

## LETTER TO THE EDITOR

### CURRENT STATUS OF *Blastocystis* TERMINOLOGY

February 27, 2009

Sir,

It is noticeable the continuous usage of the “*Blastocystis hominis*” term on current scientific communications<sup>4</sup> and I would like to take this opportunity to comment on the status of the nomenclature of this common gastrointestinal parasite.

Since its discovery, *Blastocystis* was a point of controversy, being first classified as a yeast then as a Protozoarian, until its recent reclassification into the Chromist or Stramenophila kingdom. The term *Blastocystis hominis* was first used by Brumpt almost 100 years ago and since that time it has been used universally to designate this unicellular parasite found in the human gastrointestinal tract<sup>2</sup>.

With the use of new technology as the analysis of its ssRNA and the elongation factor 1 $\alpha$  (EF-1 $\alpha$ ) gene sequences, it has been revealed 10 *Blastocystis* sub types known to date, which may account for the disparities of previous data when assessing its morphology, life cycle and pathogenic role<sup>1,2,5</sup>.

What is more, current epidemiological and experimental data demonstrate the poor host specificity of *Blastocystis* and now is known its transmission from human-to-human, animal-to-human, human-to-animal and animal-to-animal<sup>1</sup>. As a result previous denominations restricted to species such as *Blastocystis galli* for isolates from chickens, *B. anatis* from domestic ducks, *B. anseri* from domestic geese, etc. are proven inefficient.

For this reason, in a consensus published on 2007<sup>3</sup>, the use of the term *Blastocystis* sp. followed by a subtype (from 1 to 10) was proposed for mammal and avian isolates, including those isolated from humans.

Therefore, due to the extreme genetic diversity among *Blastocystis* isolates and until new evidence is presented, the use of the term *Blastocystis* sp. should be encouraged when referring to isolates from human samples.

Table 1  
*Blastocystis* subtype distribution identified in non-human primates, other mammals, birds and humans. Adapted from PARKAR *et al.*<sup>1</sup>

HOST GROUP	<i>Blastocystis</i> sp. subtype (ST)										
	ST1	ST2	ST3	ST4	ST5	ST6	ST7	ST8	ST9	ST10	ST Unknown
Primates	X	X	X	X	X			X		X	X
Pigs	X	X	X		X						
Cattle	X		X		X					X	
Horse/sheep/dog	X	X	X							X	
Rodent/Marsupial				X							
Birds	X	X				X	X	X			X
Humans	X	X	X	X		X	X	X	X		X

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