

# Research Center on Sleep Medicine

Director: Prof. Carolina Lombardi (Coordinators: Dr. Martino Pengo [internal medicine issues], Dr. Elisa Perger [pneumological issues])

Specialised research centre afferent to the cardiology research laboratory

Members of the research group

## RESEARCH ACTIVITIES

- Dott. Martino Pengo
- Dott.ssa Elisa Perger
- Dott.ssa Paola Mattaliano
- Dott. Antonio Foresi
- Dott.ssa Ada Beretta
- Ing. Andrea Faini
- Dott. Davide Soranna
- Ing. Cerveri Pietro
- [Prof. Gianfranco Parati](#)

External collaborations with:

- Ing. Castiglioni ed Ing. Meriggi (Don Gnocchi)
- Eng Timo Leppanen (University of Eastern Finland)
- Pr. Raphael Heinzer (Centre hospitalier universitaire vaudois, CHUV represented by Bureau du Promoteur de la Recherche)

## The main research areas of the center are:

Research on the relationship between sleep disorders and cardiovascular diseases (alterations in daytime and nighttime blood pressure profiles in patients with obstructive sleep apnea, insomnia, restless legs syndrome. Impact of sleep-disordered breathing on cardiac arrhythmias and their cardioembolic consequences).

Research on new therapeutic approaches: pharmacological therapy for obstructive apnea and hypoventilation-obesity, pharmacological and non-pharmacological therapy for insomnia.

Research on new technologies applicable to the study of sleep disorders: wearable systems, telemedicine.

Research on sleep and high altitude (HIGHCARE projects).

Research on the identification of early prognostic markers in patients with sleep apnea: innovative analysis of ECG and PPG signals, study of baroreflex sensitivity, serum and cerebrospinal fluid markers.

Research on the identification of neurodegeneration markers in patients with sleep disorders: nocturnal apneas and the effect of CPAP therapy in patients with cognitive

impairment, study of Predictive Risk Factors for conversion in idiopathic RBD. Italian Study "FaRPreSto," sponsored by the Italian Association of Sleep Medicine (AIMS).

Creation of a national registry of OSA pathology as a coordinating center (IPNOS Project, PNRR).

Participation in the national registry of the Higher Institute of Health on Rare Diseases, specifically the Registry on Narcolepsy and Central Nervous System Hypersomnias (ReN&IS).

Collaboration with CHUV represented by the Bureau du Promoteur de la Recherche Principal Investigator Pr. Raphael Heinzer Co-investigator Adrien Waeber on the project "Nocturnal pulse wave variations in OSA as a predictor of autonomic and vascular response to CPAP therapy."

## **DISEASES RESEARCHED**

- Obstructive Sleep Apnea
- Insomnia
- Restless Legs Syndrome
- REM Sleep Behavior Disorder (RBD)
- Narcolepsy with Cataplexy

## **RESULTS OF PARTICULAR IMPORTANCE ACHIEVED**

Accredited Center by the Italian Society of Sleep Medicine.

Training Center for students and fellows from national and international universities (Master's in Sleep Medicine, Bologna; University of Lisbon) and recipients of scholarships from Scientific Societies (European Respiratory Society ERS).

### **List of publications:**

Lombardi Carolina: <https://www.scopus.com/authid/detail.uri?authorId=7101708707>

Pengo Martino: <https://www.researchgate.net/profile/Martino-Pengo>

Perger Elisa: <https://www.scopus.com/authid/detail.uri?authorId=57190304903>

Foresi Antonio: <https://www.scopus.com/authid/detail.uri?authorId=56243495500>

Parati Gianfranco: <https://www.scopus.com/authid/detail.uri?authorId=57214358986>

## **MAIN COLLABORATIONS IN NATIONAL AND INTERNATIONAL RESEARCH NETWORKS**

ESADA: <https://esada.med.gu.se/login/login.aspx?ReturnUrl=%2fhttps://esrs.eu/research-networks/sleep-apnea-network-european-sleep-apnea-database/>

SLEEP REVOLUTION- HORIZON 2020: <https://cordis.europa.eu/project/id/965417>

ANDANTE: <https://www.auxologico.com/andante-project>

PNRR-MAD-2022-12375812 Progetto: "Italian PheNotypes Obstructive sleep Apnea Study (IPNOS)" Responsabile Scientifico: Prof.ssa Lombardi Carolina.