

DYNAMICS AND MANAGEMENT OF POOR RESULTS IN RoEQALM EXTERNAL QUALITY CONTROL SCHEMES IN PARASITOLOGY, DURING 2009-2013

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RoEQALM. External Quality Control Scheme in Parasitology

- has started with **mono-programs** from September 2002 until November 2006
- from February 2007 until present, has continuities with both, **mono-programs** and **multiple- programs (4 times/year)**
- The scheme of External Quality Control in Parasitology is a **qualitative nominal one**

The participant laboratories has received:

- **Control specimens** of preserved stool (formalin)/ control slides of thin/ thick blood smear
- **Information about the patient**
- **A printed form for the answer**

Information about the patient - contain guide marks for the diagnostic orientation

- History of **travel**
- **Origin** of the patient
- Occupation, age (**risk groups**)
- **Clinical significant data** (fever, abdominal pain, diarrhea, splenomegaly, lost of weight)
- **Laboratory data**: degree of eosinophilia/ anemia/ thrombocytopenia)

The printed form for the answer has columns for each item:

- Number **identification of the participant** laboratory
- Number **identification of specimen control**
- **Results:**
 - complete name of the species identified
 - specific stage
- **Signature and stamp of the examiner**

The participant laboratory received finally:

- The confidential **Evaluation Report**
- The **External Quality Control Certificate**

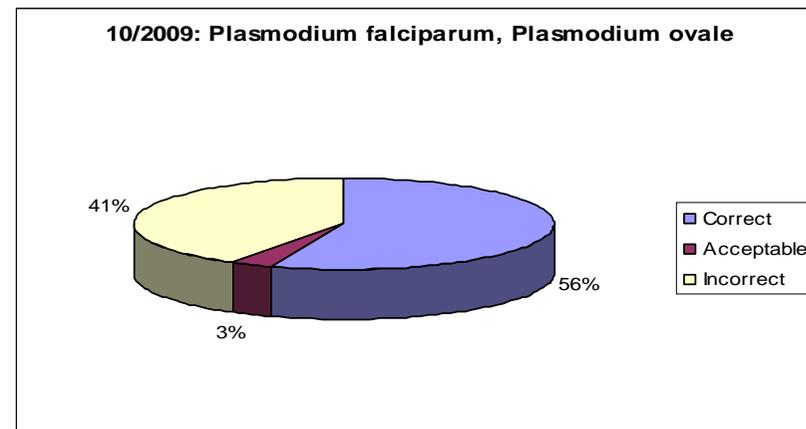
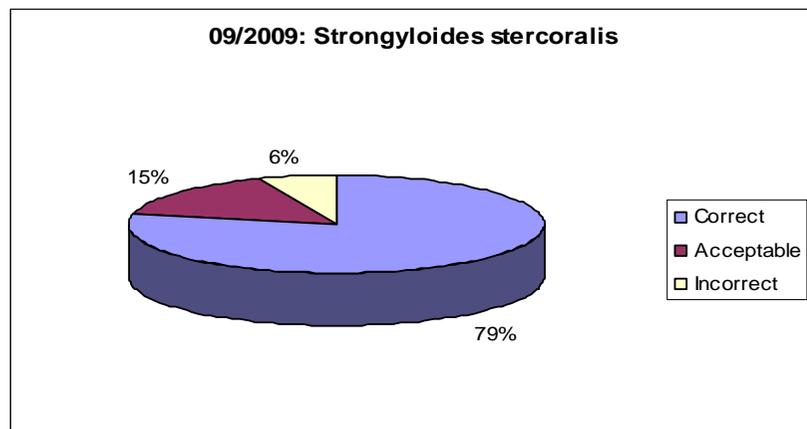
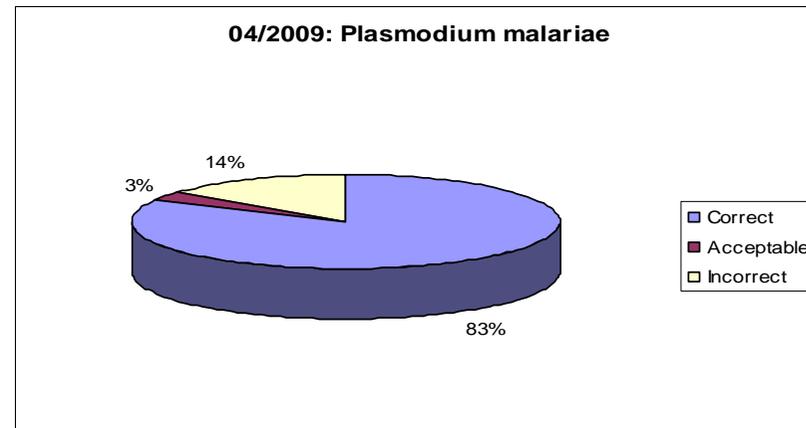
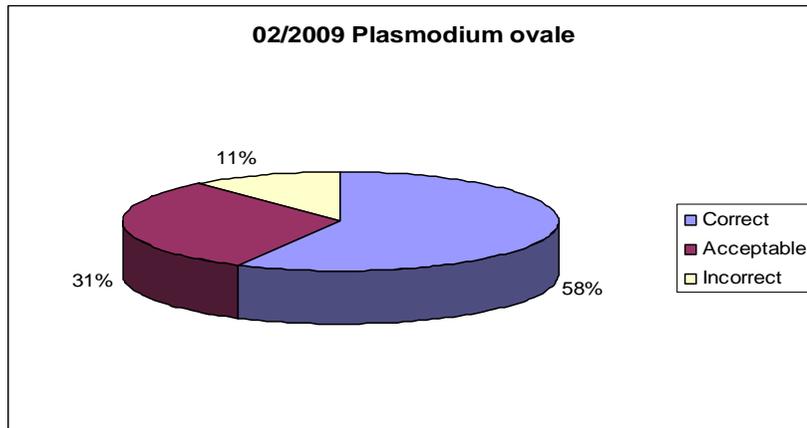
The confidential evaluation report contain:

