

YONG HOU

| China

Summary

I work as Research Scientist and Associate Director of BGI-Research. I have strong background of next generation sequencing data analysis and interpretation, especially on single cell analysis and cancer research. Published more than 20 peer reviewed scientific papers on journals including Cell, Nature Biotechnology, and be the co-inventor of more than 25 of patents in related area. I have granted more than 12 million RMB (5 years) from the by the local funding agency in Shenzhen to investigate the clinical application of next generation sequencing on cancer diagnosis. I'm invited as guest editor for Journal of Clinical and Translational Medicine on Clinical Bioinformatics Session, and reviewer of BMC Bioinformatics. Now I'm focusing on the translational research of applying next generation sequencing and single cell analysis to cancer precision medicine.

Academic activity

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| 10/2015 | Efforts to Push Cancer Genomics to Cancer Translational Research 30 min talk on 11 th International Symposium on Respiratory Disease in China Forum 2015, Chengdu, China |
| 10/2014 | Single Cell Analysis and Its Application on Cancer Translational Research 30 min talk on Nature Conference of Nuclear Reprogramming and the Cancer Genome, Guangzhou, China |
| 07/2013 | From Sequencing to Cancer Translational Research 30 min talk on the Third International Workshop on Cancer System Biology (ISCB, 2013), Zhuhai, China |
| 05/2012 | Single Cell Sequencing @BGI 30 min talk on Symposium of The Era of Next Generation Sequencing in Cancer, Imperial College London, UK |
| 02/2012 | Single Cell Sequencing and Its Application on Tumor Study 20 min talk on the 2nd China-Japan Symposium on Cancer Research, Chiba-shi, Japan |

Publications

- **Hou, Y^{*}**, Liu, Y., Chen, Z., Gu, N., and Wang, J. (2010). Manufacture of IRDye800CW-coupled Fe₃O₄ nanoparticles and their applications in cell labeling and in vivo imaging. **Journal of nanobiotechnology** 8, 25.

- Wang, j., Liu, Y., **Hou, Y***, Chen, Z., Gu, N. (2012). Near-Infrared Fluorescence Labeling of Iron Nanoparticles and Applications for Cell Labeling and In Vivo Imaging. **Methods in Molecular Biology** 01/2012; 906:221-37. DOI:10.1007/978-1-61779-953-2_17
- **Hou, Y***, Song, L., Zhu, P., Zhang, B., Tao, Y., et al. (2012). Single-Cell Exome Sequencing and Monoclonal Evolution of a JAK2-Negative Myeloproliferative Neoplasm. **Cell**, Volume 148, Issue 5, 873-885, 2 March 2012
- Xu, X., **Hou, Y. ***, Yin, X., Bao, L., Tang, A., et al. Single-cell Exome Sequencing to Nucleotide Level Reveals Novel Mutation Characteristics of Clear Cell Renal Cell Carcinoma. **Cell**, Volume 148, Issue 5, 886-895, 2 March 2012
- Li, Y.; Xu, X.; Song, L.; **Hou, Y***, Li, F., et al. (2012): Single cell whole-exome sequences of bladder cancer from an individual. **GigaScience**, doi:10.1186/2047-217X-1-12
- Dong, Y., Xie, M., Jiang, Y., ..., **Hou, Y.**, ..., Wang, W., et al. Sequencing and automated whole-genome optical mapping of the genome of a domestic goat (*Capra hircus*), **Nature Biotechnology** 31, 135–141 (2013), doi:10.1038/nbt.2478
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- Yu, C., Yu, J., Yao, X., ..., **Hou, Y.**, ..., Wang, J., et al. Discovery of biclonal origin and a novel oncogene SLC12A5 in colon cancer by single-cell sequencing, **Cell Research** 24, 701-712 (June 2014) | doi:10.1038/cr.2014.43
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- Li, S., Li, B., Cheng, C. ... **Hou, Y.**, ... Yan, J., et al. Genomic signatures of near-extinction and rebirth of the crested ibis and other endangered bird species, **Genome Biology**, **15**, 557 (2014)
- **Hou, Y***, Wu, K., Shi, X., Li, F., Song, L., et al. (2015): Comparison of variations detection between whole-genome amplification methods used in single-cell resequencing, **GigaScience**, 2015, 4:37 doi:10.1186/s13742-015-0068-3
- Jiang, R., Lu, Y., Ho, H., ... **Hou, Y.**, ..., Wang, J., A comparison of isolated circulating tumor cells and tissue biopsies using whole-genome sequencing in prostate cancer, **Oncotarget**, 2015 Nov 5. doi: 10.18632/oncotarget.6330
- Wu, L., Zhang, X., Zhao, Z., Wang, L., ... **Hou, Y.**, Xu, X., Full-length single-cell RNA-seq applied to a viral human cancer: applications to HPV expression and splicing analysis in HeLa S3 cells, **Gigascience**, 2015 Nov 5;4:51. doi: 10.1186/s13742-015-0091-4
- Wu, K., Zhang, X., Li, F., Xiao, D., **Hou, Y.**, ..., He, J., Frequent alterations in cytoskeleton remodelling genes in primary and metastatic lung adenocarcinomas, **Nature Communication**, 2015, 6, Article number: 10131 doi:10.1038/ncomms10131
- Ma, J., Pallett, D., Jiang, H., **Hou, Y.**, Wang, H., Mutational bias of Turnip Yellow Mosaic Virus in the context of host anti-viral gene silencing, **Virology**. 2015 Sep 11;486:2-6. doi: 10.1016/j.virol.2015.08.024.

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- Wu, S., Yang, Z., Ye, R., An, D., **Hou, Y.**, Fan, Z., Cai, Z., Novel variants in MLL confer to bladder cancer recurrence identified by whole-exome sequencing, **Oncotarget**, 2015 Nov 25. doi: 10.18632/oncotarget.6380
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*Contribute equally to this work

#Co-corresponding