**Giovanna Zoccoli – Curriculum Vitae**

**Born**: July 29, 1962

Qualifications: ASSOCIATE PROFESSOR, Department of Biomedical and Neuromotor Sciences (DIBINEM), Alma Mater Studiorum - University of Bologna

Scientific sector: BIO / 09 Physiology

Visiting Professor at Laboratoire PériTox Université de Picardie Jules Verne, Amiens, Francia (2015-2019).

2018: National Scientific Qualification as Full Professor - Sector 05 / D1 Physiology

**Education**

1987 MD (University of Bologna) (cum laude)

1991 Board certified in Neurology (University of Bologna) (cum laude)

1995 PhD in "Experimental and Clinical Pathophysiology" (University of Bologna).

**Scholarships and awards**

1987 Bologna University, Prof. Angelo Piazza Award and Luigi Concato Award: best student of the year - School of Medicine;

1988 Lions Club Bologna, Malpighi d’oro Award: best thesis in a biological field;

1989-90 Accademia Nazionale dei Lincei, Roma, Giuseppe Levi Foundation for Neurobiological Research Fellowship: “Blood-brain barrier regulation during sleep”

2002 Award “Schwarz Pharma” for Sleep Medicine, from Italian Association for Sleep Medicine.

**Academic career**

1995 Assistant Professor, Department of Human and General Physiology, University of Bologna.

2004 Associate Professor, Department of Human and General Physiology, University of Bologna now Department of Biomedical and Neuromotor Sciences (DIBINEM).

**Academic duties at Bologna University**

• Board of the Department of Human Physiology and General (2004-2006).

• Commission of Lab Managers, DIBINEM, Physiology Unit

• Member of the Commission for the recognition of academic credits (2005-2008) and of the Commission Scholarships for Dissertations Abroad, School of Psychology and Education Sciences, University of Bologna.

• Member of Overseas Commission

• Member of the Scientific Committee of the Master in Sleep Medicine

• Member of the Scientific Council, Lecturer and Tutor of the Collegio Superiore

• Representative of the Collegio Superiore at the Council of the Institute of Higher Studies of UNIBO (2020-)

• Member of Committee for the institution of Bologna Medical School (BOMS)

• Director of the Laboratory PRISM (Physiological Regulation in Sleeping Mice) of DIBINEM (2008-present). Website:

http://www.esrs.eu/membership-services/european-sleep-research-laboratories.html?tx\_mnmesrslab\_pi1%5Buid%5D=5938

**Present teaching activity at Bologna University**

APPARATUSES PHYSIOLOGY 8 cfu (64 hours), Single cycle degree programmes (LMCU) in Medicine and Surgery School of Medicine

CELLULAR PHYSIOLOGY 3 cfu (24 hours), Single cycle degree programmes (LMCU) in Medicine and Surgery School of Medicine

COGNITIVE NEUROSCIENCES - 4 cfu (30 hours), Second cycle degree programmes (LM) in Applied cognitive psychology, School of Psychology and Education — Campus of Cesena

PLASTICITA' NEURONALE: OLTRE IL PERIODO CRITICO - 1 cfu (8 hours) - Module of: IL CERVELLO PLASTICO: CONSEGUENZE DELLA MODIFICAZIONE E DELL'EVENTUALE RIPRISTINO DEI CIRCUITI NERVOSI C.I.- Single cycle degree programmes (LMCU) in Medicine and Surgery School of Medicine

FRONTIERS IN THE PHYSIOLOGY OF TORPOR AND HIBERNATION - 1 cfu (8 hours) – Module of: MAPPING THE INTERACTIONS AMONG SLEEP, TORPOR/HIBERNATION AND ENERGY METABOLISM: AN INTERNATIONAL TEACHING WORKSHOP C.I.- Single cycle degree programmes (LMCU) in Medicine and Surgery School of Medicine (a.a. 2019-20)

Teaching at MASTER in: “SLEEP MEDICINE”, University of Bologna

Teaching at MASTER in: “SLEEP DENTISTRY”, University of Bologna

**Grants and Fundings**

1997 PRIN Project "Study of the cerebral microcirculation in rats during sleep" (Participant)

1998 European Sleep Research Society (ESRS) - Sanofi Aventis Research Grant, "Blood-brain barrier permeability during sleep" (Principal Investigator) (50.000 FF).

