

PROGRAM SCHEDULE

IN THIS PROGRAM AND ABSTRACT BOOKLET, THE CODE INDICATED AFTER THE PRESENTATION TIME CORRELATES WITH THE CODE ASSIGNED TO EACH ABSTRACT. THE ABSTRACTS ARE FOUND AFTER THE PROGRAM SCHEDULE, AND ARE ARRANGED CHRONOLOGICALLY (IN THE ORDER OF PRESENTATIONS). AN INDEX OF AUTHORS IS FOUND AT THE END OF THE BOOKLET.

TUESDAY, JUNE 20

PM

2:00 - 4:00

International Society of Protistologists Executive Committee Meeting - Eduardo Viana I

4:00 -

Registration opens - Ground Floor Atrium

6:00 - 8:00

Opening Reception - Hotel Villa Rica

WEDNESDAY, JUNE 21

AM

8:00 - 8:15

Opening ISOP/IWOP Plenary Session - Eduardo Viana II & III

Welcome, Announcements

8:15 - 11:00

Symposium 1 - "Antigenic Variation" (James R. Stringer, convener) - Eduardo Viana II & III

8:20 S1 Antigenic Variation in Ciliates. M.C. SIMON, H.J. SCHMIDT, University of Kaiserslautern, Germany.

9:00 S2 Structure, Evolution, and Expression of *Pneumocystis* Gene Families that Encode Variable Surface Proteins. J.R. STRINGER, S. P. KEELY, University of Cincinnati, Cincinnati, OH, USA.

9:40 S3 Trypanosome Antigenic Variation – Generation of Diversity at Different Levels. L. MARCELLO, J.D. BARRY, Wellcome Centre for Molecular Parasitology, Glasgow, UK.

10:20 S4 Position Effects at Telomeres of *P. falciparum* that Control *var* Gene Expression. A. SCHERF¹, L. MANCIO DA SILVA¹, A.P. ROJAS-MEZA^{1,2}, R. HERNANDEZ RIVAS^{2,1}, Institut Pasteur, Politecnico Nacional Mexico D.F., Mexico.

11:00 - 11:15

Break

11:15 - PM 1:00

Platform Sessions 1 and 2

Platform Session 1 - "'Protistan Parasites in Marine Waters'" (Patricia Conrad & Sheila Mitchell, co-chairs) - Eduardo Viana I

- 11:15 PL1** The Quest for Sensitive, Specific, Quantitative Detection of Fecal Protozoa: *Cryptosporidium* in California Mussels. W.A. MILLER¹, I.A. GARDNER¹, E.R. AMES², D. JESSUP², A. MELLI¹, D. ATWILL¹, M.A. MILLER², M. HARRIS², J. PARADIES³, K. WORCESTER⁴, P.A. CONRAD¹, ¹School of Veterinary Medicine, University of California, Davis, CA, ²Marine Wildlife Veterinary Care and Research Center, Santa Cruz, CA, ³Bay Foundation of Morro Bay, Los Osos, CA, ⁴Central Coast Regional Water Quality Control Board, San Luis Obispo, CA, USA.
- 11:30 PL2** The Fate of *Cryptosporidium parvum* Oocysts Filtered by Zebra Mussels and their Possible Role in Oocyst Removal. O. DITRICH^{1,2}, K. RYVOLOVÁ², ¹Institute of Parasitology, Biological centre of Academy of Sciences of Czech Republic, Ceske Budejovice, CR, ²Faculty of Biological Sciences, University of South Bohemia in Ceske Budejovice, Czech Republic.
- 11:45 PL3** Virulence Shift in a Sexual Clade of Wild *Toxoplasma gondii* Infecting Marine Mammals. E.R. JAMES¹, M.A. MILLER², P.A. CONRAD³, P. KEELING⁴, M.E. GRIGG¹, ¹Department of Medicine, University of British Columbia, Vancouver, BC, Canada, ²California Department of Fish and Game, Santa Cruz, CA, USA, ³School of Veterinary Medicine, University of California, Davis, CA USA, Department of Botany, University of British Columbia, Vancouver, BC, Canada.
- 12:00 PL4** *Toxoplasma gondii* and *S. neurona* Infections of Pacific Coastal Sea Otters in California, USA: Evidence for Land-Sea Transfer of Biological Pathogens. M.A. MILLER¹, M.E. GRIGG², W.A. MILLER³, H.A. DABRITZ³, E.R. JAMES², A.C. MELLI³, A.E. PACKHAM³, D. JESSUP¹, P.A. CONRAD³, Department of Fish and Game, Santa Cruz, CA, USA, University of British Columbia, Vancouver, BC, Canada, University of California, Davis, CA, USA.
- 12:15 PL5** Protist Parasites in Bottle-Nosed Dolphins (*Tursiops truncatus*) in Florida and South Carolina. R. FAYER¹, M. SANTIN¹, J.P. DUBEY¹, P. FAIR², G. D. BOSSART³, ¹Agricultural Research Service, U.S. Dept. of Agriculture, Beltsville, MD, ²National Oceanic and Atmospheric Administration, Center for Environmental Health and Biomolecular Research, Charleston, SC, ³Division of Marine Mammal Research and Conservation, Harbor Branch Oceanographic Institution, Fort Pierce, FL, USA.
- 12:30 PL6** European and North American Distribution of *Conchophthirus acuminatus* (Ciliophora), a Mantle-Cavity Commensalist of Dreissenid Mussels. D.B. CONN¹, D.A. CONN², D. MINCHIN³, F. LUCY⁴, ¹Berry College, Mount Berry GA, USA, ²North American Scientific Enterprises (NASCENT), Monteagle TN, USA, ³Marine Organism Investigations, Killaloe, Co. Clare, Ireland, ⁴Institute of Technology, Sligo, Ireland.

