



Cover: Scanning electron micrograph of an *Arabidopsis pin-formed1 pinoid* double mutant seedling, showing extremely reduced growth and asymmetric positioning of cotyledons. The reduction of growth is caused by the expansion of *CUC1* and *CUC2* gene activity, which normally represses growth at the cotyledon boundaries. See article by Furutani et al. on p. 5021.

Review

Gilboa, L. and Lehmann, R.

How different is Venus from Mars? The genetics of germ-line stem cells in *Drosophila* females and males

4895-4905

Research articles

Mustonen, T., Ilmonen, M., Pummila, M., Kangas, A. T., Laurikkala, J., Jaatinen, R., Pispä, J., Gaide, O., Schneider, P., Thesleff, I. and Mikkola, M. L.

Ectodysplasin A1 promotes placodal cell fate during early morphogenesis of ectodermal appendages

4907-4919

Martin, F. A., Pérez-Garijo, A., Moreno, E. and Morata, G.

The *brinker* gradient controls wing growth in *Drosophila*

4921-4930

Faivre-Sarrailh, C., Banerjee, S., Li, J., Hortsch, M., Laval, M. and Bhat, M. A.

Drosophila contactin, a homolog of vertebrate contactin, is required for septate junction organization and paracellular barrier function

4931-4942

Angulo, M., Corominas, M. and Serras, F.

Activation and repression activities of *ash2* in *Drosophila* wing imaginal discs

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Kurita, T., Medina, R. T., Mills, A. A. and Cunha, G. R.

Role of p63 and basal cells in the prostate

4955-4964

Farrona, S., Hurtado, L., Bowman, J. L. and Reyes, J. C.

The *Arabidopsis thaliana* SNF2 homolog AtBRM controls shoot development and flowering

4965-4975

Piepenburg, O., Grimmer, D., Williams, P. H. and Smith, J. C.

Activin redux: specification of mesodermal pattern in *Xenopus* by graded concentrations of endogenous activin B

4977-4986

Nedachi, T. and Conti, M.

Potential role of protein tyrosine phosphatase nonreceptor type 13 in the control of oocyte meiotic maturation

4987-4998

Rana, A. A., Martinez Barbera, J. P., Rodriguez, T. A., Lynch, D., Hirst, E., Smith, J. C. and Beddington, R. S. P.

Targeted deletion of the novel cytoplasmic dynein mD2LIC disrupts the embryonic organiser, formation of the body axes and specification of ventral cell fates

4999-5007

Adolphe, C., Narang, M., Ellis, T., Wicking, C., Kaur, P. and Wainwright, B.

An in vivo comparative study of sonic, desert and Indian hedgehog reveals that hedgehog pathway activity regulates epidermal stem cell homeostasis

5009-5019

Furutani, M., Vernoux, T., Traas, J., Kato, T., Tasaka, M. and Aida, M.

PIN-FORMED1 and *PINOID* regulate boundary formation and cotyledon development in *Arabidopsis* embryogenesis

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Fuccillo, M., Rallu, M., McMahon, A. P. and Fishell, G.

Temporal requirement for hedgehog signaling in ventral telencephalic patterning

5031-5040

Harrelson, Z., Kelly, R. G., Goldin, S. N., Gibson-Brown, J. J., Bollag, R. J., Silver, L. M. and Papaioannou, V. E.

Tbx2 is essential for patterning the atrioventricular canal and for morphogenesis of the outflow tract during heart development

5041-5052

Shandala, T., Gregory, S. L., Dalton, H. E., Smallhorn, M. and Saint, R.

Citron Kinase is an essential effector of the Pbl-activated Rho signalling pathway in *Drosophila melanogaster*

5053-5063

Kofron, M., Puck, H., Standley, H., Wylie, C., Old, R., Whitman, M. and Heasman, J.

New roles for FoxH1 in patterning the early embryo

5065-5078

Asaoka, M. and Lin, H.

Germline stem cells in the *Drosophila* ovary descend from pole cells in the anterior region of the embryonic gonad

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Hans, S., Liu, D. and Westerfield, M.

Pax8 and Pax2a function synergistically in otic specification, downstream of the Foxj1 and Dlx3b transcription factors

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Cong, F., Schweizer, L. and Varmus, H.

Wnt signals across the plasma membrane to activate the β -catenin pathway by forming oligomers containing its receptors, Frizzled and LRP

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Zhao, S., Chai, X., Förster, E. and Frotscher, M.

Reelin is a positional signal for the lamination of dentate granule cells

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Aigouy, B., Van de Bor, V., Boeglin, M. and Giangrande, A.

Time-lapse and cell ablation reveal the role of cell interactions in fly glia migration and proliferation

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Rowan, S., Chen, C.-M. A., Young, T. L., Fisher, D. E. and Cepko, C. L.

Transdifferentiation of the retina into pigmented cells in ocular retardation mice defines a new function of the homeodomain gene *Chx10*

5139-5152

Brugger, S. M., Merrill, A. E., Torres-Vazquez, J., Wu, N., Ting, M.-C., Cho, J. Y.-M., Dobias, S. L., Yi, S. E., Lyons, K., Bell, J. R., Arora, K., Warrior, R. and Maxson, R.

A phylogenetically conserved cis-regulatory module in the *Msx2* promoter is sufficient for BMP-dependent transcription in murine and *Drosophila* embryos

5153-5165

Truman, J. W., Schuppe, H., Shepherd, D. and Williams, D. W.

Developmental architecture of adult-specific lineages in the ventral CNS of *Drosophila*

5167-5184

Coppola, V., Barrick, C. A., Southon, E. A., Celeste, A., Wang, K., Chen, B., Haddad, E.-B., Yin, J., Nussenzweig, A., Subramaniam, A. and Tessarollo, L.

Ablation of TrkA function in the immune system causes B cell abnormalities

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Research article: Development and disease

Hallaq, H., Pinter, E., Enciso, J., McGrath, J., Zeiss, C., Brueckner, M., Madri, J., Jacobs, H. C., Wilson, C. M., Vasavada, H., Jiang, X. and Bogue, C. W.

A null mutation of *Hhex* results in abnormal cardiac development, defective vasculogenesis and elevated Vegfa levels

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Corrigendum

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Corrigendum

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