

CURRICULUM VITA of Dr. Ruiqiang Li

Education

- 2010.11 Ph.D. in Biology, University of Copenhagen, Denmark
- 2002.06 B.S. in Physics, Southeast University, Nanjing, China.

Positions:

- 2011.03 – Founder & CEO, Novogene, China
- 2009.07 – 2011.03 Vice President, BGI, China
- 2009.07 – 2011.03 Head of Research & Cooperation Division, BGI, China
- 2007.07 – 2009.07 Head of Bioinformatics Center, BGI, China
- 2004.09 – 2004.11 Visiting Scholar, Wellcome Trust Sanger Institute, Cambridge, UK
- 2002.07 – 2005.07 Group Leader, Bioinformatics Department, Beijing Genomics Institute (BGI)

Honorary Positions:

- 2009.12 - Honorary Assistant Professor, Department of Computer Science, University of Hongkong, HK

Publications (Peer reviewed) (* Equal first author, # corresponding)

1. The Brassica rapa Genome Sequencing Project Consortium. (2011) “The genome of the mesopolyploid crop species Brassica rapa.” **Nature Genetics**. 43:1035-1039. doi:10.1038/ng.919.
2. Stukenbrock, E., Bataillon, T., Dutheil, J. Y., Hansen, T.T., **Li, R.**, Zala, M., et. al. (2011) “The making of a new pathogen: Insights from comparative population genomics of the domesticated wheat pathogen *Mycosphaerella graminicola* and its wild sister species.” **Genome Res.** doi: 10.1101/gr.118851.110

3. Liu, C., Lam, T., ..., **Li, R.** (2011) "GPU-BWT: GPU-based compressed indexing for improving the alignment engine of SOAP2." **MASSIVE 2011**
4. The Potato Genome Sequencing Consortium. (2011) "Genome sequence and analysis of the tuber crop potato." **Nature**. 475(7355):189-95. doi: 10.1038/nature10158. [cover story]
5. Li, Y., Zheng, H., Luo, R., Wu, H., Zhu, H., **Li, R.**, Cao, H. et. al. (2011) "Single-nucleotide resolution structural variations of two human genomes mapped by whole genome de novo assemblies." **Nature Biotech.** doi:10.1038/nbt.1904
6. Liu, Y., Gao, M., Lv, Y., ..., **Li, R.**[#], Zhang, X. (2011) "Confirmation by exome sequencing of the pathogenic role of NCSTN mutations in Acne Inversa (Hidradenitis Suppurativa)." **Journal of Investigative Dermatology**. doi: 10.1038/jid.2011.62
7. Liaset, B., Hao, Q., ..., **Li, R.**, et. al. (2011) "Nutritional Regulation of Bile Acid Metabolism Improves Pathological Characteristics of the Metabolic Syndrome." **The Journal of Biological Chemistry**. doi: 10.1074/jbc.M111.234732
8. Huang, S., Zhang, J., **Li, R.**, Zhang, W., He, Z., Lam, T., Peng, Z. and Yiu, S. (2011). "SOAPsplice: genome-wide ab initio detection of splice junctions from RNA-Seq data." **Front. Gene.** 2:46. doi: 10.3389/fgene.2011.00046
9. Shi, Y., Li, Y., ..., **Li, R.**, et. al., (2011) "Exome sequencing identifies ZNF644 mutations in high myopia." **PLoS Genetics**. 7: e1002084.
10. Leung, C., Yiu, S., Yang, B., Peng, Y., ..., **Li, R.**, Chin, F. (2011) "A robust and accurate binning algorithm for metagenomic sequences with arbitrary species abundance ratio." **Bioinformatics**. doi: 10.1093/bioinformatics/btr186
11. Korbel, J., Mills, R., ... **Li, R.**, et. al. (2011) "Mapping copy number variation by population-scale genome sequencing." **Nature**. 470: 59-65.
12. Wang, J., Yang, X., Xia, K., ... Wang, J., **Li, R.**[#], Tang, B. (2010) "*TGM6* indentified as a novel causative gene of spinocerebellar ataxias using exome sequencing." **Brain**. doi:10.1093/brain/awq323
13. Wang, J., Zhang, J., **Li, R.**^{*}, Zheng, H., et. al. (2010) "Evolutionary transients in the rice transcriptome." **Genomics, Proteomics & Bioinformatics**. doi:10.1016/S1672-0229(10)60023-X
14. Yang, B., Peng, Y., Leung, H., Yiu, S., Qin, J., **Li, R.**, Chin, F. (2010)

“MetaCluster: unsupervised binning of environmental genomic fragments and taxonomic annotation.” **ACM-BCB**, 2010

