

ESH Hypertension Summer School 2026

Theme: Into the future



Introduction

This ESH course is organised around the theme “Into the Future.” Knowledge gaps, future research agendas, and practical challenges in hypertension and cardiovascular care are the central focus of this week’s lectures and assignments.

Faculty

Local Organizing Committee

Prof. J. Danser
Dr. J. Deinum
Mrs. A. van Ittersum
Dr. C. Stolk-van der Heijden
Prof. L. Vogt

ESH Organizing Committee

Prof. J. Brguljan Hitij
Mrs. M. Elgner

International Faculty

Prof. A. Januszewicz, President ESH
Dr. J. Brguljan Hitij
Prof. C. Delles
Prof. A. Persu
Prof. T. Guzik
Prof. M.C. Zennaro
Prof. K. Narkiewicz
Prof. P. Sarafidis
Prof. E. Rodilla
Dr. H. Naderi
Dr. D. Ferrao

Local Faculty

Dr. W. Spiering
Dr. J. Rutten
Prof. N. Riksen
Prof. F.E. de Leeuw
Prof. B.J. van den Born
Dr. J. Versmissen
Prof. M. Schreuder
Dr. J. Claassen
Dr. K. Verdonk
Dr. S. Peters

GUIDE TO THE PROGRAMME

Session Types

Plenary	All plenary lectures include 5–7 minutes for questions and discussion . Moderators will strictly adhere to the allocated time to ensure that the programme runs according to schedule. Participants are encouraged to actively engage in the discussion following each presentation.
Case-based assignment	Participants will be divided into six groups of approximately ten students and will work in separate meeting rooms. Groups will analyze two to three clinical cases , addressing structured questions based on recent literature and current clinical guidelines , which will be distributed by the faculty prior to the course.
Present your own research	Participants will present their own research projects in six parallel groups of approximately ten participants. In each session, five students will present, allowing every participant the opportunity to present during the course. Presentations are limited to 7 minutes , followed by 3 minutes for questions and discussion . Each group will be supported by two faculty members , who will provide feedback and moderate the discussion.
Design a future grant proposal	Participants will work in six groups of approximately ten students to develop a grant proposal addressing an important unresolved question in the field . Throughout the week, groups will refine their proposal with the support of two or three faculty members , who will provide methodological and conceptual guidance. The final proposals will be presented at the end of the course .
Parallel sessions	Parallel sessions will take place in smaller groups of approximately fifteen participants . Each participant will attend two interactive sessions , lasting 30–45 minutes , depending on the programme schedule. These sessions are designed to promote active participation and in-depth discussion .
Interview the experts	In this session format, one expert moderates a discussion with two additional specialists on a specific topic. The format resembles an expert panel interview, allowing exploration of clinical and research perspectives . The audience will be invited to participate by asking questions and contributing to the discussion.
Present a future grant proposal	At the end of the course, each group will present the research proposal they have developed during the week. Presentations will take place in six parallel groups. Each group will have 8 minutes to present their proposal , followed by 7 minutes of discussion and feedback from faculty and participants.

Group assignments and networking time

The “Present Your Own Research” sessions and the case-based assignments are conducted within the same small groups to facilitate continuity of discussion and interaction among participants and faculty. Dedicated networking periods are intentionally incorporated into the programme to encourage participants to engage with fellow researchers and clinicians beyond their assigned groups and the formal educational sessions. These moments are designed to promote informal scientific exchange and the development of new professional connections.

INTRODUCTION

Introduction

You have been selected as a promising early-career doctor or researcher in the field of hypertension, representing your country among a diverse and talented international group. We are delighted to welcome you to this course which we hope will add to your professional and personal growth.

This course is designed to expand your knowledge beyond the foundational understanding of hypertension, which we expect all participants to already possess. More importantly, we aim to encourage critical thinking about the future of hypertension care and your potential role in shaping it.

By the end of the course, we hope that you have progressed in your ability to:

- Envision the evolution of hypertension diagnosis and management over the next 20 years.
- Evaluate the utility and limitations of current guidelines, tools and treatments.
- Identify key knowledge gaps and underrepresented populations in hypertension research.
- Propose forward-looking research agendas and innovative care strategies.
- Reflect on your personal and professional role in advancing hypertension care.

Hypertension is a global pandemic. One in three adults worldwide has a blood pressure above the optimal level. Yet only one in five patients with hypertension receives adequate treatment. Millions of lives could be saved and a large economic burden averted through earlier diagnosis and better hypertension treatment coverage. In addition, several patient populations—such as the young, the elderly, and pregnant women—remain under-researched and underserved.

We have work to do.

PROGRAMME

For information on session types, we refer to the Guide to the Programme on page 3.

