

Laboratory Diagnosis of Human Parasitic Infections

Monday January 24th – February 4th 2022

9:00 – 17:00 uur

<see actual starting time of face-to-face teaching in schedule below>

Course language:

English

(NB: in the 2022 course - due to corona regulations - only Dutch (speaking) participants will be accepted; still, a large proportion of the course material will still be provided in English)

Course venue:

University of Applied Sciences Leiden (Hogeschool Leiden), Zernikedreef 11, Leiden, Netherlands

<http://www.hsleiden.nl/english>

This location is about 10 minutes 'walk from Leiden Central station.

Speakers: (week 1 or week 2)

Department of Parasitology; LUMC

- E.A.T. Brienen (1,2)
- Prof. Dr. C.H. Hokke (2)
- Dr. L. van Lieshout (1,2)
- Dr. M. Roestenberg (2)

Other departments LUMC

- Prof. Dr. L.G. Visser, Dept. Infectious Diseases (1,2)

Guest-speakers

- Dr. J. van der Giessen, Center of Disease Control the Netherlands ; National Institute of Public Health and Environment, Bilthoven (1)
- Drs. A. van Goor, Microbiology, University of Applied Sciences Leiden (1,2)
- Dr. C.L.M. van Hees, Dermatology, Erasmus MC, Rotterdam (2)
- Dr. J.J. van Hellemond, Microbiology, Erasmus MC, Harbour hospital, Rotterdam (2)
- Drs. L.M. Kortbeek, Center of Disease Control the Netherlands ; National Institute of Public Health and Environment, Bilthoven (2)
- Dr. T.G. Mank, Regional Laboratory for Medical Microbiology and Public Health, Haarlem (1)
- Dr. B. Mulder, Dept. Medical Microbiology and Infectious Diseases; Canisius Wilhelmina Hospital;Nijmegen (2)
- Dr. F. Stelma, Dept. Medical Microbiology, Radboud UMC, Nijmegen (2)
- Dr. J.J. Verweij, Laboratory for Medical Microbiology and Immunology; Laboratory for Clinical Pathology; St. Elisabeth Hospital, Tilburg (1,2)

Colour indication:

Combined Practical&Lecturerroom = Room xx at the HLO

On-line lecture given – real-time; preferably watched together from HLO

Home study (own time) – internet required

Monday 24 January 2022

Approx. 30 min - pre-course homestudy

Introduction to course and laboratory diagnosis of parasitic infection

L. van Lieshout

Approx. 1 hr - pre-course homestudy

Diagnosis of soil transmitted helminths and Strongyloides, some theoretical aspects

L. van Lieshout

Approx. 30 min - pre-course homestudy

Diagnosis of Echinococcoses, Taenia and other common cestodes; some theoretical aspects

L. van Lieshout

09.45 - 10.15 **Registration, coffee/tea**

10.15 - 10.30 Introduction, welcome

10.30 - 11.00 **Quiz and FAQ about pre-course homework**

L. van Lieshout

11.00 - 12.30 **Diagnosis of soil transmitted helminths and cestodes – practice
Strongyloides – the neglected among the neglected - theory**

L. van Lieshout; E.A.T. Brienen, A. van Goor

12.30 - 13.15 **Lunch break**

13.15 - 14.15 **Clinical aspects of echinococcosis**

M. Roestenberg

14.15 - 15.15 **Epidemiology and control of echinococcosis**

J. van der Giessen

15.15 - 15.30 **Coffee/tea break**

15.30 - 16.30 **Diagnosis of soil transmitted helminths and cestodes - practice**

L. van Lieshout; E.A.T. Brienen, A. van Goor

16.30 - 17.00 **Discussion about patient of the day, slide quiz and general review**

L. van Lieshout

Tuesday 25 January 2022

Approx. 30 min - homestudy

Diagnosis of trematodes, some general aspects

L. van Lieshout

- 09.30 – 10.30 **Diagnosis and control of schistosomiasis - theoretical aspects**
Quiz and FAQ about homework
L. van Lieshout
- 10.30 - 10.45 **Coffea/tea break**
- 10.45 - 12.30 **Laboratory procedures for the diagnosis of helminths in stool and urine**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 12.30 - 13.15 **Lunch break**
- 13.15 - 14.00 **Laboratory procedures for the diagnosis of helminths in stool and urine**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 14.00 - 14.45 **Blinded cases for the diagnosis of helminths**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 14.45 - 15.00 **Coffea/tea break**
- 15.00 - 16.30 **Blinded cases for the diagnosis of helminths**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 16.30 - 17.00 **Discussion about patient of the day, slide quiz and general review**
L. van Lieshout

