WEDNESDAY, 11th October 2017 - Euroforum (San Lorenzo de El Escorial, Madrid)

14:00 Registration

17:00 - 17:15 Welcome to Apicowplexa

Opening Lecture

Session Chairs: Andrew Hemphill and Alexandre Leitão

17:15 - 18:15 Apicomplexan parasites: Their relevance for livestock production and veterinary public health. Franz Conraths, Friederich Loeffler Institute, Germany

18:15 - 19:15 “Prison Break”. The natural egress of Toxoplasma from infected cells is a tightly programmed event. Dominique Soldati, University of Geneva, Switzerland

20:00 Welcome reception

THURSDAY, 12th October 2017 - Euroforum (San Lorenzo de El Escorial, Madrid)

Systems biology, 8:30 - 10:00

Session Chairs: Dominique Soldati and Jeroen Saeij

Oral communications

8:30 - 8:45 An integrated model of host-parasite interactions in Coccidian parasites, Dong Xia

8:45 - 9:00 The three-dimensional ultrastructure of Eimeria tenella sporozoites, Alana Burrell

9:00 - 9:15 Transcriptome modulation of bovine trophoblast cells in vitro by Neospora caninum, Pilar Horcajo

9:15 - 9:30 Evolution of the micropyle of Eimeria acervulina young oocyst and its assumed role, Jean Michel Répérant
9:30 - 9:45  Generation of population genomics data for an intracellular parasite of nucleated mammalian cells, Richard Bishop

9:45 - 10:00  Differential gene expression in Neospora caninum, John Ellis

10:00 - 10:30  Coffee Break

Host-parasite interactions I, 10:30 - 12:30

Session Chairs: Jon Boyle and Jonathan Wastling

Invited Speaker

10:30 - 11:15  Toxoplasma proteins that modulate the host cell. Jeroen Saeij, University of California-Davis, United States of America

Oral communications

11:15 - 11:30  A new class of apically confined, transmembrane micronemal proteins play a pivotal role in host cell invasion by Toxoplasma gondii tachyzoites, Furio Spano

11:30 - 11:45  Toxoplasma gondii aspartyl protease 3: a microneme and rhoptry protein maturate essential for host plasma membrane lysis during egress and rhoptry discharge during invasion, Sunil Kumar Dogga

11:45 - 12:00  miR-126-5p by direct targeting of JNK-interacting protein-2 (JIP-2) plays a key role in Theileria-transformed macrophage virulence, Malak Haidar

12:00 - 12:15  In vitro characterization of bovine macrophages infection by Neospora caninum isolates of high and low virulence, Marta García-Sánchez

12:15 - 12:30  Virulence and attenuation of Theileria annulata-infected macrophages are stable parasite-associated traits transferable to fresh macrophages of a different MHC type, Gordon Langsley

12:30 – 14:00  Lunch

Host-parasite interactions II, 14:00 - 15:00

Session Chairs: Furio Spano and Fiona Tomley

Oral communications

14:00 - 14:15  Cultivation of Hammondia hammondi in vitro reveals new insights into the timing of parasite development that can be exploited for genetic manipulation, Jon Boyle
14:15 - 14:30 Experimental *Toxoplasma gondii* and *Eimeria tenella* co-infection in chickens, Lysanne Hiob

14:30 - 14:45 *Neospora caninum* infection in a pregnant bovine model at mid gestation: comparison of early infection dynamics between high- (Nc-Spain7) and low- (Nc-Spain1H) virulence isolates, Laura Jiménez-Pelayo

14:45 - 15:00 Development of the first in vivo bovine experimental model of chronic besnoitiosis, Carlos Diezma-Díaz

**Epidemiology and diagnostics I, 15:00 - 16:15**

Session Chairs: Luis Gondim and Frank Katzer

*Invited Speaker*

15:00 - 15:45 Extensive review on potential risk and protective factors for *Toxoplasma gondii* infection in farm animals: What is remaining after excluding all presumably confounding or effect modifying factors? Gereon Schares, Friederich Loeffler Institute, Germany

*Oral communications*

15:45 - 16:00 Analysis of *Toxoplasma gondii* clonal type-specific antibody reactions in experimentally infected turkeys and chickens by peptide microarray, Pavlo Maksimov

16:00 - 16:15 Serotyping of *Toxoplasma gondii* infections using strain-specific peptides, David Arranz

