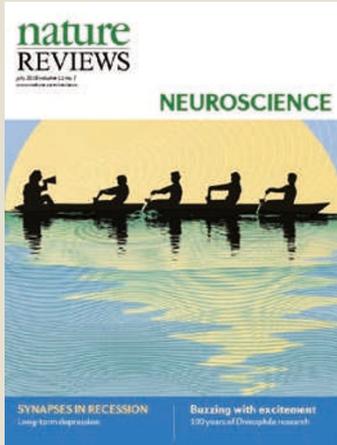




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► **COVER:** 'Gainful employment in the brain' by Kirsten Lee, inspired by the Review on p474.



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Topics covered by this month's articles include computational neuroscience, the cellular and systems bases of memory, animal models for basic and clinical research, and the function of the habenula. Below, we highlight three of the articles.

Although autism is arguably a quintessentially human disorder, its strong genetic basis has led to the development of several genetic mouse models. Such models, if robust, could facilitate the discovery of therapeutics for specific components of autism. On page 490, Crawley and colleagues describe behavioural assays that can be used to investigate the extent to which mouse models reproduce the three main behavioural aspects of autism.

The neural systems that underlie different types of memory have been a topic of much research and discussion. Declarative and nondeclarative forms of memory are generally distinguished on the basis of whether they engage the hippocampus and involve conscious learning and recall. On page 523, Henke presents an alternative model of memory systems that is based on processing operations rather than consciousness.

On page 474, Silver reviews the biophysical mechanisms that enable both morphologically simple and complex neurons to perform computations on their synaptic inputs before converting them into an output. He discusses how some of these mechanisms apply to both sustained rate-coded and sparse temporally coded signals, whereas others apply to only one of these coding regimes.

We end this introduction by congratulating the recipients of the second Kavli Prize in Neuroscience, announced on 3rd June. Thomas Südhof, Richard Scheller and James Rothman are the joint winners for their contribution to identifying the molecular basis of neurotransmitter release from vesicles.

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Printed in Wales by Cambrian Printers

on acid-free paper