

International intracellular bacteria meeting 2021

**Joint ESCCAR International congress
on Rickettsiae and 9th Meeting of
the European Society for Chlamydia
Research (ESCR)**

August, 24-27, 2021

Auditoire César Roux
University Hospital – CHUV
Lausanne, Switzerland



Organizing Societies

American Rickettsia Society
European Society for Chlamydia Research
European Society on intracellular bacteria (ESCCAR)

Local Scientific and Organizing Committee

Greub Gilbert
Aeby Sébastien
Ardissone Silvia
Jacquier Nicolas
Kebbi-Beghdadi Carole

Institut de Microbiologie
Université de Lausanne – CHUV



Congress office Management

Meeting.com Congress Organisation
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PROGRAM

ORGANIZING SOCIETIES

American Society for Rickettsiology (ASAR)

President	Kevin Macaluso, Baton Rouge, LA
Vice-President	Joao Pedra, Baltimore, MD
Treasurer	Daniel E. Voth, Little Rock, AR
Councilor-at-large	Alison Fedrow, West Newton, PA
Past President	Kelly Brayton, Pullman, WA

European Society for Chlamydia Research (ESCR)

Chair	Gilbert Greub, Switzerland
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Board Member	Angelika Stari, Austria
Board Member	Per-Anders Mårdh, Finland
Board Member	Matthias Maas, Austria
Board Member	Judit Deák, Hungary
Board Member	Konrad Sachse, Germany

European Society on Intracellular Bacteria (ESCCAR)

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Vice-president	Aranzazu Portillo Barrio, Spain
Past-president	Pierre-Edouard Fournier, France
Secretary	Idir Bitam, Algeria
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Board member	Mirja Puollakainen, Finland
Board member	Beate Henrichfreise, Germany

EUROPEAN STUDY GROUP ON

ESGMD Executive Committee

Chair	Gilbert Greub, Switzerland
Secretary	Hege Vangstein Aamot, Norway
Treasurer	Frederic Laurent, France
Education Officer	Amel Renaud Bidias, Cameroon

ESGAMC Executive Committee

Chair	Ran Nir-Paz, Israël
Secretary	Cecile Bébéar, France
Treasurer	Gilbert Greub, Switzerland
Education Officer	Katherine Loens, Belgium
Science Officer	Michael Beeton, United Kingdom

AWARDS COMMITTEE

Best Poster Award	Pierre-Edouard Fournier, France Carole Kebbi-Beghdadi, Switzerland Beate Henrichfreise, Germany
Best Oral Award <i>Chlamydia</i>	Nicolas Jacquier, Switzerland Servaas Morré, The Netherlands Mirja Puollakainen, Finland

Best Oral Award <i>Rickettsia</i>	José A. Oteo, Spain Daniel Paris, Switzerland Aranzazu Portillo Barrio, Spain
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Best Oral Award <i>Others</i>	Chantal Bleeker-Rovers, The Netherlands Max Maurin, France Ran Nir-Paz, Israël
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Welcome

Dear Colleagues,

The "2021 International intracellular bacteria meeting" will take place from 24th to 27th August 2021, in Lausanne, Switzerland.

This meeting is a joint meeting between the **ESCCAR meeting** (European Society on Chlamydia, Coxiella, Anaplasma and Rickettsia), that was held in Marseille in 2018 and the **meeting of the European Society for Chlamydia Research**, that took place in 2016 in Oxford.

The meeting is co-organized by the ESCCAR board, the European chlamydia board and the American rickettsial society. It is also supported by the ESGMD (genomics and molecular diagnostics) and ESMAC (mycoplasma and chlamydia) groups of ESCMID (European Society of Clinical Microbiology and Infectious Diseases).

As usual, we will have dedicated sessions and talks on various aspects including epidemiology, genomics, cell biology, molecular biology, diagnostics & infection management of a variety of bacterial agents, including Anaplasma, Bartonella, Chlamydia, Coxiella, Ehrlichia, Rickettsia, Waddlia and Wolbachia.

