Nano-Robots in Diabetes Treatment

What challenge or problem are you addressing? What is the need for the project?

This project addresses challenge 2 of Interreg North West Europe Programme – SMEs innovative capabilities. It aims to improve personalised treatment of patients suffering from diabetes. Each case of diabetes is different. Patients have different needs and react differently to drugs and nutrition. Nano-robots in terms of atomic force microscope (AFM) and magnetic force microscope (MFM) are able to inject drugs and nutrition in to patients' living cells and to measure the cells reactions to the drugs and nutrition. Hence, they can provider doctors and patients with personal information for personalized treatment.

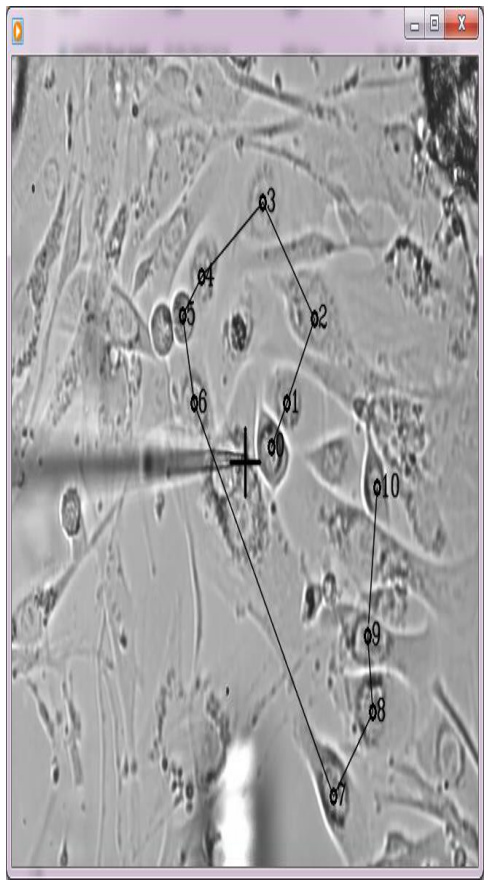
Objective of the project: What your project wants to achieve/change

The aim is to develop nano-robots enhanced personalised diabetes treatment. The project will:

1. Exchange and capitalize on the work on in Diabetes in NWE Region
2. Propose a next step of personalised treatment of Diabetes by designing and implementing AFM/MFM and automation algorithms leading to determination of customized drugs and nutrition levels for individual patient

Why do you need transnational cooperation?

1. To better address personalized diabetes treatment as the common interest across NWE region
2. To form critical mass in personalized diabetes treatment, nano-robot manufacturing, automatic control of the robots in the region
3. To speed up the development of market for the final products
4. To capitalize on what we know so far and design the next steps for building a robot



What kind or partners are you looking for?

Diabetes research institutes and clinicians: knowledge and experiences to guide drug and nutrition selection and treatment
SMEs: AFM/MFM parts, in particular, controller manufacturing (SMEs)
Policy makers: Ethical issues

Your contact details

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