

---

# 2025年度热门论文精选 Journal of Developmental Biology (JDB)

作者：writer 来源：科学网

本文原地址：<https://www.iikx.com/news/progress/38904.html>

**本文仅供学习交流之用，版权归原作者所有，请勿用于商业用途！**

2025年度热门论文精选 Journal of Developmental Biology (JDB)。期刊名：Journal of Developmental Biology (JDB)

期刊链接：<https://www.mdpi.com/journal/jdb>

为展示在读者群体中引起广泛关注的研究成果，Journal of Developmental Biology特别遴选并推出2025年度最受关注论文精选。本次入选的文章涵盖了发育生物学领域的多个重要研究方向，包括生殖细胞发育与生育力、肌肉与干细胞生物学、神经发育、再生、生物表观遗传调控，以及心血管与胎盘发育等。

1. CRISPR/Cas9-Targeted Myostatin Deletion Improves the Myogenic Differentiation Parameters for Muscle-Derived Stem Cells in Mice

CRISPR/Cas9靶向敲除肌生成抑制素（Myostatin）提升小鼠肌源性干细胞的肌生成分化能力

<https://www.mdpi.com/2221-3759/13/1/5>

Elashry, M.I.; Schneider, V.C.; Heimann, M.; Wenisch, S.; Arnhold, S. CRISPR/Cas9-Targeted Myostatin Deletion Improves the Myogenic Differentiation Parameters for Muscle-Derived Stem Cells in Mice. J. Dev. Biol. 2025, 13, 5. <https://doi.org/10.3390/jdb13010005>

2. Utilizing C. elegans Spermatogenesis and Fertilization Mutants as a Model for Human Disease

利用秀丽隐杆线虫（C. elegans）精子发生与受精突变体研究人类疾病

<https://www.mdpi.com/2221-3759/13/1/4>

Perez, S.M.; Augustineli, H.S.; Marcello, M.R. Utilizing C. elegans Spermatogenesis and Fertilization Mutants as a Model for Human Disease. J. Dev. Biol. 2025, 13, 4. <https://doi.org/10.3390/jdb13010004>

3. Ribosome Incorporation Transdifferentiates Chick Primary Cells and Induces Their Proliferation by Secreting Growth Factors

---

核糖体整合诱导鸡初级细胞转分化，并通过分泌生长因子促进细胞增殖

<https://www.mdpi.com/2221-3759/13/2/19>

Inoue, S.; Istiaq, A.; Datta, A.; Lu, M.; Nakayama, S.; Takashi, K.; Nakajo, N.; Tamura, S.; Kawashima, I.; Ohta, K. Ribosome Incorporation Transdifferentiates Chick Primary Cells and Induces Their Proliferation by Secreting Growth Factors. *J. Dev. Biol.* 2025, 13, 19. <https://doi.org/10.3390/jdb13020019>

4.Zebrafish Unga Is Required for Genomic Maintenance upon Genotoxic Stress and Male Fertility

斑马鱼Unga在基因毒性应激下维持基因组稳定性并影响雄性生育能力

<https://www.mdpi.com/2221-3759/13/3/32>

Kazzazy, L.; Huba, F.; Hausz, B.L.; Mezo, D.; Perey-Simon, V.; Jezs ó , B.; Seddik, A.; Marinovic, Z.; T ó th, J.; B é k é si, A.; et al. Zebrafish Unga Is Required for Genomic Maintenance upon Genotoxic Stress and Male Fertility. *J. Dev. Biol.* 2025, 13, 32. <https://doi.org/10.3390/jdb13030032>

5.Neuronal Populations Involved in Motor Function Show Prominent Expression of Sbno1 During Postnatal Brain Development

参与运动功能的神经元群体在出生后脑发育过程中高表达Sbno1

<https://www.mdpi.com/2221-3759/13/1/3>

Zolzaya, S.; Ihara, D.; Erkhembaatar, M.; Ochiai, S.; Isa, A.; Nishibe, M.; Bellier, J.-P.; Shimizu, T.; Kikkawa, S.; Nitta, R.; et al. Neuronal Populations Involved in Motor Function Show Prominent Expression of Sbno1 During Postnatal Brain Development. *J. Dev. Biol.* 2025, 13, 3. <https://doi.org/10.3390/jdb13010003>

6.HP1-Mediated Silencing of the Doublesex1 Gene for Female Determination in the Crustacean *Daphnia magna*

