Med Chem (Los Angeles) 2017, 7:8(Suppl)
DOI: 10.4172/2161-0444-C1-034

Design and synthesis of inhibitors of the GDP-Mannose Pyrophosphorylase(GDP-MP)

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Leishmaniasis is a neglected tropical disease who occurs in 88 countries and infects 12 million people worldwide that causes hundreds of thousands of deaths per year. Only few treatments are currently available (i.e. antimonials, miltefosine and AmBisome®) while more and more cases of drug resistance appear all around the world. To overcome the limitations of these treatments, we have started to develop a new series of inhibitors of an original target that are essential for parasite survival or virulence : the GDP-Mannose Pyrophosphorylase(GDP-MP), an enzyme involved in glycosylation and essential for amastigote survival.The goal of this project is to develop inhibitors that are specifically active on the GDP-MP of *Leishmania infantum* and do not have side effects on the human homologous enzyme. Currently we are working on click chemistry in order to synthesize stable analogs of GDP-MP in Medicinal Chemistry,

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