Wednesday 26 January 2022

Approx. 30 min - homestudy

Diagnosis of intestinal protozoa, some general aspects

L. van Lieshout

- 09.30 - 10.30 **Laboratory diagnosis of amoebiasis, theory and practice**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 10.30 - 10.45 **Coffea/tea break**
- 10.45 - 11.30 **Laboratory diagnosis of other pathogenic intestinal protozoa, theory and practice**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 11.30 - 12.30 **Laboratory diagnosis of non-pathogenic intestinal protozoa, theory and practice**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 12.30 - 13.15 **Lunch break**
- 13.15 - 15.00 ***Giardia* and *D. fragilis*, clinical aspects, diagnostics and epidemiology**
T.G. Mank
- 15.00 - 15.15 **Coffea/tea break**
- 15.15 - 16.30 **Blinded cases for the diagnosis of most common intestinal prozoa**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 16.30 - 17.00 **Slide quiz, discussion about patient of the day and general review**
L. van Lieshout

Thursday 27 January 2022

Approx. 30 min - homestudy

Diagnosis of coccidia and microsporidium, some general aspects

L. van Lieshout

- 09.30 - 10.00 **Artefacts when detecting helminth or protozoa in stool or urine**
E.A.T. Brienen
- 10.00 - 10.30 **Laboratory diagnosis of coccidia and microsporidium and artefacts**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 10.30 - 10.45 **Coffea/tea break**
- 10.45 - 12.30 **Laboratory diagnosis of *P. falciparum*, theory and practice**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 12.30 - 13.15 **Lunch break**
- 13.15 - 15.00 **Laboratory diagnosis of non-*P. falciparum* malaria, theory and practice**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 15.00 - 15.15 **Coffea/tea break**
- 15.15 - 16.30 **Blinded cases for the diagnosis of malaria**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 16.30 - 17.00 **Slide quiz, discussion about patient of the day and general review**
L. van Lieshout
- 17.00 - 20.30 **Social Event – (depending on COVID situation during the course)**
Dutch pancakes – Dutch treat (not included in the fee)

Friday 28 January 2022

- 09.00 - 10.30 **New developments in the laboratory diagnosis of parasitic infection**
J.J. Verweij
- 10.30 - 10.45 **Coffea/tea break**
- 10.45 - 11.30 **A brief introduction to other common blood and tissue parasites**
L. van Lieshout
- 11.30 - 12.30 **Laboratory diagnosis of other common blood and tissue parasites**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 12.30 - 13.15 **Lunch break**
- 13.15 - 14.30 **Blinded cases for the diagnosis of parasitic infections**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 14.30 - 15.15 **Discussion about patient of the day, quiz and general evaluation of the week**
L. van Lieshout
- 15.15 - 15.30 **Coffea/tea break**
- 15.30 - 16.45 **Clinical aspects of parasitic infections discussed during the first week**
L. Visser
- 16.45 - 17:00 **Closure of week 1**
L. van Lieshout

Monday 31 January 2022

Approx. 30 min - homestudy

Filariasis and dracunculosis – background from endemic regions

L. van Lieshout

Approx. 30 min - homestudy

Free living amoeba

L. van Lieshout

- 9.15 - 10.15 **Parasites of the skin**
C. van Hees
- 10.15 - 10.30 **Coffea/tea break**
- 10.30 - 12.15 **Malaria microscopy of complicated cases**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 12.15 - 12.30 **Discussion about patient of the day and general review**
Some repetition of week 1
L. van Lieshout
- 12.30 - 13.15 **Lunch break**
- 13.15 - 14.30 **Clinical aspects and treatment of malaria**
L. Visser
- 14.30 - 14.45 **Coffea/tea break**
- 14.45 - 16.00 **Malaria microscopy of complicated cases**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 16:00 – 17:00 **Non-microscopy diagnosis of malaria**
M. Roestenberg

