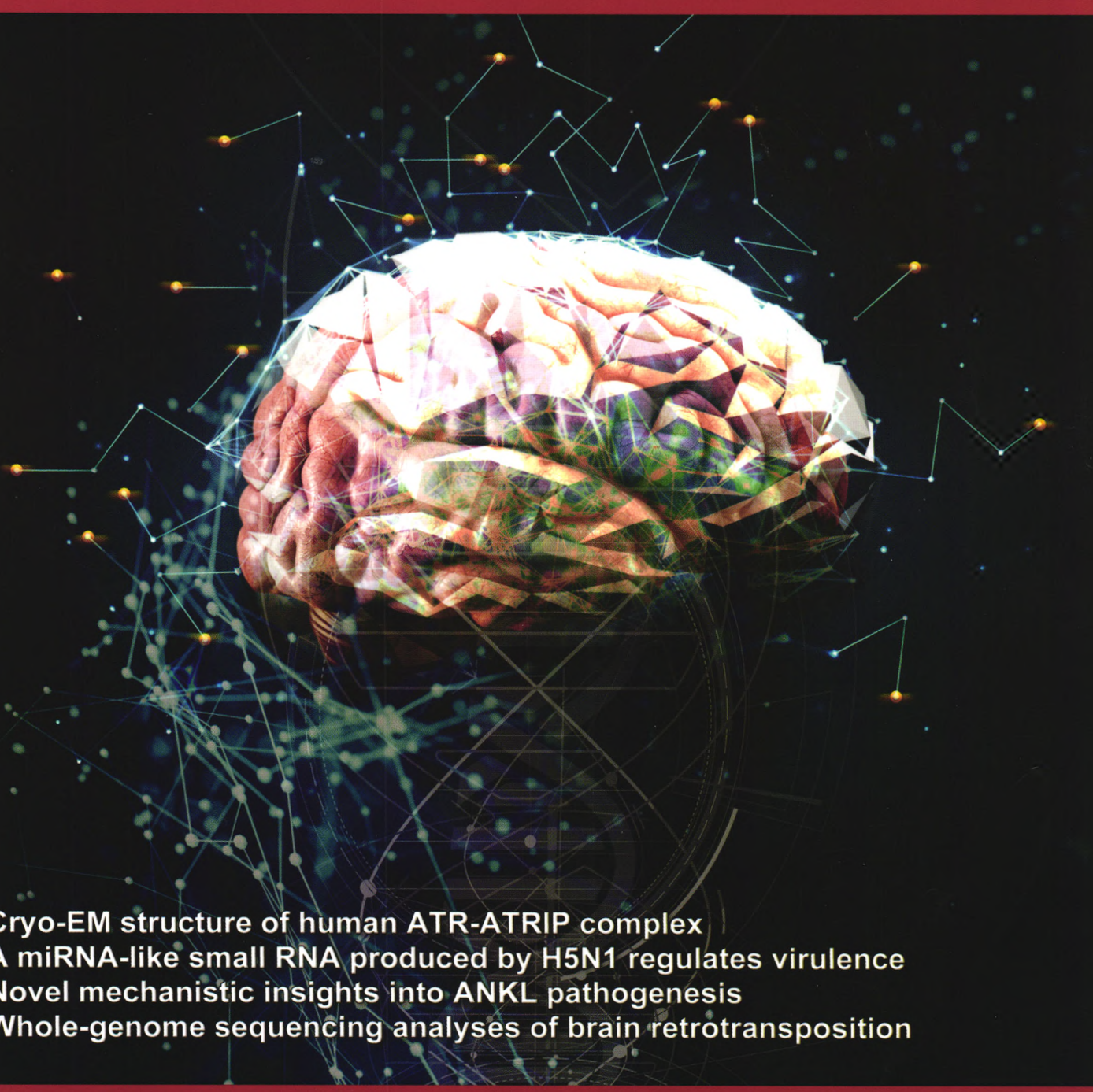


Cell Research



Volume 28 Number 2 February 2018

www.nature.com/cr
www.cell-research.com



Cryo-EM structure of human ATR-ATRIP complex
A miRNA-like small RNA produced by H5N1 regulates virulence
Novel mechanistic insights into ANKL pathogenesis
Whole-genome sequencing analyses of brain retrotransposition

Institute of Biochemistry and Cell Biology
Shanghai Institutes for Biological Sciences
Chinese Academy of Sciences

万方数据

SPRINGER NATURE

(Founded in 1990)

Online submission via:

<http://www.nature.com/cr>

<http://www.cell-research.com>

Cell Research is published monthly by Nature Publishing Group (NPG) in partnership with Shanghai Institutes for Biological Sciences (SIBS), Chinese Academy of Sciences (CAS) since 2006.

