Stanford

Wenfei Sun

Postdoctoral Scholar, Bioengineering

Bio

HONORS AND AWARDS

- SNF postdoc fellowship, Schweizerische Nationalfonds (Swiss National Science Foundation) (2022)
- Pfizer Research Prize, Stiftung Pfizer Forschungspreis (Pfizer research prize foundation) (2022)
- Science & SciLifeLab Prize for Young Scientists, Science/AAAS, SciLifeLab (2021)
- SNF postdoc fellowship, Schweizerische Nationalfonds (Swiss National Science Foundation) (2020)
- ETH Medal for outstanding doctoral theses, ETH Zurich (2020)
- Award for Outstanding Self-Financed Students Abroad, Ministry of Education of China (2019)
- Best poster award (1st prize) in 58th International Conference on the Bioscience of Lipids, ICBL (2017)

PROFESSIONAL EDUCATION

- Doctor of Philosophy, ETH Zurich (2020)
- Master of Science, Columbia University (2014)
- Bachelor of Science, China Pharmaceutical University (2010)

STANFORD ADVISORS

- Stephen Quake, Postdoctoral Faculty Sponsor

LINKS

- Google Scholar: https://scholar.google.ch/citations?user=4odVrMoAAAAJ&hl=en
- ORCID: https://orcid.org/0000-0001-5762-6010

Research & Scholarship

LAB AFFILIATIONS

- Stephen Quake (9/1/2021)
- Thomas Sudhof (9/1/2021)

Publications

PUBLICATIONS

- **Identification of a regulatory pathway inhibiting adipogenesis via RSPO2.** *Nature metabolism*
  Dong, H., Sun, W., Shen, Y., Baláz, M., Balázová, L., Ding, L., Löffler, M., Hamilton, B., Klöting, N., Blüher, M., Neubauer, H., Klein, H., Wolfrum, et al
  2022

- **Analysis of Single-Cell/Nucleus Transcriptome Data in Adipose Tissue.** *Methods in molecular biology (Clifton, N.J.)*
  Sun, W.
  2022; 2448: 291-306

- **Local acetate inhibits brown adipose tissue function.** *Proceedings of the National Academy of Sciences of the United States of America*
  Sun, W., Dong, H., Wolfrum, C.
  2021; 118 (49)

- **Fat for heat.** *Science (New York, N.Y.)*
  Sun, W.
  2021; 374 (6571): 1066

- **Plasticity and heterogeneity of thermogenic adipose tissue** *NATURE METABOLISM*
  Sun, W., Modica, S., Dong, H., Wolfrum, C.
  2021; 3 (6): 751-761

- **snRNA-seq reveals a subpopulation of adipocytes that regulates thermogenesis** *NATURE*
  Sun, W., Dong, H., Balaz, M., Slyper, M., Drokhlyansky, E., Colleluori, G., Giordano, A., Kovanicova, Z., Stefanicka, P., Balazova, L., Ding, L., Husted, A., Rudofsky, et al
  2020; 587 (7832): 98-+

- **Environmental and Nutritional Effects Regulating Adipose Tissue Function and Metabolism Across Generations** *ADVANCED SCIENCE*
  Sun, W., von Meyenn, F., Peleg-Raibstein, D., Wolfrum, C.
  2019; 6 (11): 1900275

- **Fat cells with a sweet tooth** *NATURE*
  Sun, W., Wolfrum, C.
  2019; 565 (7738): 167-168

- **Cold-induced epigenetic programming of the sperm enhances brown adipose tissue activity in the offspring** *NATURE MEDICINE*
  Sun, W., Dong, H., Becker, A. S., Dapito, D. H., Modica, S., Grandl, G., Opitz, L., Efthymiou, V., Straub, L. G., Sarker, G., Balaz, M., Balazova, L., Perdikari, et al
  2018; 24 (9): 1372-+

- **Remission of obesity and insulin resistance is not sufficient to restore mitochondrial homeostasis in visceral adipose tissue.** *Redox biology*
  Gonzalez-Franquesa, A., Gama-Perez, P., Kulis, M., Szczepanowska, K., Dahdah, N., Moreno-Gomez, S., Latorre-Pellicer, A., Fernandez-Ruiz, R., Aguilar-Mogas, A., Hoffman, A., Monelli, E., Samino, S., Miro-Blanch, et al
  2022; 54: 102353

- **GPR180 is a component of TGF beta signalling that promotes thermogenic adipocyte function and mediates the metabolic effects of the adipocyte-secreted factor CTHRC1** *NATURE COMMUNICATIONS*
  Balazova, L., Balaz, M., Horvath, C., Horvath, A., Moser, C., Kovanicova, Z., Ghosh, A., Ghoshdastider, U., Efthymiou, V., Kiehlmann, E., Sun, W., Dong, H., Ding, et al
  2021; 12 (1): 7144

- **Lipolysis drives expression of the constitutively active receptor GPR3 to induce adipose thermogenesis** *CELL*
  Johansen, O., Ma, T., Hansen, J., Markussen, L., Schreiber, R., Reverte-Salisa, L., Dong, H., Christensen, D., Sun, W., Gnad, T., Karavaeva, I., Nielsen, T., Kooijman, et al
  2021; 184 (13): 3502-+

