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# Cell Research

Volume 32 Number 9 September 2022

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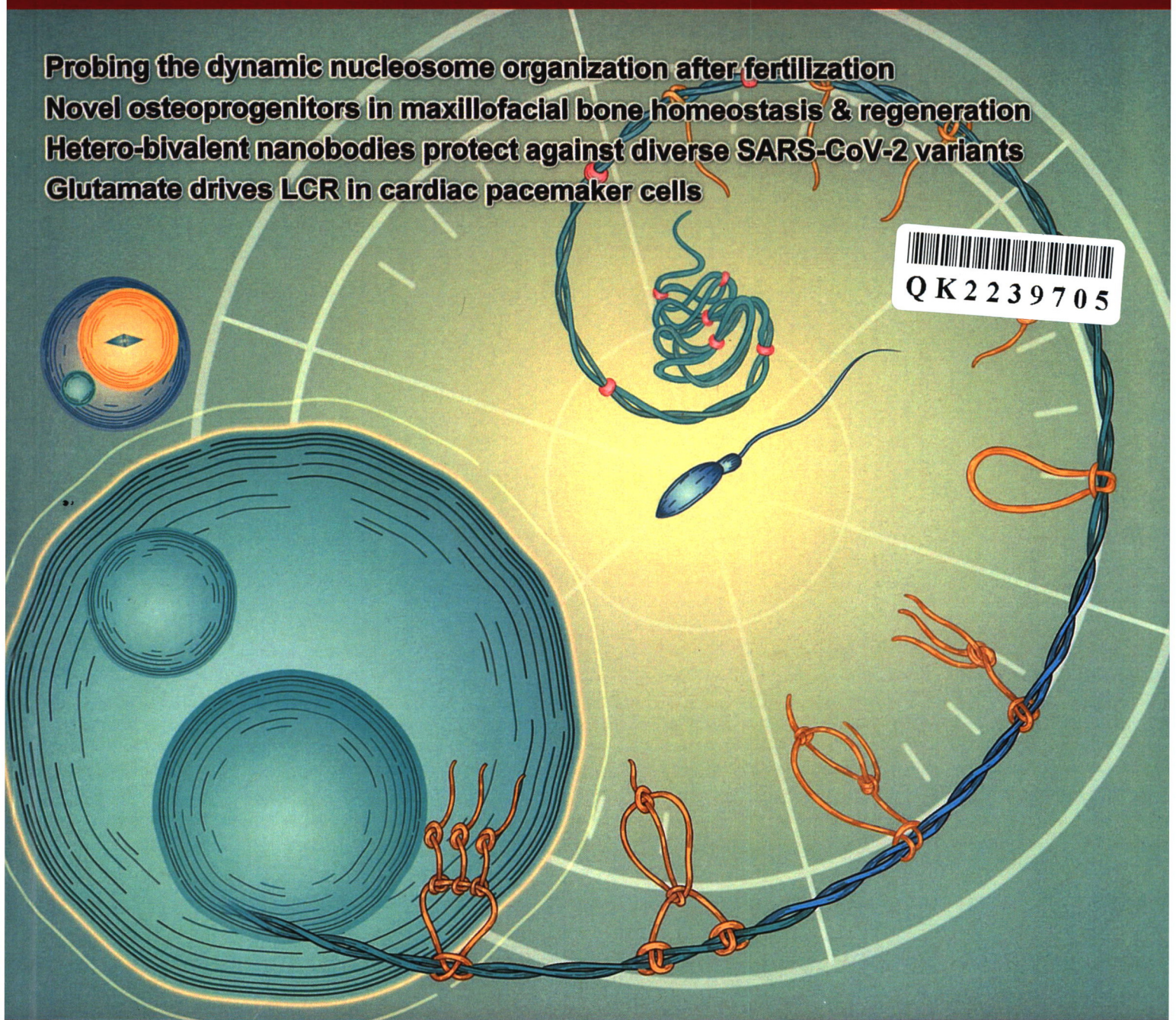
**Probing the dynamic nucleosome organization after fertilization**
**Novel osteoprogenitors in maxillofacial bone homeostasis & regeneration**
**Hetero-bivalent nanobodies protect against diverse SARS-CoV-2 variants**
**Glutamate drives LCR in cardiac pacemaker cells**





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SPRINGER NATURE

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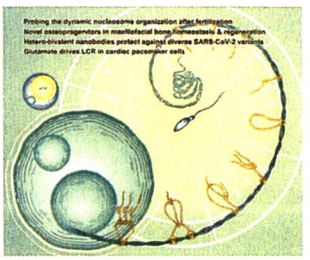
# Contents

## RESEARCH HIGHLIGHTS

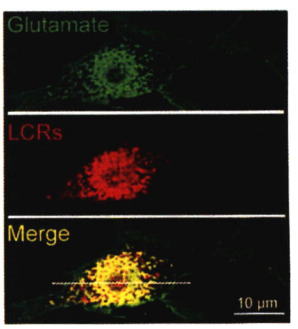


## ARTICLES





**Cover:** Nucleosome remodeling of the paternal genome during the first 12 h after fertilization in mice. The knotted ropes represent chromatins in the nucleus. In the first 3 h after fertilization, the protamine (pink knots) on paternal DNA was replaced by histone (yellow knots). Then the nucleosome positioning pattern was continually rebuilt to form nucleosome depletion regions at promoters and transcription factor binding sites, which were represented by more complex knots. See page 801-813 by Chenfei Wang et al. for details.