- The correct answer: **complete name** of the parasitic organisms **and the stages** in control sample/ control slide.
- Information regarding the answers of the other participants.
- **Suggestions/comments.**

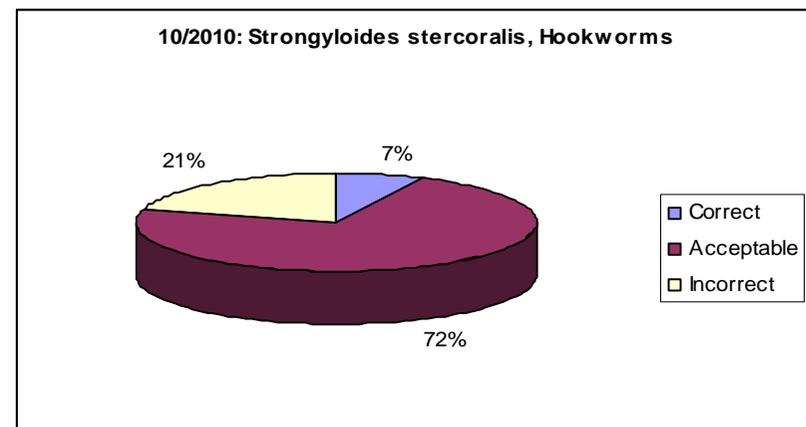
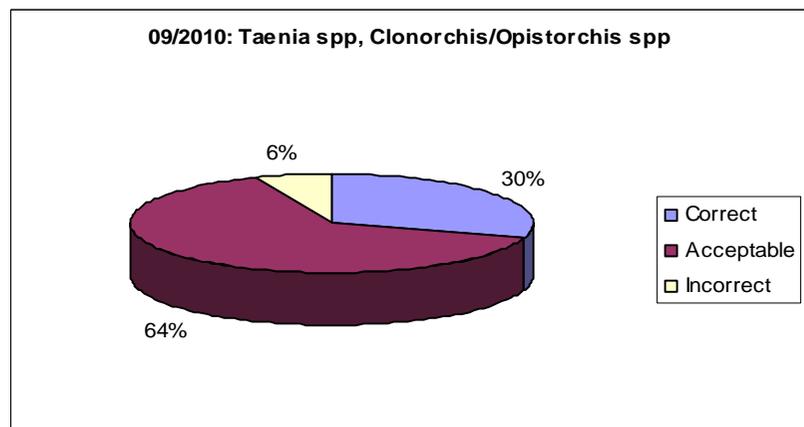
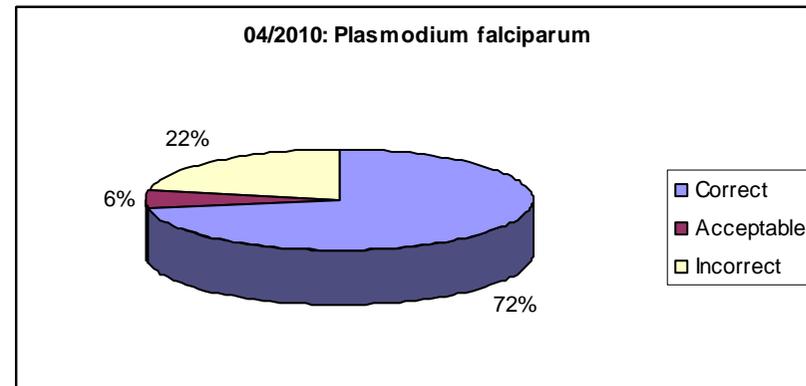
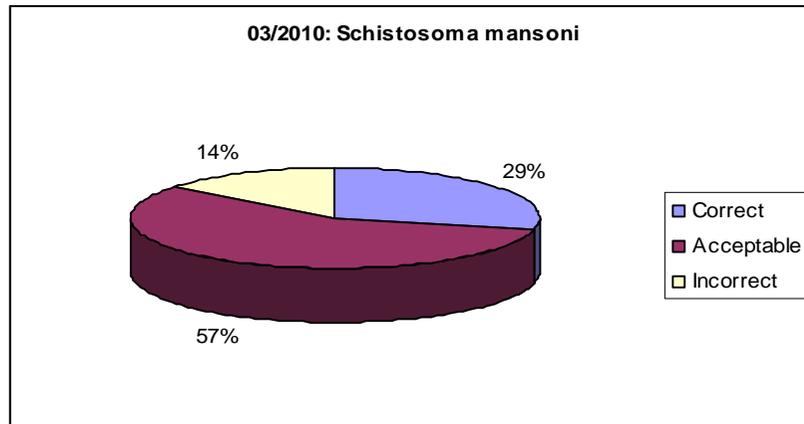
Responses are considered to be:

- **correct** if the participant identified **correctly the parasitic species** present in the control sample, **as well as the corresponding evolutionary stage**.
- **acceptable** if the participant identified correctly **only the parasitic species in the control sample**, but not properly the evolutionary stage or has shown **additionally species nonexistent in the control sample**.
- **incorrect (poor results)** if the participant has **incorrectly identified both the parasitic species and evolutionary stages** in the control sample.

