

## Q&A with Kate Rumrill, President and CEO of NeoSync Inc developing their Transcranial Magnetic Stimulator (TMS) Medical Device that Synchronizes Brainwaves in Treating Depression and other CNS Disorders



**Kate Rumrill**  
President & Chief Executive Officer

NeoSync Inc  
Boston, MA  
[www.neosync.com](http://www.neosync.com)  
Inquiries: [info@neosync.com](mailto:info@neosync.com)

Interview conducted by:  
Lynn Fosse, Senior Editor  
CEOCFO Magazine

**CEOCFO: Ms. Rumrill, would you tell us about NeoSync?**

**Ms. Rumrill:** We are a medical device company, developing a transcranial magnetic stimulator (TMS) that is intended to be used primarily for depression as a start; however we are looking at uses in other CNS disorders, as well. We see our unique value proposition in the way that we treat patients with TMS; specifically we synchronize it to individual patients' brainwaves, measured by electro-encephalograms, so we tailor the actual treatment of the magnetic stimulation to that individual patient.

**CEOCFO: What is the range of variation in brainwaves?**

**Ms. Rumrill:** Within an individual's brain there are different bands of frequency that the neurons communicate within the brain. Specifically we are targeting one of those bands called the alpha band which has been shown to play a role in specific mood disorders. If you have changes in the synchrony of your alpha frequency, that could have an effect on mood. We target that alpha band, which is between eight and thirteen Hertz. For example, you may have an individual with an alpha wave of 9.3 or another may be 12.5. It is really nothing different with those other than the frequency being unique for that individual, sort of like a thumbprint.

**CEOCFO: How does the device work; what is the science?**

**Ms. Rumrill:** The concept of transcranial magnetic stimulation, regardless of which device you are talking about, is that you are placing a magnetic field upon the brain and by doing that you are resetting the cortical oscillators to bring that brain back to a normal state. It is not something that happens with just a single treatment but needs repetitive treatments to bring the brain back to normal state over time.

**CEOCFO: Where are you in the development process?**

**Ms. Rumrill:** We are a clinical stage company, so we are not currently approved for sale in the US or elsewhere. We have approval from the FDA to study this device in a controlled setting under IRB approval, within physician's offices for the sole purpose of collecting information that will be used in our regulatory submissions, seeking clearance to market the product.

**CEOCFO: What have you learned so far?**

**Ms. Rumrill:** Probably the most fundamental learning that we had is not necessarily even about our own device but just in general with this field. There are several other transcranial magnetic stimulators that are out there on the market and they have proven that they are safe and effective but they are not getting what you would expect as far as adoption. The reason is because it is cumbersome and difficult for the patients in that they have to first find a center that has this treatment available and they have to go to the physician's office five days a week for four to six weeks for their acute