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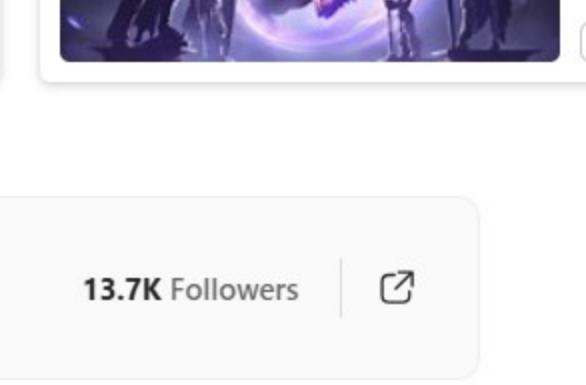
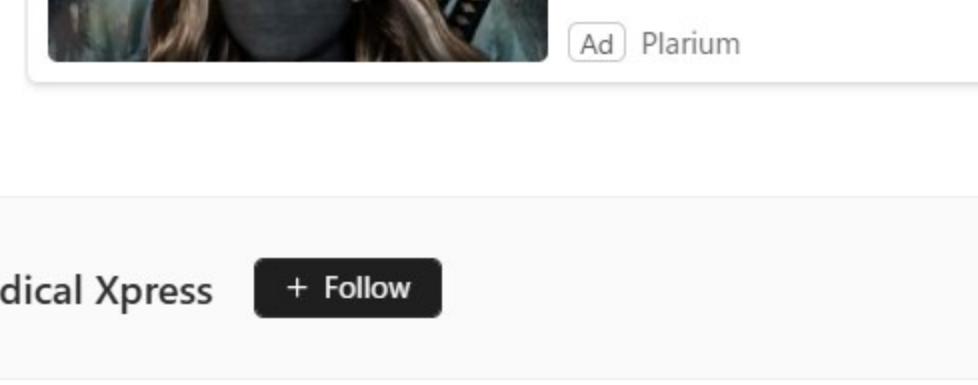
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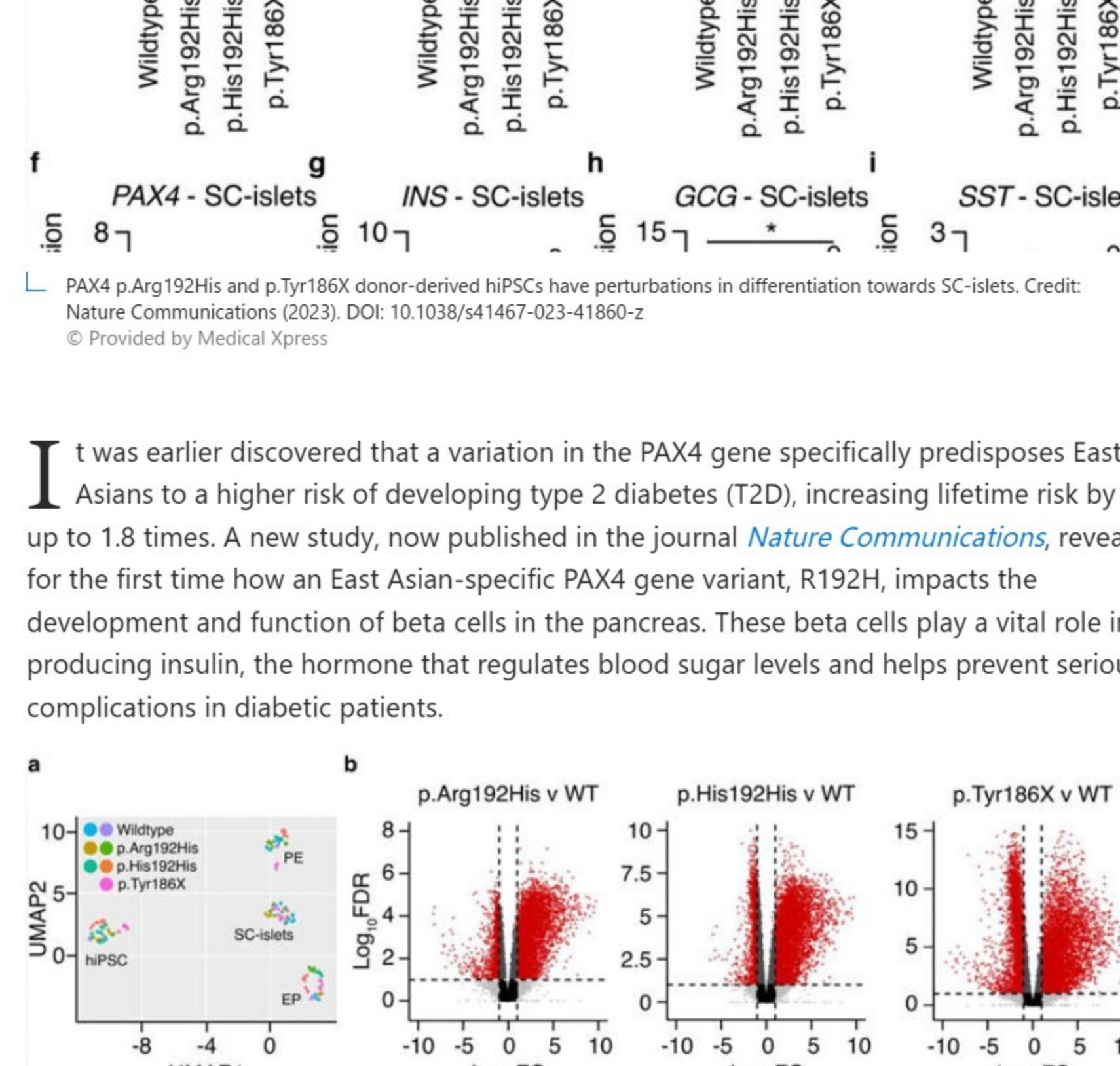
## Researchers unveil impact of east Asian gene variant on type 2 diabetes risk

