

Bristol scientists to study potential new way of treating diabetes

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Scientists at the University of Bristol are to investigate a potential new way of treating diabetes, following funding from the British Heart Foundation (BHF).

Dr Sebastian Oltean has been awarded £268,000 to explore why [diabetes](#) causes a process called '[alternative splicing](#)' to go wrong in the kidneys

and make the disease worse.

Alternative splicing is a process involved in turning sections of our DNA into proteins which carry out important functions in the body. But when someone has diabetes, it causes this process to malfunction in the body, including the kidneys. As a result abnormal proteins are produced which can accelerate the complications of diabetes, including diabetic nephropathy which results in kidneys losing proteins in the urine.

Dr Oltean will seek to better understand the mechanisms that go wrong during alternative splicing when someone has diabetes. He will also test ways of switching the production of damaging proteins back to beneficial ones. This knowledge could point the way to a completely new approach of treating diabetes.

Nearly 3.5 million adults in the UK have been diagnosed with diabetes. It is estimated over half a million more are living with undiagnosed type 2 diabetes. A person with diabetes is more likely to develop [coronary heart disease](#) than someone without the condition.

Dr Oltean, said: 'In recent years it has become increasingly clear that the alternative splicing process is involved in the progression of disease, including diabetes.

'Through this research we're seeking to investigate what could be a completely new way of treating diabetes.

'If we can understand the mechanisms that turn alternative splicing to malfunction in the kidney when affected by diabetes, it would provide a new target for the development of treatments which stop this process happening.'

Dr Shannon Amoils, Senior Research Adviser at the BHF, said:

'Manipulating alternative splicing to favour the production of beneficial proteins over damaging proteins in the diabetic kidney is a challenging, but innovative strategy.

'Diabetes is a serious condition that greatly increases the risk of heart and circulatory disease as well as kidney [disease](#), and it's vital that we fund projects, like Dr Oltean's, to explore new avenues for treatment.

'Research we've funded has helped establish many of the treatments heart patients receive today. But we can only fund science that could lead to future breakthroughs with the public's generosity. It's vital that they continue to support our work so we further improve the treatment and care people receive.'

Provided by University of Bristol

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