Looking forward to welcoming you in Lausanne.

Best regards,



Professeur Gilbert GREUB, MD-PhD
Institute of Microbiology, UNIL-CHUV, Lausanne

Program

Tuesday, August 24th

08.00	Registration	FOYER
08.50	Welcome word	
09.00-10.30	SESSION 1 KEYNOTES	CÉSAR ROUX
	Chairs : Aranzazu Portillo Barrio, La Rioja (ES) ; Gilbert Greub, Lausanne (CH)	
09.00-09.45	Chlamydia is a Master Cell Biologist: The Secret Life of an Intracellular Pathogen	
	Joanne Engel, San Francisco (US)	
09.45-10.30	Rickettsia: lessons from genomics	
	Pierre-Edouard Fournier, Marseille (FR)	
10.30-11.00	Coffee break	FOYER
11.00-12.30	SESSION 2 A HOST-CELL INTERACTIONS	CÉSAR ROUX
	Chairs : Christine Suetterlin, Irvine (US) ; Anders Omsland, Pullman (US)	
11.00-11.30	Manipulation of host cholesterol in the bacterial intracellular niche	
	Stacey D. Gilk, Indianapolis (US)	
11.30-12.00	Anaplasma: cell corruption by an intracellular bacteria	
	J. Stephen Dumler, Bethesda (US)	
12.00-12.15	Short talk	
12.15-12.30	Short talk	

Tuesday, August 24th

11.00-12.30	SESSION 2 B EPIDEMIOLOGY OF AGENTS OF ATYPICAL PNEUMONIA Chairs: Cécile Bebear, Bordeaux (FR) ; Ran Nir-Paz, Jerusalem (IL)	AUGUSTE TISSOT
11.00-11.30	Mycoplasma pneumoniae infections across Europe and Israel (2011-2016) Michael Beeton, Cardiff (GB)	
11.30-12.00	Co-circulation within a network structured population induce cycling epidemics Vicky Chalker, London (GB)	
12.00-12.15	Short talk	
12.15-12.30	Short talk	

12.30-14.00 Lunch time and posters (even numbers <200) **FOYER**

12.30-13.30 Closed ESCCAR Committee Meeting **SEMINAR ROOM 3**

14.00-15.30	SESSION 3 A DIAGNOSIS Chairs: Hege Vangstein Aamot, Lorenskog (NO) ; Onya Opota, Lausanne (CH)	CÉSAR ROUX
14.00-14.30	Diagnosis of rickettsial infections Didier Raoult, Marseille (FR)	
14.30-15.00	Q fever: what's new? Chantal Bleeker-Rovers, Nijmegen (NL)	
15.00-15.15	Short talk	
15.15-15.30	Short talk	

Tuesday, August 24th

14.00-15.30	SESSION 3 B CHLAMYDIA HOST CELL INTERACTIONS Chairs: Jeanne Salje, Newark (US) ; Antony Croxatto, Lausanne (CH)	AUGUSTE TISSOT
14.00-14.30	Effect of Chlamydia on centrosome and cilia Christine Suetterlin, Irvine (US)	
14.30-15.00	The type three secretion system of Waddlia chondrophila Carole Kebbi-Beghdadi, Lausanne (CH)	
15.00-15.15	Short talk	
15.15-15.30	Short talk	

15.30-16.00 Coffee break **FOYER**

16.00-17.30	SESSION 4 MOLECULAR PATHOGENESIS Chairs: Joanne Engel, San Francisco (US) ; Jaime Mota, Caparica (PT)	CÉSAR ROUX
16.00-16.30	Molecular pathogenesis of chlamydial infection Raphaël Valdivia, Durham (US)	
16.30-17.00	Molecular pathogenesis of Bartonella infection Christoph Dehio, Basel (CH)	
17.00-17.15	Short talk	
17.15-17.30	Short talk	

