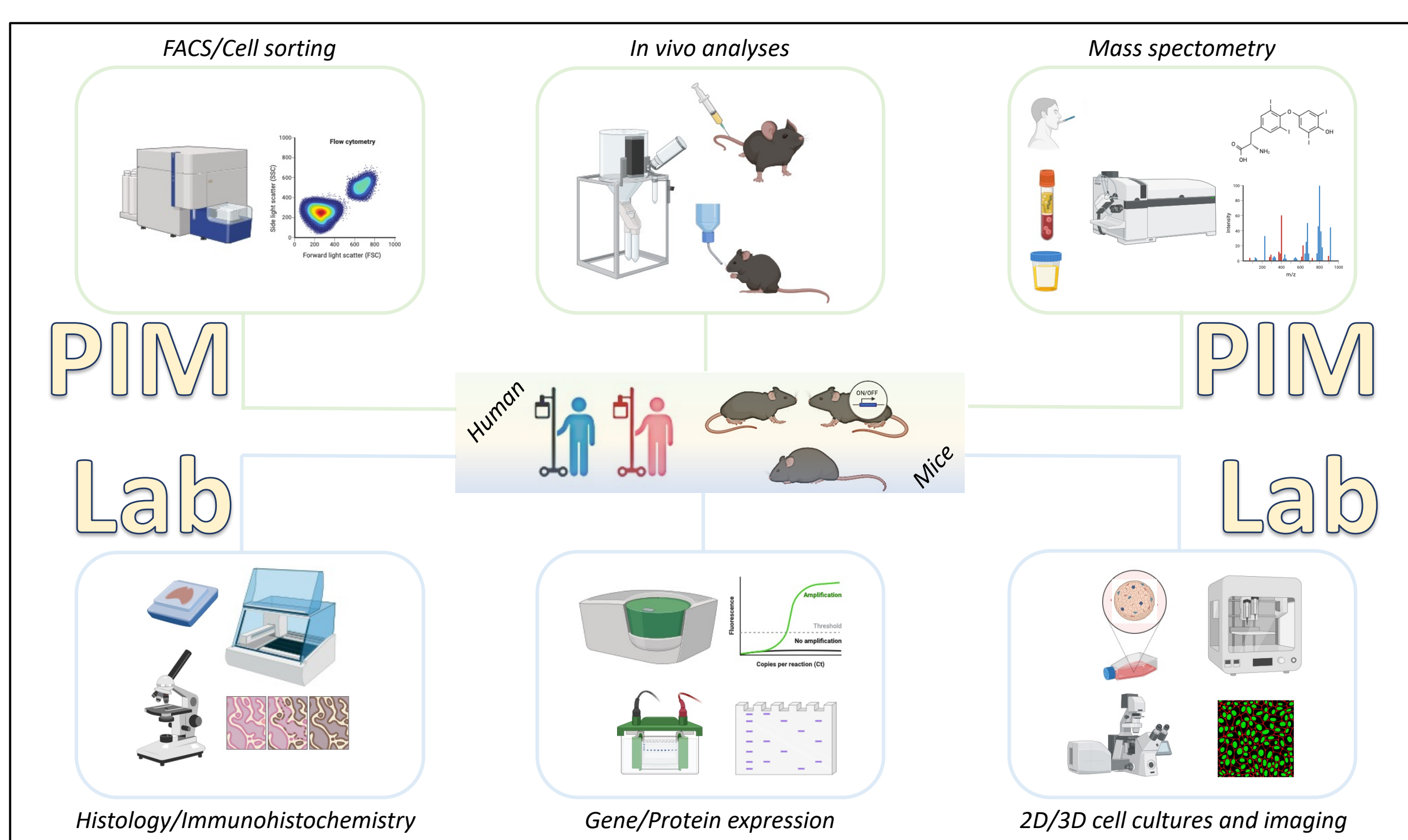


PRECLINICAL IMMUNO-METABOLISM LAB (PIM LAB)



General description of the activities

Development and characterization of preclinical models to study molecular and cellular mechanisms involved in immuno-metabolic diseases (e.g. diabetes, obesity) and identification of new potential diagnostic/prognostic biomarkers through:

- in vitro models: 2D and 3D human primary cell/cell line cultures;

- in vivo models: transgenic/knock-in/knock-out constitutive or inducible mouse models.

Role	Name	Position	E-mail	Publications	Keywords
Lab head	Prof. Mary Anna Venneri	Associate professor	maryanna.venneri@uniroma1.it	https://pubmed.ncbi.nlm.nih.gov/?term=venneri+ma&sort=date&size=100	Targeting tumor angiogenesis; Metabolic Disorder; Inflammation; Circadian rhythms
Lab members	Dr. Federica Campolo	Assistant Professor (RTD-A)	federica.campolo@uniroma1.it	https://pubmed.ncbi.nlm.nih.gov/?term=Campolo,+Federica%5BAuthor%5D&sort=date	Mouse modelling; phosphodiesterase s; metabolism; molecular endocrinology
	Dr. Francesca Sciarra	Post-doc	francesca.sciarra@uniroma1.it	https://pubmed.ncbi.nlm.nih.gov/?term=Sciarra,+francesca%5BAuthor%5D&sort=date&size=200	Hormones, Endocrine disease, Circadian regulation
	Dr. Anisa Degjoni	PhD student	anisa.degjoni@uniroma1.it	https://pubmed.ncbi.nlm.nih.gov/?term=Degjoni,+Anisa%5BAuthor%5D&sort=date&size=200	Endocrine disruptor chemicals; platelets
	Dr. Ambra Maria Pia Gavillucci	PhD student	ambramaria.gavillucci@uniroma1.it		Circadian rhythm; immuno-oncology
	Dr. Natalia Pediconi	Technician	natalia.pediconi@uniroma1.it	https://pubmed.ncbi.nlm.nih.gov/?term=Pediconi,+Natalia%5BAuthor%5D&sort=date&size=200	Epigenetic and gene expression;
	Dr. Flavio Rizzo	Technician	flavio.rizzo@uniroma1.it	https://pubmed.ncbi.nlm.nih.gov/?term=Rizzo,+Flavio%5BAuthor%5D&sort=date&size=200	Hormones; mass spectrometry analysis

