

## Can lab-grown brains become conscious?

In August 2019, [biologist Alysson] Muotri's group published a paper in Cell Stem Cell reporting the creation of human brain organoids that produced coordinated waves of activity, [resembling those seen in premature babies](#). The waves continued for months before the team shut the experiment down.

This type of brain-wide, coordinated electrical activity is one of the properties of a conscious brain. The team's finding led ethicists and scientists to raise a host of moral and philosophical questions about whether organoids should be allowed to reach this level of advanced development, whether 'conscious' organoids might be entitled to special treatment and rights not afforded to other clumps of cells and the possibility that consciousness could be created from scratch.

Follow the latest news and policy debates on sustainable agriculture, biomedicine, and other 'disruptive' innovations. Subscribe to our newsletter.

[SIGN UP](#)

Researchers are now calling for a set of guidelines, similar to those used in animal research, to guide the humane use of brain organoids and other experiments that could achieve consciousness. In June, the US National Academies of Sciences, Engineering, and Medicine began a study with the aim of outlining the potential legal and ethical issues associated with brain organoids and human–animal chimaeras.

The concerns over lab-grown brains have also highlighted a blind spot: neuroscientists have no agreed way to define and measure consciousness. Without a working definition, ethicists worry that it will be impossible to stop an experiment before it crosses a line.

[Read the original post](#)