

EDITORIAL

***Translational Psychiatry*: leading the transition from the cesspool of devastation to a place where the grass is really greener**

Translational Psychiatry (2011) 1, e1; doi:10.1038/tp.2011.3; published online 4 April 2011

Nothing is as exhilarating as the process of creation. There is something that is absolutely thrilling when a concept that is born inside one's head takes shape in the outer world and becomes its own self-standing entity. That is why the pursuits of scientific inquiry, research and discovery are so exciting. I am, therefore, particularly pleased to announce the launch of *Translational Psychiatry*, the new sister journal of *Molecular Psychiatry*. This launch is a case study example of the self-perpetuating character of creativity that goes beyond a starting birth point to take a life of its own. *Translational Psychiatry* is the outcome of ideas that I have been cultivating for years. It will in turn serve as the vehicle for publication and dissemination of creative outcomes of others that will then be the source of inspiration for an even greater number of people to unleash their own scientific creativity, which is undeniably always built on the foundation of existing work.

When I first conceptualized *Molecular Psychiatry* in 1995¹ the journal title bordered on being contradictory. The juxtaposition of the words 'molecular' and 'psychiatry'—even though not unprecedented—was certainly unusual and raised many eyebrows. Several colleagues told me then that those two words together represented an oxymoron. However, that was the direction taken by the experts in the mainstream of medical research. In the 1990s, there was a blind faith in mechanistic work that would lead to breakthrough cures. We were all so wrong! The hallmark of current biomedical research is that the explosion in mechanism dissection that occurred in the last three decades has miserably failed to generate new cures or novel preventive strategies. The examples of mechanistically based therapies are few and far between. Trastuzumab (Herceptin, Genentech, South San Francisco, CA, USA) is so repeatedly cited that a tipping point has been reached in which continued exemplification of this specific, toxic and expensive treatment of limited curative value will only serve to highlight how small the number of success stories that we can boast as justification for translational medicine is.

Hopefully, my new juxtaposition of 'translational' and 'psychiatry' will, in 2011, be well accepted from the outset. It needs to be; in psychiatry, therapeutics is in dire straits. There are no fair treatments for autism and Alzheimer's. Patients with schizophrenia are still treated with drugs that block dopamine receptors, with immense resources poured over the last 60 years at dissecting mechanisms, pathways, correlates and variations of a suboptimal, at best partially effective, and non-curative approach. Those suffering from depression have

comparably bleak therapeutic prospects. Nobel laureate Julius Axelrod, a member of *Molecular Psychiatry*'s Editorial Board from the journal's inception until his death in 2004,² discovered the principle of synaptic reuptake of monoamines such as serotonin and norepinephrine in 1961. Now, 50 years later, if a patient arrives in a psychiatrist's office, and a new diagnosis of depression is made, what is the most likely treatment? A serotonin or norepinephrine reuptake inhibitor! Ketamine is currently being tested as a 'novel' treatment for depression.^{3–5} The first use of that drug in humans was reported in 1965⁶... What happened? Where is the locus of the grievous disconnect between the promise, accomplishments, discoveries and billions of dollars spent in contemporary neuroscience, which fueled the unprecedented success of *Molecular Psychiatry*, and the abysmal lack of conceptually novel therapeutics in psychiatry? In medicine, the pathway between discovery and therapeutics has been referred to as 'the valley of death'.⁷ In psychiatry, that should be called the 'cesspool of devastation.'

Paradoxically, as I make such pessimistic statements, inside me a kernel of optimism not only exists but it also grows. At present, the state of translation in our field is such that, as we continue to sink into a long day's journey into the night, we have reached the stage of utter darkness in which those who became knowledgeable of the night are prescient that the crack of dawn is imminent. I belong to this group that is imbued with a sane and sober optimism: the dawn of translation in psychiatry is forthcoming. Having worked full time my entire life at the interface of the clinic and the lab, in the fields of translational medicine and psychiatry, I have experienced the thrill of translation firsthand. The joy of having prevented four certain deaths with a novel translational treatment of monogenetically based obesity caused by leptin deficiency^{8–10} is, to date, the highlight of my career. When will investigators in psychiatry feel the same type of elation as they bring perfectly happy and productive lives to patients with autism, Alzheimer's, depression, bipolar disorder or schizophrenia? When will we arrive at a place where the grass is really greener, where accurate diagnoses lead to optimally personalized and curative treatments?

Why am I so optimistic? Translational medicine, of which translational psychiatry is a branch, became, within a remarkably short time, a *bona fide* area of medicine, with its own body of knowledge, journals, societies, scientific meetings, training programs, organized and well-funded centers, institutes and departments. Its importance is demonstrated by

the recognition emanating from the formal proposal submitted to the United States Congress for the establishment of a new National Institutes of Health Center, the National Center for Advancing Translational Sciences, advocated by Francis Collins. One should stop and listen when such a visionary physician–scientist, who inspired, organized and led the worldwide effort to successfully achieve the hitherto impossible sequencing of the human genome,¹¹ strongly pursues a new direction. This journal was conceptualized just before the emergence of the proposal for National Center for Advancing Translational Sciences, demonstrating the timeliness of efforts to streamline and organize translational pathways.

