

Carmine Maria Pariante: Understanding why and how stress makes us ill

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Carmine M. Pariante is Professor of Biological Psychiatry at the Institute of Psychiatry, Psychology and Neuroscience, King's College London, and Consultant Perinatal Psychiatrist at the South London and Maudsley NHS Foundation Trust. He investigates the role of stress and inflammation in the pathogenesis of mental disorders and in the response to psychotropic drugs, both in clinical and experimental settings. His work focuses on depression and fatigue, with a particular interest in the perinatal period and individuals with medical disorders. More recently, he has developed an interest in the effects of the arts, social prescribing, and nutritional interventions on mental health. Since 2018, Professor Pariante has been a Clarivate Analytics Highly Cited Researcher, and, as of April 2024, he has published > 520 publications, with close to 40,000 citations and an H-Index of 103 in Scopus and 137 in Google Scholar. He is also the appointed Editor in Chief of the journal *Brain Behaviour and Immunity* and the Past President of the International Society for Psychoneuroendocrinology. Professor Pariante is also passionate about public engagement and has made many media appearances in newspapers, magazines, radio, and TV on topics broadly related to mental health, writing pieces for the *Daily Mail*, *The Guardian*, and the *New Humanist*. He can be followed on X and Instagram on @Pariantelab and the digital publication he edits, www.inspirethemind.org. It is gratifying to see Professor Pariante share insights into his professional and personal voyage during the Genomic Press interview.

Part 1: Carmine M. Pariante – 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 have always wanted to be a psychiatrist. My parents were both psychiatrists, and I read Freud when I was in school. I was captivated by the psychoanalytical themes in Hitchcock's movies. Then, in my first year of medical school, I was gobsmacked by the complexity of the brain. This was the perfect recipe, or perhaps the perfect storm, to drive my passion for research in the biology of mental health.

We would like to know more about your career trajectory leading up to your most relevant leadership role. What defining moments channelled you toward that leadership responsibility?

I have had a very linear career path. I spent the first 28 years of my life in my country, Italy, where I attended medical school in Rome (1990) and part of my psychiatry training in Cagliari (1994). Then, in January 1995, I left Italy for the US – and I have never had a job in Italy since then. In the US, I was a Research Fellow in Psychiatry at Emory University in Atlanta, working with Andrew H. Miller and Charles B. Nemeroff, who have remained to date my close friends and mentors. In 1997, I moved to London to the (then) Institute of Psychiatry, and I progressed here throughout my clinical academic career until becoming a Full Professor in 2012. My institution has changed its name (it is now called Institute of Psychiatry, Psychology and Neuroscience at King's College London), but I have never



Figure 1. Carmine M. Pariante, MD, PhD, King's College London, UK.

moved, mostly because I have found here so many friends and colleagues, such as Robin Murray and Simon Wessely – as well as a fantastic team of junior researchers that have always been a dream to work with, and who have progressed over the years to become independent, established academics. Of the many leadership roles I have had over the years – as editor of scientific journals, president of societies, and leader of research programs – nothing gives me the same joy, fire, and challenge as leading my amazing research team.

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

My MD research project in 1990, and the resulting first publication in 1991, was on depression and the immune system. I do not know why I fell in love with "psycho-neuro-immune-endocrinology," an area that at that time was quite a niche and had not yet entered mainstream psychiatry and neuroscience research. The notion of such a profound and reciprocal communication between the brain and the body resonated at that time with my holistic view of the human being and my understanding of mental health as interlinked with physical health. At the same time, the deep molecular and cellular dimensions of psycho-neuro-immune-endocrinology triggered the curiosity of the basic scientist in me. I have remained loyal to this initial passion until today.

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

I have one ambition and one ambition only: to tap into psycho-neuro-immune-endocrinological mechanisms in order to develop new medications and treatment strategies for people with mental health problems that are not responding to currently available medications. Moreover, there are plenty of people like this.



Figure 2. Carmine Pariante after a run in Villa Borghese, Rome; in the background, Piazza del Popolo and San Pietro.

