

# Centre for Research on Arterial Hypertension (centre of excellence recognised by the European Society of Hypertension)

Specialised research centre afferent to the cardiology research laboratory

Research Group Members

## ***Prof. Grzegorz Bilo***

Director of the Centre

Contact person for research on: blood pressure measurement and monitoring; blood pressure variability; hypertension and high altitude; therapeutic adherence; hypertension and cancer therapies

## ***Prof. Gianfranco Parati***

Honorary Director

President Elect, World Hypertension League.

Chairperson, Council on Hypertension of the European Society of Cardiology;

Past -Chairperson Working Group on Blood Pressure Monitoring and Cardiovascular Variability of the European Society of Hypertension;

Past President, Italian Society of Hypertension (SIIA)

Past President SIIA Foundation

## ***Dr. Martino Pengo***

Contact person for research on: integrated cardiovascular prevention; hypertension and sleep; endocrine hypertension; new technologies in cardiometabolic prevention

## ***Dr. Alessandro Croce***

Contact person for research on: hypertension and ageing; hypertension in children and adolescents

## ***Dr. Lucia Zanotti***

Coordination of clinical studies

## ***Dr. Francesca Gorini***

Coordination of clinical studies

## **RESEARCH ACTIVITIES**

DISEASES RESEARCHED

- Primary and secondary arterial hypertension
- Dyslipidaemias

RESULTS OF PARTICULAR IMPORTANCE ACHIEVED (list of publications accessible from the website with a hyperlink, approved projects, awards and recognitions - to be updated annually)

Most relevant publications:

Cattazzo F, Pengo MF, Giontella A, Soranna D, Bilo G, Zambon A, Karalliedde J, Gnudi L, Martinez-Garcia MÁ, Minuz P, Lombardi C, Parati G, Fava C. Effect of Continuous Positive Airway Pressure on Glucose and Lipid Profiles in Patients With Obstructive Sleep Apnoea: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Arch Bronconeumol*. 2023 Mar 21;S0300-2896(23)00111-4. doi: 10.1016/j.arbres.2023.03.012.

<https://pubmed.ncbi.nlm.nih.gov/37024342/>

Parati G, Bilo G, Kollias A, Pengo M et al. Blood pressure variability: methodological aspects, clinical relevance and practical indications for management - a European Society of Hypertension position paper \*. *J Hypertens*. 2023 Apr 1;41(4):527-544. doi: 10.1097/HJH.0000000000003363.

<https://pubmed.ncbi.nlm.nih.gov/36723481/>

Pengo MF, Steier J, Parati G; ANDANTE collaborators; Researchers Collaborating in the ANDANTE PROJECT. The ANDANTE Project: A Worldwide Individual Data Meta-Analysis of the Effect of Sleep Apnea Treatment on Blood Pressure. *Arch Bronconeumol*. 2021 Nov;57(11):673-676. doi: 10.1016/j.arbr.2021.05.026.

<https://pubmed.ncbi.nlm.nih.gov/35699002/>

Parati G, Stergiou GS, Bilo G, Kollias A, Pengo M et al; Working Group on Blood Pressure Monitoring and Cardiovascular Variability of the European Society of Hypertension. Home blood pressure monitoring: methodology, clinical relevance and practical application: a 2021 position paper by the Working Group on Blood Pressure Monitoring and Cardiovascular Variability of the European Society of Hypertension. *J Hypertens*. 2021 Sep 1;39(9):1742-1767. doi: 10.1097/HJH.0000000000002922.

<https://pubmed.ncbi.nlm.nih.gov/34269334/>

Pengo MF, Albini F, Guglielmi G, Mollica C, Soranna D, Zambra G, Zambon A, Bilo G, Parati G. Home blood pressure during COVID-19-related lockdown in patients with hypertension. *Eur J Prev Cardiol*. 2022 Mar 25;29(3):e94-e96. doi: 10.1093/eurjpc/zwab010.

<https://pubmed.ncbi.nlm.nih.gov/33899916/>

Kreutz R, Dobrowolski P, Prejbisz A, Algharably EAE, Bilo G, Creutzig F, Grassi G, Kotsis V, Lovic D, Lurbe E, Modesti PA, Pappaccogli M, Parati G, Persu A, Polonia J, Rajzer M, de Timary P, Weber T, Weisser B, Tsioufis K, Mancia G, Januszewicz A; European Society of Hypertension COVID-19 Task Force Review. Lifestyle, psychological, socioeconomic and environmental factors and their impact on hypertension during the coronavirus disease 2019 pandemic. *J Hypertens*. 2021 Jun 1;39(6):1077-1089. doi: 10.1097/HJH.0000000000002770.

<https://pubmed.ncbi.nlm.nih.gov/33395152/>

Bilo G, Acone L, Anza-Ramírez C, Macarlupú JL, Soranna D, Zambon A, Vizcardo-Galindo G, Pengo MF, Villafuerte FC, Parati G; HIGHCARE-ANDES Highlanders Study Investigators. Office and Ambulatory Arterial Hypertension in Highlanders: HIGHCARE-ANDES Highlanders Study. *Hypertension*. 2020 Dec;76(6):1962-1970. doi: 10.1161/HYPERTENSIONAHA.120.16010.

