swimming rats. *Pharmaceutical Biology*, 58(1), 545–552. (IF=2.971, 51/234 (21.8%), Plant Sciences).
- Yen, C.C., Tung, C.W., **Chang, C.W.**, Tsai, C.C., Hsu, M.C.*, Wu, Y.T.* (2020). Potential risk of higenamine misuse in sports: Evaluation of *Lotus plumule* extract products and a human study. *Nutrients*, 12(2), 285. (IF=4.546, 17/89 (19.1%), Nutrition & Dietetics).

CURRICULUM VITAE (FEB 2021)

- Chang, C.W.**, Chen, C.Y., Yen, C.C., Wu, Y.T., Hsu, M.C.* (2018). Repressed exercise-induced hepcidin levels after Danggui Buxue Tang supplementation in male recreational runners. *Nutrients*, 10(9), 1318. (IF=4.546, 17/89 (19.1%), Nutrition & Dietetics).
- Chang, C.W.**, Hu, S.Y., Huang, G.Q., Hsu, M.C.* (2018). Ephedra alkaloid content of Chinese herbal formulae sold in Taiwan. *Drug Testing and Analysis*, 10(2), 350–356. (IF=2.903, 30/86 (34.9%), Chemistry, Analytical).
- Chang, C.W.**, Yen, C.C., Wu, M.T., Hsu, M.C., Wu, Y.T.* (2017). Microwave-assisted extraction of cannabinoids in hemp nut using response surface methodology: Optimization and comparative study. *Molecules*, 22(11), 1894. (IF=3.267, 70/177 (39.6%), Chemistry, Multidisciplinary).
- Yen, C.C., **Chang, C.W.**, Hsu, M.C.* , Wu, Y.T.* (2017). Self-nanoemulsifying drug delivery system for resveratrol: Enhanced oral bioavailability and reduced physical fatigue in rats. *International Journal of Molecular Sciences*, 18(9), 1853. (IF=4.556, 74/297 (24.9%), Biochemistry & Molecular Biology).
- Chang, C.W.**, Yeh, Y.Y., Chang, L.C., Hsu, M.C., Wu, Y.T.* (2017). Rapid determination of oxindole alkaloids in Cat's claw by HPLC using ionic liquid-based microwave-assisted extraction and silica monolithic column. *Biomedical Chromatography*, 31(8), e3925. (IF=1.728, 58/86 (67.4%), Chemistry, Analytical).
- Chang, C.W.**, Tung, C.W., Tsai, C.C., Wu, Y.T.* , Hsu, M.C.* (2017). Determination of cannabinoids in hemp nut products in Taiwan by HPLC-MS/MS coupled with chemometric analysis: quality evaluation and a pilot human study. *Drug Testing and Analysis*, 9(6), 888–897. (IF=2.903, 30/86 (34.9%), Chemistry, Analytical).
- Chang, C.W.**, Hsu, M.C.* (2017). Doping control: The use of glucocorticosteroids. [Article in Chinese] *Formosan Journal of Medicine*, 21(3), 297–301.
- Chang, C.W.**, Wong, C.Y., Wu, Y.T.* , Hsu, M.C.* (2017). Development of a solid dispersion system for improving the oral bioavailability of resveratrol in rats. *European Journal of Drug Metabolism and Pharmacokinetics*, 42(2), 239–249. (IF=1.913, 200/270 (74.1%), Pharmacology & Pharmacy).
- Chang, C.W.**, Chen, Y.M.†, Hsu, Y.J.†, Huang, C.C., Wu, Y.T.* , Hsu, M.C.* (2016). Protective effects of the roots of *Angelica sinensis* on strenuous exercise-induced sports anemia in rats. *Journal of Ethnopharmacology*, 193, 169–178. (IF=3.690, 3/28 (10.7%), Integrative & Complementary Medicine).
- Chang, C.W.**, Hsu, M.C.* (2016). Telmisartan in the doping monitoring program. [Article in Chinese] *Journal of Exercise Physiology and Fitness*, 23, 13–22.
- Chang, C.W.**, Wang, C.Y., Wu, Y.T.* , Hsu, M.C.* (2016). Enhanced solubility, dissolution, and absorption of lycopene by a solid dispersion technique: The dripping pill delivery system. *Powder Technology*, 301, 641–648. (IF=4.142, 31/143 (21.7%), Engineering, Chemical).
- Wu, Y.T.* , Cai, M.T., **Chang, C.W.**, Yen, C.C., Hsu, M.C. (2016). Bioanalytical method development using liquid chromatography with amperometric detection for the pharmacokinetic evaluation of forsythiaside in rats. *Molecules*, 21(10), 1384. (IF=3.267, 70/177 (39.6%), Chemistry, Multidisciplinary).
- Chang, C.W.**, Chen, C.Y., Hsu, M.C.* (2016). Maria Sharapova and meldonium doping. [Article in Chinese] *Sports Coaching Science*, 42, 121–130.
- Chang, C.W.**, Huang, T.Z., Chang, W.H., Tseng, Y.C., Wu, Y.T.* , Hsu, M.C.* (2016). Acute *Garcinia mangostana* (mangosteen) supplementation does not alleviate physical fatigue during exercise: A randomized, double-blind, placebo-controlled, crossover trial. *Journal of the International Society of Sports Nutrition*, 13, 20. (IF=5.068, 6/85 (7.1%), Sport Sciences).
- Chang, C.W.**, Hsu, Y.J., Chen, Y.M., Huang, W.C., Huang, C.C., Hsu, M.C.* (2015). Effects of combined extract of cocoa, coffee, green tea and garcinia on lipid profiles, glycaemic markers and inflammatory responses in hamsters. *BMC Complementary and Alternative Medicine*, 15, 269. (IF= 2.833, 6/28 (21.4%), Integrative & Complementary Medicine).
- Chang, C.W.**†, Huang, T.Y.†, Tseng, Y.C., Chang-Chien, G.P., Lin, S.F., Hsu, M.C.* (2014). Positive doping results caused by the single-dose local injection of triamcinolone acetonide. *Forensic Science International*, 244, 1–6. (IF=2.108, 4/16 (25.0%), Medicine, Legal).

