

Cell Culture Techniques (Celkweek)

Cell and tissue culture has become one of the major tools used in life sciences today, and it is a rapidly growing field. This one-day laboratory course for standard lab techniques is an essential guide to successful cell culture.

Cursussen, post-hbo en maatwerkopleidingen Faculteit Techniek

Introduction

The discovery that mature, specialised cells can be reprogrammed to become immature cells capable of developing into all tissues of the body is revolutionizing the biomedical world. These discoveries have changed our understanding of how cells and organs develop and differentiate.

Cell and tissue culture has become one of the major tools used in life sciences today, and it is a rapidly growing field. Cell culturing methods are used for production of influenza vaccines and are much faster than traditional egg-based production systems. Cell line based in vitro studies are alternatives to animal testing and can help to identify toxic effects of chemicals and agents. Such cell technologies have a widespread application, not only in the health sector. Since the discussion on animal welfare has expanded and as millions of animals are used for food production, the development of innovative technologies for in vitro meat, such as the development of lab-grown "In vitro hamburgers" is considered a potential solution.

This laboratory course for standard lab techniques is an essential guide to successful cell culture. In the presentations and discussions you will meet the future of in vitro food. Whether in vitro meat is fiction or a realistic future, is up for discussion.

Objectives and target audience

Objectives and target audience Cell and tissue culturing techniques consist of a few basic concepts. This practical course is designed to serve as a basic introduction to animal and human cell culture. It is appropriate for beginners and experts, i.e. for those who are using culturing techniques for the first time, as well as those who interact with cell culture researchers and who strive for a better understanding of the key concepts and terminology in this fast growing field.

Location

Institute Applied Sciences (Hogeschool van Arnhem en Nijmegen), Laan van Scheut 2 in Nijmegen.

Time

This one-day course will be scheduled when we have reached the minimum of 8 registrations.

Teacher

Jutta Wirth, Ph.D. of Wageningen University & Research Centre.

Course fee

The course fee is € 537, including course material and catering (coffee/tea/lunch).

Result

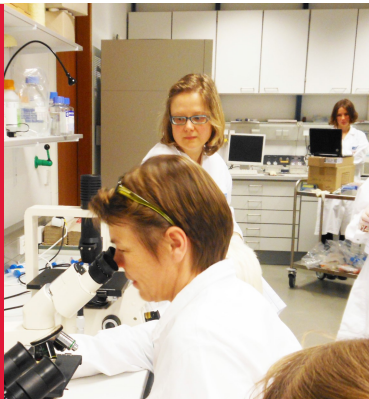
You will receive a Proof of Participation from the Hogeschool van Arnhem en Nijmegen.

Registration

You can register on our website:

<http://www.han.nl/werken-en-leren/studiekeuze/studiedag/celkweek/aanmelden/>

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More information

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Course Programme

Theoretical part

In the theoretical part, you will acquire a basic understanding of how cells are treated and how cell lines are produced. These are the topics that will be discussed:

- Routine methods in cell culture and equipment
- Sterile working techniques and contaminations
- Ingredients of culture media
- Cell counting and viability testing
- Cell banking
- Managing contaminations: Dr. Johanna Lier, ATCC Field Application Specialist, LGC Standards

Practical part

You will acquire practical experience with adherent and suspension cells and learn about sterile working techniques at the laboratory bench. You will acquire the basic techniques and understanding to work with cell cultures. The following topics are the centre of the practical:

- Basic actions using best practice sterile techniques
- Steps to prevent contamination
- Morphology of cells in culture
- Counting cells
- Guidelines for maintaining cultured cells
- Cell cryopreservation and banking
- Environmental and routine sterility testing

In-company

The HAN has expertise in in-company courses.
We can organise our courses on your own location.
Programme changes, focused on your business,
are possible.