

Chromatic Modulation Ameliorated Symptoms

Page 1 of 3

USPTO Granted Patent 2012/0249964

Chromatic modulation prescriptions determined, as described herein, are operable for enhance visual performance and/or provide neurovisual therapeutic intervention therapy for the symptoms, syndromes, conditions, and anomalies exemplified within Table I. It is appreciated that neurochromatic lenses may provide enhanced visual performance and/or therapy for other symptoms, syndromes, conditions, and anomalies as well.

TABLE I

Exemplary symptoms, syndromes, conditions, and anomalies which neurochromatic lens provide relief

- 1 Visual and auditory dyslexia.
- 2 Blurred vision not fully corrected by ophthalmic lenses.
- 3 Contrast sensitivity compromises.
- 4 Color vision recognition compromises.
- 5 Restricted or compromised neurovisual fields of vision.
- 6 Convergence and divergence insufficiency.
- 7 Unilateral diplopia.
- 8 Compromises of night vision.
- 9 Wet and dry macular degeneration.
- 10 Visual aberrations and delusions not related to a psychotic or delusional condition.
- 11 Photophobia.
- 12 Visually evoked migraines.
- 13 Migraines characterized by aurora, photosensitivity, aberrations, dizziness, limited vision, or blindness.
- 14 Post migraines characterized by any one of the above.
- 15 Visually evoked seizure phenomena characterized by light stimulation or by any one of the above.
- 16 Post seizure activity characterized by any one of the above.
- 17 Cranial and brain hemorrhages.
- 18 Compromises of visual performance and cognitive awareness/alertness caused by blood blockage or hemorrhages (e.g., stroke) and/or traumatic brain injuries or post surgical trauma.
- 19 Some forms of schizophrenia or schizoid phenomena including delusional auditory and visually induced hallucination-type activities.
- 20 Reduction in autistic-type over stimulation of the visual and auditory kind.
- 21 Compromised saccade performance.
- 22 Irregular and inconsistent pupillary responses to light and focus activities.
- 23 Compromised cognitive performance not related to conditioned responses of learning or physical development.
- 24 Eye pain and strain related to visual performance.
- 25 Headaches related to visual pain or strain.
- 26 Neck and shoulder pain or distress related to visual stress.
- 27 Compromised reading speeds related to visual performance.
- 28 Compromised recall related to visual or auditory stimulation.
- 29 Non-migraine visually induced headaches, stress, or discomfort.
- 30 Seasonal affective disorder.
- 31 Computer vision syndrome.
- 32 Compromises in depth recognition and perception. For example, some patients

Chromatic Modulation Ameliorated Symptoms

Page 2 of 3

USPTO Granted Patent 2012/0249964

cannot sustain a sight vocabulary or recognition of other visual data which appears to be a problem of either cognition, memory, or concentration of the neurovisual data that was heretofore already compromised.

- 33 Body coordination and physical performance requiring visual stimulation as one of several variables of perception.
- 34 Disorientation to space and motion.
- 35 Motion sickness.
- 36 Fear of heights.
- 37 Claustrophobia-type responses that cause a constriction and expansion of pupils seemingly consciously uncontrollable.
- 38 Some forms of general and specific anxiety disorders.
- 39 Physiologically related artistic performance.
- 40 Amblyopic (a.k.a. lazy eye) or wandering eye.
- 41 Excessive eye dominance.
- 42 Suppressive vision or visual performance of one eye not related to eye trauma, disease, or aging.
- 43 Specific photophobia related to lighting conditions, working environments, tasks, seasons of the year, or tools.
- 44 Post surgical photophobia.
- 45 Post traumatic brain injuries independent of hemorrhages or not.
- 46 Post traumatic stress disorders or syndromes.
- 47 Post concussion hyper-light sensitivity.
- 48 Compromised night vision.
- 49 Hyper-sensitive night or storm-type related vision compromises.
- 50 Myopia phenomena.
- 51 Astigmatism phenomena.
- 52 Strabismus phenomena.
- 53 "Comfort" or "performance" (e.g., +0.25 to +0.50) ophthalmic prescriptions.
- 54 Pharmaceutical prescription induced photophobia, e.g., caused by most hormonal based medications such as birth control or menopausal prescriptions.
- 55 Compromises in spatial differentiation.
- 56 Disparity between reading, writing, or mathematic capabilities as to any or all of these related to kinesthetic and/or mechanical aptitude.
- 57 Visual comprehension enhanced by "hearing the words" inside one's head or by reading out-loud to process fully.
- 58 The use of a finger or any other kind of marker or place keeper to read and maintain proper tracking.
- 59 High end near-sighted prescriptions.
- 60 Patients suffering from minor to severe depression (e.g., situational to needs of chronic dimness or brightness of light).
- 61 Lacking in physical coordination or clumsiness.
- 62 Premature fatigue or sleepiness with prolonged visual tasks including and not limited to driving, reading, sewing, sightseeing.
- 63 Nausea or upset stomach with visual tasks.

Chromatic Modulation Ameliorated Symptoms

Page 3 of 3

USPTO Granted Patent 2012/0249964

- 64 Abnormal pupillary sizes and shapes not related to bright or darkness.
- 65 Patients who experience “glare” or excessive brightness in normal lighting conditions and situations.
- 66 Patients who cannot drive at night or in stormy conditions because of failed or compromised vision.
- 67 Patients who report a “smudged” or “fogged” vision where upon a physiological examination there are no known causal factors.
- 68 Patients who report visual aberrations such as letters or words moving, switching, disappearing, fading away, changing size or shape, having a glow or luminance around print or coming from the background of the print. These and other dyslexic symptoms are known to respond to a neurochromatic lens.
- 69 Patients who see a white background on the printed page, from art, as having a color or hue, or glare.
- 70 Patients who see night lighting such as street lights, vehicle lights as having a color or hue, streaks, or having an abnormal comfort or affect.
- 71 Patients affected by chronic and severe fevers.
- 72 Patients affected by Down Syndrome.
- 73 Patients with compromises in cognitive function caused by disease, accident, or trauma.
- 74 Patients with varied degenerative muscular diseases.
- 75 Patients affected with chronic fatigue syndrome.
- 76 Limited or narrow band of light spectrum photophobia.
- 77 Major depression not identified as seasonal affective disorder.
- 78 Post traumatic stress disorder visually evoked symptoms.
- 79 Patients who complain or say there is excessive glare or aberrations around the words and images of printed material.
- 80 Patients who complain or say there never is enough light to read comfortably or effectively.

- 81 Patients identified as having retinal pigmatosa, Graves' disease, chronic fatigue syndrome, degenerative muscle diseases of varied sorts, connective tissue diseases of varied sorts, lupus patients, other auto-immune diseased or compromised patients, patients having chemo or radiation therapies.
- 82 Patients with albinism.
- 83 Compromised visually evoked responses.
- 84 Situational visual compromise or visual difficulties.