18.00-20.00 KROBS EVENING



SEMINAR ROOMS 3-4

Wednesday, August 25th

07.00-08.00 *Running from Croisettes (Epalinges, 6-7 km)*
 08.00 Registration **FOYER**

09.00-10.30 SESSION 5 A CÉSAR ROUX
MOLECULAR MICROBIOLOGY AND BACTERIAL GENETICS
 Chairs: Deborah Dean, Oakland (US);
 Servaas Morré, Maastricht (NL)
 09.00-09.30 **Genetic dissection of chlamydial infection biology**
 Ken Fields, Lexington (US)
 09.30-10.00 **Transcriptional regulation of Chlamydia**
 Ming Tan, Irvine (US)
 10.00-10.15 Short talk
 10.15-10.30 Short talk

09.00-10.30 SESSION 5 B AUGUSTE TISSOT
FROM THE BENCH TO BEDSIDE
 Chairs: Mirja Puolakkainen, Helsinki (FI);
 Paul Newton, Ventiane (US)
 09.00-09.30 **Scrub typhus: an overview**
 Daniel Paris, Basel (CH)
 09.30-10.00 **Typhus and spotted fever: clinical overview**
 Amel Letaïf, Sousse (TN)
 10.00-10.15 Short talk
 10.15-10.30 Short talk

10.30-11.00 Coffee break Foyer

Wednesday, August 25th

11.00-12.30 SESSION 6 A CÉSAR ROUX
BACTERIAL DIVISION AND PEPTIDOGLYCAN
 Chairs: Beate Henrichfreise, Bonn (DE);
 Raphaël Valdivia, Durham (US)
 11.00-11.30 **Peptidoglycan of chlamydia**
 Georges Liechti, Bethesda (US)
 11.30-12.00 **Chlamydial division**
 Nicolas Jacquier, Lausanne (CH)
 12.00-12.15 Short talk
 12.15-12.30 Short talk

11.00-12.30 SESSION 6 B AUGUSTE TISSOT
MOLECULAR DIAGNOSIS OF INTRACELLULAR BACTERIA
 Chairs: Victoria Jane Chalker, London (GB);
 Michael Beeton, Cardiff (GB)
 11.00-11.30 **How to develop a new diagnostic PCR to detect intracellular bacteria?**
 Kate Templeton, Edinburgh (GB)
 11.30-12.00 **Added value of PCR for diagnosis of atypical pneumonia**
 Katherine Loens, Antwerp (BE)
 12.00-12.15 Short talk
 12.15-12.30 Short talk

12.30-14.00 Lunch time and Posters (even numbers >200) Foyer

12.30-13.00 Committee of European Chlamydia Society SEMINAR ROOM 3

14.00-15.30 SESSION 7 A CÉSAR ROUX
GENOMICS
 Chairs: Linda Mueller, Lausanne (CH);
 Ted Hackstadt, Hamilton (US)
 14.00-14.30 **Lessons from Chlamydia trachomatis genomics**
 Deborah Dean, Oakland (US)
 14.30-15.00 **Genomics of Chlamydia-related bacteria**
 Trestan Pillionel, Lausanne (CH)
 15.00-15.15 Short talk
 15.15-15.30 Short talk

Wednesday, August 25th

14.00-15.30	SESSION 7 B CELL & MOLECULAR BIOLOGY OF OTHER INTRACELLULAR BACTERIA Chairs: Helena Seth-Smith, Basel (CH); Steven Ball, Lille (FR)	AUGUSTE TISSOT
14.00-14.30	The developmental cycle of Orientia tsutsugamushi Jeanne Salje, Newark (US)	
14.30-15.00	Formation of a pathogen vacuole: how Legionella pneumophila kills one bird with many stones Hubert Hilbi, Zurich (CH)	
15.00-15.15	Short talk	
15.15-15.30	Short talk	

