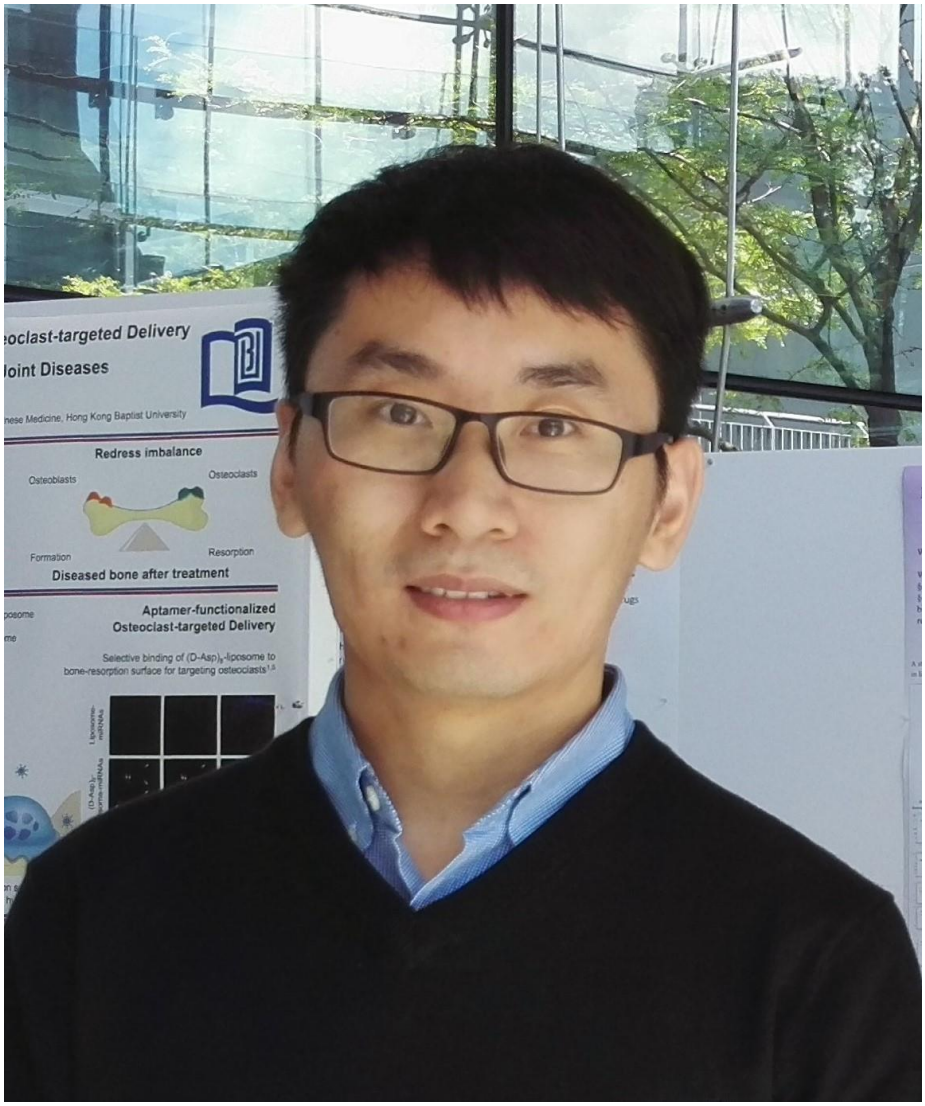
oclast-targeted Delivery
Joint Diseases
nese Medicine, Hong Kong Baptist University
Redress imbalance
Osteoblasts
Osteoclasts
Formation
Resorption
Diseased bone after treatment
Aptamer-functionalized
Osteoclast-targeted Delivery
Selective binding of (D-Asp)8-liposome to
bone-resorption surface for targeting osteoclasts

CURRICULUM VITAE of Dr. LIANG CHAO (liangchao@hkbu.edu.hk)

Name: LIANG Chao

Academic qualifications:

2006/09-2010/07	B.Sc. Taishan Medical University, Shandong, China
2010/09-2013/06	M.Sc. Anhui Medical University, Anhui, China
2014/03-2016/09	Ph.D. Law Sau Fai Institute for Advancing Translational Medicine in Bone & Joint Diseases, School of Chinese Medicine, Hong Kong Baptist University

Previous academic positions held:

