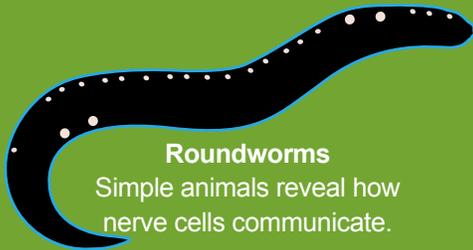


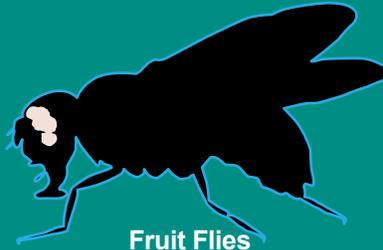
Understanding the brain means studying squishy, strange organisms of all shapes and sizes.

Creatures large and small, simple and complex help scientists and engineers understand how the human brain and nervous system works. Here are a few examples.



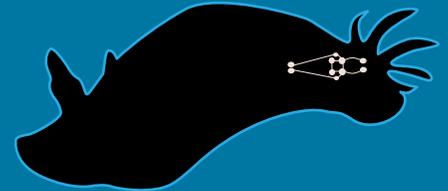
Roundworms

Simple animals reveal how nerve cells communicate.



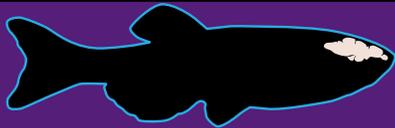
Fruit Flies

Different animals share many of the same genes, providing insights into social interaction and disease.



Sea Hares

Even simple creatures learn to avoid danger, which changes molecules in the brain.



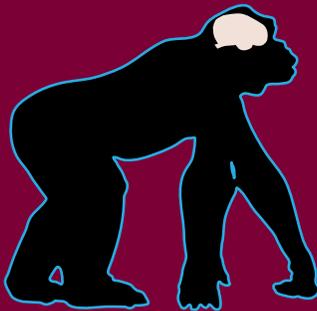
Zebrafish

Certain brain circuits activate when an animal is startled, and those circuits evolve over time.



Rats and Mice

Modifying animal genes gives scientists the ability to explore specific brain functions, like stress, diet and maternal behavior.



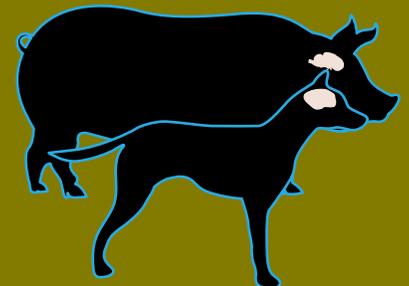
Non-human Primate

Animals with highly developed cognitive skills help scientists study how the brain makes decisions and controls the body.



Human

Studying humans in controlled environments uncovers everything from how sleep affects learning to risk-taking and economics.



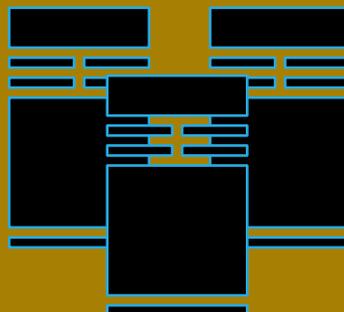
Dogs and Pigs

More complex nervous systems reveal more complex brain functions like facial recognition and perception.



Songbirds

Few animals besides humans learn to vocalize by listening, so songbird brains teach us how language develops.



Supercomputers

Advances in artificial intelligence and neurotechnologies enable scientists to build more human-like machines and model brain functions.

