

Andrea Ballesio: Mechanisms of sleep-mood interactions

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Brain Medicine July 2025;1(4):4–6; doi: <https://doi.org/10.61373/bm024k.0043>

Keywords: sleep, insomnia, mood, depression, biomarker

Dr. Andrea Ballesio is a tenure-track researcher (RTT) in Clinical Psychology at the Faculty of Medicine and Psychology, Sapienza University of Rome. He works in the Clinical Psychology & Psychophysiology Lab of the Department of Psychology, where he investigates the causes and consequences of poor sleep and insomnia and the clinical efficacy of psychotherapeutic interventions for sleep disorders. Dr. Ballesio's research aims to shed light on the psychophysiological and psychoneuroimmunological mechanisms linking insomnia and mood disturbances, particularly depression. To serve this aim, he mostly employs longitudinal and experimental models in humans. He is a member of the European Sleep Research Society (ESRS), the European Insomnia Network (EIN), the European Academy of Cognitive Behaviour Therapy for Insomnia, the European Psychoneuroimmunology Network, and the International Society of Psychoneuroendocrinology (ISPNE). He received the 2023 ISPNE Early Career Scholar Award. Dr. Ballesio is also a licensed psychotherapist, working in the clinical centre of the Department of Psychology, Sapienza University of Rome. We are delighted that Dr. Ballesio shares his insights from the Genomic Press Interview with our community.

Part 1: Andrea Ballesio – Life and Career

Could you give us a glimpse into your personal history, emphasizing the pivotal moments that first kindled your passion for science?

I became interested in science during my first year of university when I attended lectures that showed how psychotherapy could be proven scientifically effective. Previously, I had studied Freud in high school and attended some seminars on Rorschach, and until then, I only had a nebulous idea of the scientific application of psychological theories.

We would like to know more about your career trajectory leading up to your current role. What defining moments channeled you toward this opportunity?

I gained all my formal university degrees in my hometown, at Sapienza University of Rome, Italy. I received a master's degree in clinical health psychology in 2015. During my Master's, I spent a semester in Budapest for the Erasmus program and some months at the Freiburg University Medical Centre, where I worked with Dieter Riemann's team on my Master's thesis on sleep and emotions. I also met a terrific mentor and trusted friend, Chiara Baglioni, who taught me how to use meta-analysis. I will always be grateful to her for that. Then, I had the opportunity to win a grant to spend some months at the Sleep and Circadian Neuroscience Institute of Oxford in 2018, where I had the privilege to work with another fantastic mentor, Simon D. Kyle, who was and still is the academic I aspire to be. These experiences consolidated my eagerness to attempt a career in sleep research. I got the PhD in 2019, with a project on executive functions in insomnia, then a post-doc in psychometrics (2019), a position as a researcher in clinical psychology (2021), the habilitation as an associate professor in clinical psychology (2022), and ultimately my current position (2023).



Figure 1. Andrea Ballesio, PhD, Sapienza University of Rome, Italy.

Please share with us what initially piqued your interest in your favorite research or professional focus area.

I have always been captivated by the idea that sleep could integrate mind and body, representing a key feature of psychophysiology. Sleep shows us how the mind can physically modulate the body. Moreover, when I was choosing the topic of my specialisation, I considered epidemiological aspects: insomnia is complained about by most individuals with mental disorders, and it is also frequent in physically ill patients. From this perspective, studying sleep could have been a model for understanding mind-body interactions and a powerful tool for improving people's health.

What impact do you hope to achieve in your field by focusing on specific research topics?

I wish I could clarify the specific mechanisms leading people reporting poor sleep and insomnia to a higher risk of suffering from emotional disorders. Also, I wish I could contribute to making treatments for sleep conditions more effective and accessible to the public.

Please tell us more about your current scholarly focal points within your chosen field of science?

Several projects I am currently running involve ecological momentary assessment of sleep and mood in different populations, such as adolescents,





Figure 2. Dr. Andrea Ballesio in Rome at the Zaha Hadid-designed MAXXI (Italian: Museo Nazionale delle Arti del XXI Secolo, "National Museum of 21st-century Arts"), with a photo panel of Sapienza University of Rome in the background.

workers, and patients with neurological disorders. These intense longitudinal assessments allow us to estimate "real-life" associations between sleep, mood, and underlying factors. Other projects focus on how sleep can be related to (e.g., modulate) psychoneuroimmunological aspects of mood disorders, especially depression. More broadly, I aim to integrate two areas of research that have been chiefly investigated separately for a long time: the immunology of sleep and the immunology of depression. In the latter, for example, the study of sleep has been chiefly relegated to the response to sickness behaviour. The work of Michel Irwin and his group exemplifies the integration between the two fields, and I find it remarkably inspiring.