Representative confocal images demonstrating the subcellular colocalization of glutamate accumulation and LCR events. See page 843-854 by Duanyang Xie et al. for details.

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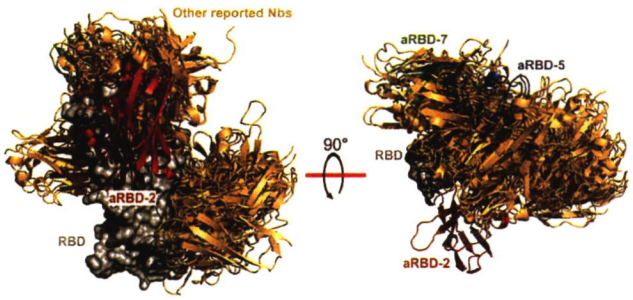


Alignment of the structures of RBD:aRBD-2, RBD:aRBD-5 and RBD:aRBD-7 complexes with other reported RBD/spike:Nb complex structures (bright-orange) deposited in the PDB database. See page 831–842 by Huan Ma et al. for details.

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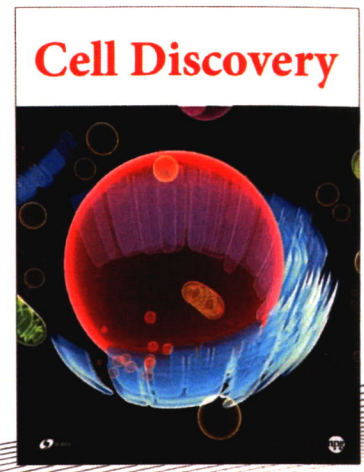


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*Cell Discov*. 2022 Jun 6;8(1):53. doi: 10.1038/s41421-022-00419-w.

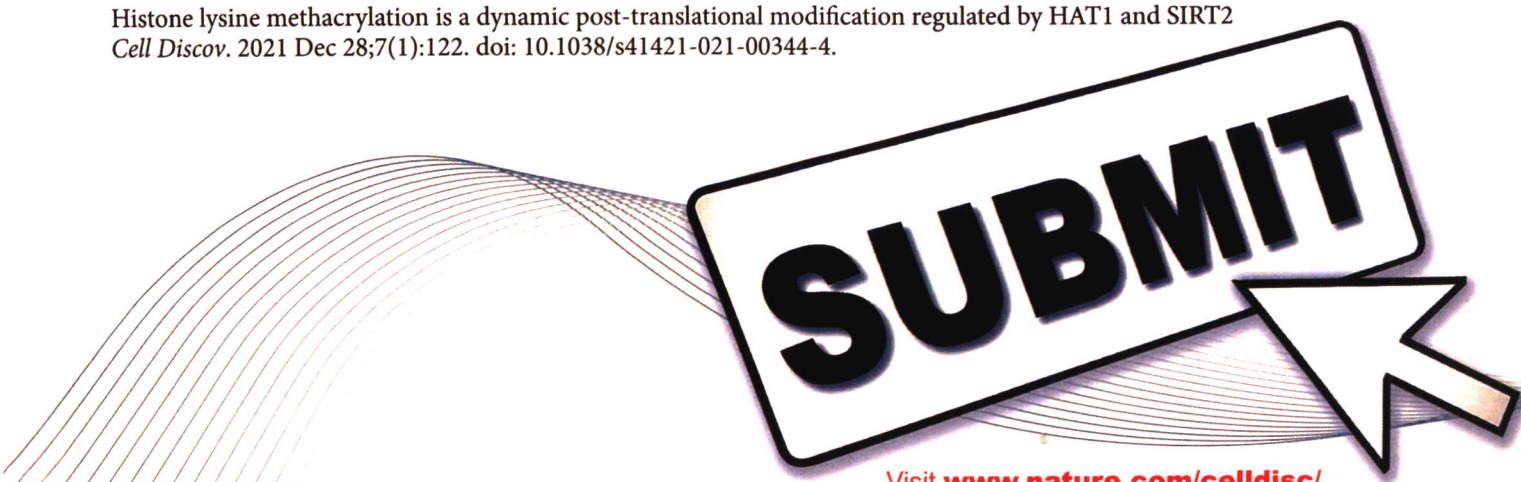
Dynamic O-GlcNAcylation coordinates ferritinophagy and mitophagy to activate ferroptosis
*Cell Discov*. 2022 May 3;8(1):40. doi: 10.1038/s41421-022-00390-6.

Treatment of SARS-CoV-2-induced pneumonia with $NAD^+$ and NMN in two mouse models
*Cell Discov*. 2022 Apr 29;8(1):38. doi: 10.1038/s41421-022-00409-y.

CRISPR signal conductor 2.0 for redirecting cellular information flow
*Cell Discov*. 2022 Mar 15;8(1):26. doi: 10.1038/s41421-021-00371-1.

Cross-species metabolomic analysis identifies uridine as a potent regeneration promoting factor
*Cell Discov*. 2022 Feb 1;8(1):6. doi: 10.1038/s41421-021-00361-3.

Histone lysine methacrylation is a dynamic post-translational modification regulated by HAT1 and SIRT2
*Cell Discov*. 2021 Dec 28;7(1):122. doi: 10.1038/s41421-021-00344-4.

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