Purification of *Bothrops jararaca* Fibrinogen and Antithrombin

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Introduction: Human fibrinogen and antithrombin (AT) are plasma glycoproteins of blood coagulation cascade synthesized in the liver. Fibrinogen is composed of two sets of three non-identical polypeptide chains (Aa, Bß and ?) covalently linked by disulfide bonds. Thrombin releases fibrinopeptides A and B, from the Aa and Bß fibrinogen chains, respectively, which forms a clot. AT is composed of a single chain with molecular mass about 60 kDa. AT is an important regulator of blood coagulation due to its ability to inhibit thrombin, factor IXa, and factor Xa in plasma, and other intrinsic coagulation pathway serine proteases like factors XIa and XIIa. **Objective:** The aim of this work was to develop a method for purification of blood coagulation proteins from plasma of *Bothrops jararaca* (*Bj*). **Methods:** The *Bj* plasma was adsorbed by barium chloride and ammonium sulfate. Fibrinogen was purified from precipitated through gel filtration chromatography (Sephacryl S-300 column). AT was obtained from supernatant through affinity chromatography (HiTrap Heparin HP column). The purified proteins were analyzed by SDS-PAGE. **Results:** Using this methodology, we obtained purified fibrinogen and AT with molecular masses of 372 kDa and 61 kDa, respectively, in non reduced conditions. **Conclusion:** This purification process appeared to be reproducible, yielding products homogenous in SDS-PAGE.

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