What to Expect

Inside this, the first issue of VRN, the qualifying class of 2008 runs the gamut from molecular to behavioral neuroscience, from our understanding of decision-making processes to what we know about human neurological disease and/or disorder.

Several great papers have been published in high impact journals this past year, and are highlighted in the “Research Highlights” section of the journal. Buckholtz et al. identifies neural circuitry responsible for third-party decision-making (p. 5); Reed et al. reported that somatosensory cortex likely serves to integrate information from the hand at multiple levels previously unidentified (p. 7); my collaborators and I show that circadian behavior in mice is the result of population encoding within the brain’s biological clock (p. 6); Binda et al. report that syntaxin 1a is involved in amphetamine-induced dopamine efflux through the dopamine transporter (p. 8); Cohen et al. showed that neurons in the FEF fire at an decreased rate in order to increase selection time when making a saccade in increasingly complex visual search tasks (p. 8).

Dopamine was hot in Vanderbilt University research. Two studies in particular captured the attention of the general public in the past year and are discussed in the “In the News” section of the journal (p. 6), with further elaboration as Research Highlights: Zald et al. demonstrated a relationship between D₃-like receptor availability in the midbrain and novelty-seeking behavior (p. 7) and Mazei-Robison et al. characterized the A559V mutation in the human dopamine transporter (p. 7). The popularity of dopamine carries through to the candidate reviews, with no fewer than five of the reviews mentioning the neurotransmitter as a major player.

This journal is very much a work-in-progress. The Contents (p. 1) are fairly clear about the reviews inside. How useful they are is up to you. If you have any suggestions, let us know. We hope to do this again.

C. M. Ciarleglio

ON THE COVER...

A single plane confocal image of the zebrafish habenulae at 2 days post-fertilization. The paired habenulae, components of the dorsal diencephalon, asymmetrically express proteins in wild type embryos. In this case, the big time mutant displays more symmetrical expression of Leftover (green), though Right on protein distribution (red) appears to be unaffected (To-Pro nuclear dye in blue).

-Caleb Doll