

<i>Commentary</i>	<b>Commentary and Review</b> Community annotation: Procedures, protocols, and supporting tools Christine G. Elsik, Kim C. Worley, Lan Zhang, Natalia V. Milshina, Huaiyang Jiang, Justin T. Reese, Kevin L. Childs, Anand Venkatraman, C. Michael Dickens, George M. Weinstock, and Richard A. Gibbs	1329 <sup>OA</sup>
<i>Letters</i>	<b>Research</b> Phylogenomic analysis reveals bees and wasps (Hymenoptera) at the base of the radiation of Holometabolous insects Joël Savard, Diethard Tautz, Stephen Richards, George M. Weinstock, Richard A. Gibbs, John H. Werren, Hervé Tettelin, and Martin J. Lercher	1334 <sup>OA</sup>
	Exceptionally high levels of recombination across the honey bee genome Martin Beye, Irene Gattermeier, Martin Hasselmann, Tanja Gempe, Morten Schioett, John F. Baines, David Schlipalius, Florence Mougel, Christine Emore, Olav Rueppell, Anu Sirviö, Ernesto Guzmán-Novoa, Greg Hunt, Michel Solignac, Robert E. Page Jr.	1339 <sup>OA</sup>
	Canonical TTAGG-repeat telomeres and telomerase in the honey bee, <i>Apis mellifera</i> Hugh M. Robertson and Karl H.J. Gordon	1345 <sup>OA</sup>
	Molecular and phylogenetic analyses reveal mammalian-like clockwork in the honey bee ( <i>Apis mellifera</i> ) and shed new light on the molecular evolution of the circadian clock Elad B. Rubin, Yair Shemesh, Mira Cohen, Sharona Elgavish, Hugh M. Robertson, and Guy Bloch	1352 <sup>OA</sup>
	Evolution of the complementary sex-determination gene of honey bees: Balancing selection and trans-species polymorphisms Soochin Cho, Zachary Y. Huang, Daniel R. Green, Deborah R. Smith, and Jianzhi Zhang	1366 <sup>OA</sup>
	Patterns of conservation and change in honey bee developmental genes Peter K. Dearden, Megan J. Wilson, Lisha Sablan, Peter W. Osborne, Melanie Havler, Euan McNaughton, Kiyoshi Kimura, Natalia V. Milshina, Martin Hasselmann, Tanja Gempe, Morten Schioett, Susan J. Brown, Christine G. Elsik, Peter W.H. Holland, Tatsuhiko Kadowaki, and Martin Beye	1376 <sup>OA</sup>
	Evolution of the Yellow/Major Royal Jelly Protein family and the emergence of social behavior in honey bees Mark David Drapeau, Stefan Albert, Robert Kucharski, Carsten Prusko, and Ryszard Maleszka	1385 <sup>OA</sup>

(continued)

The chemoreceptor superfamily in the honey bee, *Apis mellifera*:  
Expansion of the odorant, but not gustatory, receptor family 1395<sup>OA</sup>  
Hugh M. Robertson and Kevin W. Wanner

Function and evolution of a gene family encoding odorant  
binding-like proteins in a social insect, the honey bee (*Apis mellifera*) 1404<sup>OA</sup>  
Sylvain Forêt and Ryszard Maleszka

A highly divergent gene cluster in honey bees encodes a novel  
silk family 1414<sup>OA</sup>  
Tara D. Sutherland, Peter M. Campbell, Sarah Weisman,  
Holly E. Trueman, Alagacone Sriskantha, Wolfgang J. Wanjura,  
and Victoria S. Haritos

The nicotinic acetylcholine receptor gene family of the honey bee,  
*Apis mellifera* 1422<sup>OA</sup>  
Andrew K. Jones, Valerie Raymond-Delpech, Steeve H. Thany,  
Monique Gauthier, and David B. Sattelle

### Methods and Resources

Resource

ProtoBee: Hierarchical classification and annotation of the honey  
bee proteome 1431<sup>OA</sup>  
Noam Kaplan and Michal Linial

Erratum 1439

<sup>OA</sup>Open Access paper.



**Cover** Honey bees on comb. Photo: © Scott Camazine (www.scottcamazine.com).