€150,000 Grant to Investigate Big Improvements to Medicines Using Tiny Particles

2022-02-24
University of Warwick project is investigating using nanoparticles to enable efficient delivery of drugs to improve their efficiency and lower their side effects. Part of €25 million European Research Council scheme to edge frontier research closer to market.

A project to improve the efficiency of our medicines using tiny particles at the University of Warwick has received funding to take it a step closer towards commercialization.

166 researchers funded by the European Research Council (ERC) have won Proof of Concept Grants. Worth €150,000 each, this top-up funding will help them bridge the gap between the results of their pioneering research and the early phases of its commercialisation. The grants are part of the EU's research and innovation programme, Horizon Europe.

Artist impression of nanotubular drug delivery vehicle nanotubes obtained from the self-assembly of peptide / polymer conjugates.

ERC grantees use this Proof of Concept (PoC) funding in several ways, for example to verify the practical viability of scientific concepts, explore business opportunities, or prepare patent applications. This round of funding will benefit projects in a range of fields, for example the creation of a new toolkit to tackle harmful adolescent behaviour, or the use of the power of bubbles to achieve more sustainable wastewater treatment. The projects also include an app to help train musicians to play in a group, and a way to help medical practitioners read and analyse DNA in real time.

At the University of Warwick, Professor Sebastien Perrier of the Department of Chemistry and

Warwick Medical School has received €150,000 for the DELIBRUSH project. This project will look at the potential of using a new family of extremely small particles, or nanoparticles, in improving the efficiency of medicinal drugs.

Nanostructures have emerged as key players in modern medicine in recent years, due to their numerous advantages employed as drug delivery vectors over conventional delivery systems, with applications ranging from contrast agents in medical imaging to gene delivery carriers to individual cells. In particular, research in nanoparticles (NPs) has explored how to make drugs more effective by having an in-depth understanding of the interaction of nanoparticles with cells, and the optimal toxicity or concentration. This project will explore the use of a new family of nanoparticles which enable efficient delivery of drugs to improve their efficiency and lower their side effects.

Professor Perrier said: “This Proof of Concept fund provides support to bridge between our fundamental research and applications of our materials for drug delivery. It will enable us to obtain both data and market research to explore the future applications of our nanomaterials.”

President of the European Research Council Prof. Maria Leptin said: “It’s wonderful to see that frontier research has the capacity to generate discoveries that can be quickly put into practice. Let’s not forget that there is no applied research without basic research feeding the pipeline first - and that very valuable innovations spring from all disciplines, from the physical and life sciences to the social sciences and humanities.”

The Proof of Concept grant scheme is open only to researchers who are or have been previously funded by the ERC. They use PoC funding to develop findings they have made during research projects funded by their ERC Starting, Consolidator, Advanced or Synergy grants.

Read the original article on University of Warwick.