

MSc: Bioengineering of biomimetic drug delivery systems with microfluidics

Motivation and Background

Biomimetic drug delivery systems present an effective solution to enhance biocompatibility and therapeutic effectiveness. Microfluidics is an ideal strategy for the fabrication of such systems as it is easily scalable and can be operated continuously. An effective microfluidic-based, biomimetic drug delivery system would be a promising solution to the treatment of a wide number of diseases such as tumors.

Research project

This project aims at developing a microfluidic methodology to fabricate biomimetic drug delivery systems (Figure below). The project consists of the design and engineering of microfluidic systems and the bioengineering of drug delivery particles.

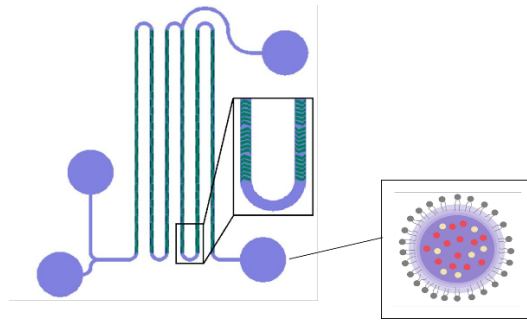


Figure. A microfluidic system designed for the production of drug delivery particles

What's in it for you?

Working on this topic in our group allows you to

- deepen your knowledge on transport phenomena in biomedical applications
- develop your skills in the synthesis of drug delivery vehicles and analysis
- maneuver at the *Biology-Chemical Engineering Interface*

Contact

Highly motivated MSc students interested in conducting exciting and rewarding projects are encouraged to contact Dr. Alina Rwei (e-mail: a.y.rwei@tudelft.nl)