15.30-16.00 Coffee break **FOYER**

16.00-17.30	SESSION 8 EVOLUTION Chairs: Cherilyn Elwell, San Francisco (US); Ken Fields, Lexington (US)	CÉSAR ROUX
16.00-16.30	Role of chlamydia in the evolution of plant plastids Steven Ball, Villeneuve d'Ascq (FR)	
16.30-17.00	Evolution of intracellular bacteria Gilbert Greub, Lausanne (CH)	
17.00-17.15	Short talk	
17.15-17.30	Short talk	

18.00-19.00 Visit of Diagnostic Laboratories **LABORATORIES**

Thursday, August 26th

07.00-08.00 *Running from Ouchy (lakeshore, 6-7 km)*

08.00 Registration **FOYER**

09.00-10.30	SESSION 9 A CELL BIOLOGY Chairs: Elizabeth Rucks, Omaha (US); Christoph Dehio, Basel (CH)	CÉSAR ROUX
09.00-09.30	Rickettsia/host-cell interactions Ted Hackstadt, Hamilton (US)	
09.30-10.00	Rickettsia typhi Subverts Intracellular Trafficking to Establish Replicative Niche Mohammed Sayeedur Rahman, Baltimore (US)	
10.00-10.15	Short talk	
10.15-10.30	Short talk	

09.00-10.30	SESSION 9 B IMMUNOLOGY AND HOST GENETICS Chairs: Daisy Vanrompay, Gent (BE); Milos Stojanov, Lausanne (CH)	AUGUSTE TISSOT
09.00-09.30	Host genetics: impact on Chlamydia infection Servaas Morré, Maastricht (NL)	
09.30-10.00	Chlamydia Vaccine Initiative What, Who, How? Toni Darville, Chapel Hill (US)	
10.00-10.15	Short talk	
10.15-10.30	Short talk	

10.30-11.00 Coffee break **FOYER**

Thursday, August 26th

11.00-12.30	SESSION 10 A	CÉSAR ROUX
	MOLECULAR BIOLOGY	
	Chairs: Stacey D. Gilk, Indianapolis (US); J. Stephen Dumler, Bethesda (US)	
11.00-11.30	Metabolic Plasticity and Host Cell Tropism in <i>Coxiella burnetii</i>	
	Anders Omsland, Pullman (US)	
11.30-12.00	Insights into <i>Ehrlichia ruminantium</i> pathogenesis	
	Damien Meyer, Guadeloupe (FR)	
12.00-12.15	Short talk	
12.15-12.30	Short talk	

11.00-12.30	SESSION 10 B	AUGUSTE TISSOT
	METAGENOMICS AND INTRACELLULAR BACTERIA	
	Chairs: Kate Templeton, Edinburg (GB); Max Maurin, Grenoble (FR)	
11.00-11.30	The microbiome of ticks: an overview	
	Aranzazu Portillo Barrio, La Rioja (ES)	
11.30-12.00	<i>Chlamydia trachomatis</i> & urogenital mycoplasma: lessons from vaginal metagenomics	
	Cécile Bebear, Bordeaux (FR)	
12.00-12.15	Short talk	
12.15-12.30	Short talk	

12.30-14.00 Lunch time and posters (odd numbers <200) **FOYER**

12.30-13.00 Closed EU Society Chlamydia Meeting **SEMINAR ROOM 3**

14.00-15.30	SESSION 11 A	CÉSAR ROUX
	VETERINARY MICROBIOLOGY	
	Chairs: Nicole Borel, Zurich (CH); José A. Oteo, La Rioja (ES)	
14.00-14.30	<i>Chlamydia</i> infections in animals and their zoonotic potential	
	Daisy Vanrompay, Gent (BE)	
14.30-15.00	<i>Chlamydia abortus</i> vaccine	
	David Longbottom, Midlothian (GB)	
15.00-15.15	Short talk	
15.15-15.30	Short talk	

