

Mapping the complex wiring of our brains

Marta Zlatic owns what could be the most tedious film collection ever...the neuroscientist has stored more than 20,000 hours of black-and-white video featuring fruit-fly (*Drosophila*) larvae...the footage is helping to answer one of the biggest questions in modern neuroscience: how the circuitry of the brain creates behaviour.

It's a major goal across the field: to work out how neurons wire up, how signals move through the networks and how these signals work together to pilot an animal around, to make decisions or — in humans — to express emotions and create consciousness.

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Scientists are beginning to detect patterns in simple circuits that may operate in more complex brains. "This is what we hope," says Willie Tobin, a neuroscientist at Harvard Medical School in Boston, Massachusetts: "that we can come across general principles that can help us understand larger systems."

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For now, at least, many researchers are content to embrace the dizzying complexity of the task at hand. Zlatic takes some comfort in the fact that she is starting to see repeating patterns in how neurons in her fly larvae arrange themselves and how they create feedback loops. This modular arrangement, she says, could make the going easier once the team has a finished map.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: [How to map the circuits that define us](#)