



## 刘合力

发布日期: 2011-11-28 浏览次数: 字号: [大 中 小]



刘合力, 男, 博士, 博士后学历, 特聘研究员, 北京大学优秀青年人才“百人计划”入选者, 国家“青年千人”计划获得者。

2005年获中国科学院生物物理研究所生物化学与分子生物学博士学位, 2006.1-2011.10 在美国西北大学Feinberg医学院分子药理学与生物化学系从事博士后和Research Associate研究; 2011.11担任北京大学药学院分子与细胞药理学系特聘研究员, 入选北京大学优秀青年人才“百人计划”; 2012.8入选第三批国家“青年千人”计划。

Email: liuheli@bjmu.edu.cn

研究方向:

以生物大分子X-射线晶体学为重要手段, 结合分子生物学、生物化学和生物物理学的技术和方法, 在原子分辨率水平上揭示肿瘤转移和自闭症谱系障碍 (Autism Spectrum Disorders, ASD) 等神经精神性疾病发生过程中重要分子事件的结构机制, 并基于相关细胞表面受体信号转导的结构机制设计和开发蛋白质或多肽药物。

近期研究内容:

1. 肿瘤细胞转移过程中integrin和细胞基质以及其他细胞表面受体相互作用的结构和分子机制; 含锌蛋白酶ADAMs对Notch信号转导的作用机制;
2. ASD发生过程中神经细胞黏连蛋白contactin及其相关蛋白CNTNAP2的结构与功能关系;
3. 基于酪氨酸激酶受体 (比如FMS、Kit) 的信号转导结构机制设计和开发用于癌症治疗的蛋白质药物;
4. 特发性癫痫蛋白LGII与受体ADAMs复合物的结构生物学研究 (获国家自然科学基金面上资助);

代表性论文:

1. Liu H, Leo C, Chen X, Wong BR, Williams LT, Lin H, He X. The mechanism of shared but distinct CSF-1R signaling by the non-homologous cytokines IL-34 and CSF-1. *Biochim Biophys Acta*. 2012 1824(7):938-45.
2. Jiang X, Liu H, Chen X, Chen PH, Fischer D, Sriraman V, Yu HN, Arkinstall S, He X. Structure of follicle-stimulating hormone in complex with the entire ectodomain of its receptor. *Proc Natl Acad Sci U S A*. 2012 109(31):12491-6

3. Heli Liu, Pamela J. Focia, Xiaolin He. Homophilic adhesion mechanism of neurofascin, a member of the L1 family of neural cell adhesion molecules. *J Biol Chem.* 2011 Jan 7;286(1):797-805.
4. Heli Liu, Z. Sean Juo, Ann Hye-Ryong Shim, Pamela J. Focia, Xiaoyan Chen, K. Christopher Garcia, and Xiaolin He. Structural Basis of Semaphorin-Plexin Recognition and Viral Mimicry from Sema7A and A39R Complexes with PlexinC1. *Cell.* 2010 Sep 3;142(5):749-61. (commented by “Faculty of 1000” )
5. Ann H. R. Shim\*, Heli Liu\*, Pamela J. Focia, Xiaoyan Chen, P. Charles Lin, Xiaolin He. Structures of a platelet-derived growth factor/propeptide complex and a platelet-derived growth factor/receptor complex. *Proc Natl Acad Sci U S A.* 2010 Jun 22;107(25):11307-12. (\*equal contribution)
6. Heli Liu, Ann H. R. Shim Xiaolin He. Structural characterization of the ectodomain of a disintegrin and metalloproteinase-22 (ADAM22), a neural adhesion receptor instead of metalloproteinase: insights on ADAM function. *J Biol Chem.* 2009 Oct 16;284(42):29077-86. (highlighted as “Paper of Week” )
7. Heli Liu\*, Xiaoyan Chen\*, Pamela J Focia, Xiaolin He. Structural basis for stem cell factor-KIT signaling and activation of class III receptor tyrosine kinases. *EMBO J.* 2007 26(3):891-901 (\*equal contribution) [commented in *Cell.* 2007 Jul 27;130(2):213-5]
8. Chen X, Liu Heli, Focia PJ, Shim AH, He X. Structure of macrophage colony stimulating factor bound to FMS: diverse signaling assemblies of class III receptor tyrosine kinases. *Proc Natl Acad Sci U S A.* 2008 Nov 25;105(47):18267-72.
9. Xiaoyan Chen, Heli Liu, Ann Shim, Pamela J Focia, Xiaolin He. Structural basis for synaptic adhesion mediated by neuroligin-neurexin interactions. *Nature Structural & Molecular Biology.* 2008 Jan;15(1):50-6
10. HeLi Liu, Hui-Na Zhou, Wei-Man Xing, Jian-Feng Zhao, Shu-Xing Li, Ju-Fu Huang, Ru-Chang Bi. 2.6 Å resolution crystal structure of the bacterioferritin from *Azotobacter vinelandii*. *FEBS Letters* 573 (2004) 93 - 98

[打印本页](#) [关闭窗口](#)