I believe in a broad view of translation, which is very different from purely applied science, drug development, pharmaceutical research or commercialization. The motto of the John Curtin School of Medicine, where I am based, is 'Health Through Discovery.' Paraphrasing our motto, *Translational Psychiatry*—and translational medicine in general—covers the entire pathway from discovery to health. We will publish, in this exciting new journal, the full spectrum from the most fundamental discovery to proof of principle, first in human studies (T1), then going to clinical trials (T2), translation from clinical research to healthcare practice guidelines and policy (T3), treatment evaluation (T4) and just as the proof of the pudding is in the eating, so the proof of translation is in worldwide implementation and the advancement of global health.

In our logo and cover banner, we use an image of the pituitary gland highlighted by *in situ* hybridization of interleukin 1 receptor antagonist mRNA.¹² The pituitary gland was chosen not because we believe it has anything to do with the causes of psychiatric disorders; those are sadly still unknown. We use images of the pituitary because it is *par excellence* the prototypical translational interface, which in this case starts with the process of neuroendocrine transduction. Signals that are generated within the brain as the outcome of gene–environment interactions are transduced within the hypothalamus into neuronally synthesized hypothalamic releasing hormones, which reach the pituitary gland through the hypophyseal portal system. The pituitary then translates central nervous system-derived inputs into multiple endocrine axes that regulate all organs and systems. Likewise, *Translational Psychiatry* was created to be the key translational interface in the field.

Please participate in *Translational Psychiatry* as readers and authors. The future is here, and we invite you to join this new online journal that will combine the expertise of the Nature Publishing Group with the success of *Molecular Psychiatry*. To get to this place where the grass is really greener, you can send your work directly to *Translational Psychiatry* or submit first to *Molecular Psychiatry*. In the last 6 months, we accepted only 3% of submissions in *Molecular Psychiatry*. We are in a position that truly outstanding papers, which are favorably reviewed, cannot be accepted in *Molecular Psychiatry* simply based on priority, as we just do not have the space. The authors of such papers will now be invited to revise their papers and submit the revised manuscripts to *Translational Psychiatry*. An editorial decision may then be made without further external review. Note that most papers that have been rejected

in *Molecular Psychiatry* will continue to be rejected. *Translational Psychiatry* is a sister journal of *Molecular Psychiatry*, not a second-tier publication. We will accept in *Translational Psychiatry* only outstanding work, which a couple of years ago would have been published in *Molecular Psychiatry* and it is not currently in that journal solely for space reasons. An invitation from us to submit to *Translational Psychiatry* represents formal recognition that the work has the highest levels of intrinsic merit, impact and relevance.

Cautious investigators hesitate to send their work to new, unproven titles that have not existed long enough to have an impact factor (IF) or to even be indexed. When *Molecular Psychiatry* was launched in 1996, some brave researchers foresaw our success and made multiple submissions to us. Now they can boast publications in the field's number one journal, with an IF of 15.049. An additional example is provided by our own research. We had two research articles in *Nature Medicine*'s first volumes^{13,14} that were submitted before that journal had an IF. Now *Nature Medicine*'s IF of 27.136 is the number one in medicine, research and experimental fields. That very wise move paid off superbly. It will only become increasingly hard to publish in high-impact journals. In psychiatry, we teach that past behavior is the best predictor of future behavior. That being true, one can only foresee a splendid future for *Translational Psychiatry*. Would not it be advantageous for you to be part of our inevitable success right from the outset?

Conflict of interest

The author declares no conflict of interest.

J Licinio

Department of Translational Medicine, John Curtin School of Medical Research, Australian National University, Canberra, ACT, Australia
E-mail: julio.licinio@anu.edu.au

1. Licinio J. *Mol Psychiatry* 1996; 1: 1–3.
2. Coyle JT. *Mol Psychiatry* 2005; 10: 225–226.
3. Berman RM, Cappiello A, Anand A, Oren DA, Heninger GR, Charney DS *et al.* *Biol Psychiatry* 2000; 47: 351–354.
4. Kudoh A, Takahira Y, Katagai H, Takazawa T. *Anesth Analg* 2002; 95: 114–118.
5. Li N, Lee B, Liu RJ, Banasr M, Dwyer JM, Iwata M *et al.* *Science* 2010; 329: 959–964.
6. Domino EF, Chodoff P, Corssen G. *Clin Pharmacol Ther* 1965; 6: 279–291.
7. Collier BS, Califf RM. *Sci Transl Med* 2009; 1: 10cm9.
8. Licinio J, Caglayan S, Ozata M, Yildiz BO, de Miranda PB, O'Kirwan F *et al.* *Proc Natl Acad Sci USA* 2004; 101: 4531–4536.
9. Paz-Filho GJ, Babikian T, Asanow R, Delibasi T, Esposito K, Erol HK *et al.* *PLoS One* 2008; 3: e3098.
10. Paz-Filho GJ *et al.* *Obes Rev*, 17 March 2011; e-pub ahead of print; doi:1111/j.1467-789x.2010.00840.x.
11. Collins FS, Morgan M, Patrinos A. *Science* 2003; 300: 286–290.
12. Wong M-L, Bongiorno PB, Rettori V, McCann SM, Licinio J. *Proc Natl Acad Sci USA* 1997; 94: 227–232.
13. Wong M-L, Rettori V, al-Shekhlee A, Bongiorno PB, Canteros G, McCann SM *et al.* *Nat Med* 1996; 2: 581–584.
14. Licinio J, Mantzoros C, Negrão AB, Cizza G, Wong ML, Bongiorno PB *et al.* *Nat Med* 1997; 3: 575–579.



Translational Psychiatry is an open-access journal published by Nature Publishing Group. This work is licensed under the Creative Commons Attribution-NonCommercial-No Derivative Works 3.0 Unported License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/3.0/>