

Blastocystis hominis s. l. ST6 – parasite of chickens – new zoonotic agent in Poland

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Blastocystis spp. is relatively commonly detected in humans in Poland. Molecular analysis of *Blastocystis* isolates we had performed revealed presence of *Blastocystis* subtype ST6 in humans, which was generally considered to be avian parasite and was extremely rarely detected in humans. The goal of the research was to determine natural reservoir of *Blastocystis* sp. ST6 in Poland. Eighty one faecal samples were investigated, including 15 obtained from wild ducks (*Anas platyrhynchos*) and 25 from free living pigeons (*Columba livia*) from Warsaw and 41 samples obtained from free-range domestic chickens (*Gallus gallus* dom.) from two farms (A and B) from Mazovian voivodship. Faecal samples were subjected to culture in modified Jones' medium. The DNA was extracted from culture using QIAamp DNA Mini Kit according to manufacturer's recommendations. Gene fragment of SSU-rRNA was amplified with forward primer RD5 (Clark, 1997) and reverse primer BhRDr (Scicluna *et al*., 2006). The PCR products were purified and subjected to automated Sanger sequencing of both strands. *Blastocystis* was not detected in faecal samples from wild ducks and pigeons. In the faecal material from chickens, from both farms, *Blastocystis* was detected: in 5 of 16 samples and 6 of 25 samples from the farms A and B, respectively. Molecular analyses showed that *Blastocystis* from farm A belonged to the subtype ST6, and *Blastocystis* from farm B belonged to the subtype ST7. The nucleotide sequence of the genetic marker of *Blastocystis* originating from farm A (ST6, 553 bp) was identical to the sequence that had been found in a human isolate obtained from a sample investigated in Parasitology Department of NIZP-PZH. It is the first record of *Blastocystis* sp. ST7 in Poland. Based on the obtained results it can be stated that domestic chickens may be natural reservoir of *Blastocystis hominis* s. l. ST 6 and ST7 in Mazovian region.

We would like to thank Elżbieta Gołąb and Aleksander Masny (NIZP-PZH, Warsaw) for the support of our study.