1999 PRIN Project n. 9905031935\_006: "Cerebral microcirculation and transport mechanisms of the blood-brain barrier during the wake-sleep cycle" (Participant).

2001: PRIN Project n. 2001054935\_006, "Neural and metabolic processes that characterize sleep and wakefulness" (Participant) (Research Unit: € 28.922).

2002: FIRB Project n. RBAU01KCNZ, "Effects of the overall level of brain activation on the permeability of the blood-brain barrier to glucose" (Participant) (Total amount: € 150.000).

2004: PRIN Project n. 2004050080\_001, "Sleep disturbances and cardiovascular regulation hypertensive rats " (Participant) (Total amount: € 152.000, Research Unit: € 35.000).

2008: PRIN Project n. 2008FY7K9S, "The role of the hypocretin system in cardiovascular thermoregulatory control during wakefulness and sleep" (Principal Investigator) (Total amount: € 143.000, Research Unit: € 27913).

2010: Grant of the Fondazione Cassa di Risparmio di Bologna, "Role of hypothalamic neurogenesis in the development of obesity and its hypnic and cardiovascular morbidities" (Participant) (Total amount: € 57000, Research Unit: € 28500).

2013: FARB Project, line 1 (UNIBO), n. FFBO120705, "The ecological study of the emotional response through wireless'biosignals " (Participant) (Total amount: € 25.000)

2018: Grant of the Fondazione Cassa di Risparmio di Bologna: “IASBO: Inquinamento Atmosferico e disordini del Sonno infantile a Bologna (Air Pollution and Infant Sleep Disorders in Bologna)” (Participant) (Total amount: € 12.000).

2021: Project n°2021/2 RF/010 EXSOCAR « Etude des effets d'une EXposition de type 5G sur le SOmmeil, la thermorégulation et la fonction CARdiovasculaire, ANSES ; Francia (Head of Research Unit)

Holder of provisions from the University of Bologna (ex 60%) since 2001.

**Bibliographic indices**

Source: Scopus

Query Giovanna Zoccoli: all Papers 77 Citations 1156

h\_index 21

http://orcid.org/0000-0002-9670-9959

**Editorial Activities**

“Frontiers in Vascular Physiology” and ”Frontiers in Integrative Physiology”, member of the Editorial Board; Frontiers in Neuroscience (section: Sleep and Circadian Rhythms), Review Editor

Reviewer for: Bioelectromagnetics, Biological Research, Canadian Journal of Physiology and Pharmacology, Circulation, Experimental Brain Research, Frontiers, Journal of Molecular Medicine, the Journal of Applied Physiology, the Journal of Sleep Research, Neuroscience Letters, Pediatric Research, PlosOne, PNAS, Psicologia Sociale, Science Translational Medicine, SLEEP

Reviewer for PhD thesis from:

Université Claude Bernard, Lyon, France (2004)

Monash University, Victoria, Australia (2005)

University of Padua (2012)

University of Milano-Bicocca (2018)

University of Naples “Federico II” (2018)

Université de Picardie Jules Verne, Amiens, Francia (2020)

**Membership in Scientific Societies**

Italian Association for Sleep Medicine (AIMS); Italian Physiological Society (SIF); Italian Neuroscience Society (SINS); European Sleep Research Society (ESRS); Federation of European Neuroscience Societies (FENS); American Physiological Society (APS), World Sleep Society (WSS).

**Duties in Scientific Societies**

Board of Italian Society of Sleep Research (2004-2008).

