Tabernaemontana pandacaqui Poir ethanolic leaf extract’s Phytochemical analysis and In vitro effect on adult Caenorhabditis elegans

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The study aims to identify the metabolites of the ethanolic leaf extract of Tabernaemontana pandacaqui Poir by phytochemical screening and to determine the in vitro effect of ethanolic leaf extract of Tabernaemontana pandacaqui Poir on adult Caenorhabditis elegans. 2 kilos of Tabernaemontana pandacaqui Poir young leaves were collected by manual picking. Authentication of the leaves was also done. The leaves were air dried for 5 days and subjected to overnight incubation in oven. The selected leaves were then soaked in 2600 mL of solvent (70% ethanol) with dilution ratio of 1:6. The mixture was allowed to stand in room temperature overnight and was filtered for phytochemical analysis. Caenorhabditis elegans N2 strain were grown in Nematode Growth Medium Agar. Adult worms in the final culture were particularly used in the research. The ethanolic extract of Tabernaemontana pandacaqui Poir was positive for carbohydrates, flavonoids and tannins, with tannins as a proven anthelmintic. Lower survival rates were seen following longer exposure (24 hours vs. 48 hours) at concentrations 250 ug/mL and 1000 ug/mL. There is statistically significant difference between length of exposure at 24 hrs and baseline (p<0.001), 48 hrs and baseline (p<0.000) and no statistically significant difference between 24 hrs and 48 hrs. The efficacy of the ethanolic extract of Tabernaemontana pandacaqui Poir can be shown at lengths of exposure at 24 hrs and 48 hrs. Ethanolic extract of Tabernaemontana pandacaqui Poir can have a potential anthelmintic efficacy against in vitro culture of adult Caenorhabditis elegans at lengths of exposure of 24 and 48 hours. This pioneer study can be used as a basis for potential antihelminthic drug development against nematodes. We used a natural extract which has lower side effects and is effective.

Biography
Joshua Angelo H Mandanas is a High School Valedictorian in 2009 and obtained his Degree of Bachelor of Science in Medical Technology in 2014 (Magna Cum Laude) in University of Perpetual Help System Laguna. He is also a Registered Medical Technologist. He then finished his Master’s in Public Health Major in Tropical Medicine last year (2017) in University of the Philippines, Manila. Currently, he is one of the Philippines’ youngest national Lecturers of Parasitology and Immunology. He is also a Post-graduate student in the College of Medicine of University of the Philippines, Manila taking up certificate in Biochemistry.

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