CLAIMS

1. A removable filter module for a blood filtering apparatus, comprising:

a filter housing formed of one or more side walls, the filter housing having a partially or fully open proximal face and distal face;

a filter medium disposed within the filter housing, in which the filter medium is formed of a mesh comprising pleated triangle-shaped facets, and in which the mesh has a plurality of pores sized to prevent passage of blood clots and large biological particulates through the pores while permitting passage of blood cells through the pores; and

a body valve positioned on a proximal end of the filter housing, the body valve being partially attached to the filter housing via a joint, the body valve movable between an open and a closed configuration, in which, in the closed configuration, the body valve seals the proximal face of the filter housing , and in which, in the open configuration, the body valve bends at the joint such that one or more unattached portions of the body valve move outward away from the filter housing;

an inlet positioned on a distal end of the body valve and configured to receive blood; and

a hollow body positioned at a proximal end of the body valve and configured to store filtered blood,

in which the hollow body comprises an outlet on a sidewall of the hollow body, the outlet configured to egress filtered blood.

2. A removable filter module according to Claim 1, in which the filter module is sized and configured to fit securely within a blood filtering apparatus and to form a liquid-tight seal with an inner wall of the blood filtering apparatus.

3. A removable filter module according to Claim 2, further comprising a sealing surface protruding from the one or more side walls of the filter housing, in which the sealing surface is configured to compress against the inner wall of the blood filtering apparatus.

4. A removable filter module according to Claim 3, in which the filter housing and the sealing surface are monolithic.

5. A removable filter module according to Claim 3, in which the filter housing, the sealing surface, and the body valve are monolithic.

6. A removable filter module according to Claim 1, in which the filter housing is cylindrical.

7. A removable filter module according to Claim 2, in which the body valve opens when a negative pressure is created within the blood filtering apparatus.

8. A removable filter module according to Claim 1, in which the filter housing is transparent.

9. The removable filter module according to Claim 1, in which the filter medium comprises a biocompatible material.

10. The removable filter module according to Claim 9, in which the biocompatible material includes nylon or polyester.