12:45 PL7 Quantitative Assessment of Viable *Cryptosporidium parvum* Load in Commercial Oysters (*Crassostrea virginica*) in the Chesapeake Bay. T.K. GRACZYK¹, E.J. LEWIS², G. GLASS¹, A.J. DASILVA³, L. TAMANG¹, A.S. GIROUARD¹, F.C. CURRIERO¹,
¹Johns Hopkins Bloomberg School of Public Health, Baltimore, MD,
²NOAA, Oxford, MD, ³CDC, Atlanta, GA, USA.

Platform Session 2 - "Cell Biology I" (Harriett Smith-Somerville & Howard Buhse, co-chairs) -
Eduardo Viana II + III

11:15 PL8 Towards an Understanding of the Role of Actin in *Tetrahymena* Phagocytosis: Comparative Studies Using Inhibitors of PI 3-Kinase and Myosin Kinase. R.V. ZACKROFF¹, L. OCTAVIO²,
Light Chain
A. BIGDELI², L.A. HUFNAGEL²,
Pharmacy and Health Sciences, Boston, MA, ²University of Rhode Island, Kingston, RI, USA.

11:30 PL9 Subcellular Centrin Localization within Distinct Compartments of *Vorticella convallaria* Contractile Organelles. K. KONIOR, S. JR., Department of Biological Sciences, University of Illinois at Chicago, Chicago, IL 60607, USA.

11:45 PL10 Calcium Homeostasis and Acidocalcisomes in *Toxoplasma gondii*. S.N.J. MORENO¹, K. MIRANDA^{2,3}, J. FANG¹, P. ROHLOFF¹, W. DE SOUZA²,
Center for Tropical and Emerging Diseases, ¹Department of Cellular Biology and University of Georgia, GA, USA. ²Laboratório de Ultraestrutura Celular Hertha Meyer, Instituto de Biofísica Carlos Chagas Filho, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil.

12:00 PL11 Golgi-Associated Genes in the Oxymonad *Monocercomonoides* sp. Suggest the Presence of a Cryptic Organelle. J.B. DACKS¹, N.A. LIAPOUNOVA¹, V. HAMPL², R.P. HIRT³, T.M. EMBLEY³, L. GEDAMU¹, ¹University of Calgary, Calgary, Canada, ²Dalhousie University, Halifax, Canada, ³University of Newcastle Upon Tyne, Newcastle Upon Tyne, UK.

12:15 PL12 High Voltage Electron Microscopy and Computerized Tomography: New Approaches to Study Microsporidian Spore Internal Organization. P.M. TAKVORIAN^{1,3}, K.F. BUTTLE², C.A. MANNELLA², L.M. WEISS³, A. CALI¹,
University, Newark, NJ, ²Resource for Visualization of Biological Complexity (RVBC), Wadsworth Center, Albany, NY, ³Albert Einstein College of Medicine, Bronx, NY, USA.

