Advanced therapies feature in new IMI Call for proposals

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Brussels, Belgium, 26 June 2019 – Advanced therapies are a major part of new Innovative Medicines Initiative (IMI) Calls for proposals launched today. The two advanced therapies topics aim to accelerate research into advanced therapies for rare diseases, and support the development of engineered T cells to fight cancer. Other topics in the Calls address artificial intelligence; the need for reliable, relevant health information; and ways of incorporating patients’ views and experiences into healthcare and cancer clinical trials.

Advanced therapy medicinal products (ATMPs) based on genes and cells have the potential to revolutionise treatments for certain diseases with a high unmet medical need, including many rare diseases and some cancers. However, developing ATMPs is highly challenging. With this in mind, IMI is launching two new Call topics in this area with a total budget of EUR 45 million. Half of this comes from Horizon 2020, the EU’s research and innovation programme, and half comes from EFPIA companies and IMI Associated Partners.

Accelerating research & innovation for ATMPs for rare diseases: Currently it is very difficult to know which patients will respond well to an advanced therapy and which will experience serious side effects. The aim of this topic is to add to our understanding of the factors that trigger an immune response to ATMPs, and develop tools to study them. The topic will also work with regulators to ensure the tools and data generated by the project are in line with what regulators need to assess ATMPs. The topic will focus on rare diseases caused by a single gene mutation. However, many of the project’s findings will be applicable to other diseases.

Supporting the development of engineered T cells to fight cancer: T cells are an important part of the immune system, and in recent years scientists have succeeded in creating ‘engineered’ T cells designed specifically to fight cancers. However, when developing T cell therapies, it is very hard to predict serious toxicity issues and it is also hard to estimate accurately how well a treatment will work. This topic aims to support the development of new, safer, more effective T cell therapies. Among other things, it will do this by deliver tools and markers that will improve our ability to predict the toxicity and efficacy of T cell therapies, as well as techniques to analyse the behaviour of T cells in the body.

Pierre Meulien, IMI Executive Director commented: ‘Advanced therapies offer the hope of safe, effective therapies for patients who currently have little or no treatment options. We hope that by bringing together top academics, the industry, small companies and patients, we can contribute to efforts to turn the hope of advanced therapies into a reality.’

Other topics included in IMI2 – Call 18 are:

Digital pathology slides and artificial intelligence: Many diseases are still diagnosed in part on the basis of biological samples that have been mounted on a glass slide and studied under a microscope. Yet while the report of the expert pathologist who analyses the slide can be easily transformed into a digital format, the actual slides are simply archived. This topic aims to create a repository of digital copies of around 3 million slides (plus associated information) covering a range of disease areas. This repository will then be used to develop artificial intelligence tools that could aid in the analysis of slides.

Better, integrated healthcare information: Medicines have an information problem. Although they come with an information leaflet, few patients read and understand this, and while vast amounts of information on medicines can be found online, it is hard to know what is reliable or even relevant for a specific patient. This topic aims to demonstrate how an integrated, digital, user-centric health information solution could make it a lot easier for patients to access and understand reliable, relevant health information. Ultimately, it is hoped that this will improve patient adherence to treatments.

Health outcomes observatories: Many measures of disease (and disease outcomes) are based largely on input from clinicians and so do not fully capture patients’ experiences of the disease and its impact on their quality of life. The aim of this topic is to establish ‘health outcomes observatories’ that would make it easy for patients to systematically report their health outcomes and experience of healthcare. The observatories, which would initially be established in the areas of diabetes, inflammatory bowel disease, and cancer, would consist of technologies and a platform for gathering data, along with relevant standards and ethical approaches.

Putting the patient voice into cancer clinical trials: The aim of this topic is to develop recommendations on how to analyse and interpret data on health-related quality of life and patient reported outcomes in cancer clinical trials. If analysed in a rigorous, standardised way, this data could accurately capture how patients feel or function during treatment, and so aid in decision making for regulators, health technology assessment bodies, and, crucially, improve patient satisfaction.

IMI will contribute EUR 86 million to the projects funded under IMI2 – Call 18; these funds come from Horizon 2020. EFPIA companies and IMI Associated Partners contribute EUR 75 million, mostly as ‘in kind’ contributions (e.g. staff time, access to equipment, etc.).

IMI is also launching IMI2 – Call 19. The goal of this Call is to provide additional support to certain existing IMI2 projects to allow them to build on their achievements and maximise the impacts of their work.