



Ying Chih Chang

Adjunct Professor

Chemical Engineering

Bio

BIO

Dr. Ying Chang is an Adjunct Professor of the Department of Chemical Engineering and Chair of Taiwan Science and Technology Hub at Stanford University. She is also a Research Fellow at the Genomics Research Center, Academia Sinica. Formerly, she was an Assistant Professor in the Department of Chemical Engineering and Materials Science, and the Department of Biomedical Engineering at the University of California-Irvine, Irvine, CA. Prior to her academic appointments, Dr. Chang had worked in various industrial R&D laboratories including as a Senior Engineer for the hard drive media at Maxmedia California, San Jose, CA (now Seagate), a Postdoctoral Scientist for the materials design of GeneChip at Affymetrix Corp, Santa Clara, CA (now Thermal Fisher Scientific). Her invention in single cell derived 3D organoid scaffold free culture system has led to Acrocyte Therapeutics, Inc. which she currently serves as the Chief Executive Officer. Highlights of her research include integrated nanomaterials, microfluidics, and bioreactors to control stem cell fates for tissue engineering and liquid biopsy for cancer diagnostics and precision medicine. Dr. Chang received her BS from National Taiwan University and PhD from Stanford University in Chemical Engineering.

ACADEMIC APPOINTMENTS

- Adjunct Professor, Chemical Engineering

ADMINISTRATIVE APPOINTMENTS

- Chair, Taiwan Science and Technology Hub@Stanford, (2023- present)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Chair, Chang Chau Ting Memorial Foundation (2020 - present)
- Trustee, Kaohsiung Medical University (2020 - present)

PROFESSIONAL EDUCATION

- BS, National Taiwan University
- PhD, Stanford University , Chemical Engineering

Publications

PUBLICATIONS

- **Liposome-tethered supported lipid bilayer platform for capture and release of heterogeneous populations of circulating tumor cells.** *Journal of materials chemistry. B*
Yeh, P. Y., Chen, J. Y., Shen, M. Y., Che, T. F., Lim, S. C., Wang, J., Tsai, W. S., Frank, C. W., Huang, C. J., Chang, Y. C.
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- **Proliferative ability of circulating tumor cells is a prognostic factor in Early-Stage lung adenocarcinoma.** *Lung cancer (Amsterdam, Netherlands)*
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- **Multimic characterization and drug testing establish circulating tumor cells as an exvivo tool for personalized medicine.** *iScience*
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- **Lipid-assisted synthesis of magnesium-loaded hydroxyapatite as a potential bone healing material** *JOURNAL OF THE TAIWAN INSTITUTE OF CHEMICAL ENGINEERS*
 Chen, Y., Yu, Y., Yu, P., Fang, H., Chang, Y., Wu, K. W.
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- **Early Detection and Dynamic Changes of Circulating Tumor Cells in Transgenic NeuN Transgenic (NTTg) Mice with Spontaneous Breast Tumor Development.** *Cancers*
 Tsai, W., Hung, T., Chen, J., Huang, S., Chang, Y.
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- **Anticlogging Hemofiltration Device for Mass Collection of Circulating Tumor Cells by Ligand-Free Size Selection.** *Langmuir : the ACS journal of surfaces and colloids*
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- **Scalable Multilayer Cell Collector to Capture Circulating Tumor Cells with an Unlimited Volume Capacity.** *ACS biomaterials science & engineering*
 Tsai, Y. L., Yeh, P. Y., Huang, C. J., Guo, C. L., Chang, Y. C.
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- **Scalable Multilayer Cell Collector to Capture Circulating Tumor Cells with an Unlimited Volume Capacity** *ACS BIOMATERIALS SCIENCE & ENGINEERING*
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 2019; 5 (6): 2725–31
- **Construction of Cell-Extracellular Matrix Microenvironments by Conjugating ECM Proteins on Supported Lipid Bilayers** *FRONTIERS IN MATERIALS*
 Huang, C., Chang, Y.
 2019; 6
- **Random and aligned electrospun PLGA nanofibers embedded in microfluidic chips for cancer cell isolation and integration with air foam technology for cell release** *JOURNAL OF NANOBIO TECHNOLOGY*
 Yu, C., Chen, Y., Yeh, P., Hsiao, Y., Lin, W., Kuo, C., Chueh, D., You, Y., Shyue, J., Chang, Y., Chen, P.
 2019; 17: 31
- **Snail-induced claudin-11 prompts collective migration for tumour progression** *NATURE CELL BIOLOGY*
 Li, C., Chen, J., Ho, Y., Hsu, W., Wu, L., Lan, H., Hsu, D., Tai, S., Chang, Y., Yang, M.
 2019; 21 (2): 251-+
- **A two-dimensional immunomagnetic nano-net for the efficient isolation of circulating tumor cells in whole blood.** *Nanoscale*
 Lai, C. H., Tsai, W. S., Yang, M. H., Chou, T. Y., Chang, Y. C.
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- **Promoting Multivalent Antibody-Antigen Interactions by Tethering Antibody Molecules on a PEGylated Dendrimer-Supported Lipid Bilayer** *BIOMACROMOLECULES*
 Yeh, P., Chen, Y., Wang, C., Chang, Y.
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- **Site-specific antibody modification and immobilization on a microfluidic chip to promote the capture of circulating tumor cells and microemboli** *CHEMICAL COMMUNICATIONS*
 Lai, C., Lim, S. C., Wu, L., Wang, C., Tsai, W., Wu, H., Chang, Y.
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- **A High Circulating Tumor Cell Count in Portal Vein Predicts Liver Metastasis From Periapillary or Pancreatic Cancer A High Portal Venous CTC Count Predicts Liver Metastases** *MEDICINE*
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Chang, M., Chang, Y., Chen, J., Jeng, Y., Yang, C., Tien, Y., Yang, S., Chen, H., Liang, T., Wang, C., Lee, E. P., Chang, Y., Lee, et al
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Yang, C., Wang, Y., Frank, C. W., Chang, Y.
2015; 5 (105): 86113-86119
- **Efficient elution of viable adhesive cells from a microfluidic system by air foam**
Lai, J., Shao, H., Wu, J., Lu, S., Chang, Y.
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- **DIFFERENTIATION OF NEURAL STEM/PROGENITOR CELLS USING LOW-INTENSITY ULTRASOUND** *ULTRASOUND IN MEDICINE AND BIOLOGY*
Lee, I., Lo, T., Young, T., Li, Y., Chen, N. G., Chen, C., Chang, Y.
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Huang, C., Tseng, P., Chang, Y.
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