Thursday, August 26th

14.00-15.30	SESSION 11 B	AUGUSTE TISSOT
	PLASMIDS OF INTRACELLULAR BACTERIA	
	Chairs: Silvia Ardissonne, Lausanne (CH); Pierre-Edouard Fournier, Marseille (FR)	
14.00-14.30	<i>Chlamydia</i> plasmids	
	Ian Clarke, Southampton (GB)	
14.30-15.00	Rickettsial plasmids and transformation	
	Juan J. Martinez, Baton Rouge (US)	
15.00-15.15	Short talk	
15.15-15.30	Short talk	

15.30-16.00 Coffee break **FOYER**

16.00-17.30	SESSION 12	CÉSAR ROUX
	SECRETION SYSTEMS	
	Chairs: Carole Kebbi-Beghdadi, Lausanne (CH); Richard Hayward, Cambridge (GB)	
16.00-16.30	New insights into how <i>Chlamydia</i> effectors modulate host cell functions	
	Cherilyn Elwell, San Francisco (US)	
16.30-17.00	The role of type III secreted proteins during the <i>Chlamydia</i> infectious cycle	
	Jaime Mota, Caparica (PT)	
17.00-17.15	Short talk	
17.15-17.30	Short talk	

18.15 Visit of the Olympic Museum **OLYMPIC MUSEUM**
19.00 Aperitif **QUAI D'OUCHY 1**
20.00 Gala dinner **1006 LAUSANNE**

Friday, August 27th

07.00-08.00 *Running from La Sallaz to Sauvabelin (6-7 km)*

08.00 Registration **FOYER**

09.00-10.30 SESSION 13 A CÉSAR ROUX

NEW PATHOGENS
Chairs: Amel Letaïef, Sousse (TN);
David Longbottom, Midlothian (GB)

09.00-09.30 **Role of Chlamydia-related bacteria in human diseases**
Mirja Puolakkainen, Helsinki (FI)

09.30-10.00 **The role of Candidatus Rickettsia as humans pathogens**
Jose A. Oteo, La Rioja (ESP)

10.00-10.15 Short talk

10.15-10.30 Short talk

09.00-10.30 SESSION 13 B AUGUSTE TISSOT

CELL WALL AND ADHESINS
Chairs: Toni Darville, Chapel Hill (US);
Nicolas Jacquier, Lausanne (CH)

09.00-09.30 **The chlamydial peptidoglycan remodeling machinery**
Beate Henrichfreise, Bonn (DE)

09.30-10.00 **Overview on chlamydial adhesins**
Johannes Hegemann, Düsseldorf (DE)

10.00-10.15 Short talk

10.15-10.30 Short talk

10.30-11.00 Coffee break Foyer

Friday, August 27th

11.00-12.30 SESSION 14 A CÉSAR ROUX

LAY COMMUNICATION

Chairs: Carole Kebbi-Beghdadi, Lausanne (CH);
Dmitry Kopelyanskiy, Lausanne (CH)

11.00-11.15 **Pint of Science bridges the gap. Scientists and public meet at a bar**
Dmitry Kopelyanskiy, Lausanne (CH)

11.15-11.30 **How a spoonful of viruses helps to fight against antibiotic resistance**
Shawna McCallin, Lausanne (CH)

11.30-11.45 **The Dark and Bright side of the force: teaching the importance of microbes from school to University**
Pilar Junier, Neuchâtel (CH)

11.45-12.00 **www.microbes.ch: a website dedicated to lay communication about pathogenic microorganisms**
Carole Kebbi-Beghdadi, Lausanne (CH)

12.00-12.15 **Lay communications using movies: the exposure science film Hackathan project**
Enrico Milanese, Lausanne (CH)

12.15-12.30 Short talk

11.00-12.30 SESSION 14 B AUGUSTE TISSOT

EPIDEMIOLOGY

Chairs: Victoria Jane Chalker, London (GB);
Philippe Christe, Lausanne (CH)

11.00-11.30 **Epidemiology and treatment of scrub typhus and murine typhus**
Paul Newton, Ventiane (LA)

11.30-12.00 **Entomology: a key tool for epidemiology of intracellular bacteria**
Idir Bitam, Alger (DZ)