12:30 PL13 Evidence for Unizoic Cyst Formation of *Cystoisospora canis* in vitro. S.M. MITCHELL, A.M. ZAJAC, D.S. LINDSAY, Virginia Tech, Blacksburg, VA, USA.

12:45 PL14 How to Build a Parasite: Assembly of Daughter Cells in *Toxoplasma gondii*. K. HU¹, D.S. ROOS², S.O. ANGEL³, J.M. MURRAY⁴, ¹The Scripps Research Institute, La Jolla CA, USA; ²Dept. of Biology, Univ. of Pennsylvania, Philadelphia PA, USA; ³IIB-INTECH, UNSAM-

CONICET, Buenos Aires, Argentina; ⁴Dept. of Cell &
Developmental Biology, Univ. of Pennsylvania, Philadelphia PA, USA.

PM

1:00 - 2:00

Lunch - Almada Negreiros and Hotel Restaurant

Journal of Eukaryotic Microbiology Editorial Board Luncheon Meeting -
Vieira da Silva

2:00 - 4:00

Poster Session A - Eduardo Viana IV

PO1 The Tryparedoxin Sequences of *Leishmania infantum*. S. ROMÃO¹, H. CASTRO¹, C. SOUSA¹, S. CARVALHO¹, A. M. TOMÁS^{1,2}, ¹Institute for Molecular and Cell Biology, University of Porto, ²Abel Salazar Institute for Biomedical Research, University of Porto, Portugal.

PO2 Internal Transcribed Spacer (ITS) Chimeras are Frequently Generated during *Pneumocystis jirovecii* Genotyping. J. BESER, P. HAGBLUM, V. FERNANDEZ, Department of Parasitology, Mycology and Water Microbiology, Swedish Institute for Infectious Disease Control, and the Microbiology and Tumor Biology Center, Karolinska Institute, Stockholm, Sweden.

PO3 Detection and Genotyping of *Enterocytozoon bieneusi* in Park Pigeons. M. HARO¹, N. HENRIQUES-GIL¹, F. IZQUIERDO¹, F. ALONSO², S. FENOY¹, C. DEL ÁGUILA¹, ¹Facultad de Farmacia, Universidad San Pablo-CEU, 28668 Madrid, ²Facultad de Veterinaria, Universidad de Murcia, Spain.

PO4 Usefulness of Oropharyngeal Wash for the Identification of *Pneumocystis jirovecii* Carrier State. N. RESPALDIZA¹, M.A. MONTES-CANO¹, V. FRIAZA¹, F. MUÑOZ-LOBATO¹, F.J. MEDRANO², J.M. VARELA², E. CALDERÓN², C. DE LA HORRA¹, ¹Reina Mercedes Investigation Unit, ²Internal Medicine Service, Virgen del Rocío University Hospital, Sevilla, Spain.

PO5 Interaction of a Synthetic Azasteroid with Several Species of *Tetrahymena*. C. SUNDERMANN¹, S. LENAGHAN¹, N. DOORENBOS², J. BAKER¹, ¹Department of Biological Sciences, ²Pharmaceutical Sciences, Harrison School of Pharmacy, Auburn University, Auburn, AL, USA.

PO6 *Pneumocystis jirovecii* Genotypes in Patients with Different Pulmonary Diseases. M.A. MONTES-CANO¹, C. DE LA HORRA¹, N. RESPALDIZA¹, V. FRIAZA¹, J. MARTIN-JUAN², F. MUÑOZ-LOBATO¹, F.J. MEDRANO³, J.M. VARELA³, E. CALDERÓN³, ¹Reina Mercedes Investigation Unit, ²Pneumology Service, ³Internal Medicine Service, Virgen del Rocío University Hospital, Sevilla, Spain.

