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Letter to Editor

Can We Change the Current Landscape of All Addictive Behaviors by Adopting a Personalized Genetic Guided Approach to Help Epigenetically Induce Dopamine Homeostasis at the Brain Reward Circuit?

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Currently planet earth is in deep trouble housing not only the Covid pandemic with new strains like delta and lamda and many people not willing to get vaccinated thereby spreading the virus globally, but our drug and non-drug addiction pandemic as well. Nora Volkow director of the National Institute on Drug Abuse (NIDA) estimated that opioid induced overdoses increased to 30 - 40 percent post COVID. In fact, in 2020, 93,000 people died from narcotic overdoses. In the face of the current Opioid crisis in America killing close to 1,000,000 people since 2004, and even more when we consider tobacco smoking, we are hereby proposing a novel approach to assist in at least attenuating these unwanted premature deaths. The current approach is failing, and other alternative approaches should at least be tested [1].

The current DSM-5 does not actually accurately display the natural brain reward process. The human brain has not been designed to carve out specific drugs like opioids, alcohol, nicotine, cocaine, benzodiazepines or cannabis and process addictions such as gambling as distinct endophenotypes [2]. It is noteworthy that our brain consists of natural ligands for cannabinoids, endorphins, or even benzodiazepines but not alcohol or cocaine [3].

Indeed, the most accurate endophenotype is reward dysfunction (e.g. hypodopaminergic or hyperdopaminergic). To reduce stigma related to the field of addictive behaviors including alcoholism (termed "Isoquinolism") [4], we are encouraging the term "Hypodopameinism" instead.

While we applaud the enormous efforts of NIDA and NIAAA and other societies dedicated to the field of Addiction Medicine like ASAM, the current Medication Assisted Treatment (i.e. 'MAT') that has expanded to needed individuals as an initial "-temporary aid - " to reduce societal harm, in the minds of some is the standard "treatment" [5]. However, by only substituting opioids for opioids without the long-term goal of prophylaxis seems minimalistic.

So, to be clear, there may be other promising modalities other than MAT such as repetitive transcranial magnetic stimulation (rTMS) [6], exercise [7] and even new medications with positive

allosteric modulators of GABA-A receptors [8]. Our proposal to change the current landscape of treatment and relapse prevention, resides in early identification of vulnerability or risk for all Reward Deficiency Syndrome (RDS) addictive behaviors [9]. This concept involves the highly researched Genetic Addiction Risk severity (GARS) coupled [10] with precision KB220Z [11] with at least 50 human clinical trials and genetically bread animals including self-administration studies [12].

Based on human evidence in both abstinent Psychostimulant [13] and Heroin misusers [14], utilization of genetic guided precision KB220 [15], as observed in a generational family study [16], induced "dopamine homeostasis" to effectively rebalance and restore healthier brain function by promoting the cross talk between various brain regions (e.g. Nucleus accumbens, cingulate gyrus, hippocampus etc.) by enhancing resting state functional connectivity [17]. Certainly, the measurement of tonic and phasic tone of dopamine in the brain as accomplished by Badgaiyan's group [18] with ADHD and similar findings in cocaine abuse [19] provides molecular evidence for the fact that low brain tonic dopamine leads to increased intake of psychoactive drugs.

While we are encouraging neurologists to consider these salient points, our laudable goal is to not only save lives, but to redeem joy and improve the quality of life in the recovery community through scientifically sound natural non-addicting alternatives. We are also encouraging scientists across multi-disciplines, but especially genetic investigators to include ethnic groups in their cohorts for better representation.[19] Our team believes that the future is now.

Author Contribution

KB developed the first draft and RDB commented and help edit and added to the manuscript.

Conflict of Interest

KB is the inventor of a number of USA and Foreign patents related to, genetic testing and Pro-dopamine regulation (KB220) licensed Ivitalize Inc.

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