

# JAMES RENNIE BEQUEST

## REPORT ON EXPEDITION/PROJECT/CONFERENCE

### Expedition/Project/

**Conference Title:** European Cysticercosis Working Group Meeting (ECWG) & Laboratory Visit

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**Travel Dates:** 14<sup>th</sup>-26<sup>th</sup> April 2012

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**Location:** Institute of Tropical Medicine (ITM), Antwerp, Belgium

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**Group member(s):** Lian Doble

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**Aims:**

- 1/ To present my work on the epidemiology of *Taenia solium* in Western Kenya at the ECWG meeting
- 2/ To biotinilate polyclonal antibodies provided by the ITM
- 3/ To become proficient in the running of copro-antigen ELISA for the detection of *Taenia spp.*

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**OUTCOME (not less than 300 words):-** The European Cysticercosis Working Group (ECWG) was set up to enable European based researchers working on *Taenia spp.* (specifically the bovine and porcine tapeworms; *Taenia saginata* & *Taenia solium*) to provide a forum for the discussion of their current work and to enable future plans to be co-ordinated.

*Taenia solium* cysticercosis has been designated by the WHO as a 'Neglected Tropical Disease' and is one of 17 such diseases associated with poverty, which have been highlighted by a recent road-map for control drawn up in January 2012 by the WHO and other partners.

The ECWG meets on a bi-annual basis and was this year hosted by the ITM in Belgium. The first one and a half days of the meeting was dedicated to presentations by the assembled researchers, divided into sessions based around "Diagnostics", "Clinical aspects", "Epidemiology & Socio-economics" and "Control & Prevention". My presentation fell within the Epidemiology and Socio-economics stream and was well received.

The last half day session of this meeting was dedicated to a facilitated group discussion on 'the way forward'. A specific question was posed by Francois Meslin of the WHO which was "Are we tool ready?", this question relates to the recently published road-map for control of *Taenia solium*, which requires that by 2015 a Validated strategy for control and elimination of *T. solium* taeniasis/cysticercosis is available and that by 2020 control interventions are scaled up in several countries.

There was some contention within the group on the issue of 'tool readiness', mainly centring around the imperfect nature of the diagnostic tests available for this parasite. It is my opinion, however, and one I made clear at the meeting, that an imperfect test should not preclude control work moving ahead, as long as those interpreting the data understand the limitations of the diagnostics used.

Attendance at this meeting and the opportunity to present my work to this forum was an invaluable experience, assisting me with networking and building collaborations for future work with this parasite.

After the two day meeting I had the opportunity to remain in Antwerp, where I spent time within the laboratory of Professor Pierre Dorny & Dr Sarah Gabriel. Pierre & Sarah are kindly collaborating with my PhD work by providing the polyclonal antibodies required to perform a Copro-Antigen ELSIA for the detection of secretory antigens from the adult stage of *Taenia solium/ saginata* in human stools.

During my stay at the laboratory I was able to biotinilate polyclonals as well as run the assay

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under the supervision of an experienced laboratory technician so that the technology may be transferred to the laboratories at the International Livestock research Institute, Nairobi, Kenya. We identified several positive carrier samples from a selection I had imported from Kenya and the experience gave me confidence to now run this diagnostic assay in Kenya without the support of the ITM laboratory staff.

My time at ITM also allowed me to meet with Dr Nicolas Praet who generously gave up his time to discuss with me a Bayesian method for evaluating diagnostic test characteristics, which will enable us to evaluate tests in the absence of a gold standard and adjust prevalence estimates based upon the test parameters.

I would like to thank the James Rennie Bequest fund for facilitating this trip, both the attendance at the ECWG meeting and the time spent with my international collaborators have been invaluable. I would also like to thank Professor Pierre Dorny & Dr Sarah Gabriel for their help and support during this trip and with the diagnostic component of my PhD.

A photo of the working group is attached below – I am on the left of the very back row!

