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# Cell Research

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**A novel gut-secreted hormone promotes adaptations to fasting**  
**Cryo-EM structures of human IFT-A complexes**  
**Mitochondria-localized cGAS suppresses ferroptosis**  
**Structural insights into complement receptor C5aR1 signaling**



Center for Excellence in Molecular Cell Science  
Chinese Academy of Sciences  
The Chinese Society for Cell Biology

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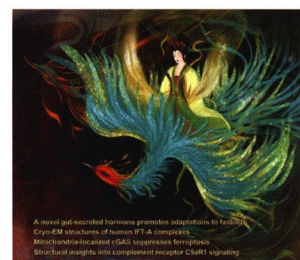
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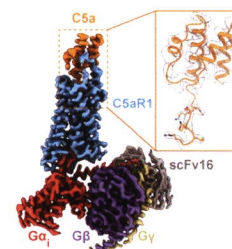
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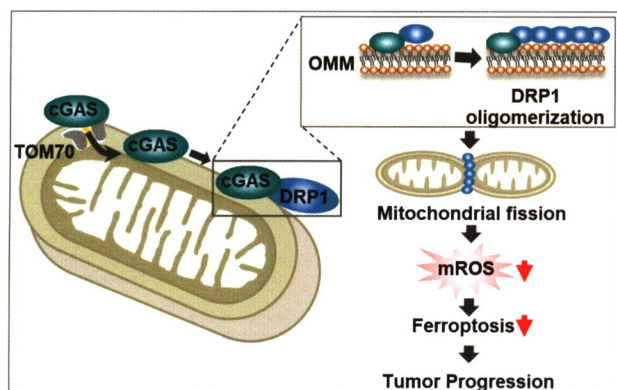


**Cover:** The image shows a Chinese fairy tale, the "Blue Bird as a messenger", wherein Blue Bird delivers messages for Xiwangmu (the Immortal Queen Mother). The Blue Bird is reminiscent of famsin, a novel gut-secreted hormone, which mediates communication between the intestine and other organs to promote metabolic adaptations to fasting and enhance animal survival when food is scarce. See page 273–287 by Aijun Long et al. for details.



Cryo-EM maps of C5a-bound C5aR1–G<sub>i</sub> complexes. See page 312–324 by Yuying Feng et al. for details.





Schematic cartoon showing that mitochondria-localized cGAS interacts with DRP1 to facilitate its oligomerization and function, thus preventing mitochondrial ROS accumulation and ferroptosis. See page 299–311 by Shiqiao Qiu et al. for details.

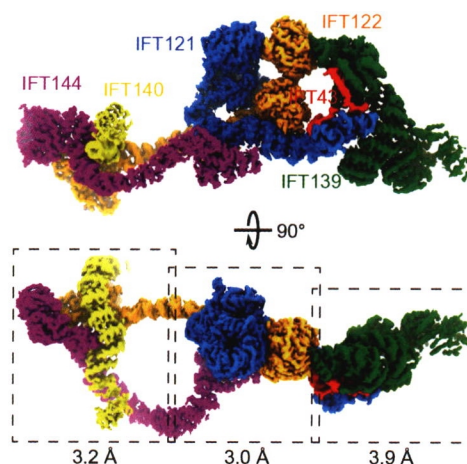
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Cryo-EM density of the IFT-A complex. See page 288–298 by Meiqin Jiang et al. for details.

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### Dietary cysteine drives body fat loss via FMRFamide signaling in *Drosophila* and mouse *Open*

Tingting Song, Wusa Qin, Zeliang Lai, Haoyu Li, Daihan Li, Baojia Wang, Wuquan Deng, Tingzhang Wang, Liming Wang and Rui Huang



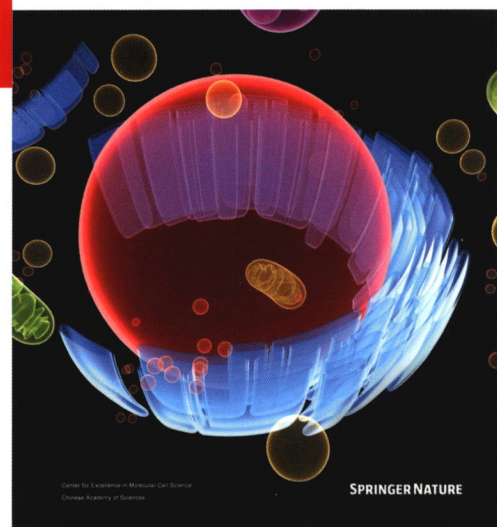
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## Featured Papers



**Structural insights into a shared mechanism of human STING activation by a potent agonist and an autoimmune disease-associated mutation**  
*Cell Discov.* 2022;8:133. doi: 10.1038/s41421-022-00481-4.



**Surface translocation of ACE2 and TMPRSS2 upon TLR4/7/8 activation is required for SARS-CoV-2 infection in circulating monocytes**  
*Cell Discov.* 2022;8:89. doi: 10.1038/s41421-022-00453-8.



**A bipotential organoid model of respiratory epithelium recapitulates high infectivity of SARS-CoV-2 Omicron variant**  
*Cell Discov.* 2022;8:57. doi: 10.1038/s41421-022-00422-1.



**Dynamic O-GlcNAcylation coordinates ferritinophagy and mitophagy to activate ferroptosis**  
*Cell Discov.* 2022;8:40. doi: 10.1038/s41421-022-00390-6.



**SARS-CoV-2 uses metabotropic glutamate receptor subtype 2 as an internalization factor to infect cells**  
*Cell Discov.* 2021;7:119. doi: 10.1038/s41421-021-00357-z.



**Identification of an intraocular microbiota**  
*Cell Discov.* 2021;7:13. doi: 10.1038/s41421-021-00245-6.