Story by Science X staff • 3d • 3 min read



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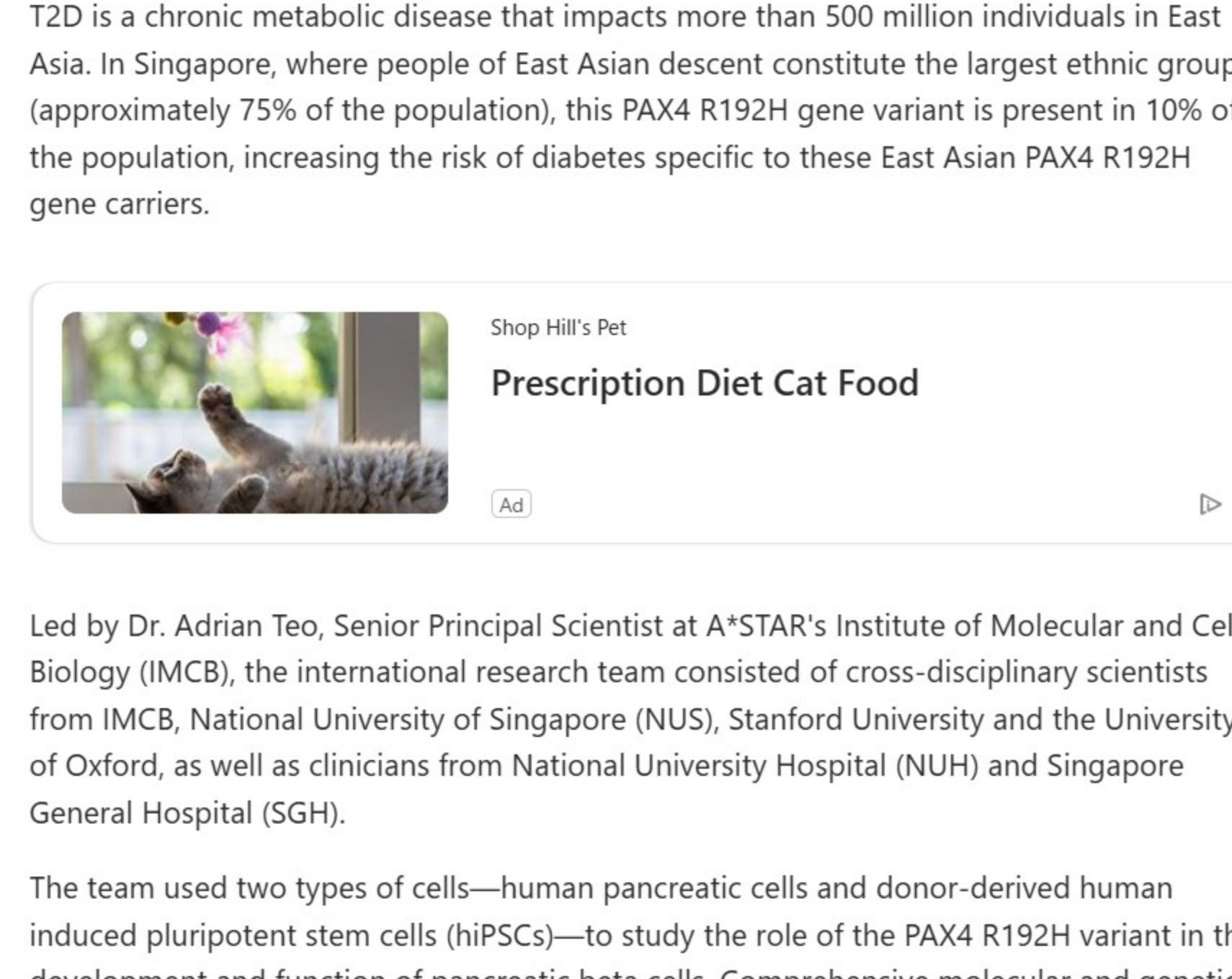


