

Leading Edge

Cell Volume 145 Number 6, June 10, 2011

IN THIS ISSUE

CELL SELECT

805 Stem Cells

VOICES

811 Reprogramming: What's Unknown?

PREVIEWS

- | | | |
|-----|---|------------------------------|
| 813 | Treating the Periphery to Ameliorate Neurodegenerative Diseases | P.H. Reinhart and J.W. Kelly |
| 815 | Rolling ES Cells Down the Waddington Landscape with Oct4 and Sox2 | N. Iovino and G. Cavalli |
| 817 | A Kinesin in Command of Primary Ciliogenesis | C.G. Pearson |

COMMENTARY

- | | | |
|-----|---|---|
| 820 | Democracy Derived? New Trajectories in Pluripotent Stem Cell Research | C.T. Scott, J.B. McCormick, M.C. DeRouen, and J. Owen-Smith |
|-----|---|---|

MINIREVIEWS

- | | | |
|-----|--|---------------------------------|
| 827 | Cell Fate Plug and Play: Direct Reprogramming and Induced Pluripotency | S.M. Chambers and L. Studer |
| 831 | The Human Brain in a Dish: The Promise of iPSC-Derived Neurons | R. Dolmetsch and D.H. Geschwind |

REVIEWS

- | | | |
|-----|--|--------------------------------|
| 835 | Chromatin Connections to Pluripotency and Cellular Reprogramming | S.H. Orkin and K. Hochedlinger |
| 851 | Strategies for Homeostatic Stem Cell Self-Renewal in Adult Tissues | B.D. Simons and H. Clevers |

SNAPSHOT

- | | | |
|-----|--|-----------------------------|
| 994 | Stem Cell Niches of the <i>Drosophila</i> Testis and Ovary | M. Issigonis and E. Matunis |
|-----|--|-----------------------------|

Articles

Cell Volume 145 Number 6, June 10, 2011

- 863 Kynurenone 3-Monoxygenase Inhibition in Blood Ameliorates Neurodegeneration
D. Zwilling, S.-Y. Huang, K.V. Sathyasaikumar, F.M. Notarangelo, P. Guidetti, H.-Q. Wu, J. Lee, J. Truong, Y. Andrews-Zwilling, E.W. Hsieh, J.Y. Louie, T. Wu, K. Scearce-Levie, C. Patrick, A. Adame, F. Giorgini, S. Moussaoui, G. Laue, A. Rassoulpour, G. Flik, Y. Huang, J.M. Muchowski, E. Masliah, R. Schwarcz, and P.J. Muchowski
- 875 Pluripotency Factors in Embryonic Stem Cells Regulate Differentiation into Germ Layers
M. Thomson, S.J. Liu, L.-N. Zou, Z. Smith, A. Meissner, and S. Ramanathan
- 890 The RNA Helicase Mtr4p Modulates Polyadenylation in the TRAMP Complex
H. Jia, X. Wang, F. Liu, U.-P. Guenther, S. Srinivasan, J.T. Anderson, and E. Jankowsky
- 902 Translational Control via Protein-Regulated Upstream Open Reading Frames
J. Medenbach, M. Seiler, and M.W. Hentze
- 914 Centriolar Kinesin Kif24 Interacts with CP110 to Remodel Microtubules and Regulate Ciliogenesis
T. Kobayashi, W.Y. Tsang, J. Li, W. Lane, and B.D. Dynlach
- 926 Paracrine and Autocrine Signals Induce and Maintain Mesenchymal and Stem Cell States in the Breast
C. Scheel, E.N. Eaton, S.H.-J. Li, C.L. Chaffer, F. Reinhardt, K.-J. Kah, G. Bell, W. Guo, J. Rubin, A.L. Richardson, and R.A. Weinberg
- 941 Coordinated Activation of Wnt in Epithelial and Melanocyte Stem Cells Initiates Pigmented Hair Regeneration
P. Rabbani, M. Takeo, W.C. Chou, P. Myung, M. Bosenberg, L. Chin, M.M. Taketo, and M. Ito
- 956 Interlocked Feedforward Loops Control Cell-Type-Specific Rhodopsin Expression in the *Drosophila* Eye
R.J. Johnston, Jr., Y. Otake, P. Sood, N. Vogt, R. Behnia, D. Vasiliauskas, E. McDonald, B. Xie, S. Koenig, R. Wolf, T. Cook, B. Gebelein, E. Kussell, H. Nakagoshi, and C. Desplan
- 969 Riboneogenesis in Yeast
M.F. Clasquin, E. Melamud, A. Singer, J.R. Gooding, X. Xu, A. Dong, H. Cui, S.R. Campagna, A. Savchenko, A.F. Yakunin, J.D. Rabinowitz, and A.A. Caudy

(continued)

THEORY

- 981 Metazoan Operons Accelerate Recovery from Growth-Arrested States

A. Zaslaver, L.R. Baugh, and P.W. Sternberg

CORRECTION

- 993 Double-Strand Break Repair-Independent Role for BRCA2 in Blocking Stalled Replication Fork Degradation by MRE11

K. Schlacher, N. Christ, N. Slaud, A. Egashira, H. Wu, and M. Jasin

ANNOUNCEMENTS

POSITIONS AVAILABLE

On the cover: The generation of pigmented hair involves the synchronized activation and differentiation of two distinct stem cell populations sharing the hair follicle niche: epithelial stem cells (EpSCs) that produce hair and melanocyte stem cells (McSCs) that differentiate into pigment-producing melanocytes. In this issue, Rabbani et al. (pp. 941–955) provide insight into the molecular pathways that mediate this coordination: proliferating EpSCs produce Wnt ligands, which then trigger differentiation of neighboring McSCs. The cover depicts an artistic rendering of several hair follicles imaged with fluorescent confocal microscopy. In the original image, shown below, McSCs are identified with tyrosine-related protein in blue, β -catenin (the key mediator of Wnt signaling) in red, and the proliferation marker Ki67 in green. Cover image generated on the iPhone4 with the application Percolator.

