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## Can gastroenterology change the therapeutic approach to autism? An innovative proposal for the study of the causes of autism

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Several studies demonstrated that many foods may provide many bioactive peptides into the gastrointestinal tract, as for example, the beta-casomorphin-7, an opioid-like peptide produced by casein. Recent studies have established that the production of these opioid peptides is experimentally associated with autism. Autism is a developmental disorder with a possible connection between dietary components and triggering or worsening of symptoms. An altered intestinal permeability might allow absorption of incompletely digested peptides (gluten and casein) that could produce opioid-like activity in the brain, causing significant changes in behavior. It is also showed, that phenomenon, of the formation of the opioid peptides, strongly stimulates intestinal mucin production in *ex vivo* and *in vitro* models, in particularly, these effects were associated with a higher expression of intestinal mucins (gel forming), MUC2, the principal constituent of Gut Protective Layer. The Over Expression of MUC 2, contrary to what one might think, does not strengthen the intestinal protective layer, but rather tends to altering the continuous layer, in a succession of bubbles, separated by channels, which allow for greater permeability, facilitating the cycle of the opioid peptides and the free radicals. The effect is twofold: inhibition of nerve receptors, and formation of, cerebral micronuclei. The purpose of this study is to propose research, as NMR, for with the imaging to evaluate, the biochemical process for inhibit the MUC2 Over-Expression, in autism, using for example enzyme as the sialidase.

### Biography

Roberto Menicagli has completed his PhD from Milan University. He has completed his Postdoctoral studies in Biochemistry and Molecular Genetics at Milan University. He is the Director of Roma Biomed Research Lab, a private medical service organization. He has published more than 20 papers in reputed journals and he is also the principal author of four international patents, in the field of the environment, and biomarkers, and has been serving as an Editorial Board Member of two magazines concerning the medical sciences.

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