

Finding the source: Cells that initiate a common infant tumor identified

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Infantile hemangiomas, exemplified by the strawberry-like patches that appear on the skin of infants soon after birth, are benign tumors that develop in 5%-10% of Caucasian infants and usually disappear by the age of 9 without treatment. Joyce Bischoff and colleagues, at Children's Hospital Boston, have now identified the cells that give rise to these tumors and used them to develop a new mouse model of this disease.

Cells expressing the protein CD133 were isolated from infantile hemangioma tissue and individual cells were grown separately in culture. After each cell had been grown long enough for it to have given rise to a large population of cells, the cells were transplanted into immunodeficient mice, where they generated human blood vessels.

Overtime, the number of blood vessels decreased and fat cells became evident. As these observations recapitulate those made in individuals with infantile hemangioma — where blood vessels form and then disappear leaving behind fat cells — the authors conclude that a single cell can give rise to infantile hemangioma and that their new model of these tumors will help identify therapeutic targets.

Source: Journal of Clinical Investigation

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