

# Cell Research

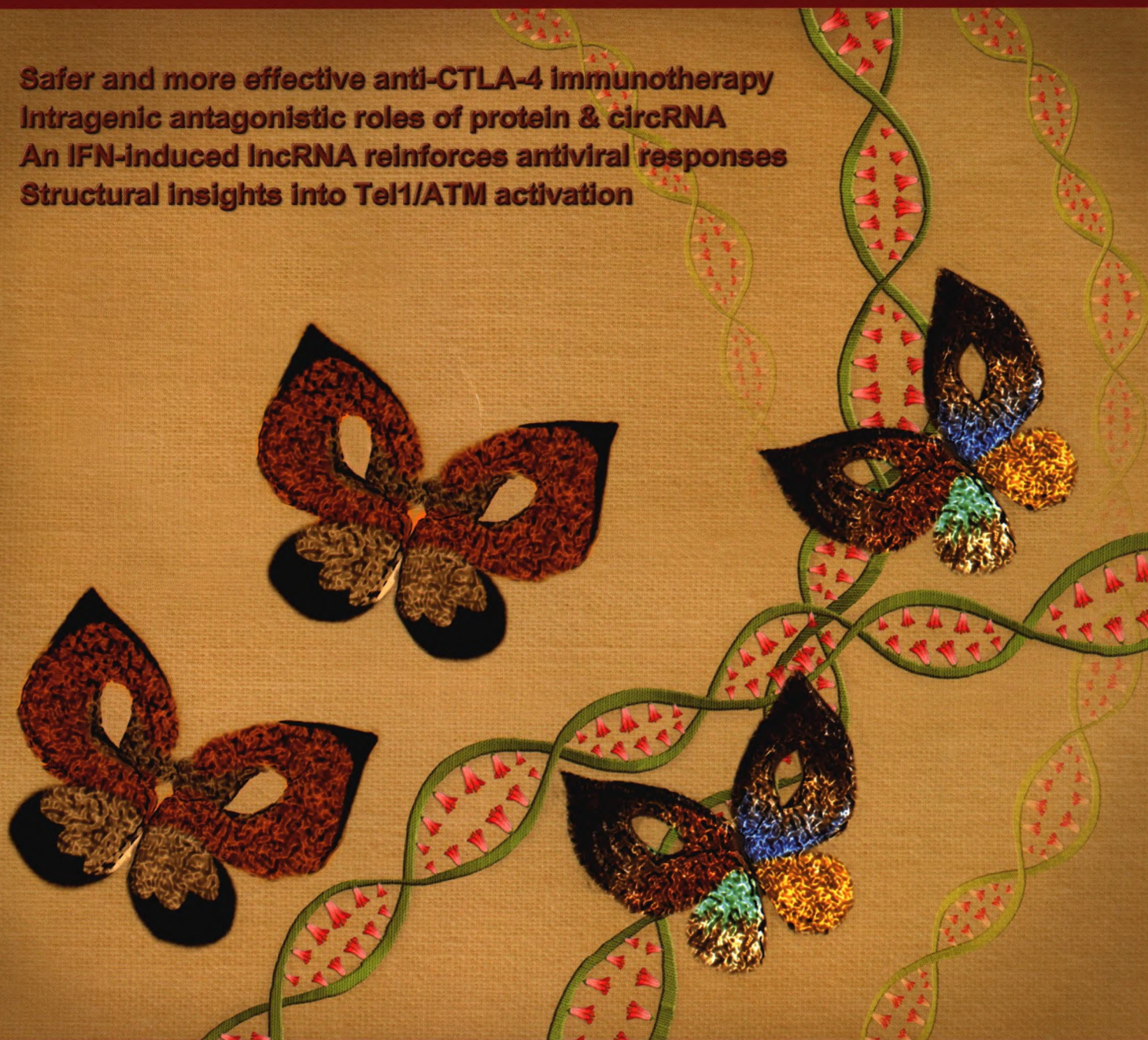


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**Safer and more effective anti-CTLA-4 immunotherapy**  
**Intragenic antagonistic roles of protein & circRNA**  
**An IFN-induced lncRNA reinforces antiviral responses**  
**Structural insights into Tel1/ATM activation**



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SPRINGER NATURE

Coordinating Editor for this issue  
Jiajun Xu

## RESEARCH HIGHLIGHTS

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- 603 Microbiota guides insulin trafficking in beta cells**  
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- 605 Crystallizing BubR1's kinase activity**  
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- 607 AIF: an acquired metabolic liability in lung cancer**  
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## ARTICLES

