Laboratory Diagnosis of Human Parasitic Infections
Monday January 27th – February 7th  2020
9:00 – 17:00 uur
<see dayly actual starting time in schedule below>

Course language:
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)
Monday 27 January 2020

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 Echinococcose, Taenia and other common cestodes; some theoretical aspects
L. van Lieshout

09.45 - 10.15 Registration, coffea/tea

10.15 - 10.30 Introduction to room G3.004

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 Coffea/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 28 January 2020

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 29 January 2020

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 30 January 2020

**Approx. 30 min - homestudy**

**Diagnosis of coccidia and microsporidium, some general aspects**  
*L. van Lieshout*

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<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter(s)</th>
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<tbody>
<tr>
<td>09.30 - 10.00</td>
<td><strong>Artefacts when detecting helminth or protozoa in stool or urine</strong></td>
<td>E.A.T. Brienen</td>
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<tr>
<td>10.00 - 10.30</td>
<td><strong>Laboratory diagnosis of coccidia and microsporidium and artefacts</strong></td>
<td>L. van Lieshout; E.A.T. Brienen, A. van Goor</td>
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<td>10.30 - 10.45</td>
<td><strong>Coffee/tea break</strong></td>
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<td>10.45 - 12.30</td>
<td><strong>Laboratory diagnosis of <em>P. falciparum</em>, theory and practice</strong></td>
<td>L. van Lieshout; E.A.T. Brienen, A. van Goor</td>
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<td>12.30 - 13.15</td>
<td><strong>Lunch break</strong></td>
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<td>13.15 - 15.00</td>
<td><strong>Laboratory diagnosis of non-<em>P. falciparum</em> malaria, theory and practice</strong></td>
<td>L. van Lieshout; E.A.T. Brienen, A. van Goor</td>
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<td>15.00 - 15.15</td>
<td><strong>Coffee/tea break</strong></td>
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<td>15.15 - 16.30</td>
<td><strong>Blinded cases for the diagnosis of malaria</strong></td>
<td>L. van Lieshout; E.A.T. Brienen, A. van Goor</td>
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<td>16.30 - 17.00</td>
<td><strong>Slide quiz, discussion about patient of the day and general review</strong></td>
<td>L. van Lieshout</td>
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<td>17.00 - 20.30</td>
<td><strong>Social Event – (optional)</strong></td>
<td><strong>Dutch pancakes – Dutch treat (not included in the fee)</strong></td>
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**Dutch pancakes – Dutch treat (not included in the fee)**
**Friday 31 January 2020**

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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>09.00 - 10.30</td>
<td><strong>New developments in the laboratory diagnosis of parasitic infection</strong></td>
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<td><em>J.J. Verweij</em></td>
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<td>10.30 - 10.45</td>
<td><strong>Coffea/tea break</strong></td>
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<tr>
<td>10.45 - 11.30</td>
<td><strong>A brief introduction to other common blood and tissue parasites</strong></td>
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<td><em>L. van Lieshout</em></td>
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<td>11.30 - 12.30</td>
<td><strong>Laboratory diagnosis of other common blood and tissue parasites</strong></td>
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<td><em>L. van Lieshout;  E.A.T. Brienen, A. van Goor</em></td>
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<tr>
<td>12.30 - 13.15</td>
<td><strong>Lunch break</strong></td>
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<td>13.15 - 14.30</td>
<td><strong>Blinded cases for the diagnosis of parasitic infections</strong></td>
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<td><em>L. van Lieshout;  E.A.T. Brienen, A. van Goor</em></td>
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<td>14.30 - 15.15</td>
<td><strong>Discussion about patient of the day, quiz and general evaluation of the week</strong></td>
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<td><em>L. van Lieshout</em></td>
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<td>15.15 - 15.30</td>
<td><strong>Coffea/tea break</strong></td>
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<td>15.30 - 16.45</td>
<td><strong>Clinical aspects of parasitic infections discussed during the first week</strong></td>
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<td><em>L. Visser</em></td>
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<td>16.45 - 17:00</td>
<td><strong>Closure of week 1</strong></td>
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<td><em>L. van Lieshout</em></td>
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Monday 3 February 2020