What habits and values did you develop during your academic studies or subsequent postdoctoral experiences that you uphold within your research environment?

Freedom, independence, and collaboration are fundamental values for me. Recognising and supporting the personal propensities and ambitions of each lab member while working towards joint goals is the perfect match for me.

At Genomic Press, we prioritize fostering research endeavors based solely on their inherent merit, uninfluenced by geography or the researchers' personal or demographic traits. Are there particular cultural facets within the scientific community that warrant transformative scrutiny, or is there a cause within science that deeply stirs your passions?

I strive to make friendship and kindness my compass in my work. I spend much time with my colleagues and students and would like to cultivate meaningful and pleasant relationships. This is independent of individual or cultural characteristics.

What do you most enjoy in your capacity as an academic or research rising star?

Creating new possibilities, whether it is a successful research grant with my team members or a dissertation project, students can be thrilled to carry out. We all need to work, chill, and have fun simultaneously.

Outside professional confines, how do you prefer to allocate your leisure moments, or conversely, in what manner would you envision spending these moments given a choice?

I cannot help staying still. I love nature and sports, but I also enjoy admiring Italian and European design shops with furniture and artworks from the 1930s and 1940s.

Part 2: Andrea Ballesio – Selected questions from the Proust Questionnaire¹

What is your idea of perfect happiness?

Tzatziki in Amorgos, Greece.

What is your greatest fear?

Rejection.

Which living person do you most admire?

This is hard to rate: probably Fabiola Gianotti, in science and a Buddhist monk in spirituality.

What is your greatest extravagance?

I spend much time thinking about poetic or funny titles for my papers. So far, the sympathy of editors has yet to be found.

What are you most proud of?

I am proud to be able to help people sleep and feel emotionally better.

What is your greatest regret?

I should have undertaken a post-doc training opportunity in a foreign lab, but it was incompatible with my job then. Maybe one day...

What is the quality you most admire in people?

Dignity in grief.

What is the trait you most dislike in people?

Overtalking.

What do you consider the most overrated virtue?

Self-control.

What is your favorite occupation (or activity)?

Swimming and running.

Where would you most like to live?

Rome, London, and Florence, in hierarchical order.

What is your most treasured possession?

The books I received from my parents.

When and where were you happiest? And why were so happy then?

Last Sunday, in Tuscany, having my first swim of the year.

¹In the late nineteenth century, various questionnaires were a popular diversion designed to discover new things about old friends. What is now known as the 35-question Proust Questionnaire became famous after Marcel Proust's answers to these questions were found and published posthumously. Proust answered the questions twice, at ages 14 and 20. In 2003 Proust's handwritten answers were auctioned off for \$130,000. Multiple other historical and contemporary figures have answered the Proust Questionnaire, including among others Karl Marx, Oscar Wilde, Arthur Conan Doyle, Fernando Pessoa, Stéphane Mallarmé, Paul Cézanne, Vladimir Nabokov, Kazuo Ishiguro, Catherine Deneuve, Sophia Loren, Gina Lollobrigida, Gloria Steinem, Pelé, Valentino, Yoko Ono, Elton John, Martin Scorsese, Pedro Almodóvar, Richard Branson, Jimmy Carter, David Chang, Spike Lee, Hugh Jackman, and Zendaya. The Proust Questionnaire is often used to interview celebrities: the idea is that by answering these questions, an individual will reveal his or her true nature. We have condensed the Proust Questionnaire by reducing the number of questions and slightly rewording some. These curated questions provide insights into the individual's inner world, ranging from notions of happiness and fear to aspirations and inspirations.



What is your current state of mind?

Tired but peaceful.

What is your most marked characteristic?

Independence.

Among your talents, which one(s) give(s) you a competitive edge?

Self-discipline.

What do you consider your greatest achievement?

Having the friends that I have.

If you could change one thing about yourself, what would it be?

I wish I were more extroverted.

What do you most value in your friends?

Forgiveness and understanding.

Who are your favorite writers?

Ernest Hemingway, Kazuo Ishiguro, and Raymond Carver.

Who are your heroes of fiction?

Shantaram!

Who are your heroes in real life?

Dad.

What aphorism or motto best encapsulates your life philosophy?

"Let the boat of your life travel lightly, lest your possessions sink you." A Chinese proverb that I heard from a sage English friend.

Andrea Ballesio¹

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