- **Quantification of adipocyte numbers following adipose tissue remodeling** *CELL REPORTS*
  Moser, C., Straub, L. G., Rachamin, Y., Dapito, D. H., Kulenkampff, E., Ding, L., Sun, W., Modica, S., Balaz, M., Wolfrum, C.
  2021; 35 (4): 109023

- **Lysosomal lipoprotein processing in endothelial cells stimulates adipose tissue thermogenic adaptation.** *Cell metabolism*
  Fischer, A. W., Jaeckstein, M. Y., Gottschling, K., Heine, M., Sass, F., Mangels, N., Schlein, C., Worthmann, A., Bruns, O. T., Yuan, Y., Zhu, H., Chen, O., Ittrich, et al
  2021; 33 (3): 547-564.e7

- **Peroxisomal #-oxidation acts as a sensor for intracellular fatty acids and regulates lipolysis.** *Nature metabolism*
  Ding, L., Sun, W., Balaz, M., He, A., Klug, M., Wieland, S., Caiazzo, R., Raverdy, V., Pattou, F., Lefebvre, P., Lodhi, I. J., Staels, B., Heim, et al

2021; 3 (12): 1648-1661

- **ESRRG and PERM1 Govern Mitochondrial Conversion in Brite/Beige Adipocyte Formation** *FRONTIERS IN ENDOCRINOLOGY*
  Mueller, S., Perdikari, A., Dapito, D. H., Sun, W., Wollscheid, B., Balaz, M., Wolfrum, C.
  2020; 11: 387

- **A Genetic Model to Study the Contribution of Brown and Brite Adipocytes to Metabolism** *CELL REPORTS*
  Challa, T. D., Dapito, D. H., Kulenkampff, E., Kiehlmann, E., Moser, C., Straub, L., Sun, W., Wolfrum, C.
  2020; 30 (10): 3424-+

- **Antioxidants protect against diabetes by improving glucose homeostasis in mouse models of inducible insulin resistance and obesity** *DIABETOLOGIA*
  Straub, L. G., Efthymiou, V., Grandl, G., Balaz, M., Challa, T., Truscello, L., Horvath, C., Moser, C., Rachamin, Y., Arnold, M., Sun, W., Modica, S., Wolfrum, et al
  2019; 62 (11): 2094-2105

- **Human brown adipose tissue is phenocopied by classical brown adipose tissue in physiologically humanized mice** *NATURE METABOLISM*
  de Jong, J. A., Sun, W., Pires, N. D., Frontini, A., Balaz, M., Jespersen, N. Z., Feizi, A., Petrovic, K., Fischer, A. W., Bokhari, M., Niemi, T., Nuutila, P., Cinti, et al
  2019; 1 (8): 830-843

- **Maternal overnutrition programs hedonic and metabolic phenotypes across generations through sperm tsRNAs** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Sarker, G., Sun, W., Rosenkranz, D., Pelczar, P., Opitz, L., Efthymiou, V., Wolfrum, C., Peleg-Raibstein, D.
  2019; 116 (21): 10547-10556

- **Inhibition of Mevalonate Pathway Prevents Adipocyte Browning in Mice and Men by Affecting Protein Prenylation** *CELL METABOLISM*
  Balaz, M., Becker, A. S., Balazova, L., Straub, L., Mueller, J., Gashi, G., Maushart, C., Sun, W., Dong, H., Moser, C., Horvath, C., Efthymiou, V., Rachamin, et al
  2019; 29 (4): 901-+

- **BATLAS: Deconvoluting Brown Adipose Tissue** *CELL REPORTS*
  Perdikari, A., Leparc, G., Balaz, M., Pires, N. D., Lidell, M. E., Sun, W., Fernandez-Albert, F., Mueller, S., Akchiche, N., Dong, H., Balazova, L., Opitz, L., Roder, et al
  2018; 25 (3): 784-+

- **A stromal cell population that inhibits adipogenesis in mammalian fat depots** *NATURE*
  Schwalie, P. C., Dong, H., Zachara, M., Russeil, J., Alpern, D., Akchiche, N., Caprara, C., Sun, W., Schlaudraff, K., Soldati, G., Wolfrum, C., Deplancke, B.
  2018; 559 (7712): 103-+

- **Peroxisome Proliferator Activated Receptor Gamma Controls Mature Brown Adipocyte Inducibility through Glycerol Kinase** *CELL REPORTS*
  Lasar, D., Rosenwald, M., Kiehlmann, E., Balaz, M., Tall, B., Opitz, L., Lidell, M. E., Zamboni, N., Krznar, P., Sun, W., Varga, L., Stefanicka, P., Ukropec, et al
  2018; 22 (3): 760-773

- **Bmp4 Promotes a Brown to White-like Adipocyte Shift** *CELL REPORTS*
  Modica, S., Straub, L. G., Balaz, M., Sun, W., Varga, L., Stefanicka, P., Profant, M., Simon, E., Neubauer, H., Ukropcova, B., Ukropec, J., Wolfrum, C.
  2016; 16 (8): 2243-2258

- **Dietary ratios of n-6/n-3 polyunsaturated fatty acids during maternal pregnancy affect hippocampal neurogenesis and apoptosis in mouse offspring** *NUTRICION HOSPITALARIA*
  Fan, C., Sun, W., Fu, H., Dong, H., Xia, L., Lu, Y., Deckelbaum, R. J., Qi, K.
  2015; 32 (3): 1170-1179