

# International PhD course

## Food proteins: functionality, modifications and analysis

Wageningen, The Netherlands, 12–15 November 2018



### AIM OF THE COURSE

The course aims to provide an understanding of how proteins function in foods and how their functionalities are affected by various food processes, such as enzymatic hydrolysis. Analytical techniques used to characterize proteins are presented. After completion, the course participants should have obtained thorough knowledge about the most important food proteins and their reactions, and be able to predict their behavior in simple food systems. They should also be able to engage in discussions on methods suitable for analysis of proteins and modified proteins.

### COURSE DESIGN

The course consists of lectures and colloquia where students and teachers give presentations to be discussed in plenum. Before the course, the course literature should be studied and a short project presentation (5 minutes) should be prepared. After the course, a short report should be made which relates one or more subjects of the course to the PhD project of the student.

### PARTICIPANTS

PhD students and post docs interested in the course should either work with aspects of food proteins or plan to include this in their future work. Max. 35 participants.

### PROGRAMME TOPICS

Lectures and demonstrations include:

- Characteristics of proteins
- Common protein reactions in foods (e.g., denaturation, oxidation, glycation)
- Structure and functionality of milk, meat and legume proteins
- Challenges in protein isolation and characterisation
- Enzymatic modification
- Proteomics used for detection of changes in proteins
- Production of bioactive peptides
- Identification of peptides by LC-MS/MS

### COURSE LECTURERS & ORGANIZERS

#### Lecturers:

#### University of Copenhagen:

**Prof. Richard Ipsen**, Department of Food Science  
**Dr Jeanette Otte**, Department of Food Science  
**Dr Rene Lametsch**, Department of Food Science

#### Evan Abrahamse

Danone  
**Dr Arno Alting**, FrieslandCampina  
**Dr Roy Delahaije**, HAN/HAN bioCentre

#### Wageningen University & Research:

**Dr Peter Wierenga**, Laboratory of Food Chemistry  
**Prof. Willem van Berkel**, Laboratory of Food Chemistry  
**Dr Yuxi Deng**, Laboratory of Food Chemistry

#### Organization:

#### Wageningen University & Research:

**Dr Peter Wierenga** (Course director), Laboratory of Food Chemistry  
**Eva Oudshoorn, MSc**, The Graduate School VLAG

### COURSE FEE <sup>1</sup>

WUR & Univ. of Copenhagen PhD candidates	€275
All other PhD candidates	€525
Postdocs, and other academic staff	€725
Participants from the private sector	€1600

<sup>1</sup>includes materials, lunches/tea/coffee and one dinner.

### REGISTRATION AND INFORMATION

[www.vlaggraduateschool.nl/en/courses/course/fp18.htm](http://www.vlaggraduateschool.nl/en/courses/course/fp18.htm)

For information contact:

Eva Oudshoorn

E-mail: [eva.oudshoorn@wur.nl](mailto:eva.oudshoorn@wur.nl)

