CLAIMS

1. A method of monitoring and treating seasonal affective disorder symptoms of an individual, the method comprising:

wearing an energized biomedical ophthalmic device;

measuring changes in tear film biomarkers;

correlating the measured changes in tear film biomarkers to associated symptoms of seasonal affective disorder;

generating data from the measured changes related to a light therapy used to treat seasonal affective disorder symptoms; and

implementing generated data into a light therapy regimen.

2. The method of Claim 1, additionally comprising the step of creating an intelligent light therapy schedule according to the light therapy regimen and compensating adjustments made based on one or more conditions or settings specific to the individual.

3. The method of Claim 1, additionally comprising the step of monitoring light exposure and light intensity the individual's ocular environment is exposed to over a period of time.

4. The method of Claim 1, additionally comprising the step of monitoring the circadian rhythm of the individual.

5. The method of Claim 1, additionally comprising the step of gathering individual's preferences to generate data related to the light therapy used to treat seasonal affective disorder.

6. The method of Claim 1, wherein the biomarkers include serotonin.

7. The method of Claim 1, wherein the biomarkers include melatonin.

8. The method of Claim 1, wherein the biomarkers include interleukin-6.

9. An energized biomedical ophthalmic device comprising:

an energy source;

a light source energized by the energy source;

a biomarker sensor, wherein the biomarker sensor can detect changes in biomolecules contained in the tear film of a user and generate signal data corresponding to the measured changes;

a processor in logical communication with the biomarker sensor, wherein the processor operative to receive and process said signal data to output data related to the control of the light source; and

wherein the light source is controlled by and in proximity to the processor.

10. The energized biomedical ophthalmic device of Claim 9, additionally comprising a light sensor in communication with the processor.

11. The energized biomedical ophthalmic device of Claim 9, wherein the biomarker sensor comprises an electrochemical microchip with analytical sensitivity.

12. The energized biomedical ophthalmic device of Claim 11, wherein the electrochemical microchip with analytical sensitivity is capable of measuring changes of melatonin biomolecules in tear film.

13. The energized biomedical ophthalmic device of Claim 11, wherein the electrochemical microchip with analytical sensitivity is capable of measuring changes of serotonin biomolecules in tear film.

14. The energized biomedical ophthalmic device of Claim 11, wherein the electrochemical microchip with analytical sensitivity is capable of measuring changes of interleukin-6 biomolecules in tear film.

15. The energized biomedical ophthalmic device of Claim 9, wherein the energized biomedical ophthalmic device comprises an energized contact lens.

16. The energized biomedical ophthalmic device Claim 15, wherein the energized contact lens comprises a media insert encapsulating the energy source.

17. The energized biomedical ophthalmic device Claim 9, additionally comprising an antenna.

18. The energized biomedical ophthalmic device Claim 17, wherein the antenna can transmit electrical signals from an exterior controller.

19. The energized biomedical ophthalmic device of Claim 9, comprising an energized complementary contact lens comprising the processor in logical communication with a second processor contained in spectacles.

20. The energized biomedical ophthalmic device Claim 9, wherein the light source comprises one or more light-emitting diodes.

CLAIMS

1. A method of monitoring seasonal affective disorder symptoms of an individual, the method comprising:

wearing an energized biomedical ophthalmic device configured to measure changes in tear film biomarkers;

measuring changes in tear film biomarkers with said energized biomedical ophthalmic device;

correlating the measured changes in tear film biomarkers to associated symptoms of seasonal affective disorder; and

generating data reflecting changes in seasonal affective disorder symptoms.

2. The method of Claim 1, additionally comprising the step of monitoring light exposure and light intensity the individual's ocular environment is exposed to over a period of time.

3. The method of Claim 1, additionally comprising the step of monitoring the circadian rhythm of the individual.

4. The method of Claim 1, wherein the biomarkers include serotonin.

5. The method of Claim 1, wherein the biomarkers include melatonin.

6. The method of Claim 1, wherein the biomarkers include interleukin-6.

7. An energized biomedical ophthalmic system comprising:

an energy source;

a light source configured to emit light for the treatment of a seasonal affective disorder of a user, energized by the energy source and positioned to direct light towards an eye of the user;

a biomarker sensor, wherein the biomarker sensor can detect changes in biomolecules related to SAD contained in the tear film of the user and generate signal data corresponding to the measured changes;

a processor in logical communication with the biomarker sensor, wherein the processor is operative to receive and process said signal data to output data related to the control of the light source; and

wherein the light source is controlled by and in proximity to the processor.

8. The energized biomedical ophthalmic system of Claim 7, additionally comprising a light sensor in communication with the processor.

9. The energized biomedical ophthalmic system of Claim 7, wherein the biomarker sensor comprises an electrochemical microchip with analytical sensitivity.

10. The energized biomedical ophthalmic system of Claim 9, wherein the electrochemical microchip with analytical sensitivity is capable of measuring changes of melatonin biomolecules in tear film.

11. The energized biomedical ophthalmic system of Claim 9, wherein the electrochemical microchip with analytical sensitivity is capable of measuring changes of serotonin biomolecules in tear film.

12. The energized biomedical ophthalmic system of Claim 9, wherein the electrochemical microchip with analytical sensitivity is capable of measuring changes of interleukin-6 biomolecules in tear film.

13. The energized biomedical ophthalmic system of Claim 7, wherein the energized biomedical ophthalmic device comprises an energized contact lens.

14. The energized biomedical ophthalmic system of Claim 13, wherein the energized contact lens comprises a media insert encapsulating the energy source.

15. The energized biomedical ophthalmic system of Claim 7, additionally comprising an antenna.

16. The energized biomedical ophthalmic system of Claim 15, wherein the antenna can transmit electrical signals from an exterior controller.

17. The energized biomedical ophthalmic system of Claim 7, comprising an energized complementary contact lens comprising the processor in logical communication with a second processor contained in spectacles.

18. The energized biomedical ophthalmic system of Claim 7, wherein the light source comprises one or more light-emitting diodes.

19. The energized biomedical ophthalmic system of Claim 13, wherein said energized contact lens houses said energy source, said light source, said biomarker sensors, and said processor.