*Corresponding author †Equal contributors

CURRICULUM VITAE (FEB 2021)

CONFERENCE PAPERS (Only papers as 1st author are listed)

- Chang, W.C.W.** (Poster) et al. (Sep 2020). Comparative UHPLC-Q-Orbitrap HRMS-based metabolomics unveils biochemical changes of black garlic during ageing process. 17th Taiwan Society for Mass Spectrometry annual conference. Chiayi.
- Chang, C.W.** (Oral) et al. (Jul 2019). Chinese herbal decoction (Danggui Buxue Tang) supplementation augments physical performance and facilitates physiological adaptations in swimming rats. 24th Annual Congress of the European College of Sport Science. Prague, Czech Republic.
- Chang, C.W.** (Oral) et al. (Jul 2018). Repressed exercise-induced hepcidin levels after Danggui Buxue Tang supplementation in male recreational runners. 23rd Annual Congress of the European College of Sport Science. Dublin, Ireland.
- Chang, C.W.‡** (Oral) (Jun 2018). Current trends and challenges in anti-doping. Taiwan Scientific Symposium in Cambridge. Cambridge, United Kingdom.
- Chang, C.W.‡** (Poster) et al. (Dec 2017). Evaluation of chicken essence on anti-fatigue property. [Article in Chinese] 2017 Annual Conference of PE & Sport Academic Societies in Taiwan. Chiayi.
- Chang, C.W.** (Oral) et al. (Jul 2017). Ephedra alkaloids content in Chinese Herbal formulas sold in Taiwan. 22nd Annual Congress of the European College of Sport Science. Essen, Germany.
- Chang, C.W.** (Oral) et al. (Jul 2016). Protective effects of a traditional chinese medicine, *Angelica sinensis*, on strenuous exercise- induced sports anemia in rats. 21st Annual Congress of the European College of Sport Science. Vienna, Austria.
- Chang, C.W.‡** (Poster) et al. (Mar 2016). An analytical survey of cannabinoids composition from hemp nut products in Taiwan markets using chemometric methods. Traditional Chinese Medicine International Forum. Kaohsiung.
- Chang, C.W.‡** (Oral) et al. (Oct 2015). Acute mangosteen juice supplementation does not improve physical fatigue during exercise: A randomized, double-blind, placebo-controlled, crossover trial. 2015 International Conference of Nutrition Aids for Athlete Performance. Taipei.
- Chang, C.W.‡** (Poster) et al. (May 2015). Effects of cocoa, coffee, green tea, and garcinia complex supplement on lipid profile in hamsters. 12th Asian Congress of Nutrition. Yokohama, Japan.
- Chang, C.W.** (Poster) et al. (May 2014). Local injection of single-dose triamcinolone acetonide caused doping positive result. 61st Annual Meeting of the American College of Sports Medicine. Orlando, Florida, United States.
- Chang, C.W.** (Poster) et al. (May 2013). The case report of neuromyelitis optica. 7th Teacher-Student Presentation of College of Pharmacy & Science of Chia Nan University of Pharmacy & Science. Tainan.

‡Award winner