





Prof. M.G. (Mihai) Netea

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Prof. M.G. (Mihai) Netea (1968) is full professor of experimental medicine at Radboudumc. He conducts research into how the immune system recognises microorganisms, including the dangerous fungus *Candida albicans*, which causes blood poisoning. Netea has made significant discoveries in this area. He was one of the first people to work in this research area internationally and is a pioneer in his field.



Mihai Netea Credits: Ivar Pel

Mihai Netea is a leading international scientist in the areas of inflammations, immunology and infectious diseases. His most recent discovery is that the innate immune system of mammals, including human beings, can be 'trained'. Netea not only discovered the concept of trained innate immunity (TI), but his group also recently demonstrated the epigenetic and metabolic changes that take place during TI in two recent papers in the journal *Science*. Many of his new ideas in this field became widely accepted among fellow immunologists in a matter of only a few years.

Netea has made important contributions to the discovery of previously unknown novel primary immunodeficiencies. In doing so, he revealed the role played by specific receptors and signal molecules (e.g. STAT1 and *dectin-1*). Netea has also discovered key mechanisms at work in our immune system as it responds to infection by the fungus *Candida albicans*. This research has revealed previously unknown patterns and interactions. Gaining a better understanding of the host's response to intruders is considered crucial in the development of new treatment methods for serious infections.

Netea has also conducted pioneering research on the development of immune system during the evolution of the human species. He demonstrated that the genes involved in training immunity have been under selection pressure since the modern human being emerged from Africa 200,000 years ago.

A number of new discoveries are likely to be made in the area of trained innate immunity, especially in its epigenetics, in the coming years. The referees all have great confidence in Netea. 'This is perfect timing for such a grant, because the candidate's scientific career is in such an active and dynamic stage,' said one of the referees. 'The candidate has been an important driving force behind the concept of trained innate immunity,' explained another referee. 'The candidate has a very clear international presence in his field and absolutely meets international standards of excellence.'

Netea previously received a Vidi and a Vici grant from NWO. He was a member of the Young Academy from 2007 to 2012, and was recently elected a member of the Royal Netherlands Academy of Arts and Sciences. Netea has received numerous Dutch and international research awards, including the European Society for Clinical Investigation Award in 2013. He actively translates scientific research results so they can be used in medical practice. As a member of the Young Academy he also participated in various programmes to explain science to schoolchildren. Netea, himself a Romanian citizen, initiated an international science education programme for children from ethnic minorities together with the Moroccan-French astronomer Merieme Chadid.

Mihai Netea was nominated by the rector of Radboud University and the chair of the Netherlands Organisation for Health Research and Development (ZonMw).