Sunday, September 6, 2026

- 14.00-15.30: Participants arrive.
- 15.30-15.50: Plenary: Welcome (A. Januszewicz, ESH President) | **Location: Water**
- 15.50-16.00: Plenary: Welcome (J. Danser and J. Brguljan Hitij, ESH) | **Location: Water**
- 16.00-16.10: Plenary: Welcome (NHV) | **Location: Water**
- 16.10-16.30: Plenary: The ESH Young Investigators Group (D. Ferrao) | **Location: Water**
- 16.30-17.00: Plenary: Global impact of hypertension (C. Stolk-van der Heijden)| **Location: Water**
- 17.00-17.30: Plenary: Highlights of the ESH guideline (L. Vogt) | **Location: Water**
- 17.30-17.55: Plenary: Gaps of knowledge and future research agendas (J. Deinum) | **Location: Water**
- 18.00-19.30: Get acquainted (activity)
- 19.30-21.30: Dinner
- 21.30-23.00: Free time

Monday, September 7, 2026

- 07.00-07.40: Morning walk (activity) (A. van Ittersum & C. Stolk-van der Heijden)
- 07.00-08.30: Breakfast
- 08.30-09.00: Plenary: Blood pressure physiology and salt (W. Spiering) | **Location: Water**
- 09.00-09.30: Plenary: The renin-angiotensin-aldosterone-system (J. Danser) | **Location: Water**
- 09.30-10.30: Case-based assignment: Primary aldosteronism, renal artery stenosis and FMD | **Location: See group assignment, page 9**
- 10.30-10.45: Coffee Break
- 10.45-11.15: Plenary: Primary aldosteronism (J. Deinum) | **Location: Water**
- 11.15-11.45: Plenary: FMD and renal artery stenosis (A. Persu) | **Location: Water**
- 11.45-12.45: Present your own research, session 1 | **Location: See group assignment, page 9**
- 12.45-13.45: Lunch Break
- 13.45-14.45: Design a future research proposal, session 1 | **Location: See group assignment, page 9**
- 14.45-15.00: Coffee Break
- 15.00-16.30: Parallel sessions (45 minutes). Every session is scheduled two times.
- Obesity and hypertension (Parallel session, digital, T. Guzik) | **Location: Water**
 - Endocrine hypertension (Parallel session, J. Deinum) | **Location: Zaal 3**
 - Monogenic Hypertension (Parallel Session, M.C. Zennaro) | **Location: Zaal 4**

- Blood pressure measurement: guideline recommendations and practical workshop (A. Van Ittersum) | **Location: Zaal 6**

16.30-17.30: Present your research, session 2 | **Location: See group assignment, page 9**
 18.00-19.30: Dinner
 19.30-20.30: Session on AI in Hypertension care and research | **Location: Water**
 20.30-23.00: Free time

Tuesday, September 8, 2026

07.00-07.40: Morning slow run (C. Stolk-van der Heijden)
 07.00-07.40: Morning walk (A. van Ittersum)
 07.00-08.30: Breakfast

08.30-09.30: Case-based assignment: end-organ damage of the kidney and the brain | **Location: See group assignment, page 9**

09.30-11.00: Parallel sessions (45 minutes). Every session is scheduled two times.

- Basic and Translational Research: Omics as a Tool in Hypertension (J. Rutten) | **Location: Water**
- Basic and Translational Research: Artificial intelligence and machine learning in hypertension research (H. Naderi) | **Location: Zaal 3**
- Basic and Translational Research: Inflammation, Lipids and Hypertension (N. Riksen) | **Location: Zaal 4**
- Basic and Translational Research: Renal Denervation (B.J. van den Born) | **Location: Zaal 6**

11.00-11.15: Coffee break

11.15-12.30: Interview the experts: Trial designs in hypertension research | **Location: Water**
 Subsequently:

- Trial Design in hypertension research (P. Sarafidis & J. Deinum, moderator: J. Danser)
- Large databases in hypertension research (S. Peters & H. Naderi, moderator: L. Vogt)
- Preclinical research in hypertension research (N. Riksen & J. Danser, moderator: J. Deinum)

12.30-13.15: Lunch

13.15-14.45: Design a future research proposal, session 2

14.45-15.15: Plenary: HMOD - the vasculature (IMT, Vascular Stiffness) (E. Rodilla) | **Location: Water**

15.15-15.45: Plenary: HMOD - the brain and hypertension (F.E. de Leeuw) | **Location: Water**

15.45-16.00: Coffee break

16.00-16.30: Plenary: HMOD - the heart: LVH, Heart Failure and atrial fibrillation (H. Naderi) | **Location: Water**

16.30-17.00: Plenary: HMOD - the kidney: Renal outcomes in hypertension (L. Vogt) | **Location: Water**

17.00-18.00: Networking

18.00-20.00: Dinner

20.00-23.00: Free time or Yoga Nidra

Wednesday, September 9, 2026

- 07.00-07.30: Morning walk (A. van Ittersum & C. Stolk-van der Heijden)
- 07.00-08.30: Breakfast
- 08.30-09.00: Plenary: Social and environmental challenges: Sex differences in drug treatment (J. Brguljan Hitij) | **Location: Water**
- 09.00-09.30: Plenary: Pharmacology - Drug adherence (J. Versmissen) | **Location: Water**
- 09.30-10.30: Case-based assignment: the old and the young | **Location: See group assignment, page 9**
- 10.30-10.45: Coffee break
- 10.45-11.10: Plenary: Under-represented groups: Adolescents and young adults (M. Schreuder) | **Location: Water**
- 11.10-11.35: Plenary: Under-represented Groups: The Elderly and Frail (J. Claassen) | **Location: Water**
- 11.35-12.00: Plenary: Under-represented Groups: hypertensive disorders of pregnancy (K. Verdonk) | **Location: Water**
- 12.00-13.00: Design a future research proposal, session 3 | **Location: See group assignment, page 9**
- 13.00-13.45: Lunch
- 14.00-23.00: Free time

