

Peptide and their labelled derivatives suitable for use in the diagnosis of diabetes or its complications

About technology

One of the adverse **effects** of diabetes is damage to the kidney function (known as diabetic nephropathy), which results in the abnormal presence of **proteins** in the **patient's urine**.

Currently, the commonly used method for diagnosing diabetes is to **measure plasma glucose levels**. This is an invasive and vulnerable method, so there is still a need to find an effective, non-invasive and rapid way to detect diabetes.

The essence of the offer of the invention is a **set of two peptides** (substrates), with fluorogenic properties. These peptides are hydrolysed in the presence of proteolytic enzymes (**ADAM10** and **ADAM17**) released and present in the urine of diabetic patients.

The diagnostic potential of a method based on the assessment of the hydrolytic activity of proteolytic enzymes in human urine by measuring the fluorogenic activity of their substrates has shown that the activity of proteolytic enzymes in the urine of diabetic patients is significantly higher than in people with normal blood levels.

Implementation progress

TRL 4 –Technology validated in laboratory conditions



Research Team

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IP Protection

The invention is the subject of patent application:

- P.443779 , UPRP PL
- WO2024172675A1, EU

Cooperation opportunities

- Licensing agreement
- Transfer of ownership
- Spin off

