

16th

IWOP

International Workshop on Opportunistic Protists

25-26 August 2023

CHUV Hospital

Lausanne Switzerland



Chair and site organizer

Philippe M. Hauser

Scientific committee

Co-chairs: Philippe Hauser (CH) and Melanie Cushion (USA).
Enrique Calderone (ESP) – Olga Matos (POR) – Gilles Nevez (FRA)
Martin Kváč (CZE) – Louis Weiss (USA)

Congress organization

www.meeting-com.ch

Registrations on

www.meeting-com.ch/Conferences & Meetings



Welcome! Bienvenue!

Dear Colleagues and Friends,

In August 2023, we look forward to the 16th IWOP conference and meeting face-to-face in Lausanne, Switzerland.

We anticipate many original scientific presentations after the two-year break since the last IWOP meeting heroically and remotely hosted by our Czech Republic Colleagues.

As in the past, the conference will provide a forum for new knowledge about opportunistic organisms (*Pneumocystis*, *Toxoplasma*, *Cryptosporidium*, Microsporidia, and others).

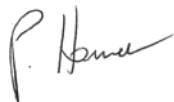
In addition, we will have awards for the best student posters and presentations.

We are also excited to bring back publication of the meeting's summary as well as an opportunity to publish original work with a formal review process in the open access Journal of Fungi.

Knowing we haven't been together socially in a while, there will be a number of events favoring networking:

- Organism-based dinners, after a short walk through the old part of the city
- Dinner on the last night at the Olympic Museum, with a possible tour of the Museum

Thus, on behalf of the organizing committee, I cordially invite you to plan to attend this meeting and I do look forward to seeing you in person in Lausanne!



Philippe Hauser
Institut de Microbiologie, CHUV Lausanne, Switzerland

Program

FRIDAY, AUGUST 25th, 2023

08.30	Registration	AUDITORIUM AREA
09.30-09.45	OPENING REMARKS	AUDITORIUM MATHIAS MAYOR
09.45-10.15	OPENING TALK	AUDITORIUM MATHIAS MAYOR
	T 01 Demystifying the NIH grant application process for international investigators Dr. Dona Love	
10.15-10.45	Coffee break Auditorium area	
10.45-11.45	SESSION 1 : Genetics, genomics	AUDITORIUM MATHIAS MAYOR
10.45-11.00	T 02 Centromere evolution during fungal pathogens <i>Pneumocystis</i> adaptation to mammals Dr. Ousmane Cisse , Dr. Shelly Curran, Dr. H. Diego Folco, Dr. Yueqin Liu, Ms. Lisa Bishop, Dr. Honghui Wang, Dr. Elizabeth Fischer, Dr. A. Sally Davis, Ms. Spenser Babb-Biernacki, Dr. Vinson Doyle, Dr. Jonathan Richards, Dr. Sergio Hassan, Dr. John Dekker, Dr. Pavel Khil, Dr. Jason Brenchley, Dr. Shiv Grewal, Prof. Melanie Cushion, Dr. Liang Ma, Dr. Joseph A Kovacs	
11.00-11.15	T 03* Genome analysis of Microsporidia MB: a malaria-transmissionblocking symbiont of the Anopheles mosquito Ms. Lilian Ang'ang'o , Dr. Jeremy Herren, Prof. Ozlem Tastan Bishop, Mr. Edward Makhulu, Ms. Jacqueline Wahura, Ms. Anne Wairimu, Dr. Thomas Onchuru	
11.15-11.30	T 04 Diversity and phylogeny of mitochondrial genomes of <i>Pneumocystis</i> species from 11 mammalian species Dr. Liang Ma , Dr. Li Peng, Ms. Regan Halverson, Ms. Isabella Lin, Dr. Shelly Curran, Dr. Jason Brenchley, Dr. Patrizia Danesi, Dr. A. Sally Davis, Dr. Evan Dessasau, Ms. Summer Hunter, Dr. Jamie Rothenburge, Dr. Antti Sukura, Dr. Terry Wright, Prof. Melanie Cushion, Dr. Francis Gigliotti, Dr. Sanjeev Gumber, Dr. Ousmane Cisse, Dr. Joseph A Kovacs	

* Student presentation

11.30-11.45

T 05

Genetic polymorphisms and systemic inflammatory response in patients with chronic obstructive pulmonary disease (COPD) colonized by *Pneumocystis jirovecii*