2013-present Member of the Committee for scientific research of the Italian Association for Sleep Medicine (AIMS)

2016-2018: Scientific Committee European Sleep Research Society

2018-2020: Co-Chair of Scientific Committee European Sleep Research Society

2018- Member of Research Network Committee (RNC), European Sleep Research Society

**Organization of scientific meetings**

2009: Member of the organizing committee of the XIV Annual Meeting of the Italian Sleep Research Society (SIRS), Bologna, 14-15 November.

2012: Member of the organizing committee of the XVII Annual Meeting of the Italian Sleep Research Society (SIRS), Bologna, March 17-18.

2014: Member of the organizing committee of the 23rd Meeting of the European Sleep Research Society (ESRS), Bologna 15-18 September 2016.

2018: Member of the organizing committee of the Meeting of the Federation of European Physiological Societies (FEPS), Bologna, 10-13 September 2019

2020-21: Member of the organizing committee of the 14th Annual Meeting of Young Researchers in Physiology, The Italian Physiological Society, Centro Residenziale Universitario di Bertinoro, July 29-31, 2021

2021-22: Member of the organizing committee of the 15th Annual Meeting of Young Researchers in Physiology, The Italian Physiological Society, Centro Residenziale Universitario di Bertinoro, June 13-15, 2022

**Invited talks (symposia and seminars):**

Italy: 27; Australia: 4; Switzerland: 3; France: 6; Canada: 1; Spain: 1; Iceland: 1; India: 1.

**Research experiences abroad**

1995 September 1-30, Visiting Scholar, Department of Neurology, Rigshospitalet, Copenhagen (Prof. OB Paulson).

1997 March 1st - August 31st, Visiting Scholar at Institute of Reproduction and Development, Monash University, Clayton, Victoria, Australia (Prof. Adrian Walker), sponsored by Consiglio Nazionale delle Ricerche (CNR).

2001 August 1st - September 30th, Visiting Scholar, Institute of Reproduction and Development, Monash University, Melbourne, Victoria, (Prof. Adrian Walker).

2001 April 1-15, Visiting Scholar, Laboratoire de Dysrégulations Métaboliques Acquises et Génétiques, Université de Picardie Jules Verne, Amiens, Francia (Prof. Jean Pierre Libert)

2007 August 15th – September 15th, Visiting Professor at Monash Institute of Medical Research (MIMR), Monash University, Melbourne, Australia, (Prof. Adrian Walker)

2015 1-30 September, Visiting Professor at Laboratoire PériTox Université de Picardie Jules Verne, Amiens, Francia (Prof. Véronique Bach)

2016 15-30 September, Visiting Professor at Laboratoire PériTox Université de Picardie Jules Verne, Amiens, Francia (Prof. Véronique Bach)

2017 7-15 September, 12-22 December, Visiting Professor at Laboratoire PériTox Université de Picardie Jules Verne, Amiens, Francia (Prof. Véronique Bach)

2018 January 29 – February 5 and 1-15 September, Visiting Professor at Laboratoire PériTox Université de Picardie Jules Verne, Amiens, Francia (Prof. Véronique Bach)

2019 15-21 June, Visiting Professor at Laboratoire PériTox Université de Picardie Jules Verne, Amiens, Francia (Prof. Véronique Bach)

**International partnerships**

Prof. V. Bach, URAPC, Faculté de Médecine Université de Picardie Jules Verne, Amiens, France

Dr. G. Cohen, Sleep Investigation Laboratory, Centre for Sleep Health and Research, Royal North Shore Hospital, Sydney, Australia.