16:15 - 16:45 Coffee Break

**Epidemiology and diagnostics II, 16:45 - 18:15**

Session Chairs: Franz Conraths and Michael Reichel

*Invited Speaker*

16:45 – 17:15 Advances in the diagnosis of bovine besnoitiosis: current options and applications for control. Gema Álvarez-García, Complutense University of Madrid, Spain

*Oral communications*

17:15 - 17:30 Deciphering ‘cryptic’ *Eimeria* isolated from the domestic chicken, Fiona Tomley
17:30 - 17:45  Multigenome sequence based genotyping of *Eimeria* species causing coccidiosis in Ontario sheep and goats, **Evelin Rejman**

*Invited Speaker*

17:45 - 18:15  An overview on Theileriosis: new diagnostic tools and their limits **Alessandra Torina**, Istituto Zooprofilattico Sperimentale della Sicilia "A. Mirri", Italy

18:15 - 19:30  Poster session

20:00  Dinner

**FRIDAY, 13th October 2017 - Euroforum (San Lorenzo de El Escorial, Madrid)**

**Vaccination and immune responses, 8:30 - 10:00**

Session Chairs: **John Ellis** and **Ivan Morrison**

*Invited Speaker*

8:30 - 9:15  DC-complexa: species-specific adaptation of dendritic cells to pathogen diversity. **Artur Summerfield**, University of Berne, Switzerland

*Oral communications*

9:15 - 9:30  Analysis of local and peripheral immune response developed in sheep experimentally infected with *Toxoplasma gondii* at different times of gestation, **Julio Benavides**

9:30 - 9:45  CD103+CD11b- intestinal dendritic cells are critical players for controlling the different steps of *C. parvum* infection, **Fabrice Laurent**

9:45 - 10:00  Coccidiosis in poultry: development of *Eimeria* as vaccine vectors to streamline anticoccidial vaccination, **Iván Pastor Fernández**

10:00 - 10:30  Coffee Break

**Biosafety and treatment, 10:30 - 12:30**

Session Chairs: **Kayode Ojo** and **Ronald Kaminsky**

*Invited Speaker*

10:30 - 11:00  Drugs and drug targets in pregnant models for *Toxoplasma* and *Neospora* infection. **Andrew Hemphill**, University of Berne, Switzerland
Oral communications

11:00 - 11:15  Bumped kinase inhibitors and their effects on the host-parasite relationship during experimental *N. caninum* infection *in vitro* and in mice, **Pablo Winzer**

11:15 - 11:30  Characterisation of drug-resistance to buparvaquone in *Theileria annulata* populations in Turkey, **Tulin Karagenç**

11:30 - 11:45  *In vitro* screening of commercially available anti-coccidials identifies diclazuril and decoquinate as potential therapeutic candidates against *Besnoitia besnoiti* infection, **Alejandro Jiménez-Meléndez**

11:45 - 12:00  Variations in anticoccidial efficacy on different *Eimeria* spp. in lambs based on oocyst excretion, **Ane Odden**

Invited Speaker

12:00 - 12:30  Advances in bumped-kinase inhibitors for human and animal therapy of cryptosporidiosis. **Wes VanVoorhis**, University of Washington, United States of America

12:30 - 14:00  Lunch

**Food and waterborne zoonosis, 14:00 - 15:45**

Session Chairs: **Gereon Schares** and **Lee Innes**

Invited Speaker

14:00 - 14:45  Food and Waterborne Protozoa: a veterinary and public health perspective, **Frank Katzer**, Moredun Research Institute, United Kingdom

Oral communications

14:45 - 15:00  The impact of vegetation on the environmental transfer of *Cryptosporidium* oocysts from faeces to soil, **Claire E. Paton**

15:00 - 15:15  *In vitro* host cell viability as putative correlate of virulence of *Cryptosporidium parvum* field isolates in Eastern Germany, **Ivette Holzhausen**

15:15 - 15:30  Impact of confinement housing on study end-points in the calf model of cryptosporidiosis, **Jennifer Zambriski**

15:30 - 15:45  Host-pathogen interactions in neonatal calves naturally and experimentally infected with *Cryptosporidium parvum*, **Sarah Thomson**
**3 minutes oral poster presentations, 16:15 – 17:15**

