Say it isn't sepsis

If a patient becomes septic, it can be a life-threatening event. Early antibiotics and fluid administration can help ease the condition, which is caused by dysregulated immune responses to systemic infection, but otherwise, options to treat sepsis remain limited. Rodent models have been used extensively to understand sepsis and to search for new treatments, but the translational gap between these small animals and humans has been difficult to overcome.

Nonhuman primates represent a more translationally relevant option. In a new Review, Lingye Chen and colleagues from Duke University Medical Center highlight several existing nonhuman primate models of sepsis and discuss the advantages and limitations to such animal models. [See page 57](#)

Computers for toxicology?

Before a chemical can be approved, regulators must determine that it is safe and won't harm humans. Animals are often involved in testing the toxicity of different chemicals, but *in vivo* approaches aren't the only way—as computer modeling advances and existing data leave the confines of corporate firewalls for more publically available databases, *in silico* models are improving and becoming promising alternatives that might one day help replace and reduce the need for animals for chemical toxicology testing.

From simple models to complex networks to crowdsourced training, read more about predicting chemical toxicity with the help of computers in this month's Technology Feature. [See page 40](#)

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