Prof. J.S. Lin, INSERM U628 Physiologie intégrée du système d’éveil, Université Claude Bernard, Lione, Francia

Dr. M. Manconi, Neurocentro della Svizzera Italiana, Lugano, Switzerland

Prof. H. Ohtsu, Applied Quantum Medical Engineering, Tohoku University, Sendai, Japan

Prof. S Swoap, Department of Biology, Williams College, Williamstown, Massachusetts, USA

**Internationalization**

* Person in charge of the Convention between the University of Bologna and the Monash University (Melbourne, Australia) (2006-present).
* Evaluator of Research Projects for the Regional Council of Picardie (France) (2013-2017)
* Evaluator Swiss National Science Foundation (SNSF) (2020)
* Evaluator of Research Projects for the program Human Research on Concordia, Antarctica (AO-2021-Concordia), ESA - European Space Agency (2021)
* Evaluator Programmes ATIP-Avenir et CSS6-Santé publique Inserm (France) (2022)

**Scientific activitiy**

Aim of the research activity currently conducted by the group that operates in the laboratory "PRISM: Physiological Regulation in Sleeping Mice" of DIBINEM, Physiology Unit, is the study of physiologic regulation during the different stages of the wake-sleep cycle, in genetically engineered mice.

In the past, several lines of research in the sleep domain have been developed: a) study of peripheral blood flow; b) study of the cerebral circulation: microcirculatory aspects, permeability of the blood-brain barrier, control mechanisms of blood flow changes; c) study of the interaction between central and baroreflex control of cardiovascular variables (blood pressure, heart rate). Studies have been conducted in physiologic and pathophysiologic conditions (hypertension, obesity, narcolepsy, leukodistrophy), and in different animal models (rabbit, rat, lamb) and human subjects.

In the last few years it has been developed a combined technique that makes it possible to simultaneously record blood pressure and behavioral state in mice. The signal of blood pressure is achieved by a telemetry system based on the use of an intravascular catheter connected to a radio transmitter. Discrimination of behavioral state is based on the cable recording of electroencephalographic and electromyographic signals. Respiratory activity is also monitored noninvasively, by plethysmography. The recording of diaphragmatic EMG allows to discriminate central and obstructive apneas. Recently it has been developed a technique that allows the intraperitoneal administration of drugs without any manipulation of the animal, which is used for the study of the contribution the ortho and parasympathetic system to cardiovascular control. Finally, the insertion of icv microcannules allows a selective pharmacological manipulation of hypothalamic circuits.

The current research activity is carried out in the field of functional genomics, where physiological studies of phenotypical characterization are conducted on animal models (especially mice), with a known genetic background. Genetically engineered mice are studied for the association between the gene mutation and changes in cardiovascular, respiratory and thermoregulatory control during different stages of the wake-sleep cycle. The evaluation of the effect of the behavioral state is particularly important because the gene mutation, in addition to involve directly modifications of the studied variables, could alter their circadian profile also indirectly, through the alteration of the wake-sleep cycle.

