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## ***Analysys of action of Pothomorphe umbellata hexane fraction to Trichophyton rubrum***

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*Pothomorphe umbellata*, a plant of Brazilian flora, belonging to the family Piperaceae, popularly known as caapeba, pariparoba, capeva, can be found from south of Brazil. It is used in folk medicine as analgesic, diuretic, anti-spasmodic agent, to inflammatory disorders, malaria, asthma and gastrointestinal diseases and some substances found, were sitosterol, stigmasterol and 4-nerolidylcatechol. The great diversity of Brazilian flora can be considered for antifungal activity of some plants. In two past decades the incidence of infections caused by dermatophytes and other fungi has increased, due to the inefficiency of some drugs to these agents. Among the dermatophytes that have a higher incidence worldwide *Trichophyton rubrum* is a prevalent agent of tinea in developed world. The objective of this work was to evaluate the antifungal activity of a hexane fraction of *P. umbellata* to dermatophyte *T. rubrum* (Tr1). The 70% ethanolic extract of *P. umbellata* was fractionated with hexane (FHex). *T. rubrum* grown for 7 days (Tr1Control) was after submitted to treatment with FHex (976 ug/mL) during additional 7 days. After filtration of mycelia, the supernatant was analyzed to protein content and applied to a non-denaturant gel electrophoresis in a gel containing gelatin (2mg/mL). The results showed a reduction of band intensity in the condition in which *T. rubrum* was treated with FHex, suggesting that a possible mechanism of action of *P. umbellata* fraction is by decreased enzyme levels or protease inhibition. More detailed studies must be conducted to characterize the antifungal mechanism of action of *P. umbellata* fraction.

### **Biography**

Rosemeire Cristina Linhari Rodrigues Pietro is Associate Professor of Biotechnology, Faculty of Pharmaceutical Sciences of Araraquara in São Paulo State University-UNESP. She was graduated in Pharmaceutical Sciences from the same University. She completed her PhD in Biochemistry and her postdoctoral research at Ribeirão Preto School of Medicine, University of São Paulo-USP. She is the coordinator of the Postgraduate Course of Pharmaceutical Sciences Faculty of Pharmaceutical Sciences of Araraquara - UNESP. Her research interest includes drug discovery from natural sources, including the study of the mechanisms of action and microbial enzymes.

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