Tuesday 1 February 2022

- 9.00 - 09.30 **Molecular diagnosis of Leishmania and Trypanosoma**
J.J. Verweij
- 09.30 - 10.30 **Ectoparasites**
A.van Goor
- 10.30 - 10.45 **Coffea/tea break**
- 10.45 - 11.30 **Microscopy and macroscopy of ectoparasites and artefacts**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 11.30 - 12.30 **Laboratory diagnosis of special cases (T-cases)**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 12.30 - 13.15 **Lunch break**
- 13.15 - 14.45 **Laboratory diagnosis of special cases (T-cases)**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 14.45 - 15.00 **Coffea/tea break**
- 15:00 – 16:00 **Filariasis in practice**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 16.00 - 16.45 **Research in human parasitology**
virtual impression of research department of Parasitology, LUMC
C.H. Hokke
- 16.45 - 17.00 **Discussion about patient of the day**
L. van Lieshout; E.A.T. Brienen, A. van Goor

Wednesday 2 February 2022

- 09.00 - 10.30 **Trichomonas & clinical cases seen in a Dutch travel clinic or academic hospital**
J. van Hellemond
- 10.30 - 10.45 **Coffea/tea break**
- 10.45 - 12.30 **Blinded cases diagnosis (IP-cases)**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 12.30 - 13.15 **Lunch break**
- 13.15 - 14.00 **Therapy of malaria, leishmania and other more complicated parasitic infections**
L. Visser
- 14.00 - 14.45 **Blinded cases diagnosis (IP-cases)**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 14.45 - 15.00 **Coffea/tea break**
- 15.00 - 16.00 **Toxoplasmosis**
L.M. Kortbeek
- 16:00 – 17:00 **Clinical aspects of toxocariasis and trichinellosis**
L.M. Kortbeek

Thursday 3 February 2022

Approx. 30 min - homestudy

Readings about parasites discussed so far during the course

L. van Lieshout

- 09.30 - 10.30 **Malaria microscopy of complicated cases, including slidequiz**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 10.30 - 10.45 **Coffea/tea break**
- 10.45 - 11.45 **Sarcocistis, gnathostomiasis and other exotic parasites**
M. Roestenberg
- 11:45 – 12:30 **Parasitic cases in severely immunocompromised patients**
F. Stelma
- 12.30 - 13.15 **Lunch break**
- 13.15 - 15.00 **Blinded cases diagnosis (T -cases)**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 15.00 - 15.15 **Coffea/tea break**
- 15.15 - 16.15 **Clinical cases as seen in a Dutch regional laboratory and abroad**
B. Mulder
- 16.15 - 17.00 **Discussion about patient of the day, quiz and general review**
L. van Lieshout

Friday 4 February 2022

Approx 30 min - homestudy

e-learning “Laboratory Diagnosis parasitic infections”

L. van Lieshout

- 09.30 - 10.00 **Answers of the e-learning “Laboratory Diagnosis parasitic infections”**
L. van Lieshout
- 10.00 - 10.30 **More about microscopy-based techniques for the detection of intestinal parasites: Permanent staining, FLOTAC, mini-FLOTAC and others.**
L. van Lieshout
- 10.30 - 10.45 **Coffea/tea break**
- 10.45 - 11.30 **Blinded cases diagnosis (IP-cases)**
L. van Lieshout; E.A.T. Brienen, A. van Goor
- 11.30 - 11.45 **Answers of the T-cases, Case of the day**
L. van Lieshout
- 11.45 - 12.30 **E-diagnosis, artefacts and delusions**
L. van Lieshout
- 12.30 - 13.15 **Lunch break**
- 13.15 - 13.45 **Cases contributed by the participants**
Course participants & *L. van Lieshout*
- 13.45 - 14.15 **Final test**
L. van Lieshout
- 14.15 - 15.30 **Clinical aspects of parasitic infections discussed in during the course**
L. Visser
- 15.30 - 15.45 **Evaluation of the course**
E.A.T. Brienen, L. van Lieshout
- 15.45 - 16.30 **Drinks and departure**
- 16:30** **Closure of week 2**