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► **COVER:** 'Use your loaf' by Kirsten Lee, inspired by the Opinion on p436. The title is based on the cockney rhyming slang for 'head' — 'loaf of bread' — which is shortened to 'loaf' in the popular expression "use your loaf".



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Articles in this issue range from the epigenetic control of neuronal precursor fate, the molecular basis of nicotine addiction and the role of the somatosensory system in social perception, to the use of yeast in studying mechanisms of neurodegenerative diseases.

Epigenetic control of developmental genes determines cell fate. Hirabayashi and Gotoh (page 377) discuss epigenetic mechanisms that control the expression of developmental genes by reversible or long-term repression. Changing epigenetic marks during development results in the activation or suppression of reversibly repressed genes and contributes to sequential cell fate restrictions of pluripotent stem cells, ultimately leading to terminally differentiated neurons and glial cells.

In an authoritative Review on page 389, Changeux discusses how studies in mice in which subunits of nicotinic acetylcholine receptors (nAChRs) were targeted have revealed that particular nAChR subunits are involved in the cognitive, rewarding and behavioural effects of nicotine. Moreover, specific subunits seem to mediate the effects of acute versus chronic nicotine exposure, and of nicotine withdrawal.

Mirror systems and their function in social perception continue to be a topic of discussion, to which an article by Keysers and colleagues (page 417) will no doubt contribute. The authors describe studies suggesting that seeing touch, actions and pain experienced by other individuals activates somatosensory brain areas in the observer. They propose that this somatosensory 'mirroring' has a role in our understanding of other people.

Finally, in a Perspective article on page 436, Khurana and Lindquist discuss key properties of the budding yeast *Saccharomyces cerevisiae* that make it a valuable model for studying neurodegenerative diseases.

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