

Yuanyuan YU
Assistant Professor
Chinese Medicine - Teaching and Research Division
Email: yuyuan@hkbu.edu.hk



Qualifications

PhD, The University of Hong Kong
1 Sept 2010 → 21 Nov 2015
Award Date: 21 Nov 2015

Research outputs

Selection and characterization of DNA aptamers inhibiting a druggable target of osteoarthritis, ADAMTS-5

Yu, Y., Liu, M., Choi, V. N. T., Cheung, Y. W. & Tanner, J. A., Oct 2022, In: *Biochimie*. 201, p. 168-176 9 p.

Therapeutic aptamer targeting sclerostin loop3 for promoting bone formation without increasing cardiovascular risk in osteogenesis imperfecta mice

Wang, L., Yu, Y., Ni, S., Li, D., Liu, J., Xie, D., Chu, H. Y., Ren, Q., Zhong, C., Zhang, N., Li, N., Sun, M., Zhang, Z. K., Zhuo, Z., Zhang, H., Zhang, S., Li, M., Xia, W., Zhang, Z., Chen, L., & 5 others Shang, P., Pan, X., Lu, A., Zhang, B. T. & Zhang, G., 18 Jul 2022, In: *Theranostics*. 12, 13, p. 5645-5674 30 p.

Drug discovery of sclerostin inhibitors

Yu, S., Li, D., Zhang, N., Ni, S., Sun, M., Wang, L., Xiao, H., Liu, D., Liu, J., Yu, Y., Zhang, Z., Yeung, S. T. Y., Zhang, S., Lu, A., Zhang, Z., Zhang, B. & Zhang, G., May 2022, In: *Acta Pharmaceutica Sinica B*. 12, 5, p. 2150-2170 21 p.

Drug Discovery of DKK1 Inhibitors

Jiang, H., Zhang, Z., Yu, Y., Chu, H. Y., Yu, S., Yao, S., Zhang, G. & Zhang, B. T., 9 Mar 2022, In: *Frontiers in Pharmacology*. 13, 847387.

The Application of Microfluidic Technologies in Aptamer Selection

Liu, Y., Wang, N., Chan, C-W., Lu, A., Yu, Y., Zhang, G. & Ren, K., 17 Sept 2021, In: *Frontiers in Cell and Developmental Biology*. 9, 11 p., 730035.

Current Pharmacological Strategies for Duchenne Muscular Dystrophy

Yao, S., Chen, Z., Yu, Y., Zhang, N., Jiang, H., Zhang, G., Zhang, Z. & Zhang, B., 19 Aug 2021, In: *Frontiers in Cell and Developmental Biology*. 9, 689533.

Neolignans and Diarylheptanoids with Anti-Inflammatory Activity from the Rhizomes of *Alpinia zerumbet*

Zhang, Y., Yu, Y. Y., Peng, F., Duan, W. T., Wu, C. H., Li, H. T., Zhang, X. F. & Shi, Y. S., 18 Aug 2021, In: *Journal of Agricultural and Food Chemistry*. 69, 32, p. 9229–9237 9 p.

Dickkopf-1: A Promising Target for Cancer Immunotherapy

Chu, H. Y., Chen, Z., Wang, L., Zhang, Z. K., Tan, X., Liu, S., Zhang, B. T., Lu, A., Yu, Y. & Zhang, G., 20 May 2021, In: *Frontiers in Immunology*. 12, 14 p., 658097.

Structural Biology for the Molecular Insight between Aptamers and Target Proteins

Zhang, N., Chen, Z., Liu, D., Jiang, H., Zhang, Z-K., Lu, A., Zhang, B-T., Yu, Y. & Zhang, G., 15 Apr 2021, In: *International Journal of Molecular Sciences*. 22, 8, 27 p., 4093.

Artificial Intelligence in Aptamer–Target Binding Prediction

Chen, Z., Hu, L., Zhang, B-T., Lu, A., Wang, Y., Yu, Y. & Zhang, G., 1 Apr 2021, In: *International Journal of Molecular Sciences*. 22, 7, 3605.

Exosomal transfer of osteoclast-derived miRNAs to chondrocytes contributes to osteoarthritis progression

Liu, J., Wu, X., Lu, J., Huang, G., Dang, L., Zhang, H., Zhong, C., Zhang, Z., Li, D., Li, F., Liang, C., Yu, Y., Zhang, B. T., Chen, L., Lu, A. & Zhang, G., Apr 2021, In: *Nature Aging*. 1, 4, p. 368–384 17 p.

Recent Progress in Aptamer Discoveries and Modifications for Therapeutic Applications

Ni, S., Zhuo, Z., Pan, Y., Yu, Y., Li, F., Liu, J., Wang, L., Wu, X., Li, D., Wan, Y., Zhang, L., Yang, Z., Zhang, B-T., Lu, A. & Zhang, G., 3 Mar 2021, In: *ACS applied materials & interfaces*. 13, 8, p. 9500-9519 20 p.

The Roles of Sclerostin in Immune System and the Applications of Aptamers in Immune-Related Research

Sun, M., Chen, Z., Wu, X., Yu, Y., Wang, L., Lu, A., Zhang, G. & Li, F., 25 Feb 2021, In: *Frontiers in Immunology*. 12, 10 p., 602330.