**Peer-reviewed journal articles -** last 5 years

1. Bastianini S, Alvente, S, Berteotti C, Lo Martire V, Silvani A, Swoap SJ, Valli A, Zoccoli G Cohen G, Accurate discrimination of the wake-sleep states of mice using non-invasive whole-body plethysmography. Scientific Report, 7, 41698; doi: 10.1038/srep41698, 2017.
2. Lo Martire V, Alvente, S, Bastianini S, Berteotti C, Silvani A, Valli A, Viggiano R, Ciani E, Zoccoli G. CDKL5 deficiency entails sleep apneas in mice. J Sleep Res. 2017 Feb 23. doi: 10.1111/jsr.12512.
3. Silvani A, Ferri R, Lo Martire V, Bastianini S, Berteotti C, Salvadè A, Plazzi G, Zucconi M, Ferini-Strambi L, Bassetti CL, Manconi M., Zoccoli G. Muscle activity during sleep in human subjects, rats, and mice: towards translational models of rem sleep without atonia. Sleep. 2017 Apr 1;40(4). doi: 10.1093/sleep/zsx029
4. Bastianini S, Lo Martire V, Silvani A, Zoccoli G, Berteotti C, Lagercrantz H, Arner A, Cohen G. Long-term cardiovascular re-programming by short-term perinatal exposure to nicotine's main metabolite cotinine. Acta Paediatr. 2018 Apr;107(4):638-646. doi: 10.1111/apa.14181
5. Lo Martire V, Alvente, S, Bastianini S, Berteotti C, Bombardi C, Calandra-Bonaura G, Capellari S, Cohen G, Cortelli P, Gasparini L, Padiath QS, Valli A, Zoccoli G. Silvani A. Mice overexpressing lamin B1 in oligodendrocytes recapitulate the age-dependent motor signs, but not the early autonomic cardiovascular dysfunction of autosomal-dominant leukodystrophy (ADLD). Experimental Neurology, 301: 1–12, 2018.
6. Lo Martire V, Silvani A, Alvente S, Bastianini S, Berteotti C, Valli A, Zoccoli G. Modulation of sympathetic vasoconstriction is critical for the effects of sleep on arterial pressure in mice. J Physiol. 2018 Feb 15;596(4):591-608. doi: 10.1113/JP275353. Epub 2018 Jan 19.
7. Trazzi S, De Franceschi M, Fuchs C, Bastianini S, Viggiano R, Lupori L, Mazziotti R, Medici G, Lo Martire V, Ren E, Rimondini R, Zoccoli G, Bartesaghi R, Pizzorusso T, Ciani E. CDKL5 protein substitution therapy rescues neurological phenotypes of a mouse model of cdkl5 disorder. Human Molecular Genetics, ddy064, https://doi.org/10.1093/hmg/ddy064, 2018.
8. Silvani A, Cerri M, Zoccoli G, Swoap S. Is adenosine action common ground for NREM sleep and torpor? Physiology (Bethesda). 2018 1;33(3):182-196. doi: 10.1152/physiol.00007.2018.
9. Fuchs C, Gennaccaro L, Trazzi S, Bastianini S, Bettini S, Lo Martire V, Ren E, Medici G, Zoccoli G, Rimondini R, Ciani E. Heterozygous CDKL5 knockout female mice are a valuable animal model for CDKL5 disorder. Neural Plast. 2018 May 27;2018:9726950. doi: 10.1155/2018/9726950. eCollection 2018.
10. Lo Martire V, Valli A, Bingaman M, Zoccoli G, Silvani A, Swoap S. Changes in blood glucose as a function of body temperature in laboratory mice: implications for daily torpor. Am J Physiol Endocrinol Metab. 2018 Oct 1;315(4):E662-E670. doi: 10.1152/ajpendo.00201.2018
11. Lo Martire V, Alvente, S, Bastianini S, Berteotti C, Valli A, Manconi M, Zoccoli G, Silvani A. Sleep and tibialis anterior muscle activity in mice with mild hypoxia and iron deficiency: implications for the restless legs syndrome Frontiers Physiology, 2018 Dec 17;9:1818. doi: 10.3389/fphys.2018.01818
12. Bastianini S, Alvente S, Berteotti C, Bosi M, Lo Martire V, Silvani A, Valli A, Zoccoli G. Post-sigh sleep apneas in mice: systematic review and data-driven definition. J Sleep Res. 2019 Mar 28:e12845. doi: 10.1111/jsr.12845.
13. Allocca G, Ma S, Martelli D, Cerri M, Del Vecchio F, Bastianini S, Zoccoli G, Amici R, Morairty SR, Aulsebrook AE, Blackburn S, Lesku JA, Rattenborg NC, Wams E, Porcheret K, Wulff K, Foster R, Chan JKM, Nicholas CL, Freestone DR, Johnston LA, Gundlach AL Validation of ‘Somnivore’, a machine learning algorithm for automated scoring and analysis of polysomnography data. Frontiers Neuroscience, 13:207. doi: 10.3389/fnins.2019.00207.