Sponsored by:

Institute of Biochemistry and Cell Biology (IBCB), Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences

© 2018 IBCB, SIBS, CAS



Affiliated with:

The Chinese Society for Cell Biology since August 2007



Granted by:

Publishing Foundation of Chinese Academy of Sciences, National Natural Science Foundation of China, and China Association for Science and Technology



Supported by SPFCAS

This journal is a member of, and subscribes to the principles of, the Committee on Publication Ethics (COPE) www.publicationethics.org



SPRINGER NATURE

Coordinating Editor for this issue
Shushu Jiang

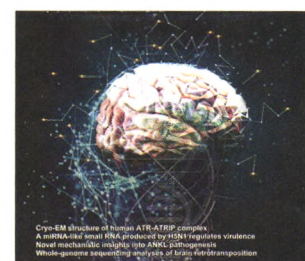
RESEARCH HIGHLIGHTS

- 135 Wild gut microbiota protects from disease**
Francesca S Gazzaniga, Dennis L Kasper
- 137 GOTcha: lncRNA-ACOD1 targets metabolism during viral infection**
Marah C Runtsch, Luke AJ O'Neill
- 139 New traffic light on Th17 Avenue**
Hao Xu, Dan R Littman
- 141 Bad germs are trapped**
Liman Zhang, Hao Wu

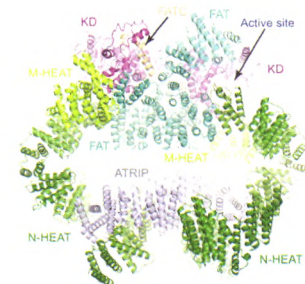
ORIGINAL ARTICLES

- 143 Cryo-EM structure of human ATR-ATRIP complex**
Qinhui Rao, Mengjie Liu, Yuan Tian, Zihan Wu, Yuhao Hao, Lei Song, Zhaoyu Qin, Chen Ding, Hong-Wei Wang, Jiawei Wang, Yanhui Xu
- 157 H5N1 influenza virus-specific miRNA-like small RNA increases cytokine production and mouse mortality via targeting poly(rC) binding protein 2 *Open***
Xihan Li, Zheng Fu, Hongwei Liang, Yanbo Wang, Xian Qi, Meng Ding, Xinlei Sun, Zhen Zhou, Ying Huang, Hongwei Gu, Limin Li, Xi Chen, Donghai Li, Quan Zhao, Fenyong Liu, Hua Wang, Jin Wang, Ke Zen, Chen-Yu Zhang
- 172 Integrated genomic analysis identifies deregulated JAK/STAT-MYC-biosynthesis axis in aggressive NK-cell leukemia**
Liang Huang, Dan Liu, Na Wang, Shaoping Ling, Yuting Tang, Jun Wu, Lingtong Hao, Hui Luo, Xuelian Hu, Lingshuang Sheng, Lijun Zhu, Di Wang, Yi Luo, Zhen Shang, Min Xiao, Xia Mao, Kuangguo Zhou, Lihua Cao, Lili Dong, Xinchang Zheng, Pinpin Sui, Jianlin He, Shanlan Mo, Jin Yan, Qilin Ao, Luguai Qiu, Hongsheng Zhou, Qifa Liu, Hongyu Zhang, Jianyong Li, Jie Jin, Li Fu, Weili Zhao, Jieping Chen, Xin Du, Guoliang Qing, Hudan Liu, Xin Liu, Gang Huang, Ding Ma, Jianfeng Zhou, Qian-fei Wang

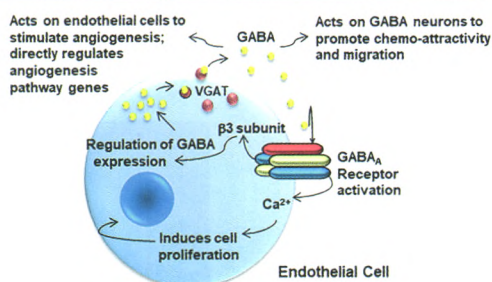
- 187 Whole-genome sequencing reveals principles of brain retrotransposition in neurodevelopmental disorders**
Jasmine Jacob-Hirsch, Eran Eyal, Binyamin A Knisbacher, Jonathan Roth, Karen Cesarkas,



Cover: Retrotransposons are known to jump in neuronal genomes. The drawing by Viktor Koen illustrates the stormy retrotransposition identified in the brain of patients affected by the neurodevelopmental disorders tuberous sclerosis, autism, Rett's syndrome and Ataxia Telangiectasia. See page 187-203 by Jacob-Hirsch *et al.* for details.