Thursday, September 10, 2026

- 08.00-09.00: Breakfast
- 09.00-10.00: Parallel sessions (30 minutes). Every session is scheduled two times.
- Pharmacology: siRNA in hypertension (J. Danser) | **Location: Water**
 - Pharmacology: Novel therapies & overlap with other risk factors from a pharmacologist's perspective (C. Stolk-van der Heijden) | **Location: Zaal 3**
 - Pharmacology: Oncolytic drugs and hypertension (J. Versmissen) | **Location: Zaal 4**
 - Sleep and hypertension (Parallel Session, K. Narkiewicz) | **Location: Zaal 6**
- 10.00-11.00: Parallel sessions (30 minutes). Every session is scheduled two times.
- Social and environmental challenges: Environmental impact (C. Stolk-van der Heijden and J. Deinum) | **Location: Water**
 - Social and environmental challenges: Ethnicity and treatment (B.J. van den Born) | **Location: Zaal 3**
 - Social and environmental challenges: Low-income countries (H. Naderi) | **Location: Zaal 4**
 - Social and environmental challenges: How to increase screening and treatment coverage in primary care (C. Delles) | **Location: Zaal 6**
- 11.00-11.30: Coffee break
- 11.30-13.00: Present your future research proposal (6 groups, 8 minutes presenting + 7 minutes discussion) | **Location: Water**
- 13.00-14.00: Lunch + Group Photo
- 14.15-14.20: Research Proposal Prize | **Location: Water**
- 14.20-15.00: Wrap up: Into the future (J. Deinum, L. Vogt) | **Location: Water**

15.00-16.00: Certificates | **Location: Water**
16.00-18.00: Free time
18.00-19.00: Hypertension Quiz (D. Ferrao, C. Stolk-van der Heijden, J. Danser and A. van Ittersum)
19.00-21.00: Dinner
21.00-00.00: Free time

Friday, September 11, 2026

07.30-10.30: Time to say goodbye (and check out)

Groups for all group assignments

Group 1

1. Benjamin Pariente
2. Eman Hasan
3. Jana Smirnova
4. Jordy Saren
5. Julie Piotte
6. Lucile Accoceberry
7. Merel Kraak
8. Olivia Gästgivers
9. Steven Mitchell
10. Yi Chen

Faculty: Jan Danser – Diana Ferrao – Alexander Persu

Location: Water

Group 2

1. Ciprian-Gelu Grigoroaea
2. Emil Weiß
3. Erez Ramaty
4. James Steckelmacher
5. Konstantinos Platanias
6. Maryla Kocowska-Trytko
7. Polina Andersone
8. Rita Féria
9. Sungjoon Park
10. Wafa Karar

Faculty: Hafiz Naderi – Niels Riksen – Krzysztof Narkiewicz

Location: Zaal 3

Group 3

1. Ane Katrine Gundel
2. Bregma Pandango
3. Ezequiel Giordani
4. Lotte Voskamp
5. María Inés Deregibus
6. Matteo Landolfo
7. Michal Szyszka
8. Niv Reiss Gindi
9. Sarah Halmer
10. Stina Björkman
11. Zala Mlinarič

Faculty: Enrique Rodilla – Jana Brguljan Hitij – Koen Verdonk

Location: Zaal 4

Group 4

1. André Chuster de Souza
2. Bertina Nielsen Herfindal
3. Mihaela Marinović Glavić
4. Nathalia Suzan Camarão Silva Martins
5. Silvija Sakalauske
6. Theofana Mihaila
7. Viltė Samsonė
8. Yuran Ahn

Faculty: Bert Jan van den Born – Joost Rutten - Christian Delles

Location: Zaal 6

Group 5

1. Anela Šubo
2. Angeliki Vakka
3. Chang-Yuan Liu
4. George Shaburishvili
5. Kari Saville
6. Katarina Cenkerova
7. Marija Domislović
8. Nada Delić
9. Sebastian Nielsen

Faculty: Liffert Vogt – A. Januszewicz - Sanne Peters - Jorie Versmissen

Location: Zaal 1

Group 6

1. Ali Hamdan
2. Ali Fawzi Abdalsahib
3. Alina Nesterenko
4. Anmol Kapoor
5. Heta Heinonen
6. Jonathan Overeem
7. Paloma Palma Guzmán
8. Tereza Hrabáková
9. Theodore Pasquier
10. Zsófia Kekk

Faculty: Jaap Deinum – Maria Christina Zennaro - Jurgen Claassen

Location: Zaal 11

