EPFL

MedPEP A New Generation of Targeted Drugs to Treat Cancer

In a nutshell

We developed a new generation of protease inhibitors with enhanced potency and safety, exhibiting all the qualities needed to become first-in-class drugs for the treatment of pancreatic cancer, osteosarcoma and B-cell lymphoma. Our platform for peptide drug discovery and optimization allows us to continuously expand the pipeline of novel drugs, to target additional cancer types and other indications.

Why is our technology important?

Several proteases, such as cysteine cathepsins, play central roles in the development of cancer and other diseases, but are considered difficult to drug because of their important physiological roles and the wide structural similarity between members of the same protease family. Our new peptide-based drugs overcome these issues because they are very specific for their protease target and can be delivered to specific cells, thereby avoiding any toxicity on healthy tissues. Our candidate drugs hold great promise for cancer patients that do not respond to currently available therapies.

The benefits of our solution

- First-in-class protease inhibitors for the treatment of several malignancies
- Target-specificity enables very good safety profile of our potent drugs
- Cell-targeted delivery further ensures increased safety
- Protease targets involved in multiple cancer types and other diseases (e.g. osteoporosis, autoimmune disorders, ...)

Keywords

Peptide drugs, protease inhibitors, cancer treatment, targeted therapy, drug development platform

Founding Team

Aaron Petruzzella, PhD Elisa Oricchio, PhD, Associate Professor - EPFL Bruno Correia, PhD, Associate Professor - EPFL

École
polytechnique
fédérale
de Lausanne