Cryo-EM structure of human ATR-ATRIP complex. See page 143-156 by Qinhui Rao *et al.* for details.



Endothelial cell-derived GABA signaling is essential for both angiogenesis and GABAergic neuronal migration in the embryonic telencephalon. See page 221-248 by Suyan Li *et al.* for details.

Chen Dor, Sarit Farage-Barhom, Vered Kunik,
Amos J Simon, Moran Gal, Michal Yalon,
Sharon Moshitch-Moshkovitz, Rick Tearle,
Shlomi Constantini, Erez Y Levanon, Ninette Amariglio,
Gideon Rechavi

204 Histone H3 lysine 4 monomethylation modulates long-range chromatin interactions at enhancers

Jian Yan, Shi-An A Chen, Andrea Local, Tristin Liu,
Yunjiang Qiu, Kristel M Dorigi, Sebastian Preissl,
Chloe M Rivera, Chaochen Wang, Zhen Ye, Kai Ge,
Ming Hu, Joanna Wysocka, Bing Ren

221 Endothelial cell-derived GABA signaling modulates neuronal migration and postnatal behavior **Open**

Suyan Li, Peeyush Kumar T, Sampada Joshee,
Timo Kirschstein, Sivan Subburaju, Jahan S Khalili,
Jonas Klopper, Chuang Du, Abdallah Elkhail,
Gábor Szabó, Rakesh K Jain, Rüdiger Köhling,
Anju Vasudevan

LETTERS TO THE EDITOR

249 Endothelial-specific m⁶A modulates mouse hematopoietic stem and progenitor cell development via Notch signaling

Junhua Lv, Yifan Zhang, Suwei Gao, Chunxia Zhang,
Yusheng Chen, Wei Li, Yun-Gui Yang, Qi Zhou, Feng Liu

253 m⁶A mRNA methylation sustains Treg suppressive functions

Jiyu Tong, Guangchao Cao, Ting Zhang, Esen Sefik,
Maria Carolina Amezcua Vesely, James P Broughton,
Shu Zhu, Huabin Li, Bin Li, Lei Chen, Howard Y Chang,
Bing Su, Richard A Flavell, Hua-Bing Li

257 Chemically synthesized histone H2A Lys13 di-ubiquitination promotes binding of 53BP1 to nucleosomes

Jia-Bin Li, Yun-Kun Qi, Qiao-Qiao He, Hua-Song Ai,
San-ling Liu, Jia-Xing Wang, Ji-Shen Zheng, Lei Liu,
Changlin Tian

CORRIGENDUM

261 Transcriptional activation of transposable elements in mouse zygotes is independent of Tet3-mediated 5-methylcytosine oxidation

Azusa Inoue, Shogo Matoba, Yi Zhang

ERRATUM

262 Chemically synthesized histone H2A Lys13 di-ubiquitination promotes binding of 53BP1 to nucleosomes

Jia-Bin Li, Yun-Kun Qi, Qiao-Qiao He, Hua-Song Ai,
San-ling Liu, Jia-Xing Wang, Ji-Shen Zheng, Lei Liu,
Changlin Tian

ADVANCE ONLINE PUBLICATION (published weekly on Tuesday and Friday)

23 JANUARY 2018

Structure of the human activated spliceosome in three conformational states **Open**

