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BrainCells and Neurogenesis: Proof of Principle and More

BrainCells' work on the stimulation of endogenous neurogenesis is a potential paradigm-shifter, beginning with the treatment of depression, for which neurogenesis has emerged as a likely key ingredient. BrainCells' screening technology has identified molecules with strong neurogenic effects: The lead NCE (BCI-540), is expected to produce Phase II results in depression (with anxiety features) late this year. But they also have a lower profile program which has been assessing the neurogenic synergy provided by the combination of well-characterized molecules. A group at MGH has reported Phase II data for such a combination, dubbed BCI-952, which consists of buspirone and melatonin. After six weeks of treatment, positive results were seen in a 142 patient depression trial. The 58% of the patients receiving BCI-952 showed treatment response on a global improvement scale, compared to 38% of patients on buspirone alone, and 36% receiving placebo. This was statistically significant, as were effects on two secondary endpoints, and the trend on another primary endpoint was similar, though it did not reach significance. Buspirone's lack of effect as a monotherapy was no surprise, but the benefit from combining it with melatonin, usually used as a sleep-inducing agent, was surprising. It buttresses the neurogenesis hypothesis for the treatment of depression, and indeed the 58% responder rate is higher than is generally found with SSRI or SNRI monotherapies. These results exceeded even BrainCells' expectations, to the point where this trial has now become something more than simple proof of concept. While it validates neurogenesis as a therapeutic target (one which may have applicability well beyond depression), it also suggests that a proprietary formulation of BCI-952 could be a commercial product, one which would have a much better side effect profile than do SSRI and SNRI antidepressants. •