

Editorial

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This issue of the SALUD MENTAL magazine is made up of a series of papers that express the efforts of those researchers at the border between basic biological science and clinical practice. This quite complex bridge, which creates a space for the interchange between those two fields of knowledge, becomes specially challenging when the matter at hand is neuropsychiatric disease. Apart from the biological elements, psychosocial variables play no doubt an important part, both in emergencies and in pathology care. As a result, this fact complicates the development of basic models, which could later be extrapolated to what is happening in clinical practice. Nevertheless, the rapid advances in Neuroscience during the last century, continuing in this one, have allowed for an accelerated progress of medical knowledge. In-

novative tools for diagnostic and therapeutic purposes have been developed bringing direct benefits to patients. As an example, we could mention the emergence of new drugs for mental illnesses that are not based serendipitously on previous discoveries but on the production of new substances based on experimental design molecules. Nonetheless, there is still a great gap between basic evidence and its clinical application, partly due to the lack of preclinical trials having enough predictive validity. The papers included in this issue are the result of the work of the Department of Clinical Research at INPRFM and they offer examples of the ways in which some of the researchers are trying to reduce this gap

Several papers are presented through an approach of basic research with a clinical application. Basic Genetics is an area of great relevance and interest since its contributions to the study of mental illnesses are increasingly greater. The article by Dr. Diaz-Anzaldúa and her team review the way



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in which molecular genetics is applied to the study of these ailments by defining the participation of endophenotypes and biological markers in their neuroanatomical, endocrinal, cognitive and treatment response aspects, among others. Doctor Carlos Cruz and his team present the results of a research project where they determined the allelic frequencies of those genes that codify dopamine receptor D4 and the carrier molecule for that neurotransmitter for an epidemiological sample of teenage population. Another area of great interest in medicine is the one related to dementias: neurodegenerative progressive diseases, which are among the most severely handicapping ailments among the elderly. Doctor Benitez-King and her team use a model both pre-clinical and clinical in order to sustain evidence that melatonin, due

to its anti-oxidant and anti-inflammatory effects as well as for its inhibitory effect on the formation of amyloid plaques on neurons, might be of use to reduce the advance of these ailments. There is a large amount of studies that prove that many neuropsychiatric diseases deal with alterations in the process of formation of new neurons. Dr. Gerardo Ramirez and his team, whose main research area is neurogenesis and neurodevelopment, present a recount of their own data, explaining the findings about these phenomena within different ailments. On the other hand, basic research on addictions is a complex issue, which can be dealt with in many different ways. For the last few years, Dr. Milagros Mendez Ubach has studied the role of the mesolimbic system of dopamine as well as of opioid receptors in the mechanisms of reinforcement and reward for the consumption of alcohol in models involving rodents. The results of their research show data suggestive of the participation of enkephalins and en-

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dorphins in these processes; these results shall eventually be confronted with their complementary correlates. The group of researchers from the Molecular Neurobiology and Addiction Neurochemistry Laboratory presents a piece that summarizes their efforts of the last few years to develop a bivalent immunogenic vaccine providing protection against the development of addiction to heroin and morphine.

Regarding the contributions of clinical practice, several lines of research are shown. It has been increasingly evident that the stigma on mental illnesses has a negative impact upon them. One of the actions taken in order to reduce it is the so-called literacy campaign on mental health, a process that implies improving the knowledge related to it and the eradication of erroneous concepts. Doctor Ana Fresán and her team present a paper showing the results of a literacy campaign among students of medicine and how it helped reduce the students' mistaken perception about the risk of aggressiveness in bipolar disorder. Another contribution is the administration of transcranial magnetic stimulation. A group of clinical researchers led by Doctor Jorge Julio Gonzalez Olvera has gained experience in using this therapeutic option along the years. The results of a study on neurophysiologic correlates of its application on subjects suffering de-

pression are presented here. Such correlates were assessed via a source analysis of the electroencephalogram. In the field of child and adolescent clinical psychiatry, Doctor Lino Palacios Cruz presents the results of a research project whose objective was to determine the frequency of the systems related to disruptive behavior disorders in patients with early onset bipolar disorder. The Clinical Trials Unit contributes with their own experience with methodological and ethical aspects at conducting research projects in the field of substance dependence. Its guidelines are the basis for developing clinical trials in various fields with state-of-the-art technology and methods.

Translational research in neuropsychiatric disorders seems less highly developed when compared with what has been happening in other areas of medicine. Nevertheless, the projects presented here are an example of an emergent trend of innovative data in basic research, which will increasingly allow for the development of new solutions for the sick regarding prevention, treatment and rehabilitation of their ailments. On the other hand, it has been proved that clinical experience provides information that will eventually offer new ideas and projects to contribute to a greater and more precise knowledge of the neurological bases of these disorders.