Mrs. Rocio Salsoso, Dr. Vicente Friaza, Ms. Sara Martínez-Rodríguez, **Dr. Carmen de la Horra**, Ms. Mar Navarro, Prof. Ruben Morilla, Mr. Luis Giménez-Miranda, Prof. Francisco J. Medrano, Prof. Enrique Calderon

11.45-13.45

Lunch & Posters

LUNCH & POSTER AREA

13.15-13.45

Presence of the authors at their poster

P 01*

Investigation of a Microsporidia MB protective phenotype against entomopathogenic fungi in the malaria vector, *Anopheles arabiensis*
Ms. Anne Wairimu, Mr. Edward Makhulu, Mr. Joseph Muthoni, Mr. Gabriel Fidel, **Dr. Jeremy Herren**, Prof. Steven Sinkins

P 02*

Localisation and tissue tropism of the symbiont Microsporidia MB in the germ line and somatic tissues of *Anopheles arabiensis*
Mr. Edward Makhulu, Dr. Thomas Onchuru, Dr. Joseph Gichuhi, Mr. Gabriel Fidel, Ms. Anne Wairimu, Mr. Joseph Muthoni, Prof. Lizette Koekemoer, Dr. Jeremy Herren

P 03*

The effect of high and low larval growth temperature on microsporidia MB positive *anopheles gambiae s.l.*
Mr. Gabriel Fidel, Mr. Edward Makhulu, Dr. Thomas Onchuru, Ms. Anne Wairimu, Ms. Cynthia Kingori, Dr. Anthony Kebira, Dr. Jeremy Herren

P 04

Can *Pneumocystis jirovecii* be transmitted via human breast milk?
Dr. Żaneta Zajączkowska, Dr. Magdalena Szydłowicz, Prof. Barbara Królak-Olejnik, Ms. Antonina Lewicka, Mr. Błażej Łukianowski, Dr. Marta Kicia

P 05

Tracking the ability of echinocandin treated mice to transmit *Pneumocystis* infection after re-initiation of the sexual cycle
Mr. Alan Ashbaugh, Prof. Melanie Cushion

P 06*

***Cryptosporidium* oocysts and Microsporidia spores in animal faecal samples in Lagos, Nigeria**
Ms. Adeyanju Adenaike, Dr. Oladele Ojuromi, Ms. Olayemi Shokefun, Ms. Oluwatomiwa Ajana, Mr. Godwin Ani

* Student presentation

P 07

***Enterocytozoon bieneusi* infection In livestock from selected farms In Lagos, Nigeria**

Dr. Oladele Ojuromi, Dr. Fernando Iziequiero, Dr. Soledad Fenoy, Prof. Carmen Del Aguila

P 08

Characterization of the fluorescent probe, monochlorobimate, for rapid assessment of glutathione inhibitors in *Pneumocystis murina*
Ms. Sandy Rebholz, Dr. Alexey Porollo, Prof. Melanie Cushion

P 09

Role of EphA2 tyrosine kinase receptor-signaling pathway in *Pneumocystis pneumonia* (PCP)
Dr. Ted Kottom, Dr. Eva Carmona, Prof. Andrew Limper

13.45-15.00

SESSION 2: Interaction with host

AUDITORIUM MATHIAS MAYOR

13.45-14.00

T 06

Antibody-mediated modulation of *Pneumocystis* host response independent on specific Fc receptor effector functions
Prof. Andrew Limper, Dr. Ted Kottom, Dr. Eva Carmona

14.00-14.15

T 07

On the tolerance to labile copper by *Pneumocystis murina*
Dr. Alexey Porollo, Mrs. Sandra Rebholz, Mr. Steven Sayson, Mr. Alan Ashbaugh, Prof. Melanie Cushion

14.15-14.30

T 08

Investigating symbiont-host interaction in *Anopheles* mosquitoes harboring Microsporidia MB
Ms. Jacqueline Wahura, Ms. Lilian Ang'ang'o, Dr. Thomas Onchuru, Dr. Joseph Gichuhi, Dr. Daniel Masiga, Dr. Jeremy Herren

14.30-14.45

T 09

Effect of roflumilast on the immune response induced by *Pneumocystis* colonization in COPD patients
Dr. Vicente Friaza, Ms. Margarida Ramon, Dr. Carmen de la Horra, Dr. Rocio Salsoso, Dr. Cristina Escorial, Ms. Mar Navarro-Alonso, Dr. Juan Delgado, Prof. Rubén Morilla, Prof. Francisco Medrano, **Prof. Enrique Calderón**