2011/10-2012/9	Research Assistant, Department of Orthopaedics & Traumatology, The Chinese University of Hong Kong
2012/10-2013/9	Research Assistant, Law Sau Fai Institute for Advancing Translational Medicine in Bone & Joint Diseases, School of Chinese Medicine, Hong Kong Baptist University
2016/10-2018/2	Postdoctoral Research Fellow, Law Sau Fai Institute for Advancing Translational Medicine in Bone & Joint Diseases, Hong Kong Baptist University

Present academic position:

2018/03-	Research Assistant Professor, Law Sau Fai Institute for Advancing Translational Medicine in Bone & Joint Diseases, School of Chinese Medicine, Hong Kong Baptist University

Previous relevant research work:

- Identification of novel molecular targets in bone and joint diseases
- Screening of therapeutic small molecules for bone and joint diseases
- Mechanistic understanding of development of bone and joint diseases
- Precision medicine in bone and joint diseases

Representative publications in the recent five years (*# First author or Co-first author; * Co-corresponding Author*)

1. **Liang C**[#], Guo B, Wu H, Shao N, Li D, Liu J, Dang L, Wang C, Li H, Li S, Lau WK, Cao Y, Yang Z, Lu C, He X, Au DW, Pan X, Zhang BT, Lu C, Zhang H, Yue K, Qian A, Shang P, Xu J, Xiao L, Bian Z, Tan W, Liang Z, He F, Zhang L, Lu A, Zhang G. Aptamer-functionalized lipid nanoparticles targeting osteoblasts as a novel RNA interference-based bone anabolic strategy. ***Nat Med***. 2015 Mar;21(3):288-94. doi: 10.1038/nm.3791. Epub 2015 Feb 9.
2. **Liang C**#, Peng S, Li J, Lu J, Guan D, Jiang F, Lu C, Li F, He X, Zhu H, Au DWT, Yang D, Zhang BT, Lu A, Zhang G. Inhibition of osteoblastic Smurf1 promotes bone formation in mouse models of distinctive age-related osteoporosis. ***Nat Commun.*** 2018 Aug 24;9(1):3428. doi: 10.1038/s41467-018-05974-z.
3. Liu J, **Liang C**[#], Guo B, Wu X, Li D, Zhang Z, Zheng K, Dang L, He X, Lu C, Peng S, Pan X, Zhang BT, Lu A, Zhang G. Increased PLEKHO1 within osteoblasts suppresses Smad-dependent BMP signaling to inhibit bone formation during aging. ***Aging Cell***. 2017 Jan 13. doi: 10.1111/acel.12566.
4. Li F, Lu J, Liu J, **Liang C**[#], Wang M, Wang L, Zhang Q, Wen J, Zhang ZK, Li J, Lv Q, He X, Guo B, Guan D, Yu Y, Dang L, Wu X, Li Y, Sun S, Zhang BT, Lu A, Zhang G.

Toward the next generation of smart anti-tumor drugs: a nucleolin aptamer-paclitaxel conjugate for tumor-specific targeting in ovarian cancer. ***Nat Commun***. 2017 Nov 9;8(1):1390. doi: 10.1038/s41467-017-01565-6.

5. **Liang C**[#*], Li F, Wang L, Zhang ZK, Wang C, He B, Li J, Chen Z, Shaikh AB, Liu J, Wu X, Peng S, Dang L, Guo B, He X, Au DWT, Lu C, Zhu H, Zhang BT, Lu A, Zhang G. Tumor cell-targeted delivery of CRISPR/Cas9 by aptamer-functionalized lipopolymer for therapeutic genome editing of VEGFA in osteosarcoma. ***Biomaterials***. 2017 Sep 13;147:68-85. doi: 10.1016/j.biomaterials.2017.09.015.
6. Zhang ZK, Li J, Guan D, **Liang C***, Zhuo Z, Liu J, Lu A, Zhang G, Zhang BT. A newly identified lncRNA MAR1 acts as a miR-487b sponge to promote skeletal muscle differentiation and regeneration. ***J Cachexia Sarcopenia Muscle.*** 2018 Jun;9(3):613-626. doi: 10.1002/jcsm.12281. Epub 2018 Mar 7.
7. Li J, **Liang C***, Zhang ZK, Pan X, Peng S, Lee WS, Lu A, Lin Z, Zhang G, Leung WN, Zhang BT. TAK1 inhibition attenuates both inflammation and fibrosis in experimental pneumoconiosis. ***Cell Discov***. 2017 Jul 11;3:17023. doi: 10.1038/celldisc.2017.23.
8. **Liang C***, Li D, Zhang GX, Li H, Shao N, Liang Z, Zhang L, Lu A, Zhang G. Comparison of the methods for generating single-stranded DNA in SELEX. ***Analyst.*** 2015, 140, 3439-3444. DOI: 10.1039/C5AN00244C.
9. **Liang C***, Zhang X, Song S, Tian C, Yin Y, Xing G, He F, Zhang L. Identification of UHRF1/2 as new N-methylpurine DNA glycosylase-interacting proteins. ***Biochem Biophys Res Commun*****.** 2013 Apr 19;433(4):415-9.
10. Wang L, **Liang C***, Li F, Guan D, Wu X, Fu X, Lu A, Zhang G. PARP1 in Carcinomas and PARP1 Inhibitors as Antineoplastic Drugs. ***Int J Mol Sci***. 2017 Oct 8;18(10). pii: E2111. doi: 10.3390/ijms18102111. Review.