HP1介导的Doublesex1基因沉默*Daphnia magna*雌性性别决定中的作用

<https://www.mdpi.com/2221-3759/13/3/23>

Leim, J.; Adhitama, N.; Nong, Q.D.; Religia, P.; Kato, Y.; Watanabe, H. HP1-Mediated Silencing of the Doublesex1 Gene for Female Determination in the Crustacean *Daphnia magna*. *J. Dev. Biol.* 2025, 13, 23. <https://doi.org/10.3390/jdb13030023>

7.Super-Enhancers in Placental Development and Diseases

超级增强子在胎盘发育及相关疾病中的作用

<https://www.mdpi.com/2221-3759/13/2/11>

---

Rosario, G.X.; Brown, S.; Karmakar, S.; Rumi, M.A.K.; Nayak, N.R. Super-Enhancers in Placental Development and Diseases. *J. Dev. Biol.* 2025, 13, 11. <https://doi.org/10.3390/jdb13020011>

#### 8. Signaling Pathways in Human Blastocyst Development: From Molecular Mechanisms to In Vitro Optimization

人类囊胚发育中的信号通路：从分子机制到体外培养优化

<https://www.mdpi.com/2221-3759/13/3/33>

Jiao, Y.; Liu, J.; Li, C.; Hu, Y.; Zhao, S. Signaling Pathways in Human Blastocyst Development: From Molecular Mechanisms to In Vitro Optimization. *J. Dev. Biol.* 2025, 13, 33.

<https://doi.org/10.3390/jdb13030033>

#### 9. Origins of Aortic Coarctation: A Vascular Smooth Muscle Compartment Boundary Model

主动脉缩窄的发生机制：血管平滑肌区室边界模型

<https://www.mdpi.com/2221-3759/13/2/13>

Greene, C.L.; Traeger, G.; Venkatesh, A.; Han, D.; Majesky, M.W. Origins of Aortic Coarctation: A Vascular Smooth Muscle Compartment Boundary Model. *J. Dev. Biol.* 2025, 13, 13.

<https://doi.org/10.3390/jdb13020013>

#### 10. Wound-Induced Regeneration in Feather Follicles: A Stepwise Strategy to Regenerate Stem Cells

损伤诱导的羽毛毛囊再生：一种逐步重建干细胞的策略

<https://www.mdpi.com/2221-3759/13/2/10>

Jiang, T.-X.; Wu, P.; Li, A.; Widelitz, R.B.; Chuong, C.-M. Wound-Induced Regeneration in Feather Follicles: A Stepwise Strategy to Regenerate Stem Cells. *J. Dev. Biol.* 2025, 13, 10.

<https://doi.org/10.3390/jdb13020010>

#### 11. In Vitro Embryo Culture Impacts Heart Mitochondria in Male Adolescent Sheep

体外胚胎培养对青春期雄性绵羊心脏线粒体的影响

<https://www.mdpi.com/2221-3759/13/2/17>

Amanollahi, R.; Holman, S.L.; Meakin, A.S.; Padhee, M.; Botting-Lawford, K.J.; Zhang, S.; MacLaughlin, S.M.; Kleemann, D.O.; Walker, S.K.; Kelly, J.M.; et al. In Vitro Embryo Culture Impacts Heart Mitochondria in Male Adolescent Sheep. *J. Dev. Biol.* 2025, 13, 17. <https://doi.org/10.3390/jdb13020017>

#### 12. The Congenital Malformation of the Interatrial Septum—A Review of Its Development and Embryology with Clinical Implications

---

## 心房间隔先天畸形：发育与胚胎学机制及其临床意义综述

<https://www.mdpi.com/2221-3759/13/3/28>

Oliveira, R.C.; Martins, P.; Martins, M.d.F. The Congenital Malformation of the Interatrial Septum—A Review of Its Development and Embryology with Clinical Implications. *J. Dev. Biol.* 2025, 13, 28. <https://doi.org/10.3390/jdb13030028>

## 13. Defective Neural Stem and Progenitor Cell Proliferation in Neurodevelopmental Disorders

### 神经发育障碍中神经干细胞与祖细胞增殖缺陷

<https://www.mdpi.com/2221-3759/13/4/40>

Shigenaka, A.; Nitta, E.; Nakagawa, T.; Nakagawa, M.; Hosoi, T. Defective Neural Stem and Progenitor Cell Proliferation in Neurodevelopmental Disorders. *J. Dev. Biol.* 2025, 13, 40. <https://doi.org/10.3390/jdb13040040>

## 14. Profilin and Non-Canonical Wnt Signaling: Coordinating Cytoskeletal Dynamics from Development to Disease

### Profilin与非经典Wnt信号通路：协调从发育到疾病过程中的细胞骨架动态

<https://www.mdpi.com/2221-3759/13/3/31>

Alam, S.; Duncan, D.; Hasan, S. Profilin and Non-Canonical Wnt Signaling: Coordinating Cytoskeletal Dynamics from Development to Disease. *J. Dev. Biol.* 2025, 13, 31. <https://doi.org/10.3390/jdb13030031>