14.45-15.00

T 10

The significance of the WNT/ β -catenin signaling pathway in *Pneumocystis pneumonia*
Dr. Eva Carmona, Dr. Ted Kottom, Prof. Andrew Limper

15.00-15.30

Coffee break

AUDITORIUM AREA

15.30-16.15

SESSION 3: Pathogenesis and model of infection AUDITORIUM MATHIAS MAYOR

15.30-15.45

T 11*

Inflammasome activation and neutrophil extracellular traps during *Pneumocystis pneumonia*

Mr. Steven Sayson, Mr. Alan Ashbaugh, Prof. Melanie Cushion

15.45-16.00

T 12

***Pneumocystis jirovecii* and systemic inflammatory response in patients with chronic obstructive pulmonary disease (COPD)**

Ms. Sonia Gutierrez, Dr. Carmen de la Horra, **Prof. Enrique Calderon**, Prof. Ruben Morilla, Ms. Mar Navarro, Ms. Sara Martínez-Rodríguez, Dr. Juan Delgado, **Prof. Francisco J. Medrano**

16.00-16.15

T 13

In vitro studies of *Pneumocystis* using Precision Cut Lung Slices

Mr. Ferris Munyonho, **Dr. Jay Kolls**

16.15

Time at your leisure

17.30

Walk to the restaurants or by metro M2 to stop “Bessières”

19.00

ORGANISM-BASED dinners at the specific restaurant

(ca. 60 CHF, information will follow)

* Student presentation

SATURDAY, AUGUST 26th, 2023

08.30

Registration

AUDITORIUM AREA

09.30-10.15

SESSION 4: Cellular biology

AUDITORIUM MATHIAS MAYOR

09.30-09.45

T 14*

Single cell RNA sequencing of the *Pneumocystis carinii* life cycle stages

Mr. Aaron Albee, Dr. Alexey Porollo, Mr. Steven Sayson, Mr. Alan Ashbaugh, Dr. Melanie Cushion

09.45-10.00

T 15

Studies on the composition of the *Encephalitozoon hellem* polar tube

Ms. Elizabeth Weyer, Dr. Bing Han, Dr. Rebekah Guevara, Dr. Tadakimi Tomita, **Dr. Louis Weiss**

10.00-10.15

T 16

Structural cell biology of Microsporidia using cryo-ET and volume EM

Dr. Noelle Antao, Ms. Mahrukh Usmani, Dr. Pattana Jaroenlak, Ms. Kacie McCarty, Dr. Nicolas Coudray, Mr. Ari Davydov, Ms. Cherry Lam, Ms. Harshita Ramchandani, Prof. Feng-Xia Liang, Prof. Gira Bhabha, **Prof. Damian Ekiert**

10.15-10.45

Coffee break

AUDITORIUM AREA

10.45-12.00

SESSION 5: Genetics, genomics II

AUDITORIUM MATHIAS MAYOR

10.45-11.00

T 17

Multilocus genetic diversity of distinct *Pneumocystis spp.* Variants in pigs from Austrian farms

Dr. Barbara Blasi, Dr. Liang Ma, Dr. Ousmane Cisse, Ms. Ana Breil, Mr. Christian Knecht, Prof. Herbert Weissenböck, Dr. Christiane Weissenbacher-Lang

11.00-11.15

T 18

Genomic and metabolomic analyses of Microsporidia MB and its malarial inhibition in host *Anopheles* mosquitoes

Dr. Roland Pevsner, Dr. Beth Poulton, Dr. Julien Martinez, Prof. Steven Sinkins

* Student presentation

11.15-11.30	T 19*	<i>Pneumocystis jirovecii</i> antigenic variation uses reassortment of subtelomeric genes' repertoires Mrs. Caroline Meier , Dr. Marco Pagni, Ms. Sophie Richard, Dr. Konrad Mühlethaler, Dr. Joao Almeida, Prof. Gilles Nevez, Prof. Melanie Cushion, Prof. Enrique Calderon, Dr. Philippe Hauser
11.30-11.45	T 20	<i>Pneumocystis jirovecii</i> antigenic variation may be mediated by DNA triplexes Mrs. Caroline Meier, Dr. Marco Pagni, Ms. Sophie Richard, Dr. Konrad Mühlethaler, Dr. Joao Almeida, Prof. Gilles Nevez, Prof. Melanie Cushion, Prof. Enrique Calderon, Dr. Philippe Hauser
11.45-12.00	T 21	Determination of the mitochondrial genetic code in fission yeasts and <i>Pneumocystis</i> through mass spectrometry Dr. Liang Ma , Dr. Honghui Wang, Dr. Ousmane Cisse, Dr. Shelly Curran, Dr. Joseph A Kovacs

