THE NANOPILOT CONSORTIUM

9 PARTNERS FROM 6 MEMBER STATES

4 RESEARCH GROUPS:

1. CIDETEC
2. National University of Ireland, Galway
3. University of Santiago de Compostela
4. ADERA-UT2A

3 SMEs:

5. Micronit
6. Mejoran
7. Spinverse

2 INDUSTRIES:

8. Sylentis
9. Chemtrix

NANOPILOT

Project acronym: NanoPilot
Start date: January 1st, 2015
End date: December 31st, 2018
Project budget: 6.28 M Euro
Research and Innovation Action

Project coordinator:
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Find all information about NanoPilot project on
www.nanopilot.eu

NANOPILOT

A PILOT PLANT FOR THE PRODUCTION OF POLYMER BASED NANOPHARMACEUTICALS IN COMPLIANCE WITH GMP

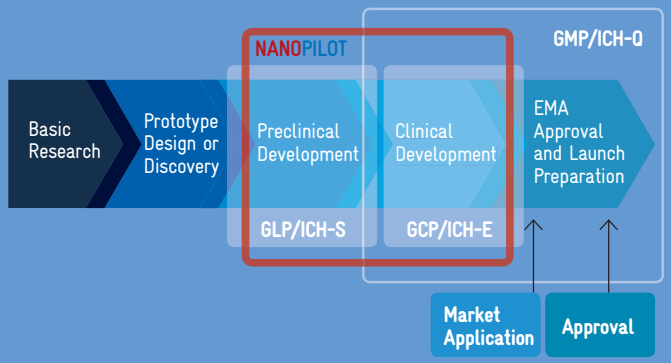
NanoPilot has received funding from the European Union Framework Programme for Research and Innovation Horizon 2020. Grant Agreement: 646142

A NEED TO ADDRESS

The European Technology Platform for Nanomedicine has recorded more than 700 SMEs/Industry working in the field of Nanomedicine, a number that doubles when including research institutions. Experts in the field have recognized the high potential of innovation, however in most cases, clinical validation is still required.

The production of innovative nanopharmaceuticals in quantity and quality (GMP) required for them to **enter clinical trials remains a challenge**. Production cannot easily be implemented in existing manufacturing plants, specialized and optimized for the production of conventional drugs. In addition, small companies usually do not have the resources to up-scale and implement GMP manufacturing of their potential nanopharmaceutical. This can **limit the capacity of these organizations for advancing their research**, and as a consequence, slow-down the development of innovative nanopharmaceuticals to treat different diseases.

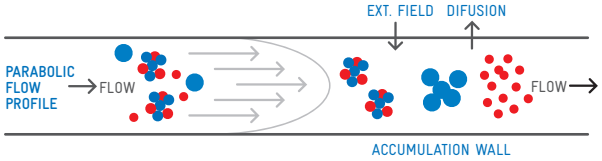
In this context, it is urgently needed to **provide those SMEs with the tools that can help them with the validation of their technologies.**



The aim of NanoPilot is to set-up a flexible and adaptable pilot plant operating under GMP for the production of small GMP batches of polymer-based nanopharmaceuticals.

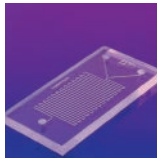
Existing laboratories owned by the coordinator, will be adapted and GMP certified.

Micro reactors and highly advanced characterization techniques will ensure the quality of the nanodrugs.



Principle of particle size fractionation in A4F

KiloFlow® Reactor



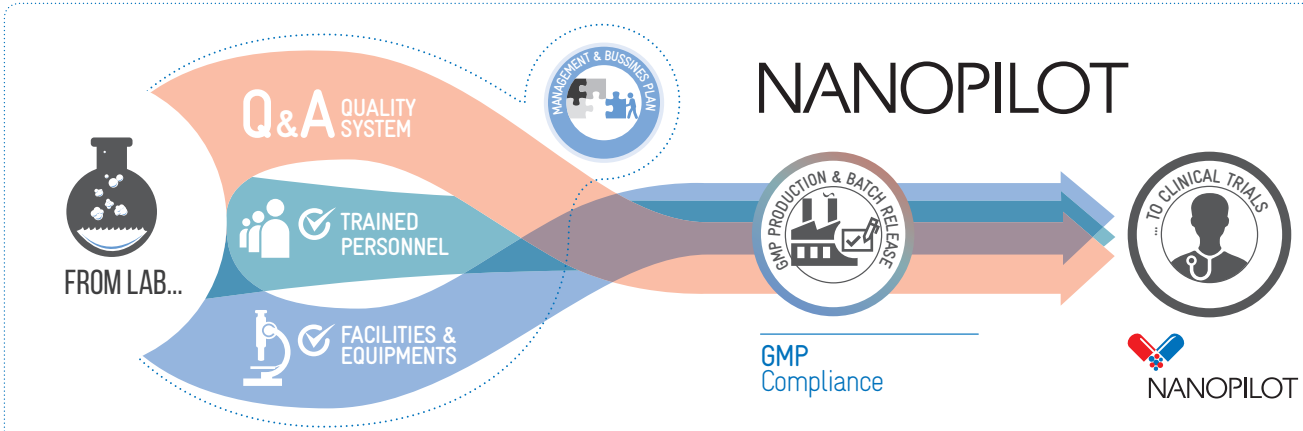
Microfluidic chip

Three different nanopharmaceuticals will be produced.

siRNA nanoformulation for the topical treatment of ocular pain associated with dry eye syndrome.

A HIV nanovaccine for intranasal administration.

Hyaluronan based spheres. A treatment for interstitial cystitis/painful bladder syndrome (IC/PBS).



OBJECTIVES BASED ON INDUSTRIAL NEEDS

Small GMP batches for clinical trials
Flexibility and adaptability
Regulatory compliance

SCIENTIFIC OBJECTIVES

Production of 3 nanopharmaceuticals
Integration of microfluidics
Highly advanced characterization techniques