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Mother's antibodies may cause autism

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Singapore: Researchers at University of California have found that prenatal exposure to specific combinations of antibodies found only in mothers of children with autism leads to changes in the brain that adversely affect behavior and development.

Researchers believe that the highly specific immunoglobulin-G (IgG) auto-antibodies cross the placenta during pregnancy to impact fetal brain development, resulting in a form of autism called maternal antibody-related (MAR) autism.

During gestation, maternal IgG antibodies normally cross the placenta and protect the fetus, conferring the mother's immunities to the developing child. However, in addition to protective antibodies, auto-antibodies that react to fetal proteins can also cross the placenta, essentially attacking fetal tissue.

The study's lead researcher, Dr. Melissa D. Bauman mentions that, "The combination of brain and behavioural changes observed in the nonhuman primate offspring exposed to these autism-specific antibodies suggests that this is a very promising avenue of research."