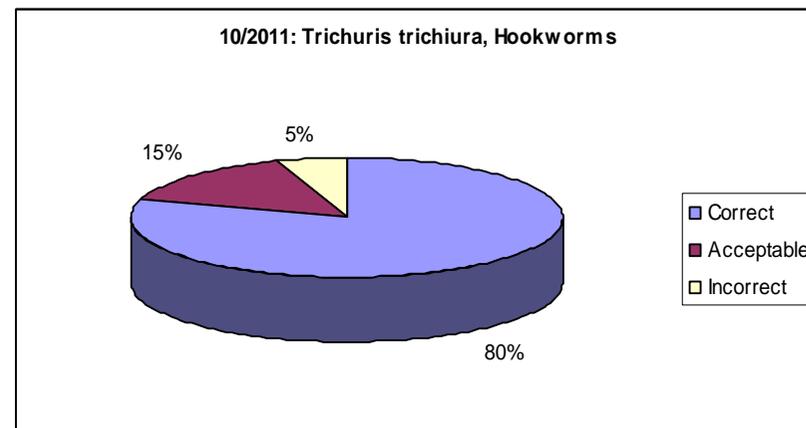
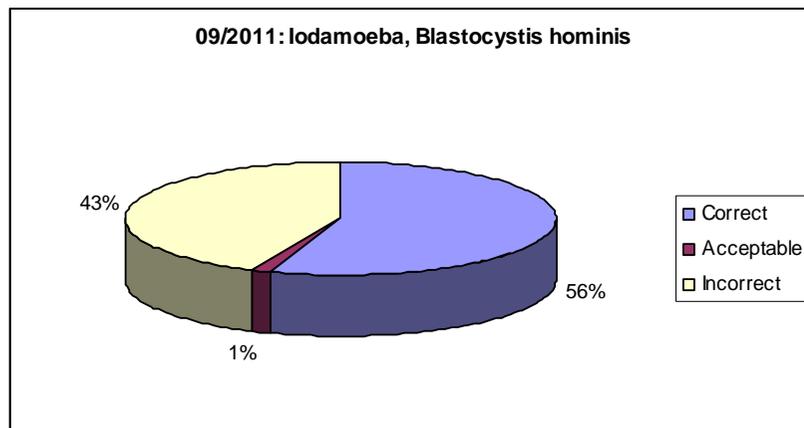
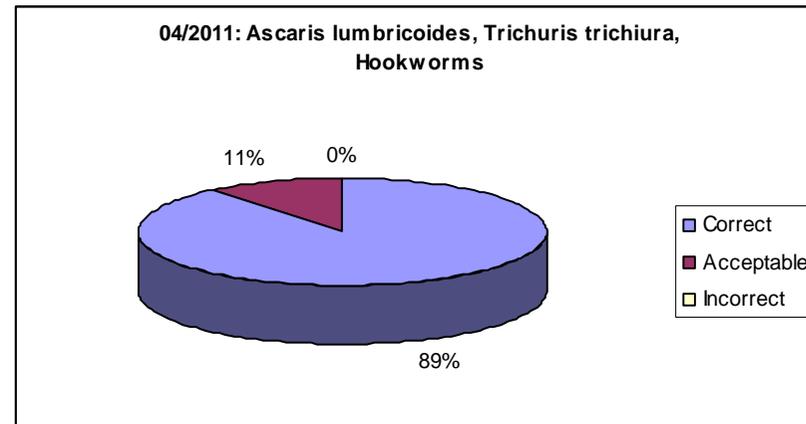
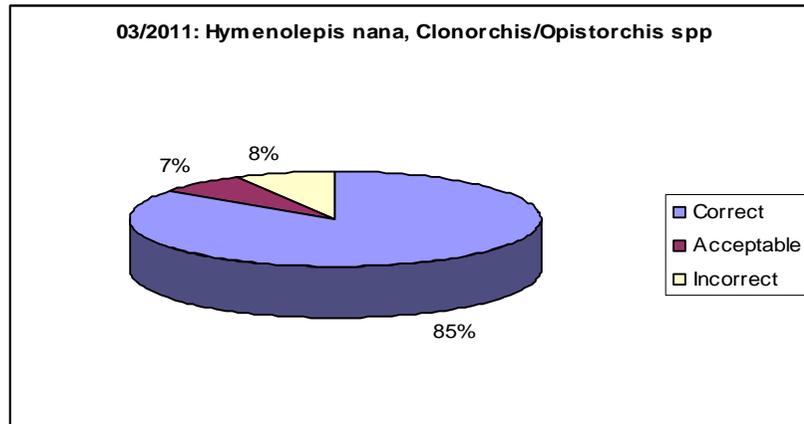
2009: 97 participants