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

Focus is not, unfortunately, my main strength! In terms of psychoneuro-immune-endocrinology, we have just started an international research programme called ASPIRE, funded by Wellcome, to understand the best predictors to identify depressed people who will respond to anti-inflammatory medications. In parallel, I am continuing my research in perinatal mental health, and in depression in pregnancy in particular, through a European programme called HappyMums, of which I lead the clinical component. I know that improving maternal mental health will prevent mental health problems in the next generations. Finally, I am in the exciting final phase of SHAPER, a Wellcome-funded research programme testing arts interventions in mental health, including post-natal depression, and papers from these studies should come out soon.

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

Work hard, and have lots of fun. I know it is a bit of a cliché, but I firmly believe that the harsh life of research and academia cannot be sustained only by high-impact papers and prestigious grants. We need to feel comfortable letting our hair down with our friends, colleagues, and co-workers, and I strive to make sure that my research team is famous not only for the great work we deliver but also for the great fun we bring to conferences' parties.

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?

My perspective on diversity and inclusion has been shaped by both the privilege of being a white man and the difficulties of being an immigrant. I have always supported young researchers from all backgrounds, regardless of their personal and demographic traits, and I am profoundly disturbed when I see bullying or discriminatory behaviour.

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

Seeing my team's researchers pushing beyond their limits and reaching successes that they thought would have never been possible.

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 have many passions—as I have said, focus is not my forte. I am a senior student of kung fu, which gives me physical, mental, and spiritual strength. I am also passionate about physical activity, including running, cross-training, and obstacle races. As soon as I can, I jump on a plane to a remote destination where it is very hot, there is a sea, and I can't understand a word of what people or street signs are saying.

Part 2: Carmine M. Pariante – Selected questions from the Proust Questionnaire¹

What is your idea of perfect happiness?

Sipping a cold beer and watching life go by in the aforementioned remote, hot, sea-facing place.

What is your greatest fear?

Not to be loved.

Which living person do you most admire?

Margaret Atwood. She is a great writer and a courageous defendant of democracy, equality, and freedom.

What is your greatest extravagance?

I love the San Remo music festival, Eurovision, trash music, and TV.

What are you most proud of?

Having run five Tough Mudder races in 5 years.

What is your greatest regret?

I should have taken a gap year when I was young. Nevertheless, there is still time.

What is the quality you most admire in people?

The ability to inspire other people. I listen to politicians, writers, and intellectuals, or I read their prose, and I think – wow, I wish I could have said that.

What is the trait you most dislike in people?

Arrogance and self-entitlement.

What do you consider the most overrated virtue?

Working hard, when it is the only thing one does.

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 favourite occupation (or activity)?

When I am not training as a martial artist, and weather permitting, I love to hike and scuba-dive.

Where would you most like to live?

In a small island in a small house with a small terrace overlooking the sea.

What is your most treasured possession?

Photos from my childhood and youth.

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

Today is always the happiest day of my life. Not only have I been alive for one more day, but I have also learnt something new that will make tomorrow even better.

What is your current state of mind?

As I am writing this in April 2024, I am still affected by the loss of both my parents less than six months ago. I am grateful because I have an incredible support network at home and work; slowly, I am returning to normal.

What is your most marked characteristic?

I am loyal. I am a loyal friend and colleague and fearlessly protective of my team.

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

I am diplomatic, a great negotiator, and can bring people together.

What do you consider your greatest achievement?

Together with my team, I have created from scratch a new mental health digital magazine called Inspire the Mind (www.inspirethemind.org). In 5 years, it has gone from a laboratory blog to an internationally renowned, award-winning platform for public dissemination in mental health, with more than 250K views.

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

I want to stop doubting myself so frequently.

What do you most value in your friends?

Being able to count on them.

Who are your favourite writers?

Jonathan Franzen, Haruki Murakami, Kazuo Ishiguro, Javier Marías

Who are your heroes of fiction?

The man with no name in Sergio Leone's Western movies

Who are your heroes in real life?

Teachers, doctors, nurses, social workers – everybody who works hard for the community.

What aphorism or motto best encapsulates your life philosophy?

There is always a way.

Carmine M. Pariante¹

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