12.00-14.00 Lunch & Posters LUNCH & POSTER AREA

13.30-14.00 Presence of the authors at their poster
(list of posters as on Friday 25.08.23)

14.00-15.00	SESSION 6: Epidemiology	AUDITORIUM MATHIAS MAYOR
14.00-14.15	T 22	<i>Pneumocystis pneumonia</i> outbreaks among transplant recipients: unraveling the mystery Prof. Gilles Nevez , Dr. Claire Hoffmann, Dr. Marie-Christine Moal, Dr. Anne Grall-Jézéquel, Dr. Konrad Muehlethaler, Prof. Yannick Le Meur, Dr. Solène Le Gal
14.15-14.30	T 23*	Clusters of patients with <i>Pneumocystis jirovecii</i> pneumonia harboring similar repertoires of genes encoding the major surface glycoproteins Mrs. Caroline Meier , Dr. Marco Pagni, Ms. Sophie Richard, Dr. Konrad Mühlethaler, Dr. Joao Almeida, Dr. Solène Le Gal, Prof. Melanie Cushion, Prof. Enrique Calderon, Dr. Philippe Hauser

* Student presentation

14.30-14.45	T 24	Shelter dogs are important reservoir of opportunistic protists Dr. Magdalena Szydłowicz, Dr. Żaneta Zajączkowska, Dr. Bohumil Sak, Prof. Martin Kváč, Dr. Nikola Holubová, Ms. Antonina Lewicka, Mr. Blažej Łukianowski, Mr. Mateusz Kamiński, Dr. Marta Kicia
14.45-15.00	T 25	Meta-analysis of published data on <i>Pneumocystis</i> in 248 different mammal species Dr. Christiane Weissenbacher-Lang , Ms. Anna Grenl, Dr. Barbara Blasi

15.00-15.45 Coffee break AUDITORIUM AREA

15.45-15.55 Awards AUDITORIUM MATHIAS MAYOR

15.55-16.10 Summary Session AUDITORIUM MATHIAS MAYOR

16.10-16.15 Picture of participants' group AUDITORIUM MATHIAS MAYOR

16.15 Transportation to visit the Olympic Museum or Time at your leisure

16.45 Visit the Olympic Museum (optional, 20 CHF) or Time at your leisure OLYMPIC MUSEUM

18.30 Aperitif with swiss music and singings OLYMPIC MUSEUM RESTAURANT

19.30 Networking Dinner & Farewell OLYMPIC MUSEUM RESTAURANT

Included in registration fee

- Attendance at the Scientific Sessions & Exhibition area;
- Certificate of participation;
- Congress Material (with personalized Name badge);
- Coffee breaks and lunches according to the programme;

Networking Dinner (26.08.2023): CHF 110.00 (VAT incl.)

- The networking dinner is NOT included in the registration fee and has to be booked separately;
- A reservation is mandatory;
- With the possibility to visit the Museum before the dinner (entrance CHF 20.00 ca USD 20)
- Venue: Olympic Museum, Quai d'Ouchy 1, CH-1006 Lausanne, Switzerland, <https://olympics.com/museum> (line M2 direction "Ouchy-Olympique" up to stop "Ouchy-Olympique" + 7 min walk along the lake eastwards).

Payment methods & confirmation

- By credit card when registering online by secure SSL registration;
- A confirmation of payment will be sent by email.

Cancellation policy & refund

- In case of cancellation 30 days prior the event, the refund of the amount paid will be done minus CHF 60.00 for administrative costs. Thereafter no refund is possible;
- Cancellation must be sent by email or fax to the Congress Secretariat;
- Legal jurisdiction is Lausanne/Switzerland.

Publication

The proceedings of 16th IWOP conference will constitute a peer-reviewed special issue of the open access Journal of Fungi (<https://www.mdpi.com/journal/jof>; guest editors: P.M. Hauser, M.T. Cushion, L.M. Weiss). Each article will cost CHF 1000.–.

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