OPINION

Where will the immunity-brain connection lead us?

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Two studies we **reported on last week** add new support for the **long-standing theory** that the mother's immune system plays an important role in autism risk in her child.

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One study found that rhesus monkeys exposed to autism-linked antibodies in the womb develop abnormal social behavior and enlarged brains. The other **identified seven proteins** in human fetal brains that are targeted by these antibodies.

Together, the studies provide some of the most direct evidence to date of maternal antibodies' influence on fetal brain development and their association with features of autism.

These rare antibodies are **found in about 11 percent**of mothers of children with autism, but not in the general population. A **previous study** has shown that these antibodies lead to developmental delay and anxiety in mice.

As **Melissa Bauman**, who led the rhesus macaque study, notes in the article, "We're just scratching the surface" of understanding how and why maternal anti-brain antibodies might cross the placenta and enter the fetal brain.

These new findings offer important clues to where to take this promising line of research next.

What do you think?

- **What studies would you like to see done now that these target proteins have been identified? What sorts of experiments might reveal the role these proteins play in autism risk?**

- **What mechanisms and risk factors could explain the connection between maternal immunity and fetal brain development? Could autoimmune susceptibility in the mother lead to the production of these anti-brain antibodies?**

- **If the interplay of these antibodies and their targets is confirmed as disrupting fetal brain development, how might the action be blocked? What doors to preventive therapy does this open?**

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