

Scientists create building blocks for anti-cancer medicine

May 14 2019



Kaunas Technology University (KTU), Lithuania scientists are working on a method to create building blocks which could be the basis for future anti-cancer medicine. Credit: Kaunas University of Technology

Kaunas Technology University (KTU), Lithuania scientists are working

on a method to create building blocks which could be the basis for future anti-cancer medicine.

Although chemotherapy can be very efficient in eliminating [cancerous cells](#), [anti-cancer drugs](#) can affect normal, healthy cells. Damage to healthy cells causes side effects. In order to avoid the undesirable side effects of the cancer medication, the investigation of synthetic [peptides](#), which could be used as active ingredients in the medication, is very important.

The team of Lithuanian scientists are aiming to duplicate active ingredients of amino acids found in nature, which would contain heightened active biological effect.

"While building new amino acid molecules it is most efficient to create minimal modifications of the fragments of the natural structure. It means that when the medication contains [active ingredients](#) from the natural sources, it can have both targeted and side effect. However, the synthesised modified materials not only help increase biological efficiency but also minimise side effects. The theory is being tested in laboratories", says Dr. Greta Ragaitė, one of the KTU researchers working on the project.

The team behind the project in KTU, Lithuania is led by Professor Algirdas Šačkus and made up of Dr. Greta Ragaitė, Dr. Neringa Kleizienė, and master's students Aistė Kveselytė and Urtė Šachlevičiūtė.

They recently started to investigate the possibilities to create new selenazole and pyridine fragments containing synthetic amino acids, which could be used to create peptides.

"The almost year-long project bore fruit," said Dr. Neringa Kleizienė, "we have created [building blocks](#), which will be the ingredients in

synthetic peptides that will allow us to create anti-cancer medicine prototypes."

Synthetic peptides could be used to negate the anti-cancer medicine side effects. The newly created material has already received attention from global pharmaceutical giants.

However, the researchers note that it is only the initial stage, and the method needs to undergo more tests.

Provided by Kaunas University of Technology

Citation: Scientists create building blocks for anti-cancer medicine (2019, May 14) retrieved 11 May 2024 from <https://medicalxpress.com/news/2019-05-scientists-blocks-anti-cancer-medicine.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.