14. Hitrec T, Luppi M, Bastianini S, Squarcio F, Berteotti C, Lo Martire V, Martelli D, Occhinegro A, Tupone D, Zoccoli G, Amici R, Cerri M. Neural control of fasting-induced torpor in mice. Sci Rep. 2019 Oct 29;9(1):15462. doi: 10.1038/s41598-019-51841-2.
15. Lo Martire V, Caruso D, Palagini L, Zoccoli G, Bastianini S. Stress & sleep: A relationship lasting a lifetime. Neurosci Biobehav Rev. 2019 Sep 3. pii: S0149-7634(19)30149-6. doi: 10.1016/j.neubiorev.2019.08.024.
16. Zoccoli G, Amici R. Sleep and autonomic nervous system. Curr. Op. Physiol. 15: 128-133, 2020 doi.org/10.1016/j.cophys.2020.01.002
17. Lo Martire V, Berteotti C, Bastianini S, Alvente S, Valli A, Cerri M, Amici R, Silvani A, Swoap SJ, Zoccoli G. The Physiological Signature of Daily Torpor Is Not Orexin-dependent. J. Comp. Physiol. B 2020, DOI 10.1007/s00360-020-01281-6
18. Pace M, Falappa M, Freschi A, Balzani E, Berteotti C, Lo Martire V, Kaveh F, Hovig E, Zoccoli G, Amici R, Cerri M, Urbanucci A, Tucci V. Loss of Snord116 impairs sleep and food-related activities in lateral hypothalamus. J. Clin. Invest., JCI Insight. 2020 Apr 30. pii: 137495. doi: 10.1172/jci.insight.137495
19. Berteotti C, Lo Martire V, Alvente S, Bastianini S, Matteoli G, Silvani A, Zoccoli G. Effect of ambient temperature on sleep breathing phenotype in mice: the role of orexins. J Exp Biol. 2020 May 26:jeb.219485. doi: 10.1242/jeb.219485.
20. Berteotti C, Lo Martire V, Alvente S, Bastianini S, Matteoli G, Ohtsu H, Lin JS, Silvani A, Zoccoli G. Tibialis anterior electromyographic bursts during sleep in histamine-deficient mice. J Sleep Res. 2021, 30(4), e13255. doi: 10.1111/jsr.13255.
21. Alvente S, Berteotti C, Bastianini S, Lo Martire V, Matteoli G, Silvani A, Zoccoli G. Autonomic mechanisms of blood pressure alterations during sleep in orexin/hypocretin-deficient narcoleptic mice. Sleep, 2021, 44(7). doi: 10.1093/sleep/zsab022.
22. Gennaccaro L, Fuchs C, Loi M, Pizzo R, Alvente S, Berteotti C, Lupori L, Sagona G, Galvani G, Gurgone A, Raspanti A, Medici G, Tassinari M, Trazzi S, Ren E, Rimondini R, Pizzorusso T, Zoccoli G, Giustetto M, Ciani E. Age-related cognitive and motor decline in a mouse model of CDKL5 deficiency disorder is associated with increased neuronal senescence and death. Aging and Disease, 2021, 12(3), pp. 764–785. DOI: 10.14336/AD.2020.0827.
23. Berteotti C, Lo Martire V, Alvente S, Bastianini S, Bombardi C, Matteoli G, Ohtsu H, Lin J.-S, Silvani A, Zoccoli G. Orexin/Hypocretin and Histamine Cross-Talk on Hypothalamic Neuron Counts in Mice. Frontiers in Neuroscience, 2021, 15, 660518. doi: 10.3389/fnins.2021.660518
24. Bartolucci ML, Berteotti C, Alvente S, Bastianini S, Guidi S, Lo Martire V, Matteoli G, Silvani A, Stagni F, Bosi M, Alessandri-Bonetti G, Bartesaghi R, Zoccoli G. Obstructive sleep apneas naturally occur in mice during REM sleep and are highly prevalent in a mouse model of Down syndrome. Neurobiol Dis. 2021 Nov;159:105508. doi: 10.1016/j.nbd.2021.105508. Epub 2021 Sep 10.
25. Bastianini S, Lo Martire V, Alvente S, Berteotti C, Matteoli G, Rullo L, Stamatakos S, Silvani A, Candeletti S, Romualdi P, Cohen G, Zoccoli G. Early-life nicotine or cotinine exposure produces long-lasting sleep alterations and downregulation of hippocampal corticosteroid receptors in adult mice. Sci Rep. 2021 Dec 13;11(1):23897. doi: 10.1038/s41598-021-03468-5.
26. Alvente S, Matteoli G, Molina-Porcel L, Landa J, Alba M, Bastianini S, Berteotti C, Graus F, Lo Martire V, Sabater L, Zoccoli G, Silvani A. Pilot Study of the Effects of Chronic Intracerebroventricular Infusion of Human Anti-IgLON5 Disease Antibodies in Mice. Cells. 2022 Mar 17;11(6):1024. doi: 10.3390/cells11061024. PMID: 35326477; PMCID: PMC8947551.

