



National Institute
on Drug Abuse

National Institutes of Health
National Institute on Drug Abuse
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Luigi Gallimberti, MD
President of the Novella Fronda Foundation
42, Marsala St.
35122 Padua (Italy)

Dear Luigi,

We have examined with greater and greater enthusiasm the results achieved by your Institute concerning the work on experimental treatment along with rTMS addicted cocaine patients, as part of our collaborative project. They appear to be extremely promising and seem to introduce an entirely new perspective on a disease that, to date and worldwide, does not show any available treatment of proven effectiveness.

Also the "National Institute on Drug Abuse" Director, Dr. Nora Volkow, as well as the Leadership from the Clinical Trial Network Division at NIDA, show growing interest in continuing the collaboration with you and in informing the scientific community of the achieved outcomes.

I have presented such results, even if still in a preliminary phase, during several seminars, including the Fundamental Themes in Neuroscience Seminar Series, at Stanford University (CA), with the participation of many prominent faculty from Stanford Neuroscience and Psychiatry. As you know this is one of the world's most prestigious venues to present data. Such data have raised a deep interest as well as many queries from those colleagues who attended the seminary, including the discoverer of the optogenetic and a Nobel Prize. They are all eager to know the developments of our study and therefore it is really important to continue them and develop every possible correlated result. Furthermore, the rTMS data has become the center of all my talks, all over the World, and has created enormous enthusiasm across basic and clinical scientists.

I am also thrilled by the fact that Prof. Raji, one of the most well-known and respected authorities in the field of rTMS worldwide, has become a formal collaborator on our rTMS projects. In collaboration with him, we plan to use the patient data to produce novel population level probabilistic maps of cortical areas and large-scale white matter networks that maximally reduce drug-seeking behaviors. To this aim, we will use individual level MRI-derived surface anatomy and tractography, and merge this information with TMS navigator data (that allows us to compute the TMS-induced electric fields, i.e., which cortical areas were stimulated) weighted by the degree of the therapeutic response. Such probabilistic brain stimulation atlases allow targeting TMS therapy on cortical targets that have optimal clinical efficacy and illuminate the large-scale brain networks underlying addiction. This scientific “addition” would fill the mechanistic gap between preclinical and clinical studies and represents a unique opportunity for our group to synergistically investigate the neuronal mechanisms on how cocaine addiction starts and persists in the human brain.

In conclusion, we might have in our hands one of the most important therapeutic discoveries of the last 50 years, with the potential of benefitting millions of people. I will do anything in my power to harvest and develop this opportunity to its full potential, and hopefully have it become a standardized treatment for cocaine use disorders. Do not hesitate to share this letter with whomever you wish, and please let me know if there is anything else I can do.

Sincerely,

A handwritten signature in black ink, appearing to read 'A. Bonci', with a stylized flourish at the end.

Antonello Bonci, MD

Scientific Director, National Institute on Drug Abuse
Director, Intramural Research Program, NIDA