Diversity and prevalence of *Blastocystis* in asymptomatic volunteers living in Chiang Rai Province, Thailand

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Blastocystis is one of the most prevalent protists in the gastrointestinal tract of healthy humans. The organism has also been implicated in gastrointestinal infections, though a definitive link has never been reported. Thus, pathogenicity of *Blastocystis* remains controversial. *Blastocystis* is considerably heterogeneous. To date, seventeen genetically distinct lineages of *Blastocystis* have been identified and are referred to as subtypes (STs). Herein, we aim to investigate the diversity, prevalence and distribution of *Blastocystis* in Chiang Rai Province in northern Thailand. We collected fecal samples from 211 asymptomatic ethnic Thais living in six districts of Chiang Rai. We combined light microscopy, cell culturing, PCR, sequencing and phylogenetic analyses to positively identify *Blastocystis*. The barcoding region of the small subunit ribosomal RNA was used to assign subtypes. Twenty three percent of the stool samples were positive for *Blastocystis*. In total, six of the nine subtypes found in humans were identified, indicating that the diversity of *Blastocystis* in the Chiang Rai population is high. Among the identified subtypes, two are considered zoonotic suggesting transfer of *Blastocystis* between animals and humans. This investigation provides the first glimpse of the diversity of *Blastocystis* circulating in asymptomatic individuals living in northern Thailand.