PO7 *Cryptosporidium* sp. in Freshwater Bivalves from Portugal. P. MELO¹, J. TEODOSIO², J. REIS³, A. DUARTE¹, J.M. CORREIA DA COSTA⁴, I.M. PEREIRA DA FONSECA¹, ¹CIISA, Faculdade de Medicina Veterinária, Lisboa, ²CCMAR, Universidade do Algarve,

Faculdade de Ciências do Mar e Ambiente, Faro, ³Centro de Biologia de Biologia Ambiental/Dept. Biologia Animal, Faculdade de Ciências da Universidade de Lisboa, Lisboa, ⁴Centro de Imunologia e Biologia Parasitária, INSA, Porto, Portugal.

PO8 Sequence of the Mitochondrial Genome of *Pneumocystis carinii*: Implications for Biologic Function and Identification of Potential Drug Targets. T.M. SESTERHENN¹, M.T. CUSHION^{1,2}, B.E. SLAVEN¹, A.G. SMULIAN^{1,2},
¹Universtiy of Cincinnati, Cincinnati, OH, ²Veterans Administration Medical Center, Cincinnati, OH, USA.

PO9 First Molecular Data on Cryptosporidiosis in Venezuela. G. CERTAD^{1,2}, T. NGOUANESAVANH¹, A. HERNAN², E. ROJAS², R. CONTRERAS³, L. POCATERRA², L. NUÑEZ², E. DEI-CAS^{1,4}, K. GUYOT¹, ¹Ecologie du Parasitisme, Institut Pasteur de Lille, Lille, France, ² Cátedra de Parasitología, Escuela de Medicina “José María Vargas”, Universidad Central de Venezuela, Caracas, Venezuela, ³Sección de Geohelminthiasis, Instituto de Medicina Tropical, Universidad Central de Venezuela, Caracas, Venezuela, ⁴Parasitologie-Mycologie, Centre Hospitalier Régional et Universitaire de Lille, France.

PO10 *Pneumocystis jirovecii* Detection on Paraffin-Embedded Lung Tissue Samples. C. DE LA HORRA¹, J.M. VARELA², V. FRIAZA¹, N. RESPALDIZA¹, F. MUÑOZ-LOBATO¹, M.A. MONTES-CANO¹, E. CALDERÓN², F.J. MEDRANO², ¹Reina Mercedes Investigation Uni, ²Internal Medicine Service, Virgen del Rocío University Hospital, Sevilla, Spain.

PO11 Canine Leishmaniasis Treatment: Preliminary Evaluation with Flow Cytometry Analysis and Clinical Profile. M. T. VILLA DE BRITO¹, G. ALEXANDRE-PIRES¹, M.C. ALGUERÓ², G. SANTOS-GOMES³, I.M. PEREIRA DA FONSECA¹, ¹CIISA, Faculdade de Medicina Veterinária, UTL, ²Departamento de Imunologia, Faculdade de Ciências Médicas, UNL, ³Unidade de Leishmanias, Instituto de Higiene e de Medicina Tropical, UTL, Lisboa, Portugal.

PO12 DHPS Genotypes in *Pneumocystis jirovecii*-Infected Patients from Spain. M.A. MONTES-CANO¹, C. DE LA HORRA¹, V. FRIAZA¹, N. RESPALDIZA¹, F. MUÑOZ-LOBATO¹, J.M. VARELA², F.J. MEDRANO², E. CALDERÓN², ¹Reina Mercedes Investigation Unit, ²Internal Medicine Service, Virgen del Rocío University Hospital, Sevilla, Spain.

PO13 *Tetrahymena* Genome Database (TGD): A Resource for Comparative Studies with a Model Protist. N.A. STOVER, C.J. KRIEGER, G. BINKLEY, Q. DONG, A. SETHURAMAN, S. WENG, J.M. CHERRY, Department of Genetics, Stanford University, Stanford, CA, USA.

PO14 Syndecan-1 Expression in the Lung during *Pneumocystis* Infection. S-H. WANG, C. ZHANG, M.E. LASBURY, D. TSCHANG, C-P. LIAO, P.J. DURANT, C-H. LEE, Indiana University School of Medicine, IN, USA.

