Oroidin: Activity on Pdr5p, a Multidrug Resistance Protein from *Saccharomyces cerevisiae*

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Multidrug resistance is one of the most preoccupying kind of resistance in cancer cells and in pathogenic microorganisms leading to an inefficiency of chemotherapy treatments by overexpressing efflux pumps belonging to super family of the ABC Transporters. In *S. cerevisiae* the PDR5 gene codifies the Pdr5p transporter, a member of the ABC Transporters super family. This protein is homologous and share some substrates with P-glycoprotein and others fungi transporters, making it an interesting model for MDR study. Some research groups are looking in natural compounds new inhibitors for efflux pumps belonging to the ABC family, and marine organisms, such as marine sponges, have significantly contributed for discovering new compounds with biological activity. In this study, we evaluated the effects of Oroidin, a bromopyrrole alkaloid isolated from *Agelas sventres*, on Pdr5p ATPase activity and on rhodamine accumulation assays. The compound demonstrated to be a very good inhibitor of ATPase, with an apparent Ki of 23 μM, but inefficient in promote the inhibition of rhodamine 6 G transport mediated for this protein. Now, studies are being done to evaluate the effects of these compounds in mammalian cells and other proteins related to multidrug resistance phenotype.