Xiaofeng Zhang, Chuangye Yan, Xiechao Zhan, Lijia Li, Jianlin Lei and Yigong Shi

doi:10.1038/cr.2018.14

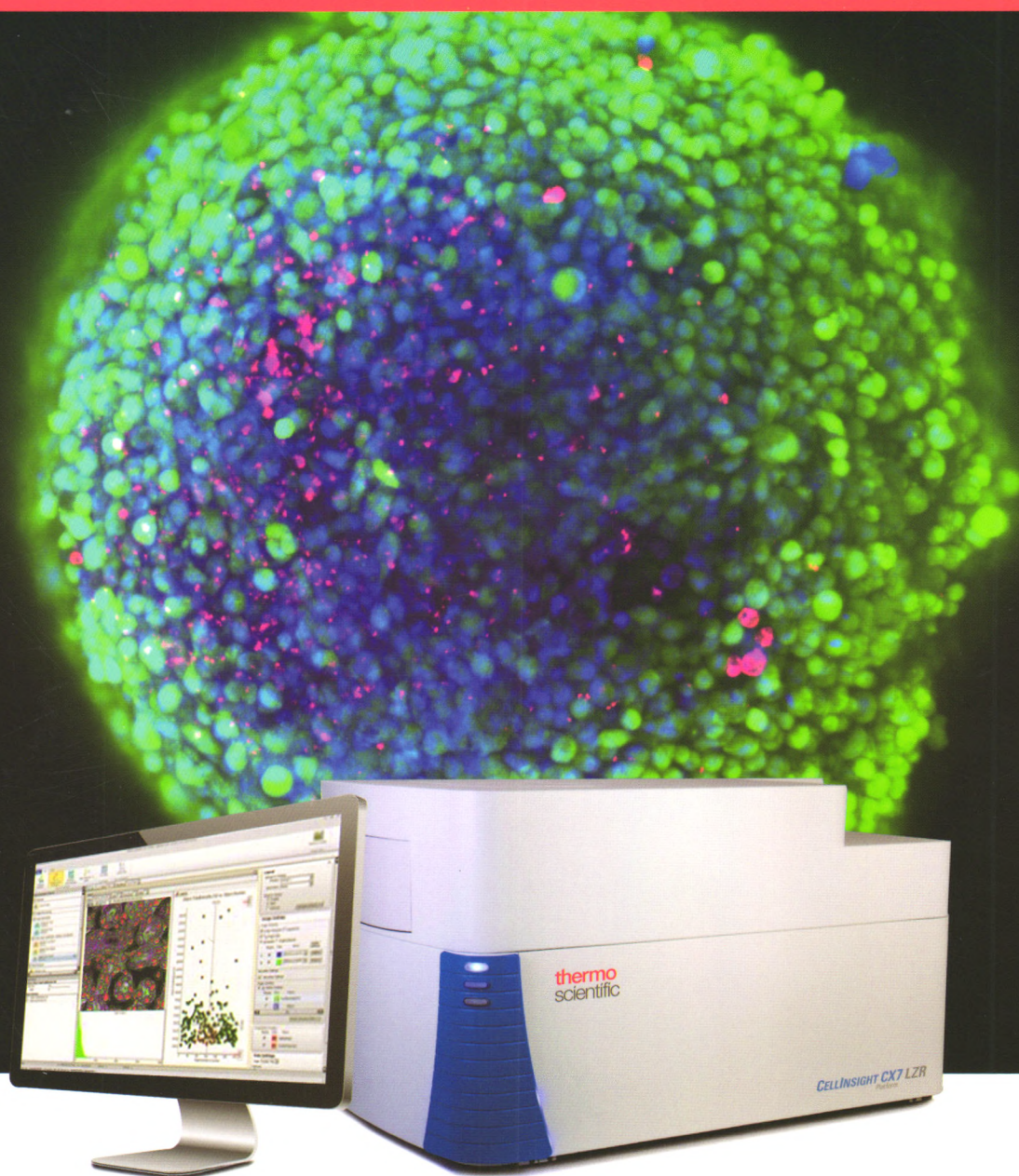
2 FEBRUARY 2018

Tamoxifen enhances stemness and promotes metastasis of ER α 36⁺ breast cancer by upregulating ALDH1A1 in cancer cells **Open**

Qiang Wang, Jun Jiang, Guoguang Ying, Xiao-Qing Xie, Xia Zhang, Wei Xu, Xuemin Zhang, Erwei Song, Hong Bu, Yi-Fang Ping,
Xiao-Hong Yao, Bin Wang, Shilei Xu, Ze-Xuan Yan, Yanhong Tai, Baoquan Hu, Xiaowei Qi, Yan-Xia Wang, Zhi-Cheng He, Yan Wang,
Ji Ming Wang, You-Hong Cui, Feng Chen, Kun Meng, Zhaoyi Wang and Xiu-Wu Bian

doi:10.1038/cr.2018.15

thermo scientific



CellInsight CX7 LZR 七色激光共聚焦高内涵分析平台 震撼上市

详情登录 www.thermofisher.com/cx7lzh



赛默飞
官方微信



赛默飞
生命科学官方微信

免费服务电话: 800 820 8982/400 820 8982
销售服务信箱: sales.china@thermofisher.com
技术咨询信箱: LifeScience-CNTS@thermofisher.com

ThermoFisher
SCIENTIFIC

仅供研究使用。不得用于诊断。© 2018 Thermo Fisher Scientific Inc. 版权所有。除特别说明外, 所有商标均为 Thermo Fisher Scientific 及其附属公司的财产。MyTaq 是 Bioline Inc. 的商标。One Taq 是 New England BioLabs Inc. 的商标

万方数据