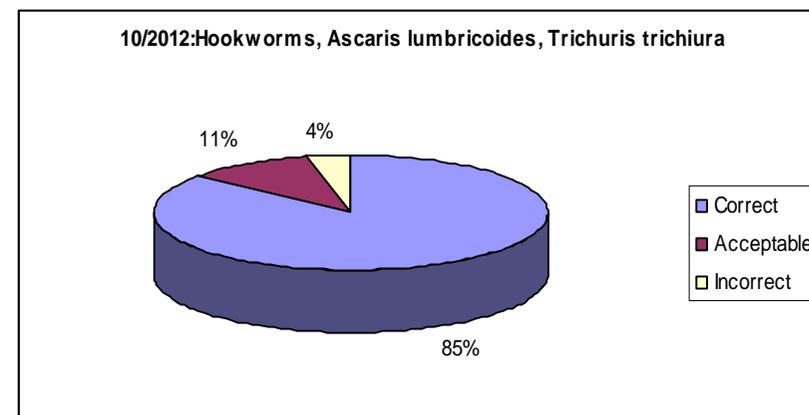
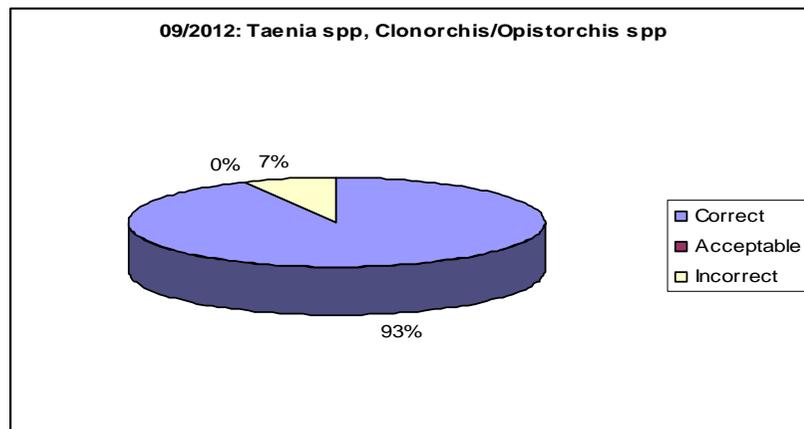
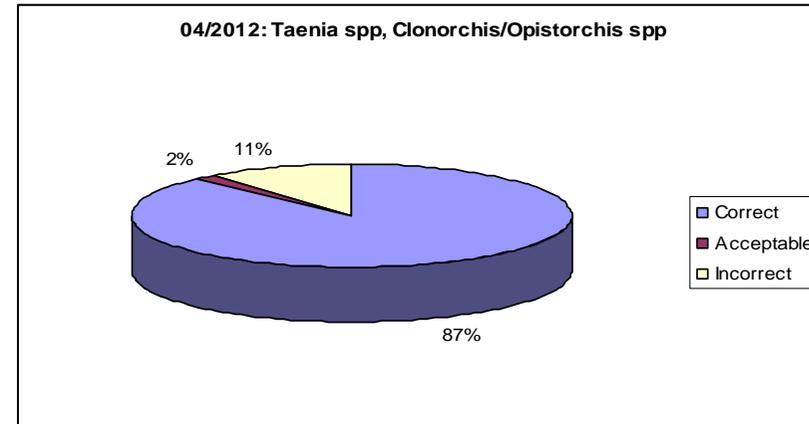
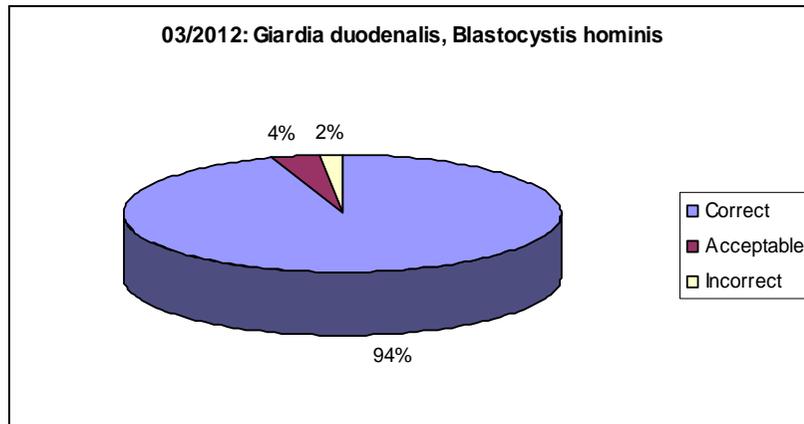
2010: 97 participants



