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Current Positions Assistant Professor
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Education

Postdoctoral Fellow, Joslin Diabetes Center, Harvard Medical School, Boston, USA (2016 ~ 2020)
Ph.D., Institute of Biochemistry and Molecular Biology, National Yang-Ming University, Taiwan (2014)
M.S., Institute of Biochemistry and Molecular Biology, National Yang-Ming University, Taiwan (2008)
B.S., Department of Biotechnology and Laboratory Science in Medicine, National Yang-Ming University, Taiwan (2006)

Expertise

Obesity	Adipocyte biology	Metabolomics
Diabetes	Gene Editing	Gene and Cell Therapy

Research Interests

My major research interests are to investigate 1) the mechanisms of brown fat activation and white fat browning, and 2) how they crosstalk with other organs to regulate whole-body metabolism and energy expenditure, and 3) what their roles are in obesity and diabetes. Our lab aims to develop genetic (CRISPR/Cas9) or pharmacological therapies targeting fat tissues to combat obesity and diabetes.

Selected Grants:

PI:
YingTsai Young Scholar Project. China Medical University, Taiwan (2020-08-01 ~ 2025-07-31)

Postdoc:

Postdoctoral Research Abroad Fellowship, Ministry of Science and Technology, Taiwan (2017-03-01 ~ 2019-02-28)

Selected Publications

1. **Wang CH**, Lundh M, Fu A, Kriszt R, Huang TL, Lynes MD, Leiria LO, Shamsi F, Darcy J, Greenwood BP, Narain NR, Tolstikov V, Smith KL, Emanuelli B, Chang YT, Hagen S, Danial NN, Kiebish MA, Tseng YH. CRISPR-engineered human brown-like adipocytes prevent diet-induced obesity and ameliorate metabolic syndrome in mice. *Sci Transl Med.* 2020 Aug 26;12(558):eaaz8664. doi: 10.1126/scitranslmed.aaz8664. PMID: 32848096. **IF = 16.304**
2. **Wang CH**, Wei YH. Roles of Mitochondrial Sirtuins in Mitochondrial Function, Redox Homeostasis, Insulin Resistance and Type 2 Diabetes. *Int J Mol Sci.* 2020 Jul 24;21(15):5266. doi: 10.3390/ijms21155266. PMID: 32722262. **IF = 4.556**
3. Pirouz M, **Wang CH**, Liu Q, Ebrahimi AG, Shamsi F, Tseng YH, Gregory RI. The Perlman syndrome DIS3L2 exoribonuclease safeguards endoplasmic reticulum-targeted mRNA translation and calcium ion homeostasis. *Nat Commun.* 2020 May 26;11(1):2619. doi: 10.1038/s41467-020-16418-y. PMID: 32457326. **IF = 12.121**
4. Leiria LO, **Wang CH**, Lynes MD, Yang K, Shamsi F, Sato M, Sugimoto S, Chen EY, Bussberg V, Narain NR, Sansbury BE, Darcy J, Huang TL, Kodani SD, Sakaguchi M, Rocha AL, Schulz TJ, Bartelt A,

Hotamisligil GS, Hirshman MF, van Leyen K, Goodyear LJ, Blüher M, Cypess AM, Kiebish MA, Spite M, Tseng YH. 12-lipoxygenase regulates cold adaptation and glucose metabolism by producing the omega-3 lipid 12-HEPE from brown fat. *Cell Metab.* 2019 Oct 1;30(4):768. doi: 10.1016/j.cmet.2019.07.001. PMID: 31353262. **IF = 21.567**

Selected Patents

1. Methods and compositions for the treatment and prevention of aging-associated conditions. (2013)
USA Patent number: US20130122082A1. Tsai TF, Chen YF, Wu CY, **Wang CH**, Tsai SF.