



**University of
Zurich**^{UZH}



Institute of Parasitology

European Veterinary Parasitology College (EVPC)

VIPs in Zurich

Very Important Parasites in Zurich – from fundamental to applied research



4th – 10th June 2023

Continuing Education in Veterinary Parasitology for EVPC Diplomates and Residents

Gold sponsor



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IDEXX

General Information

Course Organizers: Manuela Schnyder, Hubertus Hertzberg

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Venue: Institute of Parasitology (IPZ), Vetsuisse Faculty, University of Zurich, Winterthurerstrasse 266a, 8057-Zurich, Switzerland.



How to arrive:

Travelling by plane:

Zurich Airport (Zürich Flughafen) is located at 7 km from the venue, which can be reached by tram in about 30 min or taxi in about 15 min.

Travelling by tram from Zurich Airport: Take tram 10 (direction Zürich HB) until tram station “Milchbuck” (14 stops) and from there tram 7 (direction Stettbach) or tram 9 (direction Hirzenbach) to tram stop “Tierspital” (next stop).

Travelling by train:

Zurich main train station (Zurich HB, Hauptbahnhof) can be reached from abroad with connections from all over Europe. It is located at 4 km from the venue, which can be reached by tram or by taxi in about 15 min.

Travelling by tram from Zurich main train station: Take tram 7 (direction Stettbach) at tram stop “Bahnhofstrasse/HB” until tram stop “Tierspital” (11 stops).

Travelling by car

Zurich may be reached by car using existing major highways (National road tax), ensuring the shortest possible journey times. In the city or on the Campus parking is, however, severely limited and expensive; so you are encouraged to use public transportation.

Public transportation in Zurich

https://www.stadt-zuerich.ch/content/vbz/en/index/tickets/fare_zone_system.html



City of Zurich

No participation fee is asked.

In the course are included: **all lunches and coffee breaks as outlined in the program**; field excursion; teaching and laboratory materials.

Not included in the course are: travel to and from Zurich, accommodation, breakfast, and public transport tickets in Zurich.

Language: The official language will be English

Number of participants: maximum 12

Participants selection: Priority: 1. EVPC Residents, 2. EVPC Diplomates, 3. Other interested candidates.

List of lecturers and assistants (in order of appearance):

Manuela Schnyder, Prof, Dr med vet, Dipl EVPC (MS)

Peter Deplazes, Prof, Dr med vet, Dipl EVPC (PD)

Philipp Kronenberg, Dr. med. vet., Dipl. EVPC (PK)

Andreas Oehm, Dr. med. vet., EVPC Resident (AOE)

Ramon Eichenberger, Dr med vet, PhD, Dipl. EVPC (RE)

Germaine Nüesch, cand. Dr. med. vet. (GN)

Hubertus Hertzberg, PD Dr med vet, Dipl EVPC (HH)

Gillian Muchaamba, Dr. med. vet. (GM)

Kannan Venugopal, Dr, PhD (KV)

Chandra Ramakrishnan, Dr, PhD (CR)

Walter Basso, Dr med vet, Dipl EVPC (WB), Institute of Parasitology, University of Bern

Niels Verhulst, Prof, Dr, PhD (NV)

Alexander Mathis, Prof, Dr sc nat (AM)

Felix Grimm, Dr, PhD (FG)

Assistance: Francesca Gori, lab technician

Assistance. David Hug, cand. PhD

Assistance: Raffael Stegmeyer, lab technician

Assistance: Janine Hertaeg, cand. Dr. med. vet.

Program

Sunday 4th June

To be defined: City tour (optional); Meeting point: main station (below the Niki de Saint Phalle “Ange protecteur”)



Welcome Dinner (organised): Meeting point 18:00, “Milchbuck” tram stop (tram no. 7, 14, 9, 10).

Monday 5th June

08:00 Meeting point: in front of the Institute of Parasitology

8:15-9:30: Lecture (PD): *Cestodes – Biology and Research*

Contents: major cestodes - *Echinococcus multilocularis*; *E. granulosus*; *Taenia* spp.; epidemiology, hosts, clinics, diagnostics, research at IPZ

9:30-10:00: Coffee break

10:00 - 12:30: Lecture and Parasitological Zurich tour (PD, DH)

Contents:

Lecture: **Ecology of *Echinococcus* hosts.**

Visit of Zurich with focus on *Echinococcus multilocularis* ecology; how to collect environmental samples for parasitological investigations

12:30-13:30: Lunch at Mensa of Veterinary Faculty

13:30-16:00: Practical activity (PD, MS, PK, AOE, FG):

Contents: Necropsy of foxes and rodents; recovery of parasites from fox intestine; (filtration-concentration method); microscopy

16:00-16:30: Coffee break

16:30-18:30: Lecture and practical activity (MS): *Respiratory helminths of carnivores*

Contents:

Lecture: Respiratory helminths of carnivores: epidemiology, hosts, clinics, diagnostics

Practical activity: Microscopy of adult lung worms and larvae, morphological identification

(Evening/Dinner: at your own disposal)