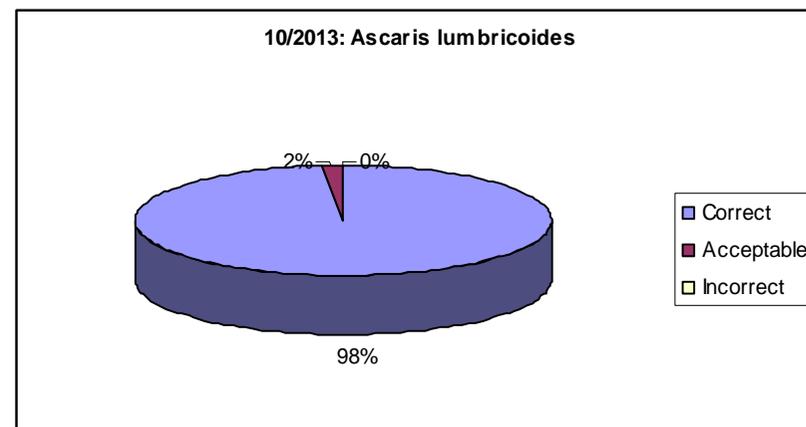
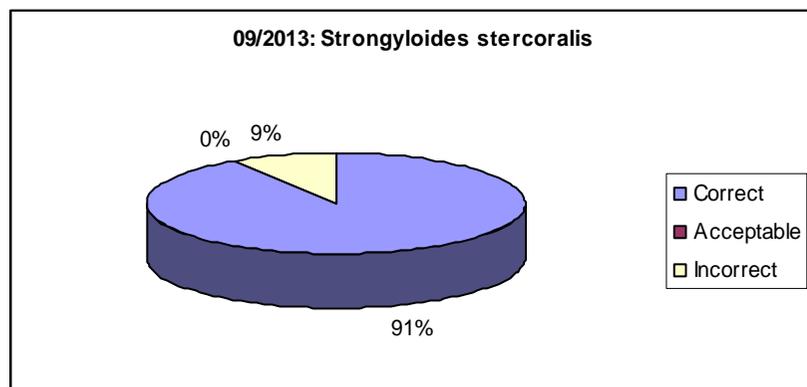
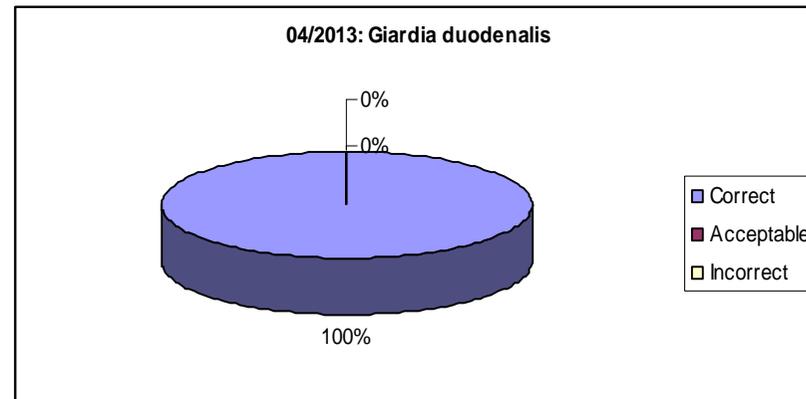
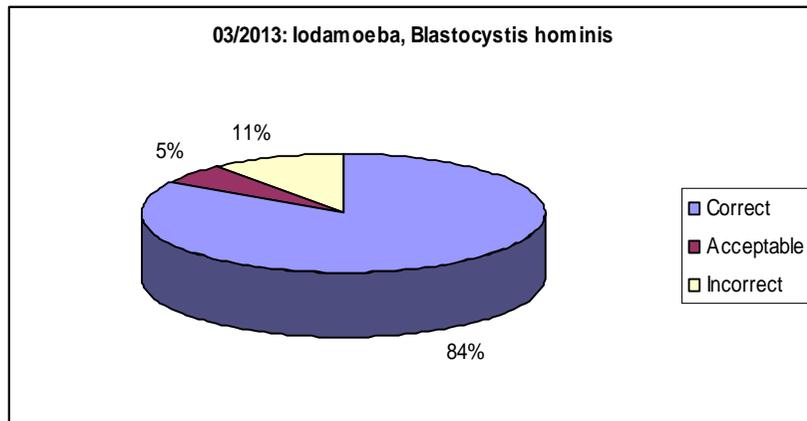
2011: 74 participants



