

Pharma-Planta Consortium

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Research Areas



Tool Development

Innovation



Basic Research

At a Glance

- Status: **Completed Consortium**
- Year Launched: **2004**
- Initiating Organization: **European Commission Seventh Framework Programme (FP7)**
- Initiator Type: **Government**
- Location: **Europe**

Abstract

The Pharma-Planta consortium was focused on advancing how transgenic plants can be used to express pharmaceuticals relevant to human health. Collectively, the consortium had a wide range of expertise spanning the areas of molecular biology, plant biology, immunology, recombinant protein expression technology, vaccinology, and plant biotechnology.

Mission

The expression of recombinant pharmaceutical proteins in plants has been under investigation for more than 10 years. Plants are attractive for several reasons, but the primary advantages are that they represent an inexpensive and versatile expression system for a wide variety of recombinant proteins, and they offer the potential for rapid and economical scale-up. The mission of the Pharma-Planta consortium was to develop efficient and safe strategies for the production of clinical-grade protein pharmaceuticals in plants, and to define the procedures needed for the production of these proteins in compliance with the strict regulatory standards that govern the manufacture of all pharmaceuticals. Ultimately the consortium aimed to take a candidate product all the way through the development

pipeline culminating in a Phase I human clinical trial.

The specific objectives listed at the beginning of the Pharma-Planta project can be summarized as follows:

Consortium History

This consortium was seeded by EU funding through the Fourth and Fifth Framework Programmes (FP4 and FP5).

July 2004: Launch of program under the Sixth Framework Programme

October 2011: Scheduled end of program

Structure & Governance

The Pharma-Planta Consortium was composed of 33 academic and industry partners in Europe and South Africa. The coordinator of the entire project was Fraunhofer Gesellschaft in Munich, Germany. The coordinator provided oversight to two management bodies, the administrative and scientific coordinators, the former handling legal, contractual, financial, and administrative aspects of project management, and the latter handling scientific developments and decisions. The administrative and scientific management staff formed the Executive Committee, which met on a regular basis to discuss progress and future direction of the consortium.

Other committees, reporting to the Executive Committee, handled specific areas of project management:

Financing

The Pharma-Planta consortium was funded by the European Commission (€12 million) as part of the Sixth Framework Programme in the area of "Plant platforms for immunotherapeutic biomolecule production."

Intellectual Property

In addition to the clauses on technology transfer and sharing of IP that apply to all EU Framework Programme grants, the consortium agreement also includes special consideration of developing countries and humanitarian access — that in principle all IP generated by the project would be shared for free if necessary to benefit a humanitarian cause. For example, there is a plan to secure access to the technology developed through the consortium at affordable cost for developing countries.

Data Sharing

The Pharma-Planta consortium included collaboration with developing countries to achieve the project's objectives and to enable the achievement of humanitarian purposes, which was part of its mission.

The consortium was based on a premise that the generation and sharing of knowledge is important for the development of products to address health needs of the poor in developing countries. This knowledge may include information, copyrights, patents, designs, plant varieties, supplementary protection certificates, and other forms of protection. The IP clauses for this consortium were unique, in that developing countries and humanitarian purposes had privileged access to the findings and technologies.

Impact/Accomplishment

The consortium's primary goal was to develop an approved pipeline for pharmaceutical proteins using plants as the production system. The benchmark for success was to take a candidate product all the way through development, culminating in a Phase I human clinical trial. This milestone was achieved with the launch in June 2011 of Pharma-Planta's Phase I clinical study of an antibody that neutralizes human immunodeficiency virus (HIV), produced in and isolated from tobacco plants. This antibody could one day become an inexpensive component of a microbicide used to prevent the spread of HIV/acquired immune deficiency syndrome (AIDS).

The project also spun off many additional technologies that are being adopted by researchers all over

the world and resulted in more than 100 publications in peer-reviewed scientific journals.

Links/Social Media Feed

Homepage <http://www.pharma-planta.net/>

Points of Contact

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