## 15. GLP-1-Mediated Pregnancy and Neonatal Complications in Mice

### GLP-1介导的小鼠妊娠及新生儿并发症

<https://www.mdpi.com/2221-3759/13/3/29>

Ramamoorthy, R.; Carden, A.K.; Hussain, H.; Druyan, B.Z.; Chen, P.P.; Hajjar, R.; Fernandez, C.; Elumalai, N.; Rashed, A.B.; Young, K.; et al. GLP-1-Mediated Pregnancy and Neonatal Complications in Mice. *J. Dev. Biol.* 2025, 13, 29. <https://doi.org/10.3390/jdb13030029>

## 16. Varanid Teeth Asymmetry and Correlation to Body Size

### 巨蜥类 (Varanid) 牙齿不对称性及其与体型大小的相关性

<https://www.mdpi.com/2221-3759/13/1/9>

Sion, G.; D'Amore, D.C. Varanid Teeth Asymmetry and Correlation to Body Size. *J. Dev. Biol.* 2025, 13, 9. <https://doi.org/10.3390/jdb13010009>

---

17. Effects of Molybdenum Supplementation in the Form of Ammonium and Sodium Salts on Trophoblast Cell Physiology and Gene Expression In Vitro

以铵盐和钠盐形式补充钼对滋养层细胞体外生理功能及基因表达的影响

<https://www.mdpi.com/2221-3759/13/1/8>

Foteva, V.; Fisher, J.J.; Qiao, Y.; Smith, R. Effects of Molybdenum Supplementation in the Form of Ammonium and Sodium Salts on Trophoblast Cell Physiology and Gene Expression In Vitro. *J. Dev. Biol.* 2025, 13, 8. <https://doi.org/10.3390/jdb13010008>

18. Probe Sequencing Analysis of Regenerating Lizard Tails Indicates Crosstalk Among Osteoclasts, Epidermal Cells, and Fibroblasts

探针测序分析揭示蜥蜴尾再生过程中破骨细胞、表皮细胞与成纤维细胞之间的相互作用

<https://www.mdpi.com/2221-3759/13/2/15>

Gamble, D.J.; Lopez, S.; Yazdi, M.; Castro-Torres, T.; Lozito, T.P. Probe Sequencing Analysis of Regenerating Lizard Tails Indicates Crosstalk Among Osteoclasts, Epidermal Cells, and Fibroblasts. *J. Dev. Biol.* 2025, 13, 15. <https://doi.org/10.3390/jdb13020015>

19. Cannabinoid Receptor 1 Regulates Zebrafish Renal Multiciliated Cell Development via cAMP Signaling

大麻素受体1通过cAMP信号通路调控斑马鱼肾脏多纤毛细胞的发育

<https://www.mdpi.com/2221-3759/13/2/20>

Nguyen, T.K.; Baker, S.; Angtuaco, J.; Arceri, L.; Kaczor, S.; Fitzsimonds, B.; Hawkins, M.R.; Wingert, R.A. Cannabinoid Receptor 1 Regulates Zebrafish Renal Multiciliated Cell Development via cAMP Signaling. *J. Dev. Biol.* 2025, 13, 20. <https://doi.org/10.3390/jdb13020020>

20. Follicular Fluid from Cows That Express Estrus During a Fixed-Time Artificial Insemination Protocol Promotes Blastocyst Development

在定时人工授精方案中表现发情的奶牛卵泡液可促进囊胚发育

<https://www.mdpi.com/2221-3759/13/2/14>

Harl, A.W.; Negrón-Pérez, V.M.; Stewart, J.W.; Perry, G.A.; Ealy, A.D.; Rhoads, M.L. Follicular Fluid from Cows That Express Estrus During a Fixed-Time Artificial Insemination Protocol Promotes Blastocyst Development. *J. Dev. Biol.* 2025, 13, 14. <https://doi.org/10.3390/jdb13020014>

JDB 期刊介绍

主编：Simon J. Conway, Indiana University School of Medicine, USA

---

期刊主要发表关于分子、细胞、组织、器官和整个生物体层面的多细胞生物发育的相关文章。

2024 Impact Factor 2.5 2024 CiteScore 4.5 Time to First Decision 27.1Days Acceptance to Publication  
5.6Days

来源：Journal of Developmental Biology

更多 科学进展 请访问 <https://www.iikx.com/news/progress/>

本文版权归原作者所有，请勿用于商业用途，[爱科学iikx.com](https://www.iikx.com)转发