

Industrial Biotechnology - for non-biotechnologists

April 1-3, 2020

At Hotel Phoenix Copenhagen in the Heart of Copenhagen, Denmark

The right place if you need to understand biotech

What you get

- **Gain** a solid foundation of industrial biotechnology
- **Understand** the entire journey of producing a protein from gene, to active and improved protein (e.g. enzyme)
- **Learn** the language and terms used in biotechnology
- **Improve** your knowledge about how enzymes are used in the industry
- **Know** the most important techniques in biotechnology

Take this course if

- You want to **understand the background** of the development and production of biotech products
- You are a **non-biotechnologist** who need to understand and communicate with your R&D partners and colleagues
- You work in an **industry using or producing biotech products** e.g. Food, starch, detergent, beverage or textile industry
- You **need to brush up** your current knowledge about molecular biology and biotechnology

What we offer

- **A solid three day crash course** in industrial biotechnology
- **Competent teaching** with alternating presentations, exercises, plenary discussions and time for questions
- **Support**, we are present throughout the entire course, to ensure that you get the maximum outcome of this course

Registration

Register online at seydlitz.dk/courses

Early registration: EUR 1,895.00* - register before Feb 1st

Late registration: EUR 2,195.00* - register after Feb 1st

* Plus VAT 25%, it is refundable

The course fee is payable in advance and includes course materials, coffee, tea & refreshments, lunch all three days and dinner on the first evening.

Overnight stay at the delegates' own expense can be arranged at the course venue or elsewhere nearby. Please contact Hotel Phoenix Copenhagen at **+45 33 95 95 00** or bookphoenix@arp-hansen.dk.

In case of any questions please contact Pernille at info@seydlitz.dk or phone **+45 30 79 03 36**



Pernille Ollendorff Hede

- M.Sc. (Biochemistry), Ph.D. (Molecular Biology)
- +10 years experience within industrial Protein Engineering



Ditte Marie Kjær Lomholt

- M.Sc. (Biochemistry)
- +10 years experience within teaching biotechnology to non-biotechnologists

Further information: Please see the next pages

Former participants say

★★★★★

It is a great course - straight, direct and no nonsense

★★★★★

Truly enthusiastic and skilled teachers

★★★★★

This course is highly recommended — it is right length, right content and great level

★★★★★

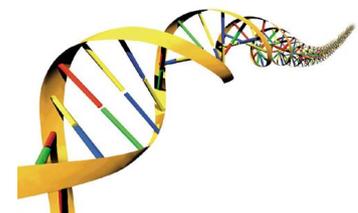
Great balance between theoretical parts, videos and exercises

★★★★★

In three days you gain a large amount of new applicable knowledge

Customers include

- Nestlé
- Unilever
- AB Enzymes
- Dr Schär
- Lallemand
- Roquette



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Course contents

Day 1:	Topic
10:00 - 10:15	<u>Course introduction</u>
10:15 - 12:00	<u>The Cell - a small factory</u> The smallest living unit Different cell types, prokaryotes vs. eukaryotes Organisation of the cell, the nucleus and organelles
12:00 - 13:00	Lunch
13:00 - 15:15	<u>Understanding protein function and stability</u> What is a protein The structure of proteins What is keeping proteins together or making them fall apart Factors defining protein stability Folding, modification and degradation of proteins Protein function
15:15 - 16:00	<u>Enzymes</u> What is an enzyme Enzyme specificity and activity Where are enzymes used industrially?
16:30 - 21:30	Course dinner in Nyhavn
Day 2:	Topic
9:00 - 10:30	<u>DNA and the gene</u> What is DNA Definition of a gene DNA replication
10:30 - 12:00	<u>Translating DNA into a functional protein</u> The genetic code - the code of life Transcription and translation Protein synthesis
12:00 - 13:00	Lunch
13:00 - 16:00	<u>Industrial protein engineering, how to design a protein.</u> Cloning and recombination Producing DNA - the polymerase chain reaction (PCR) Site directed mutagenesis Random mutagenesis Case study - optimization of an enzyme

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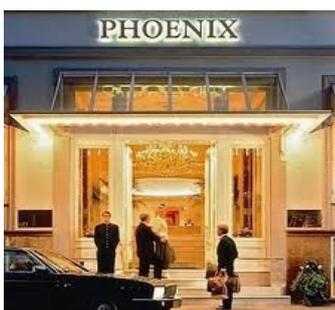
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Course contents - continued

Day 3:	Topic
9:00 – 10:00	<u>Industrial protein engineering</u> Sequence analysis of cloned DNA Bioinformatics
10:00 – 11:00	<u>Industrial use of enzymes</u> Classification of enzymes Enzyme applications Safety and regulations
11:00 – 12:00	<u>New enzyme assay technologies for industrial use</u> Guest Speaker from GlycoSpot
12:00 – 13:00	Lunch
13:00 – 15:00	<u>Industrial production of proteins</u> Using single cells as small protein factories Intracellular vs. extracellular expression Fungal expression Bacterial and mammalian expression
15:00 – 15:45	Wrap up – connecting all the dots and drawing the full picture
15:45 – 16:00	Final remarks, course evaluation



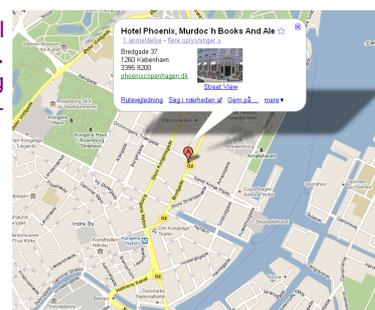
Venue



Hotel Phoenix Copenhagen is a 4-star deluxe hotel housed in one of Copenhagen's historic buildings. Situated in central Copenhagen, near Amalienborg Palace, just around the corner from Nyhavn, Kongens Nytorv, Strøget and other sights.

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