Connective Tissue Growth Factor: From Molecular Understandings to Drug Discovery

Chen, Z., Zhang, N., Chu, H. Y., Yu, Y., Zhang, Z-K., Zhang, G. & Zhang, B-T., 29 Oct 2020, In: *Frontiers in Cell and Developmental Biology*. 8, 593269.

Disorders of Calcium and Phosphorus Metabolism and the Proteomics/Metabolomics-Based Research

Sun, M., Wu, X., Yu, Y., Wang, L., Xie, D., Zhang, Z., Chen, L., Lu, A., Zhang, G. & Li, F., 10 Sept 2020, In: *Frontiers in Cell and Developmental Biology*. 8, 13 p., 576110.

A Loop-Based and AGO-Incorporated Virtual Screening Model Targeting AGO-Mediated miRNA–mRNA Interactions for Drug Discovery to Rescue Bone Phenotype in Genetically Modified Mice

Zhuo, Z., Wan, Y., Guan, D., Ni, S., Wang, L., Zhang, Z., Liu, J., Liang, C., Yu, Y., Lu, A., Zhang, G. & Zhang, B-T., Jul 2020, In: *Advanced Science*. 7, 13, 22 p., 1903451.

A PD-L1 aptamer selected by loss-gain cell-SELEX conjugated with paclitaxel for treating triple-negative breast cancer

Wu, X., Li, F., Li, Y., Yu, Y., Liang, C., Zhang, B., Zhao, C., Lu, A. & Zhang, G., 23 Jun 2020, In: *Medical Science Monitor*. 26, e925583.

Pros and Cons of Denosumab Treatment for Osteoporosis and Implication for RANKL Aptamer Therapy

Zhang, N., Zhang, Z-K., Yu, Y., Zhuo, Z., Zhang, G. & Zhang, B-T., 14 May 2020, In: *Frontiers in Cell and Developmental Biology*. 8, 9 p., 325.

A water-soluble nucleolin aptamer-paclitaxel conjugate for tumor-specific targeting in ovarian cancer

LI, F., Lu, J., LIU, J., LIANG, C., Wang, M., Wang, L., LI, D., Yao, H., Zhang, Q., Wen, J., Zhang, Z. K., Li, J., Lv, Q., He, X., GUO, B., GUAN, D., YU, Y., Dang, L., Wu, X., Li, Y., & 6 othersChen, G., Jiang, F., Sun, S., Zhang, B. T., LYU, A. & ZHANG, G., 1 Dec 2017, In: *Nature Communications*. 8, 1, 1390.

Recent advances in SELEX technology and aptamer applications in biomedicine

Zhuo, Z., YU, Y., Wang, M., Li, J., Zhang, Z., LIU, J., Wu, X., LYU, A., ZHANG, G. & Zhang, B., 14 Oct 2017, In: *International Journal of Molecular Sciences*. 18, 10, 2142.

Potential diagnostic and therapeutic applications of oligonucleotide aptamers in breast cancer

Wu, X., Shaikh, A. B., YU, Y., Li, Y., Ni, S., LYU, A. & ZHANG, G., Sept 2017, In: *International Journal of Molecular Sciences*. 18, 9, 1851.

Recent methods for purification and structure determination of oligonucleotides

Zhang, Q., Lv, H., Wang, L., Chen, M., LI, F., LIANG, C., YU, Y., Jiang, F., LYU, A. & ZHANG, G., 18 Dec 2016, In: *International Journal of Molecular Sciences*. 17, 12, 2134.

Molecular mechanisms and translational therapies for human epidermal receptor 2 positive breast cancer

Lv, Q., Meng, Z., YU, Y., Jiang, F., GUAN, D., LIANG, C., Zhou, J., LYU, A. & ZHANG, G., 14 Dec 2016, In: *International Journal of Molecular Sciences*. 17, 12, 2095.

Development of cell-SELEX technology and its application in cancer diagnosis and therapy

Chen, M., YU, Y., Jiang, F., Zhou, J., Li, Y., LIANG, C., Dang, L., LYU, A. & ZHANG, G., 10 Dec 2016, In: International Journal of Molecular Sciences. 17, 12, 2079.

Recent advances in developing small molecules targeting nucleic acid

Wang, M., YU, Y., LIANG, C., LYU, A. & ZHANG, G., 30 May 2016, In: International Journal of Molecular Sciences. 17, 6, 779.

Molecular selection, modification and development of therapeutic oligonucleotide aptamers

YU, Y., LIANG, C., Lv, Q., LI, D., Xu, X., Liu, B., LYU, A. & ZHANG, G., 1 Mar 2016, In: International Journal of Molecular Sciences. 17, 3, p. 1-19 19 p.

Projects

Targeting sclerostin loop3 to promote bone formation with low cardiovascular risk in animal models

YU, Y.

1/01/21 → 31/12/23

Targeting sclerostin to reverse established osteoporosis: Aptamer characterization and evaluation for drug discovery

YU, Y.

The role of the interactions between N domain and Linker 2 of DKK1 in modulating the immunosuppressive tumor microenvironment mediated by DKK1 C domain

YU, Y.

1/01/23 → ...

Grants