

## **APPARATUS AND METHOD FOR DETECTING MISFOLDED PROTEIN IN BIOLOGICAL SAMPLE**

### **ABSTRACT**

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An apparatus and method for detecting a misfolded protein in a biological sample. The method comprises: (a) providing a biological sample; (b) mixing the biological sample with a detection reagent, the detection reagent being capable of binding to a misfolded protein; (c) enabling the biological sample mixed with the detection reagent  
10 to come into contact with and pass through a separation matrix, the separation matrix being constructed to adsorb the detection reagent that does not bind to the misfolded protein and to allow passage of the detection reagent binding to the misfolded protein; (d) collecting, in a free liquid state, the biological sample passing through the separation matrix; and (e) detecting the presence of the detection reagent in the collected biological  
15 sample in the free liquid state, wherein the presence of the detection reagent indicates the presence of a misfolded protein in the biological sample. The apparatus and method can be used for diagnosing and predicting diseases characterized by a misfolded protein, e.g. can be used for diagnosing whether a pregnant woman suffers from preeclampsia or is at risk of suffering from preeclampsia.

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[Figure 1]