What is claimed is:

1. An External Counter Pulsation (ECP) Device comprising:
    a. an air bladder system comprising one or more helix air bladders and one or more adjunct air bladders wherein each helix air bladder is shaped such that, when attached to a user's thigh, the helix air bladder forms a helix around the thigh that closely follows the major arteries and veins that wrap around the femur bone in a manner that enables the helix air bladder to efficiently exert pressure on the major arteries and/or veins against the femur bone when the helix bladder is pressurized to effect blood flow modulation within the major arteries and veins;
    b. a valve and fluid system pneumatically connected to the air bladder system wherein the valve and fluid system is configured to pressurize and depressurize the helix air bladder and the adjunct air bladder; and
    c. a control system comprising a processor and one or more PPG sensors and one or more ECG sensors wherein the PPG and ECG sensors are connected to the user to collect PPG and ECG signals from the user and wherein the control system is electronically connected to the valve and fluid system to control the valve and fluid system to pressurize or depressurize the air bladders of the air bladder system based on signals detected by the sensors and wherein the adjunct air bladder is positioned at either the lower end or the upper end of the helix air bladder and is pressurized before the helix air bladder so as to direct blood flow towards desired direction
2. The ECP device of claim 1 wherein the dimensions of the helix air bladder are determined by the anatomy of the user so that the helix air bladder can closely follow the major arteries and veins of the user's thigh.

3. The ECP device of claim 1 wherein helix air bladder's length Lin cm is defined as height of the user/3.2 -b where b is between 15 cm to 30 cm, helix air bladder's top width and helix air bladder's bottom width are each about 14 cm and helix angle is about 55°.

4. The ECP device of claim 1 wherein the wattage of the valve and fluid system is less than 1500 Watts.

5. The ECP device of claim 1 wherein the helix air bladder length L does not exceed 50 cm, W1 and W2 do not each exceed 25 cm and total area of the helix air bladder does not exceed 1250 cm^2.

6. The ECP device of claim 1 wherein the pressure within the helix air bladder does not exceed 350 mmHg when fully pressurized.

7. The ECP device of claim 1 wherein the pressure of the helix air bladder is not below 150 mmHg when fully pressurized.

8. The ECP device of claim 1 wherein the ratio of the top width of the helix air bladder W1 to the bottom width W2 of the helix air bladder is from 1:1 to 2:1.

9. The ECP device of claim 1 wherein the helix angle of the helix air bladder is between 30° and 75°.

10. The ECP device of claim 1 wherein the adjunct air bladder is positioned at the lower end of the helix air bladder with the adjunct air bladder overlapping the helix air bladder.

11. The ECP device of claim 1 wherein the adjunct air bladder is positioned at the lower end of the helix air bladder without the adjunct air bladder overlapping the helix air bladder.

12. The ECP device of claim 1 wherein the adjunct bladder is positioned at the upper end of the helix bladder with the adjunct air bladder overlapping the helix air bladder.

13. The ECP device of claim 1 wherein the adjunct bladder is positioned at the upper end of the helix bladder without the adjunct air bladder overlapping the helix air bladder
14. The ECP device of claim 1 wherein the adjunct bladder and the helix bladder are in one single cuff.