

## PROGRAMME OF THE INTERNATIONAL SUMMER SCHOOL FOR DOCTORAL STUDENTS

### Ancestry meets Molecular Health: Opportunities of genetic diversity for Predictive, Preventive, Personalised and Participatory (P4) Medicine

#### Harnessing multi-omics for P4-Medicine

<b>Day 1</b> 20.11.23	09:00-09:15	Welcome address (IR)
	09:15-09:45	Introduction to the summer school (JLB)
	09:45-10:30	Gallbladder cancer: what is it and what are the issues? (VKK)
	10:30-11:00	Coffee break
	11:00-11:30	Gallbladder cancer – what needs to be done? (VKK)
	11:30-12:15	The European-Latin American Consortium EULAT Eradicate GBC (JLB)
	12:15-13:00	Multi-Omics in GBC patients – first results from EULAT Eradicate GBC (DS)
	13:00-14:30	Lunch
	14:30-15:15	Metabolomics and biomarker discovery in cancer epidemiology (AS)
	15:15-16:00	Metabolomics: the missing link between genotype and phenotype (RKE)
	16:00-16:45	Application of genetics to epidemiological study of US Latinos (RKA)
18:00-20:30	Welcome cocktail reception	

<b>Day 2</b> 21.11.23	09:00-09:45	Gut microbiome, metabolite and genetics affecting diet-related disease (RKA)
	09:45-10:30	Arsenic, epigenetics, cardiovascular disease and community-based research (ADR)
	10:30-11:00	Coffee break
	11:00-11:45	Gut barrier integrity, microbial metabolites and gastrointestinal cancer risk (DH)
	11:45-12:30	Non-coding RNAs in gallbladder cancer risk prediction (AB)
	12:30-13:15	microRNAs as gastric cancer biomarkers: MAGIC study and Magallanes cohort (YEP)
	13:15-14:30	Lunch
	14:30-15:15	Mendelian randomisation studies on gallbladder cancer (CBP)
	15:15-16:00	Multiple mediation: application to smoking, DNA methylation and lung cancer (ADR)
	16:00-16:45	Wrap-up of day 1 and day 2

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**Characterising ancestry and inbreeding for P4-Medicine**

<b>Day 3</b> 22.11.23	09:00-09:45	Estimating ancestry proportions using genotype data (JLB)
	09:45-10:45	Hands-on training "Genetic association analysis using R" (AB)
	10:45-11:15	Coffee break
	11:15-12:15	Hands-on training "Estimation of ancestry components using Admixture" (LZ)
	12:15-13:00	Mendelian randomisation analysis of Native American ancestry and disease (LZ)
	13:00-14:30	Lunch
	14:30-16:00	Human population genomics: how can we communicate better? (FM)
	16:00-19:00	Visit to the Chilean Museum of Pre-Columbian Art

<b>Day 4</b> 23.11.23	09:00-10:00	Runs of Homozygosity: windows into population history and trait architecture (JW)
	10:00-10:30	Latin American homozygosity and gallbladder cancer (FCC)
	10:30-11:00	Coffee break
	11:00-13:00	Hands-on training "Homozygosity I" (FCC)
	13:00-14:30	Lunch
	14:30-16:00	Hands-on training "Homozygosity II" (FCC)
	16:00-16:45	Ancestry in rare actionable and Mendelian variants (JW)
	16:45-17:30	Wrap-up of day 3 and day 4

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#### Delineating a research proposal on genetic diversity and P4-Medicine

<b>Day 5</b> <b>24.11.23</b>	<b>09:00-09:45</b> Review and comparison of funding opportunities (Representative of the German Research Foundation)
	<b>09:45-10:15</b> The “Cancer inequities” Challenge as example of funding opportunity (JLB)
	<b>10:15-10:45</b> Gallbladder cancer - What is going on and what would make an attractive research proposal? (VKK)
	<b>10:45-11:15</b> Coffee break
	<b>11:15-11:45</b> Definition of preliminary work packages
	<b>11:45-12:30</b> Delineation, strengths and weaknesses of the work packages (in groups)
	<b>12:30-13:15</b> Objectives, strengths and weaknesses of the work packages (plenary session)
	<b>13:15-14:30</b> Lunch
	<b>14:30-15:15</b> Potential impact and excellence of the preliminary proposal (in groups)
	<b>15:15-16:00</b> Potential impact and excellence of the preliminary proposal (plenary session)
	<b>16:00-16:45</b> Open discussion on the next steps for proposal preparation
<b>16:45-18:00</b> Farewell cocktail party	