Approx. 30 min - homestudy
Filariasis and dracunsulus – within endemic regions
L. van Lieshout

Approx. 30 min - homestudy
Free living amoeba
L. van Lieshout

09.45 - 10.15  Repetition of week 1 assignment
               L. van Lieshout; E.A.T. Brienen, A. van Goor

10.15 - 10.30  Coffea/tea break

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
               L. van Lieshout

12.30 - 13.15  Lunch break

13.15 - 14.45  Parasites of the skin
               C. van Hees

14.45 - 15.00  Coffea/tea break

15.00 - 16.15  Clinical aspects and treatment of malaria
               L. Visser

16:15 – 17:00  Non-microscopy diagnosis of malaria
               M. Roestenberg
Tuesday 4 February 2020

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 - 11.00  Microscopy and macroscopy of ectoparasites and artefacts  
L. van Lieshout;  E.A.T. Brienen, A. van Goor

11.00 - 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 – 14:00  Filariasis in practice  
L. van Lieshout;  E.A.T. Brienen, A. van Goor

14.00 - 14.45  Discussion about patient of the day a and special cases (malaria slide quiz)  
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
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<tr>
<td>09.00 - 10.30</td>
<td>Trichomonas &amp; clinical cases seen in a Dutch travel clinic or academic hospital</td>
<td>J. van Hellemont</td>
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<td>10.30 - 10.45</td>
<td>Coffea/tea break</td>
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<td>10.45 - 12.15</td>
<td>Blinded cases diagnosis (IP-cases)</td>
<td>L. van Lieshout, E. A. T. Brienen</td>
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<td>12.15 - 12.30</td>
<td>Discussion about patient of the day and general review</td>
<td>L. van Lieshout</td>
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<td>12.30 - 13.15</td>
<td>Lunch break</td>
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<td>13.15 - 13.30</td>
<td>Walk to LUMC (room L4-25, Medical Microbiology)</td>
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<td>13.30 - 15.00</td>
<td>Therapy of malaria, leishmania and other more complicated parasitic infections</td>
<td>L. Visser</td>
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<td>15.00 – 15.15</td>
<td>Coffea/tea break</td>
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<tr>
<td>15.15 - 16.00</td>
<td>Research in human parasitology</td>
<td>C. H. Hokke</td>
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<td>16.00 - 17.00</td>
<td>Visit to research department of Parasitology, LUMC</td>
<td>L. van Lieshout, C. H. Hokke</td>
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Thursday 6 February 2020

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 - 12.30  Blinded cases diagnosis (T -cases)
               L. van Lieshout; E.A.T. Brienen, A. van Goor

12.30 - 13.15  Lunch break

13.15 - 14.15  Sarcocistis, gnatostomiasis and other exotic parasites
               M. Roestenberg

14:15 – 15:00  Parasitic cases in severely immunocompromised patients
               F. Stelma

15.00 - 15.15  Coffea/tea break

15.15 - 16.45  Clinical cases as seen in a Dutch regional laboratory and treatment protocols
               B. Mulder

16.45 - 17.00  Discussion about patient of the day and general review
               L. van Lieshout
Friday 7 February 2020

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 more.
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
L. van Lieshout

11.45 - 12.30  Case of the day, E-diagnosis, artefacts and delusions
L. van Lieshout

12.30 - 13.15  Lunch break

13.15 - 13.45  Discussion about patient of the day and cases of the participants
L. van Lieshout together with participants

13.45 - 14.15  Final test
L. van Lieshout

14.15 - 15.30  Clinical aspects of parasitic infections discussed in during the course
M. Roestenberg / 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