

5th Metabolomics Sardinian Scientific School

“Metabolomics in Cancer Biomarkers and Therapy: Promise and Future”

9th – 13th September 2019

Sardegna Ricerche, Building 2, Sardinia Technology Park, Pula, Italy

Program

I Day 9 September 2019

Registration and welcome coffee

School presentation

Plenary Lecture – Florence Raynaud : Metabolites as biomarkers

II Day 10 September 2019

Lectures

David Wishart: Cancer as a metabolic disease – what metabolomics tells us

Jules Griffin: Metabolomics and imaging metabolism in tissues

Georgios Theodoridis: LC-MS method validation. QC and QA

Coffee break

Pietro Franceschi: Data analysis & metabolomics: two sides of the same coin

Andrès Méndez Lucas: Identifying strategies to target the metabolic flexibility of tumours

Diego Calvisi: Prognostic and therapeutic relevance of de novo fatty acid in liver carcinogenesis

Discussion

Lunch

Practical session

Pietro Franceschi: Metabolomics meet statistics

Students activities

III Day 11 September 2019

Lectures

Georgios Theodoridis: LC-MS method development for the analysis of biological fluids

Diego Calvisi: Mechanisms of resistance to fatty acid inhibition in liver cancer: role of cholesterol and fatty acid transporters

Jules Griffin: Metabolomics and lipidomics at the population scale

Coffee break

Fabien Jourdan: Using genome scale metabolic network modelling to identify cancer related metabolic modulations

Roberta Pastorelli: Defining metabolic targets in tumors with metabolomics

Pier Luigi Caboni: Experimental design in MS spectrometry – Low and high resolution approaches

Discussion

Lunch

Tutorials on NMR

Cristina Piras: NMR in metabolomics

Students activities

IV Day 12 September 2019

Lectures

David Wishart: Moving metabolomics into the clinic: Case studies with cancer

Roberta Pastorelli: Applications of metabolomics to study cancer metabolic rewiring

Andrés Méndez Lucas: In vivo metabolomics uncovers acetate as a fuel for tumour mitochondria

Coffee break

Florence Raynaud: Metabolomics in cancer drug discovery.

Saverio Tardito: Improving the metabolic fidelity of cancer cell models I

Discussion

Lunch

Tutorials on bioinformatics

Fabien Jourdan: Bioinformatics methods to study genome-scale metabolic networks

Students activities

Social dinner

V day 13 September 2019

Lectures

Reza Salek: Metabolomics and the exposome: Application to cancer epidemiology

Saverio Tardito: Improving the metabolic fidelity of cancer cell models II

Luigi Atzori: Metabolic dependencies in thyroid carcinoma cell lines

Coffee break

Students presentations

Conclusions: Atzori & Griffin

Light Lunch