Granted projects as principal investigator

1. From precision medicine to drug discovery: Inhibition of Smurf1 activity by a chalcone derivative to promote local bone formation during spinal fusion in distinctive mice subgroup with age-related osteoporosis. Principle Investigator. ID: 81700780. 2018/01/01-2020/12/31. Approved amount: 200,000 RMB. The Young Scientist Project of National Natural Science Foundation of China.

Awards

1. **Liang C**. HIF1α inhibition facilitates Leflunomide suppressing CRP to attenuate progressive bone erosion in distinctive rheumatoid arthritis. The 9th International Conference on Osteoporosis and Bone Research (ICOBR2018). Oral Presentation Abstracts. **Best Paper Award**. October 17-20, 2018. Suzhou, China.
2. **Liang C**, Peng S, Zhang B-T, Lu A, Zhang G. From precision medicine to drug discovery: inhibition of osteoblastic Smurf1 promotes bone formation in distinctive aged individuals with osteoporosis. 2017 annual ICMRS-ORS Membership Meeting. Oral Presentation Abstract. **Webster Jee Young Investigator Award**. March 20, 2017. San Diego, CA, USA.
3. **Liang C**, Peng S, Lu A, Zhang G. Inhibition of osteoblastic Smurf1 promotes bone formation in distinctive individuals with age-related osteoporosis. The 8th International Conference on Osteoporosis and Bone Research (ICOBR2016). Oral Presentation Abstracts. **Best Paper Award**. October 19-22, 2016. Chongqing, China.
4. **Liang C**, Aptamer-functionalized lipid nanoparticles (LNPs) targeting osteoblasts as a novel RNA interference (RNAi)-based bone anabolic strategy. **ASBMR Young Investigator Award** for the European Calcified Tissue Society (ECTS) Ph.D. Training Course. September 13-16, 2015. University of Siena, Tuscany, Italy.

5. **Liang C**, Guo B, Wu H, Zhang L, Lu A, Zhang G. Aptamer-functionalized lipid nanoparticles (LNPs) targeting osteoblasts as a novel RNA interference (RNAi)-based bone anabolic strategy. The 7th International Conference on Osteoporosis and Bone Research (ICOBR2014). Oral Presentation Abstracts. **Webster Jee Travel Award**. October 16-19, 2014. Xiamen, China.
6. **Liang C**, Guo B, Wu H, Zhang L, Lu A, Zhang G. Aptamer-Functionalized Lipid Nanoparticles (LNPs) Targeting Osteoblasts as a Novel RNA Interference-Based Bone Anabolic Strategy. American Society for Bone and Mineral Research (ASBMR) 2014 Annual Meeting. Oral Presentation Abstract. **Young Investigator Award**. September 12-15, 2014. Houston, Texas, USA.
7. **Liang C**, Guo B, Wu H, Zhang L, Lu A, Zhang G. Aptamer-functionalized delivery system for osteogenic siRNAs to achieve osteoblast-specific RNA interference for bone anabolic therapy. 2015 annual ICMRS-ORS Membership Meeting. Oral Presentation Abstract. **Webster Jee Young Investigator Award**. March 29, 2015. Las Vegas, Nevada, USA.