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Fibrin(ogen)olytic and antiplatelet activities of a subtilisin-like protease from *Solanum tuberosum* (*StSBTc-3*)

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Abstract

Plant serine proteases have been widely used in food science and technology as well as in medicine. In this sense, several plant serine proteases have been proposed as potential anti-coagulants and anti-platelet agents. Previously, we have reported the purification and identification of a plant serine protease from *Solanum tuberosum* leaves. This potato enzyme, named as *StSBTc-3*, has a molecular weight of 72 kDa and it was characterized as a subtilisin like protease. In this work we determine and characterize the biochemical and medicinal properties of *StSBTc-3*. Results obtained show that, like the reported to other plant serine proteases, *StSBTc-3* is able to degrade all chains of human fibrinogen and to produces fibrin clot lysis in a dose dependent manner. The enzyme efficiently hydrolyses β subunit followed by partially hydrolyzed α and γ subunits of human fibrinogen. Assays performed to determine *StSBTc-3* substrate

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