LiSyM Cancer
Liver Systems Medicine against Cancer

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Role in LiSyM-Cancer

Due to increasing incidence and high mortality rates, hepatocellular carcinoma (HCC) is an important health problem worldwide. However, its etiopathology and development are poorly understood. While liver metabolism is organized in spatially specific zones, little is known how the zonation is associated with the onset and propagation of liver diseases. To this end, in the lab of Dr. A. Shevchenko, I apply laser capture microdissection (LCM) technique to excise histologically specific features of liver tissues - healthy, marginal and with HCC- and characterize their lipidome and proteome composition.

Expertise

Expert in spatial and clinical lipidomics, proteomics, and mass spectrometry with a background in cell culture and clinical research. Throughout my PhD and postdoc training, I have led and contributed to multi-disciplinary projects investigating the lipidome and/or proteome of healthy and inflamed skin, carcinomas (liver and colon), and metabolic disorders (diabetes). I also specialized in developing and optimising analytical workflows for high-resolution spatial and quantitative lipidomics.

Degrees

- PhD
  2022
  University of Milan
  Quantitative Lipidomics and Proteomics in Medicinal Chemistry
- Master thesis
  2016
  University of Ferrara
  In vitro pharmacological characterization of novel bivalent ligands for NOP and mu-opioid receptors

Honors and Awards

- HelloBio “Lab Heroes Awards” as highly recommended | 2023, sponsored by Hello Bio
- iSLS11th Travel Grant, Singapore | 2023
- Females in Mass Spectrometry (FeMs) Society “Empowerment Award” | 2023
- SOI Journalistic Prize | 2019
- Scholarship: Specialization in Biomedical Research, Institute for Pharmacological Research “Mario Negri” IRCCS, Milan, Italy | 2017 – 2018

Publications

2024-01-27	Quantitative proteomics study of carnosine effect in an animal model of Western diet-induced nonalcoholic fatty liver disease *Journal of Biochemical and Molecular Toxicology*
2022-05-18	Hepatic Hedgehog Signaling Participates in the Crosstalk between Liver and Adipose Tissue in Mice by Regulating FGF21. *Cells*
2022-05-01	Hepatic Hedgehog Signaling Participates in the Crosstalk between Liver and Adipose Tissue in Mice by Regulating FGF21 *Cells*
2021-09-01	Study of Carnosine's effect on nude mice skin to prevent UV-A damage *Free Radical Biology and Medicine*
2021-08-23	Integratomics of Human Dermal Fibroblasts Treated with Low Molecular Weight Hyaluronic Acid *Molecules*