EADV - ESDR Summer School
Precision Medicine: from morphological roots to molecular signatures

Residents Course | 26-28 May 2027 | Vienna, Austria

Description

Precision medicine is transforming dermatology from a discipline rooted in macroscopic evaluation of skin health, microscopic morphology-driven diagnoses, and generalized therapies to one driven by molecular mechanisms and individualized targeted treatment. This EADV-ESDR Summer School will introduce dermatology residents and basic scientists to the principles of molecular diagnostics, translational research, immunology, and innovative therapeutic approaches that underpin modern precision dermatology. Through lectures, laboratory exposure, interactive discussions, patient-centred sessions, and a collaborative health hackathon, the course promotes interaction between clinicians and scientists. Participants actively explore how advanced technologies such as spatial transcriptomics, molecular profiling, point-of-care diagnostics, and gene editing are reshaping disease classification, treatment selection, and clinical trial design.

Learning Objectives

By the end of this course, participants will be able to:

1. Explain how emerging molecular and immunological technologies, including spatial transcriptomics, molecular profiling, and minimally invasive diagnostics, can be used to identify disease mechanisms and define clinically relevant disease endotypes.
2. Interpret genotype-phenotype relationships and evaluate how molecular diagnostics, translational models, and innovative therapeutic approaches can support precision medicine in rare and inflammatory skin diseases.
3. Integrate clinical observations with laboratory-derived data to formulate research questions, assess personalised treatment strategies, and contribute to multidisciplinary translational dermatology initiatives.
4. Apply practical career development strategies, including networking, mentorship, research planning, and interdisciplinary collaboration, to support a successful career in clinical and academic dermatology.

Faculty

Chairs:	Ellen van den Bogaard, Neil Rajan
Speakers:	Georg Stary, Sandrine Dubrac, Kilian Eyerich, Jos Smits, Karin Veldman, Su Lwin, Liv Eidsmo, Curdin Conrad

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Programme

Wednesday, 26 May 2027

Skin Morphology, Molecules and Models
Focus: Mapping the inflammatory landscape and building translational models to identify molecular signatures and matching therapies.

09:00 – 09:20	Welcome & Introduction by Ellen and Neil
09:20 – 10:00	Granulomatous Skin Disease *Using spatial transcriptomics (ST) to find new insights into old diseases like sarcoidosis.* Georg Stary
10:00 - 10:15	Break - Move to the lab
10:15 – 12:30	Translational research in the Lab *Introduction to the NETSKINMODELS consortium and Lab safari* Ellen van den Bogaard, Sandrine Dubrac, Georg Stary
12:30- 14:00	Lunch Break
14:00 – 15:30	Delegate flash talks *Presentation of personal academic interest, case reports or discoveries* Ellen van den Bogaard, Sandrine Dubrac, Georg Stary
15:30- 16:00	Coffee Break with Posters Session
16:00 – 17:00	Bridging translational research to clinical practice *Moving from immune profiles to endotypes and precision treatment* Kilian Eyerich

Thursday, 27 May 2027

Rare Disease Innovation
Focus: Frontiers of rare disease research.

09:30 - 10:30	Sampling the skin: How point of care diagnostics can influence clinical care. *Minimally invasive sampling for longitudinal molecular monitoring in the clinic.* Neil Rajan
10:30-11:00	Coffee Break
11:00 – 12:00	Innovation in gene editing and genetic therapies *Introduction into new EDD classification by molecular diagnostics, new technology development in gene editing and translational models.* Jos Smits
12:00 – 12:40	EDD Patient Journey & Panel Discussion Karin Veldman, Neil Rajan, Jos Smits, Su Lwin
12:40- 14:00	Lunch Break
14:00 – 15:00	Interactive session on geno-phenotypes and clinical trial design *Quiz of phenotypes and genotypes, and dissusion on the challenges of trial design and drug repurposing in small patient cohorts.* Su Lwin
15:00-15:30	Coffee Break
15:30 – 17:00	Career development session *Round table on challenges and perspectives in clinical science and academia, actionable next steps and strategic planning*
20:00	Networking Dinner with participants and faculty members

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Friday, 28 May 2027

Future of immunodermatology
Focus: Novel concepts and health hackathon

09:00 - 10:00	Hackathon: pairing clinical and laboratory research questions
10:00 - 11:00	Memory T- cells and patterns of skin disease *Multimodal data integration to identify mechanisms of chronicity and resolution in psoriasis*. Liv Eidsmo
11:00-11:30	Coffee Break
11:30 – 12:30	Hackathon: pairing clinical and laboratory research questions
12:30 – 13:30	Immune Modules in Inflammatory Skin Disease *Defining molecular signatures in psoriasis and eczema to move beyond clinical morphology*. Curdin Conrad
13:30- 14:30	Lunch Break
14:30 – 15:15	Biologic Therapies and Personalised Targets *New tools in the clinic: From JAK inhibitors to precision biologics*. Industry Speaker – Tiago Reis Matos
15:15 – 16:00	Hackathon: plenary session with presentations by participants
16.00	Closure and farewell

The programme might be subject to changes.

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