PAX4 p.Arg192His and p.Tyr186X donor-derived hiPSCs have perturbations in differentiation towards SC-islets. Credit:

Nature Communications (2023). DOI: 10.1038/s41467-023-41860-z

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It was earlier discovered that a variation in the PAX4 gene specifically predisposes East Asians to a higher risk of developing type 2 diabetes (T2D), increasing lifetime risk by up to 1.8 times. A new study, now published in the journal *Nature Communications*, reveals for the first time how an East Asian-specific PAX4 gene variant, R192H, impacts the development and function of beta cells in the pancreas. These beta cells play a vital role in producing insulin, the hormone that regulates blood sugar levels and helps prevent serious complications in diabetic patients.

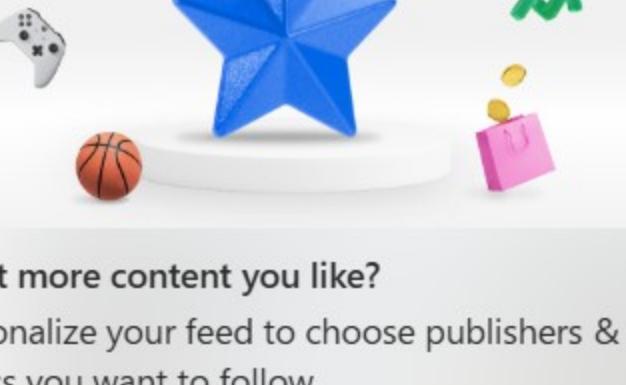
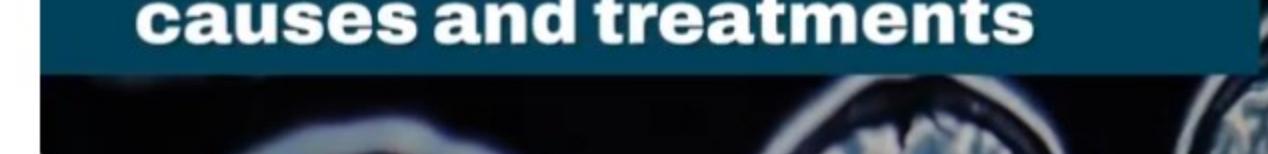


Metabolic seahorse assays revealed alterations in glycolysis function and oxidative phosphorylation in the presence of the PAX4 p.Arg192His or p.Tyr186X variants. Credit: Nature Communications (2023). DOI: 10.1038/s41467-023-41860-z

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The insights gained from this study pave the way for potential therapeutic interventions and personalized approaches in diabetes prevention and management, marking a significant step in the ongoing fight against diabetes.

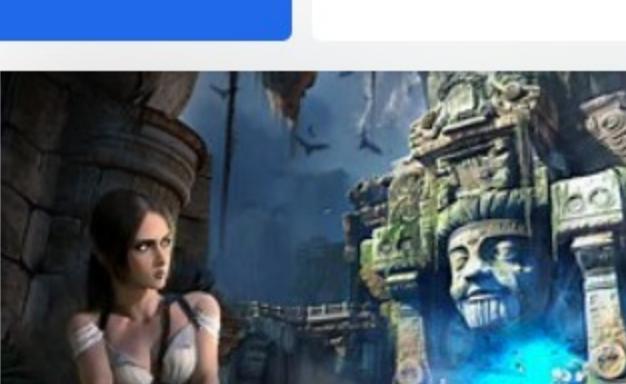
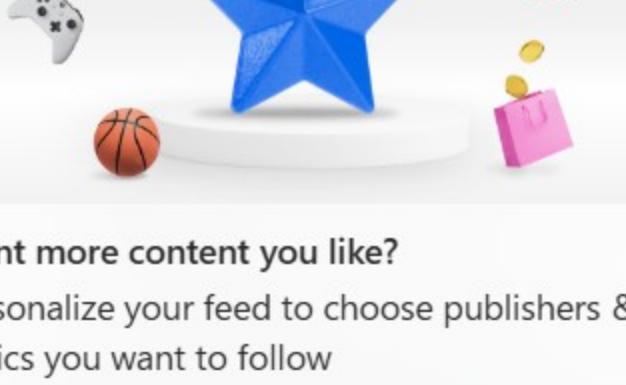
T2D is a chronic metabolic disease that impacts more than 500 million individuals in East Asia. In Singapore, where people of East Asian descent constitute the largest ethnic group (approximately 75% of the population), the PAX4 R192H gene variant is present in 10% of the population, increasing the risk of diabetes specific to these East Asian PAX4 R192H gene carriers.



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