Previous and current research

- Characterization of metabolic features of Pde5 knock-out mice
- Role of Phosphodiesterase 5 in metabolic alterations induced by long-term exposure to Bisphenol A
- Dissecting the impact of Phosphodiesterase 5 in systemic inflammation induced by in vivo administration of Lipopolysaccharide
- Metabolic players in browning of adipocytes, thermogenic functions and inflammation.
- Glucocorticoid action on circadian rhythms of immune patterns

Selected Publications

Campolo, F., Sesti, F., Feola, T., Puliani, G., Faggiano, A., Tarsitano, M.G., Tenuta, M., Hasenmajer, V., Ferretti, E., Verrico, M., Gianfrilli, D., Venneri, M.A., Isidori, A.M., Giannetta, E. **Platelet-derived circRNAs signature in patients with gastroenteropancreatic neuroendocrine tumors** (2023). Journal of Translational Medicine

Tenuta, M., Pandozzi, C., Sciarra, F., Campolo, F., Gelibter, A.J., Sirgiovanni, G., Cortesi, E., Lenzi, A., Isidori, A.M., Sbardella, E., Venneri, M.A. **Circulating Natural Killer Cells as Prognostic Value for Non-Small-Cell Lung Cancer Patients Treated with Immune Checkpoint Inhibitors: Correlation with Sarcopenia** (2023). Cancers

Sciarra F, Campolo F, Franceschini E, Carlomagno F, Venneri MA. **Gender-Specific Impact of Sex Hormones on the Immune System**(2023). Int J Mol Sci.

Puliani G, Hasenmajer V, Sciarra F, Barbagallo F, Sbardella E, Pofi R, Gianfrilli D, Romagnoli E, Venneri MA*, Isidori AM*. **Impaired Immune Function in Patients With Chronic Postsurgical Hypoparathyroidism: Results of the EMPATHY Study** (2021). J Clin Endocrinol Metab.

Degjoni A, Campolo F, Stefanini L, Venneri MA. **The NO/cGMP/PKG pathway in platelets: The therapeutic potential of PDE5 inhibitors in platelet disorders** (2022). J Thromb Haemost.

Venneri MA, Barbagallo F, Fiore D, De Gaetano R, Giannetta E, Sbardella E, Pozza C, Campolo F, Naro F, Lenzi A, Isidori AM. **PDE5 Inhibition Stimulates Tie2-Expressing Monocytes and Angiopoietin-1 Restoring Angiogenic Homeostasis in Diabetes** (2019). J Clin Endocrinol Metab.

Venneri MA, Hasenmajer V, Fiore D, Sbardella E, Pofi R, Graziadio C, Gianfrilli D, Pivonello C, Negri M, Naro F, Grossman AB, Lenzi A, Pivonello R, Isidori AM. **Circadian Rhythm of Glucocorticoid Administration Entrain Clock Genes in Immune Cells: A DREAM Trial Ancillary Study** (2018). J Clin Endocrinol Metab.

Pofi R, Fiore D, De Gaetano R, Panio G, Gianfrilli D, Pozza C, Barbagallo F, Xiang YK, Giannakakis K, Morano S, Lenzi A, Naro F, Isidori AM, Venneri MA. **Phosphodiesterase-5 inhibition preserves renal hemodynamics and function in mice with diabetic kidney disease by modulating miR-22 and BMP7** (2017). Sci Rep.

Current Grants

- PRIN PNRR 2022: Metabolic and hormonal changes in sleep disorders and circadian misalignments: the role of chronobiology, microbiota, and environmental determinants (PI: Venneri)
- PRIN 2022: New metabolic players in browning of adipocytes, thermogenic functions and inflammation (PI: Venneri)
- Health Operational Plan Trajectory 4 «Biotechnology, Bioinformatics and Pharmaceutical Development», Action 4.1 «Creation of Life Science Hubs», PAN-HUB_POS SALUTE T4 (PI: Venneri)
- ATENE0 GA12117A85B76EB4: High-parameter spectral cell sorting for the study of inflammation and immunity in metabolic diseases (co PI Venneri)
- ATENE0 2022: Role of phosphodiesterase type 5 (PDE5) in adipose tissue homeostasis: inflammation and metabolism (PI: Venneri)
- PRIN PNRR 2022: Understanding the Origin and Behavior of Ectopic Lipids excess depots: the OBELIX study (PI: Campolo).
- ATENE0 SEED PNRR 2022: Beyond the "blue pill": the metabolic breakthrough of PDE5 inhibitors (PI: Campolo).
- ATENE0 2023: Role of Phosphodiesterase 5 in metabolic alterations induced by exposure to Bisphenol A (PI: Campolo).
- ATENE0 2021: Role of Phosphodiesterase 5 in the physiopathology of adipose tissue (PI: Campolo).
- ATENE0 2020: Role of cAMP-specific Phosphodiesterase 8 in Leydig cell tumors (PI: Campolo)

Links

- <https://www.scopus.com/authid/detail.uri?authorId=55222084200>
- <https://www.scopus.com/authid/detail.uri?authorId=6602240082>
- <https://www.researchgate.net/profile/Mary-Venneri>
- <https://www.scopus.com/authid/detail.uri?authorId=57204859835>