Douglas Styles
Resident of OSH since 10.

In support of SB 1114.

I am writing in lieu of an apperance due to not having privileges

Both OSH as well as the PSRB need to be rehauled and be held to higher or at least provide a bit more professionalism in their dealings with the patients under said 'care'. As of current at least for those with a history at OSH care is the maximum sentence or as stated in the OR Judicial Statement or Face Sheet.

Even though many here say I am not the same person I was when I first arrived at OSH. According to my last Psychiatric Security Review Board Order I am considered a 'dangerous' person because I let people know what + how I feel by use of volatile (they say) language. I have a Traumatic Brain Injury @ the age of six(6) if my emotions go up so does my voice I've had to live with this fact for 43 years Even in the Phoenix Childrens Hospital while my body was contracted on the Rightside I couldn't get excited due my choking myself out as I laughed.

Sure there will be some who'll say that I'm talking Shite or smack. I tell you its all been said before. While here before I began Nuero-Feed back I began sharing the above mentioned information with people here, and they responded "according to you". But I did the testing for the Nuero feedBack + sure enough there was proof.

Although I've done Five years of the biofeedback + began t-PBM with another [Transcranial-Photo Bio Modulation]. In which I still have a few more sessions before being able to retest the old brainwaves.

Altough I've been on Conditional Release for a full 3months in '18. The group home called the PSRB and I was revoked being sent back To the OR State Hospital because I was calling the Community Health Orginizations ~~office~~ + asking (albeit several times a day) about the lacking ability or utilization of Evidence Based Practices I have already told both the OSH Admin as well as the Director of the PSRB that I have no desire to put myself out there only to have the powers that be excersize the oversight + judgment against me for utilizing the phone as a means

of appropriate communication for the questioning of those with the ultimate power & control over me.

Furthermore, this bill would allow the hospital to fully shift to accomodate the 370 population as intended. Yes you'll be considering & weighing said Expertise of Doctors & such against Similarly said individuals as myself. I've a bit under 5 yrs left. & I'm not going to bother myself over the difinitive amount of time.

Just know that every provider or Expert will have a different thought too.

The Hospital will continue to struggle & strive to meet its goal(s).

All I know is that I'm a different, better in some respects [but not all] still able to utitize my seemingly some what harsh communication styles, but the dangerous tag that has been tethered to my paper work by those & with knowledge of me by what folks continue to write or document about me don't know or have any first hand knowledge of a person shouldn't be making the often reaching judgments about an individual or the reason of said action(s) is asinine & loose in a spectrum

of scrutiny.

An article on t-PBM follows this letter.

Thank you for taking the time to consider these statements. I hope you fully consider the effect of your actions today.

Sincerely,

Douglas L Styles
2600 Center St NE
Salem OR 97301

3.7. tPBM for Traumatic Brain Injury

TBI is defined as an alteration in brain function or other evidence of brain pathology caused by an external trauma.[229] The pathophysiology of TBI is highly heterogeneous and complex, including adverse signaling pathways activation, inflammation, oxidative stress, mitochondrial dysfunction, and excitotoxic damage. The combination of cellular and physiological disturbances increases the infarct size, neurological decline, and cognitive impairment. TBI occurs more than 50 million times annually worldwide, posing a significant burden on socio-economic and healthcare systems.[230] Currently, due to the heterogeneity of TBI and limited understanding of potential pathophysiological mechanisms, there are no standardized methods or drug treatments.[231] This has led to interest in new treatment approaches such as tPBM. Since the 21st century, many research teams have begun to explore the potential of tPBM as a treatment for acute or chronic TBI. There have been many positive results (see Table S7 in the Supplementary Material).

Hamblin's team found that one transcranial, red (660 nm), or NIR (810 nm) laser treatment performed at 4 h after TBI significantly improved the neurological severity score (NSS) and decreased the brain lesion volume in moderate-to-severe TBI mouse models.[101,102] They also reported that tPBM, when applied during three consecutive days post-TBI, was more effective than only one irradiation, in improving the motor and memory ability in the TBI mouse model.[103] This reduced the degeneration and apoptosis of neurons in the injured region,[103,104] promoting the neurogenesis, synapse formation, and expression level of BDNF in the dentate gyrus (DG) of the hippocampus and in the subventricular zone.[104,105] However, it was also reported that an excessive number of tPBM treatments in mice with TBI could temporarily inhibit the process of brain repair, suggesting that it is important to choose the optimal protocol of tPBM for TBI.[106] Shemesh et al. found that tPBM (810 nm) regulated the hemodynamics, with reduced cell death and stimulation of neurogenesis.[107] Wu's lab found that tPBM (810 nm), combined with energy metabolism regulators (e.g., lactic acid or pyruvate), more effectively increased ATP levels in the impact cortex and reduced neuronal damage and neuroinflammation caused by the TBI.[108,109] Micci's team found that tPBM combined with ultrasound (optoacoustic) treatment effectively mitigated sympathetic dysfunction, neuroinflammation, and dysregulation of neurogenesis in the blast brain injury mouse model.[100,110] Similarly, neuroprotective effects of tPBM for TBI in pre-clinical studies were observed in the laboratories of Whalan,[111,112] Marques,[113] Oron,[114,115] and Zhang.[116]