2012: 56 participants



2013: 56 participants



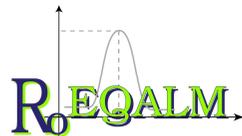
Poor results are correlated with:

- parasitic **organisms** contained in the control sample to be examined; most difficulties were observed in :
 - the **malaria** diagnosis
 - the intestinal **non-pathogenic protozoa** identification
 - the **rarely** found in Romania **helminthes** identification
- the **number** of parasite species in the sample

The most frequent difficulties occurred in the participant answers:

- **Incorrect identification**
- **Incorrect name of the parasite**
- **Confusion between classes:** protozoa/
helminthes
- **Identification of additional species**
- **Confusion between stages:** trophozoite/ cyst/
egg/ larva/ schizont / gametocyte

Measures taken by RoEQALM
for lowering the number of poor
results in the External Quality
Control in Parasitology:



1) **Additional explanations** sent by mailing correspondence to the participants with poor results

for example, in a case where they were mistaken for species of **Strongyloides stercoralis** with **Hookworms** we have sent:

- "The eggs of Hookworms are commonly identified via coproparasitologic examination; they evolves on the ground and at this level are developing Hookworms larvae;
- The *Strongyloides stercoralis* eggs are deposited in the mucosa of the small intestine and the rhabditoyd larvae hatches, go into the intestinal lumen and from here to feces, possible to by found in stool examination+

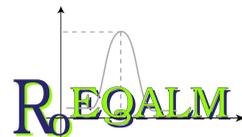
2) **Repeatedly** sending parasitic organisms in control samples

- in September 2011 and March 2013 we have sent *Pseudolimax butschlii*/*Iodamoeba*; the **poor results have dropped** significantly

3) **Short term training courses** in the field of Parasitology for the participants of the RoEQALM External Quality Control:

- May 2011 - **Quality Management in Parasitology**
- March 2012 - **Human intestinal Helminthiasis**
- October 2013 - **Intestinal Protozoa**
- March 2014 - **The difficulties of the laboratory specialist in coproparasitological diagnosis**

Following these directions,
RoEQALM wishes to contribute
to the improvement of
the participants ' performance,
with consecutive decrease of
frequency of poor
results



Thank you!