

Gene discovered as cause of fatal condition

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Medical scientists have for the first time identified a gene responsible for a fatal abdominal condition that afflicts tens of thousands of people across the world.

An international team led by Matt Bown, a [vascular surgeon](#) from the University of Leicester, identified a single gene that is linked to the development of abdominal aortic aneurysms (AAAs).

What is more, the team discovered that the gene, LRP1, was not linked to other cardiovascular diseases, suggesting that it is specific to AAA.

The research, funded by The Wellcome Trust, is published today in [The American Journal of Human Genetics](#). The University of Leicester led the study which also involved institutions from New Zealand, Australia, Denmark, Iceland, The Netherlands, Sweden, the USA and the UK.

An AAA is a swelling of the main blood vessel in the back of the [abdomen](#) which can burst, causing dangerous internal bleeding. The only treatment to prevent this happening is surgery. This is performed when the AAA grows over a certain size as the risk of the AAA bursting is low when it is small. Unfortunately there is no treatment to prevent small AAAs from growing and despite detecting AAAs by screening, and surgery, many thousands of people still die from burst AAA each year.

Mr Bown, senior lecturer in surgery in the Department of Cardiovascular Sciences at the University, said: "The study involved over 2000 people from Leicestershire as well as many more from around the globe.

"Since AAAs often run in families, the research team compared the [genes](#) of people with AAAs to those without and discovered that one gene, LRP1, was associated with AAA.

"[Abdominal aortic aneurysm](#) is an important disease since it commonly affects the older population and can only be treated by surgery. Through this research we have identified a gene that is associated with AAA and the further investigation of the function of this gene in relation to AAA may help us understand more about the disease and how to treat it without resorting to operations.

"This is a tremendously exciting discovery that is the culmination of over a decade of research work across 6 countries and is a testament to the research excellence of the [people](#) involved.

"I would also like to extend my thanks to the volunteers who have participated in this research project over the last 10 years – without them this work would not have been possible."

Provided by University of Leicester

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