Some of the above studies compared therapeutic effects from different light parameters. For various wavelengths, Reinhart et al. found that tPBM at 660 and 810 nm, but not at 730 or 980 nm, had neuroprotective effects.[102] This can be due to weak light absorption by CCO of 730 and 980 nm.[102] Regarding the delivery mode, Oron et al. found that the 100-Hz pulsed laser improved the NSS better than CW and the 600-Hz pulsed laser in a TBI mouse model. The authors speculated that this phenomenon may be related to the resonance effect between 100-Hz PW laser and brain waves (such as alpha and theta waves).[115] Also, Ando et al. proposed that a 10-Hz pulsed laser has more neuroprotective and cognitive improvement effects than a 100-Hz PW laser. This may be induced by a positive resonance between the 10-Hz PW laser and the electrical activity of neurons in the hippocampus.[101] Both Abookasis and Whalen's team found that the therapeutic effects of one tPBM treatment was positively correlated with the energy density within a specific range.[107,112]

In clinical trials, Naeser et al. found that tPBM (at 633 and 870 nm) treatment significantly improved the cognitive performance in mild TBI patients.[36] The team also reported that tPBM could enhance sleep duration by an average of 1 h in chronic TBI cases,[37,38] for which poor sleep is a common complaint. Longo et al. studied acute, hospitalized, moderate TBI cases with magnetic resonance imaging (MRI) and reported significant differences between MRI-derived diffusion parameters in white matter tracts between sham versus real LED-treated groups, demonstrating safety and neuro-reactivity for real tPBM in this population.[39] Nawashiro et al. used single-photon emission computed tomography brain scans, after 73 days of LED (850 nm) tPBM, applied twice a day to the left and the right forehead areas and reported that the regional CBF (rCBF) increased by 20% in the left anterior frontal lobe in a severe TBI patient who was in a persistent vegetative state.[40] This was associated with some new arm movement. In addition, Chao et al. reported that after combining intranasal plus transcranial PBM (810 nm) treatments for 8 weeks, there was increased brain volume, improved FC, increased cerebral perfusion, and improved neuropsychological test scores in an athlete, age 23, who had had six concussions in 5.5 years.[35]

In conclusion, tPBM for TBI mitigates the death of brain neurons, decreases neuroinflammation, and improves the self-repair ability of the brain by stimulating synapses formation and proliferation of nerve cells, demonstrating high potential of tPBM for the clinical treatment of TBI.

Transcranial Photobiomodulation (tPBM)

Transcranial photobiomodulation (tPBM) is a non-invasive therapy that uses low-intensity red or near-infrared light to stimulate brain cells. It is a form of photobiomodulation (PBM), which is a broader term for the use of light to modulate biological processes.

Mechanism of Action

tPBM works by delivering light to the brain through the scalp and skull. The light is absorbed by mitochondria, which are the energy-producing organelles within cells. This absorption triggers a cascade of cellular events, including:

Increased mitochondrial function, Reduced inflammation, Improved blood flow to the brain, and Enhanced neurogenesis (creation of new brain cells).

Potential Benefits

tPBM has been investigated for a variety of potential benefits, including:

- **Cognitive enhancement:**

  Studies have shown that tPBM can improve cognitive function, such as memory, attention, and processing speed.
- **Depression and anxiety:**

  tPBM may be effective in treating depression and anxiety by increasing brain metabolism and reducing inflammation.
- **Stroke recovery:**

  tPBM has been used to improve motor function and cognitive abilities after a stroke.
- **Alzheimer's disease:**

  Studies are ongoing to evaluate the potential of tPBM to slow the progression of Alzheimer's disease.
- **Pain management:**
  tPBM may provide relief from chronic pain conditions.

Procedure

tPBM is typically administered using a device that emits red or near-infrared light. The device is placed on the scalp over the area of the brain to be treated. Treatment sessions usually last between 10 and 30 minutes.

Safety

tPBM is considered a safe and well-tolerated treatment. Side effects are rare and typically mild, such as headache, dizziness, or skin irritation.

Current Status

tPBM is an emerging therapy that is still under investigation. While promising results have been observed in preclinical and clinical studies, more research is needed to establish the long-term safety and efficacy of tPBM