

## Flow acquires Halo - a great step for the future of neuromodulation

*Healthtech acquisition to progress tDCS technology for the treatment of mental health disorders*

London, 5<sup>th</sup> February 2021, [Flow Neuroscience](#), creator of Europe's first medically approved brain stimulation device to treat depression at home, has acquired the assets of Halo Neuroscience Inc, a US-based company leading the development of brain stimulation technology to optimise performance and well-being. The acquisition of Halo's technology, R&D and patents propels Flow to the status of leader in the application of transcranial direct current stimulation (tDCS) and will advance the company's research into treatment for depression and other mental health disorders.

Flow Neuroscience will build on the years of research that Halo has undertaken in conjunction with prestigious US universities, and will continue to build strong ties with the scientific community in the neuromodulation space. Applying this research, Flow Neuroscience intends to enhance its current medically certified tDCS headset for depression and will collaborate with clinicians to address other pressing medical needs such as rehabilitation and motor impairment.

### Advancing the field of neuromodulation

People diagnosed with depression have been found to have lower neural activity in the left frontal lobe, the area of the brain controlling cognitive skills and emotional expression. Flow's medically certified headset uses tDCS to deliver a constant, low direct current via electrodes to stimulate neurons to that area. The headset is used in conjunction with Flow's [depression app](#), which is based on psychological research and neuroscience, guiding users through a series of personalised exercises informed by behavioural therapy.

Halo's patented tDCS headset stimulates the motor cortex, an area in the brain involved in the planning, control, and execution of voluntary movements, enabling the user to learn faster and perform better. Over the past two years, Halo has been working with leading researchers including the [Neural Engineering Group](#) at The City College of New York and the [Air Force Research Laboratory](#) in Ohio to further develop its neuromodulation technology to improve not only movement, but cognitive performance and mental well-being.

By acquiring Halo's technology, Flow aims to progress its tDCS capabilities to be able to expand treatment to include mental health issues that are commonly comorbid with depression.

### Accessible healthcare

People encounter barriers when trying to access mental health services for many reasons, and the current pandemic only exacerbates this problem. Dubbed the greatest threat [to mental health since the second world war](#), an additional 10 million people are thought to need new or additional mental health support as a direct result of the crisis. However, with the surge in people seeking help, the NHS is at full capacity and people are unable to schedule appointments.

While mental health treatment is crucial for the well-being of patients at any time, a pandemic only amplifies the benefits of portable technology that is accessible outside clinics. Flow's headset and app are easy to use and effective in reducing the symptoms of depression – all in the comfort of the patient's home at a time that is most suitable to them. The effectiveness of brain stimulation for the treatment of

unipolar depression was [recognised by the NHS](#) and has been proven to have a similar impact to antidepressants without the side-effects.<sup>123</sup>

### **With the future in mind**

Daniel Mansson, CEO and Co-Founder of Flow Neuroscience and clinical psychologist, explains the decision to acquire Halo: "Our aim is to dramatically improve the lives of people who struggle with their mental health. Halo's technology and academic research complement that of Flows' in an almost magical way and will help us to take a very important next step on this journey together with our community of users."

Erik Rehn, CTO and Co-Founder of Flow Neuroscience and neuroscientist adds: "We are building on the technology Halo applied for the improvement of performance and well-being, which will revolutionise the application of tDCS for mental health disorders. By combining different neuromodulation techniques, we will be able to personalise treatments further to target brain regions with more precision. This will allow us to innovate treatments which are patient-specific and even more efficient and reliable. As we know mental health issues are as unique as the individual experiencing them, so further developing treatments that can target the precise areas a person is struggling with, will change the future of mental health treatment as we know it."

Brett Wingeier, CEO and co-founder of Halo, will support progress as an advisor to Flow and said: "Flow is the best possible successor and a great home for everything we built at Halo with the help of our team, our customers, and our collaborators. We're looking forward to seeing Flow's research and technology advance the state of the art in neuromodulation and make an enormous impact on mental health worldwide with efficient, patient-specific, precision treatment."

**-Ends-**

### **About Flow**

Flow is a physical and behavioural at-home treatment for depression which comprises a brain stimulation headset and therapy app. It is the first and only medically approved treatment for depression of its kind in Europe. Classified as a Class IIa medical device, Flow was developed from the fields of clinical psychology, neuroscience and innovative technology. Flow empowers and motivates individuals to take control and self-manage their depression with effective, non-pharmacological, digital alternatives. Based in Malmö, Sweden, Flow was founded in 2016 by clinical psychologist Daniel

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<sup>1</sup>Brunoni, A. R., Moffa, A. H., Sampaio-Junior, B., Borriero, L., Moreno, M. L., Fernandes, R. A., Benseñor, I. M. (2017). Trial of Electrical Direct-Current Therapy versus Escitalopram for Depression. *New England Journal of Medicine* (26), 2523–2533. <https://doi.org/10.1056/NEJMoa1612999>

<sup>2</sup> Brunoni, A. R., Moffa, A. H., Fregni, F., Palm, U., Padberg, F., Blumberger, D. M., ... Loo, C. K. (2016). Transcranial direct current stimulation for acute major depressive episodes: meta-analysis of individual patient data. *The British Journal of Psychiatry: The Journal of Mental Science*, 208(6), 522–531. <https://doi.org/10.1192/bjp.bp.115.164715>

<sup>3</sup> Bikson et al., Safety of Transcranial Direct Current Stimulation: Evidence-Based Update 2016. *Brain Stimulation*, 9(2016), 641–661. <http://dx.doi.org/10.1016/j.brs.2016.06.004>

Mansson and neuroscientist Erik Rehn. Their team consists of prominent researchers in the field of psychiatry and brain stimulation.

For further information please visit the [website](#), [Twitter](#), [Facebook](#).

### **About Transcranial direct current stimulation (tDCS)**

Transcranial direct current stimulation is a form of neuromodulation that uses constant, low direct current delivered via electrodes on the head. It was originally developed to help patients with brain injuries or psychiatric conditions like major depressive disorder.

#### **Notes to editors:**

Flow treatment typically lasts for 30 minutes per session, with 18 sessions over 6 weeks. Continued treatment is then possible for 1-2 sessions per week.

Flow's headset retails at 459 Euro or can be rented for 45 Euros per month.

Flow Neuroscience's own patient 2020 data analysis has shown a 30% recovery rate after 6 weeks of treatment, while 85% of users have reported an improvement in mood.

Quote from Flow user Mike Parsons: "I experience depression as a very personal thing; very intimate, the taboo, the feeling of failure, the late nights wide awake, the anxiety, the fear of making it worse. I managed to grow more resilient and find different ways of coping – a mix of the correct medication helps, talk therapy, cognitive behavioural therapy, mindfulness, and exercise were helpful to me. Having tried Flow I found that it encourages a conversation, the last thing you want when depressed. You have to engage with the app via a guided conversation and that gets you used to talking. Talking helps and makes depression about something other than yourself. You are also part of a growing network of users, the Facebook group has lots of voices all of whom have similar issues to you.

Find more user testimonials [here](#).

Watch Flow on the BBC [here](#).

Interested in the science – click [here](#).