<https://pubmed.ncbi.nlm.nih.gov/33175629/>

Stergiou GS, Palatini P, Modesti PA, Asayama K, Asmar R, Bilo G, (...), Parati G. Seasonal variation in blood pressure: Evidence, consensus and recommendations for clinical practice. Consensus statement by the European Society of Hypertension Working Group on Blood Pressure Monitoring and Cardiovascular Variability. *J Hypertens*. 2020 Jul;38(7):1235-1243. doi: 10.1097/HJH.0000000000002341. <https://pubmed.ncbi.nlm.nih.gov/31990898/>

Bilo G, Dolan E, O'Brien E, Facchetti R, Soranna D, Zambon A, Mancia G, Parati G. The impact of systolic and diastolic blood pressure variability on mortality is age dependent: Data from the Dublin Outcome Study. *Eur J Prev Cardiol*. 2020 Mar;27(4):355-364. doi: 10.1177/2047487319872572. <https://pubmed.ncbi.nlm.nih.gov/31510817/>

Torlasco C, Faini A, Makil E, Bilo G, Pengo M, Beaney T, Xia X, Borghi C, Poulter NR, Tocci G, Galletti F, Desideri G, Veglio F, Ferri C, Parati G. Nation-wide hypertension screening in Italy: data from May Measurements Month 2017-Europe. *Eur Heart J Suppl*. 2019 Apr;21(Suppl D):D66-D70. doi: 10.1093/eurheartj/suz058. <https://pubmed.ncbi.nlm.nih.gov/31043882/>

Research projects:

*CV-PREVITAL: Strategies for primary cardiovascular prevention in the Italian population.* Project on the application of mHealth technologies in cardiovascular prevention, conducted by the IRCCS Cardiology Network for Cardiovascular Prevention, promoted and funded by the Ministry of Health

<https://retecardiologica.it/progetti/cv-prevital/>

*InTake Care: development and validation of an innovative, personalised digital health solution for medication adherence support in cardiovascular prevention.* Study on the application of new technologies to improve medication adherence, funded by the Ministry of Health (grant RF-2021-12374708)

*CABER-NET: Study On The Association Between Sleep Blood Pressure Patterns And Blood Pressure Values In Daily Life - Usefulness Of Novel BP Monitoring Methods.* Study on new approaches to blood pressure monitoring, funded by Omron Healthcare.

*MASTER: MASKed-unconTrolled hypERTension management based on office BP or on ambulatory blood pressure measurement study.* Randomised, multicentre study, coordinated by Auxologico, with the aim of assessing the prognostic impact of masked hypertension.

<https://pubmed.ncbi.nlm.nih.gov/30573476/>

*HSMonitor pre-commercial procurement for innovative ICT-enabled monitoring solutions to improve health status and optimise hypertension care.* Randomised controlled pilot study on the use of mHealth technologies for the hypertensive patient, funded by EU Horizon 2020 grant, with participation of Regione Lombardia.

<https://hsmonitor-pcp.eu/>

*HYPERFRAIL: Study on hypertension and frailty in older people.* Study to assess the correlation between blood pressure variability and frailty in an elderly population.

*HIGHCARE-LAPS: HIGH altitude Cardiovascular REsearch Latin America Population Study.* Study on the prevalence of hypertension and cardiovascular risk factors in Peruvian population living at low and high altitude, coordinated by Auxologico, conducted in collaboration with Universidad Peruana Cayetano-Heredia.

**Awards:**

**Prof. Grzegorz Bilo:** honorary membership of the Polish Society of Hypertension (2022)

**Prof Gianfranco Parati:**

Honorary member of Latin American Society of Hypertension (LASH), Venezuelan Society of Cardiology, Venezuelan Society of Hypertension, Peruvian Society of Cardiology, Polish Hypertension Society, British and Irish Hypertension Society.

2004 Lecturer of the Year award by Belgian Universities and Belgian Hypertension League;

2005 Forum P.A. (Forum Public Administration) award for excellence in Health Care services endorsed by Italian Ministry of Health for projects on Telemedicine in Heart Failure.

2015 ESH "Bjorn Folkow Award and Lecture" for Excellence in Pathophysiological Research on Arterial Hypertension.

2017 appointed as Honorary Professor at the Universidad Peruana Cayetano Heredia, Lima, Peru.

2019 Pickering Lecture Award at the British and Irish Hypertension Society Annual Meeting.

2021 Appointed as Miembro Correspondiente Extranjero por Italia de la Academia Nacional de Medicina (ANM) Venezuela;

2022 Tigerstedt Award, Finnish Hypertension Society.

2021 American Physiological Society Award for best 2021 Clinical Physiology paper;

2021 American Heart Association Award for Best Clinical paper on Hypertension 2021;

2021 Awarded as Distinguished Fellow of International Society of Hypertension (ISH);

2022 Honorary Lecture at the Hungarian Society of Hypertension National Congress.

2023 Honorary Member of the Rwanda College of Physicians.

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

IRCCS Cardiology Network for Cardiovascular Prevention <https://retecardiologica.it/>

Department of Medicine and Surgery, University of Milan-Bicocca, Postgraduate School of Cardiovascular Diseases and Postgraduate School of Geriatrics

[www.unimib.it](http://www.unimib.it)

Politecnico di Milano, Institute of Electronics and Information and Telecommunication Engineering (IEIT-CNR)

<https://www.polimi.it/STRIDE> Consortium <https://www.stridebp.org/>

Network of Centres of Excellence of European Society of Hypertension (ESH)

<https://www.eshonline.org/communities/excellence-centres/> and of Italian Society of Hypertension (SIIA)

<https://siia.it/centri-e-ambulatori/>

Universidad Peruana Cayetano - Heredia, Lima, Peru <https://ugbn.cayetano.edu.pe/>

Jagiellonian University, Krakow, Poland <https://kardiologia1.cm-uj.krakow.pl/>