Extracellular vesicles from *Candida albicans* carry functional ENOLASE-1.

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Candida albicans (*Ca*) is the leading causative agent of fungal infections in humans. During the establishment and development of disease, *Ca* constitutively secretes a plethora of compounds involved with pathogenesis. We recently demonstrated that virulence associated molecules are secreted through extracellular vesicles (EV). Our results revealed that the enzyme enolase 1 (ENO1) is the major protein isolated from Ca vesicles. ENO1 is part of the glycolytic pathway but it also functions as a plasminogen-binding protein. In the presence of tissue Plasminogen Activator (tPA) plasminogen is converted to plasmin. The proteolytic activity of plasmin contributes to host tissues invasion by *Ca*. In this work, we investigated the plasminogen-binding protein activity of ENO1 from *Ca* EVs. EVs from culture supernatants of *Ca* were collected by ultracentrifugation. The presence of ENO1 was detected by ELISA and Western-blotting using antibodies to ENO1. Plasminogen-binding activity of ENO1 was performed by ELISA using anti-plasminogen in fractions of intact and disrupted EVs. Hydrolysis of human proteins was evaluated by degradation assays *in vitro* followed by SDS-PAGE and silver staining. Our results confirmed that plasminogen was able to associate with ENO1 from *Ca* EVs. Conversion to plasmin was detected by the cleavage of fibrinogen. In summary, we demonstrated that a component of Ca EVs could potentially interfere with fungal establishment and dissemination. Moreover, the secretion of ENO1 through EVs could explain the high levels of this enzyme during candidiasis and the large titer of antibodies to ENO1 detected in vivo.

Keyword: *Candida albicans*, extracellular vesicles, Enolase-1

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