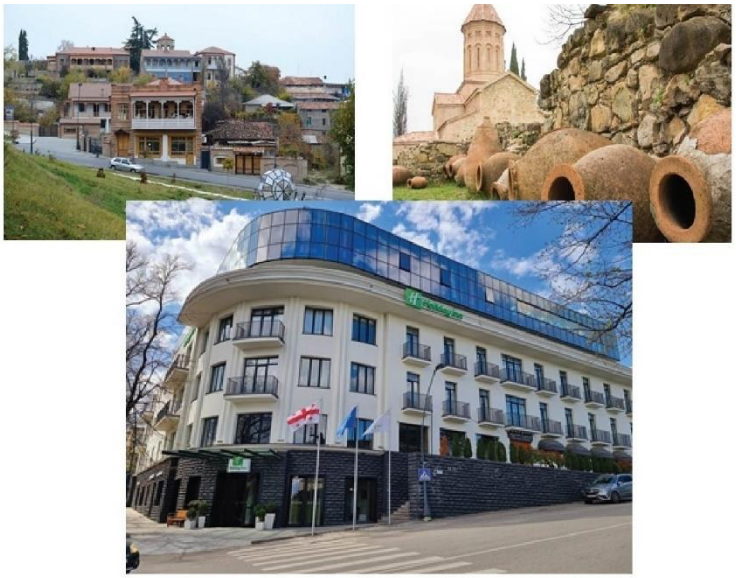


ESHG-supported course

Translational Epigenetics in Precision Medicine

31 October – 3 November, 2026

Holiday Inn

Telavi, Georgia

Programme

EACCME® Accreditation

The ESHG supported course "Translational Epigenetics in Precision Medicine", Telavi, Georgia, 31 October – 3 November 2026, has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) with **20.0 European CME credits (ECMEC®s)**.

Each medical specialist should claim only those hours of credit that they actually spent in the educational activity.

DAY 1 **Basic Concepts of Epigenetics**		
10:15–11:00	Registration and Opening remarks	**Eka Kvaratskhelia** **Tinatin Tkemaladze**
11:00–11:45	A history of epigenetics	John Greally, Albert Einstein College of Medicine, Bronx, New York, USA
11:45–12:30	Epigenetic mechanisms: DNA methylation and demethylation; histone modifications and nucleosomes	**Sebastian Alvarado** Queens College (CUNY), New York City, US

12:30–13:00	Coffee break	
13:00–13:45	DNA methylation episignatures fundamentals: from molecular profiles to AI biomarkers	**Bekim Sadikovic** London Health Sciences Centre, ON, Canada
13:45–14:30	Mechanisms of chromatin remodeling, ATP-dependent chromatin remodeling, chromatin remodeling complexes	**Sebastian Alvarado** Queens College (CUNY), New York City, US
14:30–15:30	Lunch break	
15:30–16:15	The Epigenetic Switch: X Inactivation, Stem Cells, and Cellular Reprogramming	**Maral Tajerian** Queens College (CUNY), New York City, US
16:15–17:00	The imprinting cycle of life	**Karen Temple** University of Southampton and University Hospital Southampton NHS Foundation Trust, Southampton, UK
17:00–17:30	Coffee break	
17:30–18:15	Statistical approaches in epigenome-wide association studies	**Inga Prokopenko** School of Biosciences, University of Surrey, Guildford, Surrey, UK
18:15–19:00	Temple syndrome – why early diagnosis improves outcome	**Karen Temple** University of Southampton and University Hospital Southampton NHS Foundation Trust, Southampton, UK
20:00	Welcome Dinner	

DAY 2 **Cancer Epigenetics**		
09:00–09:45	Can we detect cancer risk before cancer? Environmental exposures, epigenetic age and precision prevention	**Edyta Borkowska** Medical University of Łódź, Łódź, Poland
09:45–10:30	Epigenetic analysis using long-read sequencing data	**Christian Gilissen** The Radboud University Medical Center, Nijmegen, the Netherlands
10:30–11:00	Coffee break	
11:00–11:45	Urine as an Epigenetic Window on Bladder Cancer: Methylation and Non-coding RNA Biomarkers	**Edyta Borkowska** Medical University of Łódź, Łódź, Poland
11:45–12:30	Basic bioinformatics analysis of methylation data in cancer (Part I)	**German Demidov** Computational Oncology Group, Molecular Precision Oncology Program, National Center for Tumor Diseases (NCT), Heidelberg, Germany
12:30–13:30	Lunch break	
13:30–14:15	Basic bioinformatics analysis of methylation data in cancer (Part II)	**German Demidov** Computational Oncology Group, Molecular Precision Oncology Program, National Center for Tumor Diseases (NCT), Heidelberg, Germany
14:15–15:00	Genome Instability and Cancer: The Role of Repetitive Element Methylation	**Ketevan Kankava** Tbilisi State Medical University, Tbilisi, Georgia
15:00–15:20	Industry Presentation (Non-accredited) Molecular Panels in Oncology and Oncohematology: From Diagnostics to Personalized Treatment	**Nino Kvirkvelia** Med Diagnostics Tbilisi, Georgia
15:30–20:00	Social and Cultural Programme: Georgian Food and Wine Tour	