15. Sudmant, P., Kitzman, J., Antonacci, F., Alkan, C., Malig, M., Tsalenko, A., Samps, N., Bruhn, L., Shendure, J.; 1000 Genomes Project, Eichler, EE. (2010) “Diversity of human copy number variation and multicopy genes.” **Science**. **330(6004)**:641-6.
16. The 1000 genomes project consortium. (2010) “A map of human genome variation from population scale sequencing.” **Nature**. **467**: 1061-1073. [cover story]
17. Li, Y., Zhu, J., Li, N., Ye, M., ..., **Li, R.**, et. al. (2010) “The DNA methylome of human peripheral blood mononuclear cells.” **PLoS Biology**. **8**: e1000533.
18. Lai, J., **Li, R.***, Xu, X., et. al. (2010) “Genome-wide patterns of genetic variation among elite maize inbred lines.” **Nature Genetics**. **42**: 1027-1030. [cover story]
19. Li, Y., Vinckenbosch, N., Tian, G., ..., **Li, R.**, et. al. (2010) “Resequencing of 200 human exomes identifies an excess of low-frequency non-synonymous coding variants.” **Nature Genetics**. **42**: 969-972.
20. Kim, S., Li, Y., Guo, Y., **Li, R.**, et. al. (2010) “Design of association studies with pooled or un-pooled next-generation sequencing data.” **Genetic Epidemiology**. **34**: 479-491.
21. Yi, X., Liang, Y., ... **Li, R.**, Li, S., Yang, H., Nielsen, R., Wang, J., Wang, J. (2010) “Sequencing of 50 human exomes reveals adaptation to high altitude.” **Science**. **329**: 75-78.
22. Xiang, H., Zhu, J., Chen, Q., ..., **Li, R.**, Zhang, X., et al. (2010) “Single base-resolution methylome of the silkworm reveals a sparse epigenomic map.” **Nature Biotech**. **28**: 516-520.
23. Zhang, G., Guo, G., Hu, X., Zhang, Y., Li, Q., **Li, R.**, Zhuang, R., et al. (2010) “Deep RNA sequencing at single base-pair resolution reveals high complexity of the rice transcriptome.” **Genome Research**. **20**: 646-654.
24. **Li, R.***, Li, Y., Zheng, H., et al. (2010) “Building the sequence map of the human pan-genome.” **Nature Biotech**. **28**: 57-63.
25. **Li, R.***, Fan, W., Tian, G., et al. (2010) “The sequence and de novo assembly of the giant panda genome.” **Nature**. **463**: 311-317. [cover story]

26. Qin, J., **Li, R.***, et al. (2010) "A human gut microbial gene catalogue established by metagenomic sequencing." **Nature**. **464**: 59-65. [cover story]
27. Duan, J., Xia, Q., **Li, R.***, et al. (2010) "SilkDB v2.0: a platform for silkworm (*Bombyx mori*) genome biology." **Nucleic Acids Res.** **38**: D453-456. (Database issue).
28. **Li, R.***, Zhu, H., Ruan, J., et al. (2010) "De novo assembly of human genomes with massively parallel short read sequencing." **Genome Research**. **20**: 265-272.
29. Lam, T., **Li, R.**, Tam, A., Wong, S., Wu, E., Yiu, S. (2009) "High Throughput Short Read Alignment via Bi-directional BWT." **BIBM** 2009: 31-36
30. Xia, Q., Guo, Y., ... **Li, R.**, et al. (2009) "Complete resequencing of 40 genomes reveals domestication events and genes in silkworm (*Bombyx*)." **Science**. **326**: 433-436.
31. Huang S., **Li, R.***, et al. (2009) "The genome of the cucumber *Cucumis sativus sativus* L.." **Nature genetics**. **41**: 1275-1281. [cover story]
32. Li, G., Ma, L., **Li, R.**, et al. (2009) "The YH Database: The First Asian Diploid Genome Database." **Nucleic Acids Res** 37(Database issue): D1025-1028.
33. **Li, R.***, Yu, C., et al. (2009) "SOAP2: an improved ultrafast tool for short read alignment." **Bioinformatics** 25(15):1966-7
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37. Wang, J., Wang, W., **Li, R.***, Li, Y., et al. (2008) "The diploid genome sequence of an Asian individual." **Nature** 456(7484): 60-65. [cover story]
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50. Wong, G. K., B. Liu, ..., **Li, R.**, et al. (2004). "A genetic variation map for chicken with 2.8 million single-nucleotide polymorphisms." **Nature** 432(7018): 717-22. [cover story]
51. Kang, L., X. Chen, ..., **Li, R.**, et al. (2004). "The analysis of large-scale gene expression correlated to the phase changes of the migratory locust." **Proc Natl Acad Sci U S A** 101(51): 17611-5.