

**Cover legend:** This image shows two-color fluorescent *in situ* hybridization staining of a zebrafish embryo at 14 hours post fertilization. Probes detect *carbonic anhydrase VIII* (*ca8*, red) in the prechordal plate, notochord, and rhombomeres 3 and 5, and *krox20* (green). The greenish yellow fluorescence in the rhombomeres represented by two stripes in the developing hindbrain indicates co-expression of *ca8* in *krox20* expressing cells. At later stages, *ca8* expression is confined to Purkinje neurons in the larval cerebellum, which allowed for identifying a novel Purkinje cell specific regulatory element to be used for modeling neurodegenerative diseases affecting Purkinje neurons, such as Spinocerebellar Ataxia Type 13. (pages 3948–3969).

3783 This Week in The Journal

## Viewpoints

- 3784 **A Hypothetical Model Concerning How Spike-Timing- Dependent Plasticity Contributes to Neural Circuit Formation and Initiation of the Critical Period in Barrel Cortex**  
Fumitaka Kimura and Chiaki Itami

## Research Articles

### CELLULAR/MOLECULAR

- 3792 **Mitotic Motor KIFC1 Is an Organizer of Microtubules in the Axon**  
Hemalatha Muralidharan and Peter W. Baas
- 3812 **Intracellular Zn<sup>2+</sup> Signaling Facilitates Mossy Fiber Input-Induced Heterosynaptic Potentiation of Direct Cortical Inputs in Hippocampal CA3 Pyramidal Cells**  
Kisang Eom, Jung Ho Hyun, Dong-gu Lee, Sooyun Kim, Hyeon-Ju Jeong, Jong-Sun Kang, Won-Kyung Ho, and Suk-Ho Lee
- 3832 **Axonal Degeneration Is Mediated by Necroptosis Activation**  
Macarena S. Arrázola, Cristian Saquel, Romina J. Catalán, Sebastián A. Barrientos, Diego E. Hernandez, Nicolás W. Martínez, Alejandra Catenaccio, and Felipe A. Court
- 3845 **A Human TRPA1-Specific Pain Model**  
Stefan Heber, Markus Gold-Binder, Cosmin I. Ciotu, Martin Witek, Nino Ninidze, Hans-Georg Kress, and Michael J.M. Fischer

### DEVELOPMENT/PLASTICITY/REPAIR

- 3856 **Developmental Remodeling of Thalamic Interneurons Requires Retinal Signaling**  
Naomi E. Charalambakis, Gubbi Govindaiah, Peter W. Campbell, and William Guido

### SYSTEMS/CIRCUITS

- 3867 **Neuronal Adaptation Reveals a Suboptimal Decoding of Orientation Tuned Populations in the Mouse Visual Cortex**  
Miaomiao Jin, Jeffrey M. Beck, and Lindsey L. Glickfeld
- 3882 **Neural Maps of Interaural Time Difference in the American Alligator: A Stable Feature in Modern Archosaurs**  
Lutz Kettler and Catherine E. Carr
- 3897 **Homer1a Is Required for Establishment of Contralateral Bias and Maintenance of Ocular Dominance in Mouse Visual Cortex**  
Varun Chokshi, Brian Druciak, Paul F. Worley, and Hey-Kyoung Lee

## BEHAVIORAL/COGNITIVE

- 3906 Rapid Visuomotor Responses Reflect Value-Based Decisions**  
Timothy J. Carroll, Daniel McNamee, James N. Ingram, and Daniel M. Wolpert
- 3921 Prediction of Choice from Competing Mechanosensory and Choice-Memory Cues during Active Tactile Decision Making**  
Dario Campagner, Mathew H. Evans, Katarina Chlebikova, Andrea Colins-Rodriguez, Michaela S.E. Loft, Sarah Fox, David Pettifer, Mark D. Humphries, Karel Svoboda, and Rasmus S. Petersen
- 3934 The Subjective Value of Cognitive Effort is Encoded by a Domain-General Valuation Network**  
Andrew Westbrook, Bidhan Lamichhane, and Todd Braver

## NEUROBIOLOGY OF DISEASE

- 3948 Modeling Neurodegenerative Spinocerebellar Ataxia Type 13 in Zebrafish Using a Purkinje Neuron Specific Tunable Coexpression System**  
Kazuhiko Namikawa, Alessandro Dorigo, Marta Zagrebelsky, Giulio Russo, Toni Kirmann, Wieland Fahr, Stefan Dübel, Martin Korte, and Reinhard W. Köster
- 3970 Single Synapse Indicators of Impaired Glutamate Clearance Derived from Fast iGlu<sub>u</sub> Imaging of Cortical Afferents in the Striatum of Normal and Huntington (Q175) Mice**  
Anton Dvorzhak, Nordine Helassa, Katalin Török, Dietmar Schmitz, and Rosemarie Grantyn
- 3983 Synaptopodin Deficiency Ameliorates Symptoms in the 3xTg Mouse Model of Alzheimer's Disease**  
Etay Aloni, Efrat Oni-Biton, Micheal Tsoory, Dalia H. Moallem, and Menahem Segal
- 3993 *Erratum:*** The article “The DNA Repair-Associated Protein Gadd45 $\gamma$  Regulates the Temporal Coding of Immediate Early Gene Expression within the Prelimbic Prefrontal Cortex and Is Required for the Consolidation of Associative Fear Memory” by Xiang Li, Paul R. Marshall, Laura J. Leighton, Esmi L. Zajaczkowski, Ziqi Wang, Sachithrani U. Madugalle, Jiayu Yin, Timothy W. Bredy, and Wei Wei, appeared on pages 970–983 of the February 6, 2019 issue. An erratum for this article appears on p. 3993.
- Erratum:*** The article “Electrophysiological Signatures of Spatial Boundaries in the Human Subiculum” by Sang Ah Lee, Jonathan F. Miller, Andrew J. Watrous, Michael R. Sperling, Ashwini Sharan, Gregory A. Worrell, Brent M. Berry, Joshua P. Aronson, Kathryn A. Davis, Robert E. Gross, Bradley Lega, Sameer Sheth, Sandhitsu R. Das, Joel M. Stein, Richard Gorniak, Daniel S. Rizzuto, and Joshua Jacobs, appeared on pages 3265–3272 of the March 28, 2018 issue. An erratum for this article appears on p. 3993.

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