DAY 3 **Epigenetics in Rare Diseases**		
09:00–09:45	Enhancers/gene regulation and how to look at non-coding sequences	**Stefan Barakat** Erasmus MC, University Medical Center Rotterdam, Rotterdam, the Netherlands
09:45–10:30	Clinical Case Discussion: Orchestrating genetics and epigenetics from a clinical perspective: lessons from Rubinstein- Taybi and Cornelia de Lange syndromes.	**Tinatin Tkemaladze** Tbilisi State Medical University, Tbilisi, Georgia
10:30–11:00	Coffee break	
11:00–11:45	Workshop: Clinical applications of DNA methylation episignatures in rare diseases	**Bekim Sadikovic** London Health Sciences Centre, ON, Canada
11:45–12:30	Dutch experience with RNUopathies	**Stefan Barakat** Erasmus MC, University Medical Center Rotterdam, Rotterdam, the Netherlands
12:30–13:30	Lunch break	
13:30–14:15	Peculiarities of inheritance pattern of Angelman syndrome	**Tinatin Tkemaladze** Tbilisi State Medical University, Tbilisi, Georgia
14:15–15:00	Rethinking the role of 'epigenetics' in human diseases	**John Greally** Albert Einstein College of Medicine, Bronx, New York, USA
15:00–15:30	Coffee break	
15:30–16:15	Unravelling chromatin remodelling in Nicolaides-Baraitser syndrome: From patients to models	**Stephanie Efthymiou** UCL Queen Square Institute of Neurology, University College London, London, UK
16:15–16:45	Case discussion 1. Integrating Genomic and Epigenomic Approaches for Variant Interpretation: A Case of a CUL4B Variant Associated with Neurodevelopmental Disorder 2. Rubinstein–Taybi Syndrome versus Menke–Hennekam Syndrome: A Diagnostic Debate at the EP300 Genotype–Phenotype Boundary 3. A Homozygous Synonymous Splice-Altering Variant in UBR7 Associated with Li-Campeau Syndrome: Expanding the Molecular Spectrum of a Chromatin-Related Disorder	course participants **Niousha Javadzade**, Mashhad University of Medical Sciences, Mashhad, Iran **Narmin Aslanzade**, Referans Medical Group Baku, Azerbaijan **Mir Salar Kahaei Khosroshahi** Mashhad University of Medical Sciences, Mashhad, Iran
17:30	Gala Dinner	

DAY 4 **Environmental Epigenetics and Its Implications for Common Diseases**		
09:00–09:45	Epigenetic mechanisms of brain plasticity in the context of peripheral trauma	**Maral Tajerian** Queens College (CUNY), New York City, US
09:45–10:30	Expanding the FSHD landscape: new genetic insights from diverse populations	**Stephanie Efthymiou** UCL Queen Square Institute of Neurology, University College London, London, UK
10:30–11:00	Coffee break	
11:00–11:45	Epigenetic mechanisms: non-coding RNAs: Small interfering RNAs, MicroRNAs and their role in disease	**Eka Kvaratskhelia** Tbilisi State Medical University, Tbilisi, Georgia
11:45–12:30	Epigenetics in complex diseases: Cardiovascular diseases	**Nino Pirtskhelani** Tbilisi State Medical University, Tbilisi, Georgia
12:30–13:30	Lunch break	
13:30–13:50	Industry Presentation (Non-accredited) Building the Future of Precision Medicine in Georgia: From Polygenic Risk Scores to Epigenomics and Multi-Omics	**Nino Rostiashvili** Epicheck, Tbilisi, Georgia **Tinatin Samushia** ABM Company, Tbilisi, Georgia
13:50–14:20	Translational Epigenetics: Animal model adoption for translational and basic research	**Sebastian Alvarado** Queens College (CUNY), New York City, US
14:20–15:00	Closing remarks /Written test	