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► **COVER:** 'Amazing journey' by Tom Wilson, inspired by the review on p201.

**T**his month's issue of *Nature Reviews Microbiology* has something for everyone. From parasites to bacteria, prions, fungi and viruses, the diversity of the microbial world is reflected here.

On page 201, Neil Mabbott and Gordon MacPherson review the mechanisms that are involved in the accumulation of certain transmissible-spongiform-encephalopathy agents in lymphoid tissues, a process that is important for the efficient delivery of these agents from the site of infection to the brain. The identification of the cells and molecules that are involved in the process of neuroinvasion might identify new targets for therapeutic intervention.

By contrast, on page 212, Manfred Schmitt and Frank Breinig tackle host–virus interactions. They describe the basic biology of yeasts that carry viruses encoding antimycotic killer toxins and discuss how the yeasts survive despite their lethal cargo. On page 223, the focus turns from yeast to filamentous fungi, as Amy Gladfelter suggests that a concerted research effort to answer the remaining open questions regarding the functions of septins and formins in these organisms could yield significant insights into fundamental eukaryotic cellular processes.

Elsewhere in this issue, several articles cover various aspects of bacteria. On page 173, Ian Head and colleagues explore an interesting temporary 'host' environment — oil-impacted marine environments. This article describes the microorganisms that are important for hydrocarbon degradation and the dynamics of the networks of these bacteria in marine environments, which have implications for the treatment of oil spills.

Finally, on page 229, Carlos Buscaglia and colleagues put forward their opinion that the diversity of *Trypanosoma cruzi* surface mucins in the mammalian stage of the *T. cruzi* life cycle helps these parasites to evade the host immune response.



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