12.00-12.15 Short talk

12.15-12.30 Short talk

12.30-14.00 Lunch time and posters (odd numbers >200) Foyer

Friday, August 27th

14.00-15.30 **SESSION 15 A** **CÉSAR ROUX**

PATHOGENESIS OF INTRACELLULAR BACTERIA

Chairs: Giorgia Caruana, Lausanne (CH); Olivier Peter (CH)

14.00-14.30 **Describing the interaction between Bartonella adhesin A and Fibronectin as a novel therapeutic concept to treat bacterial infections**

Volkhard Kempf, Frankfurt am Main (DE)

14.30-15.00 **Francisella tularensis: a water-borne pathogen**

Max Maurin, Grenoble (FR)

15.00-15.15 Short talk

15.15-15.30 Short talk

14.00-15.30 **SESSION 15 B** **AUGUSTE TISSOT**

CELL MICROBIOLOGY

Chairs: Claire Bertelli, Lausanne (CH); Damien Meyer, Guadeloupe (FR)

14.00-14.30 **Chlamydia T3SS effectors: key examples**

Elizabeth Rucks, Omaha (US)

14.30-15.00 **Cell biology of Chlamydia**

Richard Hayward, Cambridge (GB)

15.00-15.15 Short talk

15.15-15.30 Short talk

15.30-16.00 **Coffee break** **FOYER**

16.00-17.30 **SESSION 16 – KEYNOTE** **CÉSAR ROUX**

WHAT'S NEW?

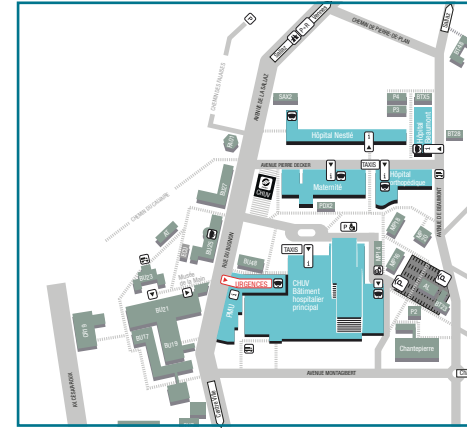
Chairs: Chantal Bleeker-Rovers, Nijmegen (NL); Gilbert Greub, Lausanne (CH)

16.00-16.45 **Molecular microbiology of Anaplasma**

Jason A. Carlyon, Richmond (US)

16.45-17.15 Awards

17.15-17.30 Farewell



Congress venue

University Hospital / CHUV, Auditoire César Roux,
Rue du Bugnon 46, 1011 Lausanne, Switzerland

Arrival

- By car Exit motorway « Lausanne-Vennes / Hôpitaux »
Take the « Route de Berne » at the traffic lights
Follow the CHUV boarding & « P-CHUV » for parking
The auditoire is at the entrance on your left, at the exit of the parking
- By metro (M2) From Lausanne station in direction of Croisettes / Sallaz
Exit at « CHUV » station
The CHUV is on your left.

International intracellular bacteria meeting 2021

Please return to

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www.meeting-com.ch/Conferences/Meetings/2020

Title Prof Dr Mr Mrs Ms

Institution _____

First name _____ Family name _____

Address _____

Postal code/City/Country _____

E-mail _____

Registration fee

Early fee

(before August 1, 2021)

Late fee & onsite

(as of August 2, 2021)

Participation

CHF 500.00

CHF 650.00

Student

CHF 300.00

CHF 400.00

Gala Dinner at the Olympic Museum on Thursday, August 26, 2021

CHF 120.00 (TTC) limited places

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 programme.

Payment & cancellation policy

A payment by credit card is mandatory for any registration from outside Switzerland. In case of cancellation 30 days prior to the event, the refund of the amount paid will be done net of CHF 60.00 for administrative costs. Thereafter no refund possible. Any registration done within the «early bird» time must be paid during this period. If not the case, the invoice is automatically updated at the current price. Legal jurisdiction is Lausanne/Switzerland.