New bipolar treatments possible with stem cell model of disease

Skin cells taken from people with bipolar disorder have been turned into brain cells. These in turn are offering up clues about the changes in the brain that drive the disorder, and may also provide a way to test new treatments.

About three in every 100 people develop bipolar disorder – a mental illness characterised by episodes of depression and euphoria. But the condition remains poorly understood.

That's because it would be too invasive to obtain and study viable nerve cells from the brains of people with the condition.

Now O'Shea and her colleagues may have found an ethical way to make a genetic model of the condition. First, they took skin samples from 22 people with bipolar disorder and 10 healthy volunteers. They induced these adult skin cells to return to a stem-cell-like state, creating what are called induced pluripotent stem cells (iPSCs) and then encouraged these cells to mature into neurons.

O'Shea was surprised to find that neurons derived from people with bipolar disorder grew differently from those from people without the condition. "I was expecting it would take decades of careful science before we would find any real differences," she says.

Read the full, original story: Stem cells offer clue to bipolar disorder treatment