Tuesday 6th June

8:15-10:15: Lecture and practical activity (MS, AOE): *Respiratory helminths of carnivores (continuation)*

Contents:

Lecture: major lungworms of cats (*Aelurostrongylus abstrusus*); and dogs: *Angiostrongylus vasorum* research (genetics, diagnostics, pathogenesis) – *Capillaria boehmi* and *aerophila* – *Crenosoma vulpis*

Practical activity: Microscopy of different stages

10.15-10:45: Coffee break

10:45-12:15: Lecture and practical activity (RE, PK): *From liver condemnation to farm management: diagnosis of liver fluke infection*

Contents: Lecture and practical activity on different levels of the diagnosis of liver fluke infections (Fasciolosis, Dicrocoeliosis, Paramphistomosis), including infected organ inspection. Basics in farm management and risk assessment.

12:15-13:15: Lunch at Mensa of Veterinary Faculty

13:15-15:30: Lecture and practical activity (RE, PK): *Development and evaluation of diagnostic tests on the example of Fasciola hepatica*

Contents: Lecture and practical activity on how to design, develop and evaluate a novel diagnostic test. Basics in test characteristics.

15.30-16.00: Coffee break

16.00-16.45: Introduction to the Wednesday Excursion (HH): *Gastrointestinal nematodes in small ruminants: current problems and potential solutions*

16.45-18.30: Lecture (PD): *Cestode research*

Contents: Various topics related to cestode research of the past decades followed by our expert Prof. em. P. Deplazes

Dinner: together, tbd (unless the participants prefer to have time at their own disposal)

Wednesday 7th June

Full day excursion with visits of goat and horse farm in alpine and prealpine areas of Switzerland

7:15: Departure in front of IPZ

Lecture (HH): ***Management of gastrointestinal nematodes in ruminants and horses***

Contents: Gastrointestinal nematodes of small ruminants and horses, epidemiology with focus on the (pre-) alpine region, pasture management, clinic, diagnostic, control measures (monitoring strategies), anthelmintic resistance

Practical activities (HH)

Visit of a goat and a horse enterprise performing advanced parasite control measures. Collection and analysis of samples from animals and pasture; FAMACHA test

(Evening/Dinner: at your own disposal)

Thursday 8th June

8:00-9:30: Lecture and practical activity (GM, KV): **Avian malaria**

9.30-10.00: Coffee break

10.00-12.00: Lecture (CR): ***Toxoplasma gondii: from fundamental to applied research***

Contents: Introduction into Apicomplexa cell biology; novel experimental approaches in *T. gondii* systems biology; dissemination and persistence; immunological control; sexual development in the cat, transcriptomics.

12:00-13:00: Lunch at Mensa of Veterinary Faculty

13.00-14.00: Practical activity (CR): Using databases for practical applications, primer design: rules and tools

14.00-14.45: Lecture and practical activity (MS, FG, GN): **Ocular parasites in carnivores**

Lecture: Clinical, diagnostics and epidemiological aspects of ocular parasites in dogs and cats (*Thelazia callipaeda*, *Encephalitozoon cuniculi*, *Toxoplasma gondii*).

Practical activity: Study of histological slides and clinical samples.

14.45-15.00: Coffee break

15.00-15:30: Practical activity (NV): **Demonstration of insect vector trapping**

15.30-17.30: Lecture and practical activity (WB): *Cyst-forming coccidian parasites in veterinary medicine: clinical, diagnostic and epidemiological aspects.*

Lecture: Clinical, diagnostic and epidemiological aspects of toxoplasmosis, neosporosis besnoitiosis and sarcocystiosis in animals.

Practical activity: Discussion of clinical cases and study of histological slides and fresh clinical samples.

EVENT Dinner, 18.30-22.00: altogether, including all lecturers and assistants, details will follow.

Friday 9th June

8.00-9.45: Lecture (AM): **Very important parasites: arthropods**

Content: *Digest of biology of important arthropods, with a focus on arthropod vectors (modes of pathogen transmission by arthropod vectors; basic reproduction number R_0 equation).*

9.45-10.15: Coffee break

10:15-10:45: Lecture (NV): **Vector entomology group; recent and current research**

10:45 – 12:15 Practical activity: **Demonstration of insect vector trapping and research facilities**

12:15-13:00: Lunch at Mensa of Veterinary Faculty

13:00 – 15.30: Practical activity (NV and others): **Identification of vectors**

Contents: Morphological mosquito & biting midge identification, LAMP, mosquito behaviour

Practical activity (NV and others): **Identification of vectors**

Vector competence studies: mosquito feeding and saliva collection

15.30-16:00: Coffee break

16:00-17:30: Exam

17.45-19.00: **Guided Tour at the Animal Hospital of the Vetsuisse Faculty, Zurich (GN)**

Tbd: Lecture: *Accreditation of a diagnostic laboratory, planning, quality management, standardization*

From approx. 19:00: Diploma delivery and Farewell BBQ at the Institute.

Saturday 10th June

8:30-16:00: Optional for EVPC Residents: Study of IPZ specimen collection (AOE)