Session Chairs: **Alexandre Leitão** and **Tulin Karagenç**

1. Comparative study between pregnant mouse interference test and zebrafish embryo acute toxicity test: a possible replacement in anti-parasitic chemotherapy trials?, **Nicoleta Anghel**
2. Investigating the virulence of *Toxoplasma gondii* isolates from Brazil and Saint Kitts in mice, **Lauren E. Black**
3. Retrospective molecular diagnosis of *Neospora caninum* in bovine aborted fetus in Uruguay: Preliminary results, **Briano Carolina**
4. Isolation of a *Neospora caninum* goat strain from Southern Minas Gerais, Brazil, **Rafael C. Costa**
5. A component of the core kinase module of MEN and Hippo pathways, Mob1 is a critical factor in *Toxoplasma gondii* replication, **Inês Delgado**
6. Cytokine response to *Cystoisospora suis* infections in immune competent pigs, **Barbara Freudenschuss**
7. Transcriptional analysis of bovine monocyte-derived macrophages infected with high and low virulent isolates of *Neospora caninum*, **Marta García-Sánchez**
8. Phylogenetic diversity of *Eimeria* spp. in different genotypes of house mice (*Mus musculus*) from the European Hybrid Zone using a multiple marker approach, **Víctor Hugo Jarquín-Díaz**
9. Host-parasite interactions of *N. caninum* isolates of different virulence in bovine fetal and maternal placental cell lines, **Laura Jiménez-Pelayo**
10. HSP81.2 from *Arabidopsis thaliana* enhances the immune response against NcSAG1 from *Neospora caninum* protein and partially protects mice from congenital neosporosis, **Sofia A. Bengoa-Luoni**
11. Effects of *Eimeria tenella* infection on chicken caecal microbiome diversity, exploring variation associated with severity of pathology, **Sarah Macdonald**
12. Dose-titration of virulent *Neospora caninum* isolate Nc-Spain7 in pregnant sheep at 90 days of gestation, **Roberto Sánchez**
13. A reduction in weight gain in beef calves with clinical cryptosporidiosis, **Hannah Jade Shaw**

**Public engagement and knowledge exchange, 17:15 – until finishing the discussion**

How to raise awareness for ruminant apicomplexan (open round table)