**Book Chapters -**  last 5 years

1. Zoccoli G., Silvani A., Franzini (2017) C. Sleep and the Peripheral Vascular System. In: Reference Module in Neuroscience and Biobehavioral Psychology, Elsevier, 2017. ISBN 9780128093245
2. Silvani A, Zoccoli G. (2017) Hypothalamus. In: Wenzel A (Ed) The SAGE encyclopedia of abnormal and clinical psychology, Vol 4, SAGE Reference, pp.1733-1735.
3. Silvani A, Zoccoli G. (2017) Parasympathetic Nervous System. In: Wenzel A (Ed) The SAGE encyclopedia of abnormal and clinical psychology, Vol 5, SAGE Reference, pp.2468-2470.
4. Silvani A, Zoccoli G. (2017) Sympathetic Nervous System. In: Wenzel A (Ed) The SAGE encyclopedia of abnormal and clinical psychology, Vol 7, SAGE Reference, pp.3460-3463.
5. Zoccoli G. (2018) Neuroni e cellule associate. In: Fondamenti Anatomofisiologici della Attività Psichica, Poletto Editore, 2nd ed, pp 2-12.
6. Zoccoli G. (2018) Anatomia funzionale del sistema nervoso. In: Fondamenti Anatomofisiologici della Attività Psichica, Poletto Editore, 2nd ed, pp 32-60.
7. Zoccoli G. (2018) Circolazione cerebrale, meningi encefaliche e liquido cerebrospinale. In: Fondamenti Anatomofisiologici della Attività Psichica, Poletto Editore, 2ed, pp 61-70.
8. Zoccoli G. (2020) Circolazione cerebrale e metabolismo energetico del cervello. In: Fisiologia Medica, a cura di F. Conti, 3rd ed, edi-ermes.
9. Amici R, Zoccoli G. (2021) Physiological basis of sleep: Adaptation of bodily functions to sleep. In: ESRS European Sleep Medicine Textbook. Bassetti C.L., Dogas Z. and Peigneux P. (Eds) European Sleep Research Society, 2nd ed, Regensburg, Germany, pp 27-39.
10. Amici R., Zoccoli G. (2021) Physiological Changes in the Autonomic Nervous System During Sleep. In: Chokroverty S., Cortelli P. (eds) Autonomic Nervous System and Sleep, Cham, Springer Nature Switzerland AG, 2021, pp 43-50.
11. Amici R., Cerri M., Hitrec T., Zoccoli G. Overview of physiological processes during sleep, in: Neuroscience and Biobehavioral Psychology, Amsterdam, Elsevier, 2021, pp 1-10
12. Amici R, Zoccoli G. (2021) Physiological basis of sleep: Adaptation of bodily functions to sleep. In: ESRS European Sleep Medicine Textbook. Bassetti C.L., Dogas Z. and Peigneux P. (Eds) European Sleep Research Society, 2nd ed, Regensburg, Germany. pp 27-39.
13. Amici R., Zoccoli G. (2021) Physiological Changes in the Autonomic Nervous System During Sleep. In: Chokroverty S., Cortelli P. (eds) Autonomic Nervous System and Sleep. Springer, Cham. https://doi.org/10.1007/978-3-030-62263-3\_5

Bologna, August 30, 2022