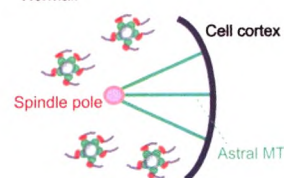
- 609 Hijacking antibody-induced CTLA-4 lysosomal degradation for safer and more effective cancer immunotherapy** *Open*  
*Yan Zhang, Xuexiang Du, Mingyue Liu, Fei Tang, Peng Zhang, Chunxia Ai, James K. Fields, Eric J. Sundberg, Olga S. Latinovic, Martin Devenport, Pan Zheng, Yang Liu*
- 628 Intragenic antagonistic roles of protein and circRNA in tumorigenesis**  
*Jlenia Guarnerio, Yang Zhang, Giulia Cheloni, Riccardo Panella, Jesse Mae Katon, Mark Simpson, Akinobu Matsumoto, Antonella Papa, Cristian Loretti, Andreas Petri, Sakari Kauppinen, Cassandra Garbutt, Gunnlaugur Petur Nielsen, Vikram Deshpande, Mireia Castillo-Martin, Carlos Cordon-Cardo, Spentzos Dimitrios, John G. Clohessy, Mona Batish, Pier Paolo Pandolfi*
- 641 Interferon-inducible cytoplasmic IncLrrc55-AS promotes antiviral innate responses by strengthening IRF3 phosphorylation**  
*Yumei Zhou, Mengxuan Li, Yiquan Xue, Zhiqing Li, Weitao Wen, Xingguang Liu, Yuanwu Ma, Lianfeng Zhang, Zhongyang Shen, Xuetao Cao*
- 655 Structural basis of allosteric regulation of Tel1/ATM kinase** *Open*  
*Jiyu Xin, Zhu Xu, Xuejuan Wang, Yanhua Tian, Zhihui Zhang, Gang Cai*



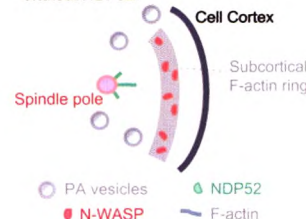
**Cover:** The dimeric architecture of Tel1/ATM resembles a butterfly stretching out its wings. The symmetric dimer is in an inactive state, whereas the asymmetric structure is representative of the pathway toward activation. See page 655-665 by Jiyu Xin et al. for details.

#### Prophase/Prometaphase

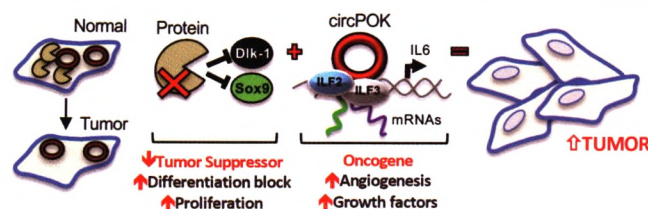
Normal:



Without NDP52:



A working model shows NDP52 vesicles-mediated coordination of subcortical actin and microtubule networks through N-WASP during prophase/prometaphase. See page 666-679 by Huijuan Yu et al. for details.



Schematic representation of the functions played by Pokemon protein (tumor suppressor) and circPOK (proto-oncogene) in the process of mesenchymal tumorigenesis. See page 628-640 by Jlenia Guamerio et al. for details.

## LETTERS TO THE EDITOR

**680 Structure of the mannose transporter of the bacterial phosphotransferase system**

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**683 Structural insights into the activation of ATM kinase**

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**666 NDP52 tunes cortical actin interaction with astral microtubules for accurate spindle orientation**

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## ADVANCE ONLINE PUBLICATION

**Single-cell RNA-seq highlights intra-tumoral heterogeneity and malignant progression in pancreatic ductal adenocarcinoma**

*Junya Peng, Bao-Fa Sun, Chuan-Yuan Chen, Jia-Yi Zhou, Yu-Sheng Chen, Hao Chen, Lulu Liu, Dan Huang, Jialin Jiang, Guan-Shen Cui, Ying Yang, Wenze Wang, Dan Guo, Menghua Dai, Junchao Guo, Taiping Zhang, Quan Liao, Yi Liu, Yong-Liang Zhao, Da-Li Han, Yupei Zhao, Yun-Gui Yang and Wenming Wu*

**NDUFAB1 confers cardio-protection by enhancing mitochondrial bioenergetics through coordination of respiratory complex and supercomplex assembly** **Open**

*Tingting Hou, Rufeng Zhang, Chongshu Jian, Wanqiu Ding, Yanru Wang, Shukuan Ling, Qi Ma, Xinli Hu, Heping Cheng and Xianhua Wang*

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## Featured articles

Structural insights into DNA recognition by AimR of the arbitrium communication system in the SPbeta phage  
*Cell Discov.* 2019 May 28; 5:29. doi: 10.1038/s41421-019-0101-2.

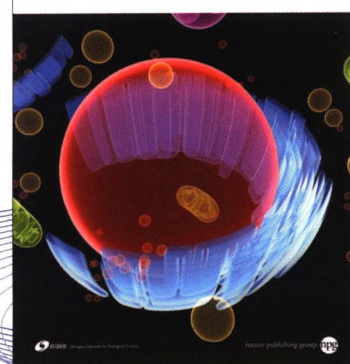
A chemical approach for global protein knockdown from mice to non-human primates  
*Cell Discov.* 2019 Feb 5; 5:10. 10.1038/s41421-018-0079-1.

Repurposing CRISPR-Cas12b for mammalian genome engineering  
*Cell Discov.* 2018 Nov 27; 4:63. doi: 10.1038/s41421-018-0069-3.

A novel antibody-TCR (AbTCR) platform combines Fab-based antigen recognition with gamma/delta-TCR signaling to facilitate T-cell cytotoxicity with low cytokine release  
*Cell Discov.* 2018 Nov 20; 4:62. doi: 10.1038/s41421-018-0066-6.

ADRB2 polymorphism Arg16Gly modifies the natural outcome of heart failure and dictates therapeutic response to  $\beta$ -blockers in patients with heart failure  
*Cell Discov.* 2018 Oct 23; 4:57. doi: 10.1038/s41421-018-0058-6.

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