**Chairman: Ronald Kaminsky**, Consulting for Parasitology and Drug Discovery

**Participants:** **Fiona Tomley**, RVC, **Wes VanVoorhis**, U-Washington, **Peter Opdam**, MSD and others

**20:00** Conference dinner (previous payment in the registration form is needed)
14. Microgametes – just motile nuclei or pivotal stages of the life cycle of Cystoisospora suis?, Anja Joachim
15. Demonstration of the presence of *T. gondii* in bio pigs intended for human consumption in Belgium, Ignacio Gisbert-Algaba
16. Analysis of allelic diversity of two immunodominant antigen genes of *T. annulata* and *T. lestoquardi* in Oman, Salama Al-Hamidhi
17. Genetics differentiation of *T. lestoquardi* in Africa and Asia, Hamza Babiker
18. Role of wildlife in the transmission of *Cryptosporidium parvum* to humans and livestock, Ross Bacchetti
19. Anti-cancer drugs affecting apicomplexan parasites: characterization of novel ruthenium-based compounds and their effects on *Toxoplasma gondii*, Vreni Balmer
20. Semi-high throughput screening of the Pathogen Box for inhibitors with dual efficacy against *Giardia lamblia* and *Cryptosporidium parvum*, Lynn Barrett
21. Evaluating the impact of pregnancy-associated immunomodulation on specific immune mechanisms against *Neospora caninum* infection in mice, Afonso P. Basto
22. Can multi-copy genes be an alternative for the diagnosis of TBDs in cattle? Huseyin Bilgiç
23. Differential modulation of the Golgi and endosomal system in host cells infected with *Besnoitia besnoiti*, *Toxoplasma gondii* and *Neospora caninum*, Rita Cardoso
24. A new indirect ELISA for the detection of *Besnoitia besnoiti* antibodies in individual and bulk milk samples, Loïc Comtet
25. The IDScreen® *Besnoitia* indirect 2.0 serum ELISA perfectly correlates with confirmatory techniques, Loïc Comtet
26. Experimental infection with *Besnoitia besnoiti* tachyzoites in calves and young bulls, Carlos Diezma-Díaz
27. A new ELISA test to diagnose *Besnoitia* spp. infection in bovids and wild ruminants with improved specificity avoiding the use of a confirmatory test, Gema Álvarez-García
29. Serological and molecular epidemiology of *Toxoplasma gondii* infection in intensive pig farms in Northern Italy, Alessia Libera Gazzonis
30. *Sarcocystis neurona* and *Neospora caninum* in Brazilian opossums (*Didelphis* spp.): Molecular investigation and in vitro isolation of *Sarcocystis* spp., Luis Gondim
31. Development of an alternative assay to study the infectivity of *T. gondii*, Tina Goroll
32. Integrative transcriptome and proteome analyses define marked differences between *N. caninum* isolates throughout the tachyzoite lytic cycle, Javier Regidor-Cerrillo
33. *Toxoplasma gondii* infections in stranded marine mammals in France and Romania, Radu Blaga
34. Immune response induced by the Mic1-3 Knockout *Toxoplasma gondii* vaccine strain in the parasite definitive feline host, Radu Blaga
35. Genus-specific antibodies for the diagnosis of *Neospora caninum* and *Toxoplasma gondii* using Immunohistochemistry in abortion cases of ruminants, A.I. Macrae
36. Characterization of *Theileria equi* antigen infecting Donkeys in Egypt, Olfat A. Mahdy
37. Coccidian in *Oryctolagus cuniculus* from Tenerife, Canary Islands, Spain, Natalia Martín Carrillo
38. Carotenoid-enriched corn protects poultry against coccidiosis, Beatriz Serrano-Pérez
39. Toxoplasma inhibitor of STAT1 transcription effector protein IST and its relevance in virulence for closely related *Neospora caninum* and *Hammondia hammondi*, Philipp Olias
40. Anticoccidial effect of naringenin and grape fruit peel extract in growing lambs naturally-infected with *Eimeria* spp, María Cristina Guerrero Molina
41. Microsatellite analysis reveals high diversity among geographically close isolates of *Cystoisospora suis*, Baerbel Ruttkowski
42. Chicken line-dependent mortality after experimental infection with three type IIxIII recombinant *Toxoplasma gondii* clones, Gereon Schares
43. Immune-endocrine patterns in dairy cattle experimentally infected with *N. caninum* in the second trimester of gestation, Beatriz Serrano
44. Development of a recombinant protein based indirect ELISA for the detection of serum antibodies against *Cystoisospora suis* in swine, Aruna Shrestha
45. Deciphering the host cues responsive circadian transcriptome of apicomplexan parasite *Plasmodium chabaudi*, Amit Kumar Subudhi
46. Analysis of *Babesia bigemina* Ap+C7:C67ical Membrane Antigen-1 immunogenicity and its characterization in Apicomplexa, Alessandra Torina
47. Distribution of cattle babesiosis in Palermo province (Sicily), Alessandra Torina
48. Serological study of *Toxoplasma gondii* and *Neospora caninum* in a wildlife conservation area in southern Portugal, Alexandre Leitão
49. Evaluation of *Eimeria* sp. infection and predictors of oocysts excretion in newly introduced beef cattle in northern Italy, Maria Teresa Manfredi
50. Mutual influences of the apicomplexan parasites *Toxoplasma gondii* and *Eimeria tenella* in poultry macrophages, Runhui Zhang
51. Efficacy of VFO-IS-01, a live attenuated immunostimulant against *Salmonella enteritidis*, *Eimeria acervulina* and *Influenza* H7N1 infections in chicks, Mehdi Ellouze
52. Effects of challenge dose and inoculation route of virulent *Neospora caninum* Nc-Spain7 isolate in pregnant cattle at mid gestation, Patricia Vazquez
53. Significant reduction of *Neospora caninum* vertical transmission and postnatal mortality by a toll-like-receptor 2-targeting vaccine formulation in the pregnant mouse model of neosporosis, Adriana Aguado
54. Evidence that transfer of *Theileria annulata* parasites from infected to uninfected leukocytes occurs by spontaneous cell fusion, Ivan Morrison
55. Placental lesions associated with abortions and stillbirths in goats naturally infected with *Neospora caninum* from Southern Minas Gerais, Brazil, Rafael C. Costa
56. Toxoplasma gondii tubulin-binding cofactor B a polarity factor required for host cell invasion and replication, Inês Delgado
57. Pharmacokinetics, safety and efficacy of Bumped Kinase Inhibitor (BKI) 1553 in a pregnant sheep model of neosporosis, Roberto Sánchez
58. *Cryptosporidium* infections among animals and humans in Greece, Smaragda Sotiraki
59. Cryptosporidium parvum increases intestinal permeability through interaction with epithelial cells and IL-1? and TNF? released by inflammatory monocytes, Fabrice Laurent
60. Investigation of tick-borne disease in Indian bovines: breed resistance and transmission blocking as strategies for improved productivity, **Stephen Larcombe**

61. The relationship between presence of antibodies and direct detection of *Toxoplasma gondii* in slaughtered cattle from four European countries, **M. Opsteegh**