- PO15** Trichomonads as Co-Infecting Agents in *Pneumocystis* Pneumonia and Acute Respiratory Distress Syndrome. C. DUBOUCHER¹, S. CABY², R. PIERCE², M. VISCOGLIOSI², ¹Laboratoire d'Anatomie Pathologique, Centre Hospitalier de Poissy/Saint-Germain, Saint-Germain-en-Laye, France, ²Inserm, U547, Institut Pasteur, Lille, France, ³Institut Pasteur, Laboratoire d'Ecologie du Parasitisme (EA3609), Lille, France.
- PO16** Searching for Alternative Therapies against Cryptosporidiosis: In Vitro and In Vivo Assays. C. RUEDA, S. FENOY, C. DEL AGUILA, Facultad de Farmacia, Universidad San Pablo-CEU, 28668 Madrid, Spain.
- PO17** Pneumocystosis : 2003-2004 Survey and D.H.P.S. Genotyping in 14 Parisian Hospitals (Assistance Publique-Hôpitaux de Paris). D. MAGNE¹, P. LACUBE², A. BOTTEREL⁴, M.E. BOUGNOUX⁵, C. CHOCHILLON⁶, M. CORNET⁷, E. DANNAOUI⁸, A. DATRY⁹, J. DUNAND¹, G. GALEAZZI¹¹, C. BOUGES-MICHEL¹², H. YEAR¹³, C. SARFATI¹⁴, P. ROUX¹, ¹Parasitologie-Mycologie, Hôpital St Antoine, Paris, ²Faculté de Médecine Université Paris 6, ³Hôpital Tenon, Paris, ⁴Hôpital Henri Mondor-Kremlin Bicêtre, ⁵Hôpital Necker, Paris, ⁶Hôpital Bichat, Paris, ⁷Hôtel Dieu, Paris, ⁸Hôpital Européen Georges Pompidou, Paris, ⁹Hôpital Pitié Salpêtrière, Paris, ¹⁰Hôpital Ambroise Paré, Boulogne-Billancourt, ¹¹Hôpital Louis Mourier, Colombes, ¹²Hôpital Avicennes, Bobigny, ¹³Hôpital Cochin, Paris, ¹⁴Hôpital Saint Louis, Paris, France.
- PO18** Intestinal Expression of H⁺ V-ATPase in the Mosquito *Aedes albopictus* is Tightly Associated with Gregarine Infection. C.G. HUANG¹, K.H. TSAI¹, W. J. WU¹, W.J. CHEN², ¹Department of Entomology, National Taiwan University, Taipei 106, Taiwan, ²Department of Public Health and Parasitology, Chang Gung University, Kwei-San, Tao-Yuan 333, Taiwan.
- PO19** DHPS-Mutated Isolates of *Pneumocystis jirovecii* from HIV Persons: Analysis of Related ITS Genotypes. A. VALERIO, E. TRONCONI, F. MAZZA, A. CARGNEL, G. FANTONI¹, C. ATZORI, II Dept. Infect. Dis., L. Sacco Hospital, Milan, Italy.
- PO20** Occurrence of *Vavraia culicis*-Related Pathogen in a Laboratory Colony of *Anopheles stephensi*. M.L. LOBO¹, H. SILVEIRA², S. RAMOS², L. XIAO³, O. MATOS¹, ¹Unidade de Protozoários Oportunistas/VIH e outras Protozooses, UPM, Instituto de Higiene e Medicina Tropical (IHMT), Lisboa, ²Unidade de Malária, CMDT, IHMT, Lisboa, Portugal, ³Division of Parasitic Diseases, National Center for Infectious Diseases, CDC, Atlanta, Georgia, USA.
- PO21** Evaluation of Hybridization of *Pneumocystis murina* RNA to *Pneumocystis carinii* Microarrays. M.J. LINKE, A.G. SMULIAN, B.E. SLAVEN, T. SESTERHENN, J. DEMLAND, M.T. CUSHION, University of Cincinnati College of Medicine and the Administration Medical Center, Cincinnati, OH, USA. Cincinnati Veterans

PO22 *Acanthamoeba* Isolated from Contaminated Groundwater. E. RAMIREZ, E. CAMPOY, D. MATUZ, E. ROBLES, Project of Conservation and Environment Improvement, UNAM FES Iztacala, Tlalnepantla, Mexico State, Mexico.

4:00 - 4:15

Break

4:15 - 6:00

Platform Sessions 3 and 4

Platform Session 3 - "Epidemiology I" (Sergio Vargas & Phillippe Hauser, co-chairs) - Eduardo Viana I

4:15 PL15 Antibodies Prevalence to *Encephalitozoon cuniculi* in Large Companion Animals: Horses from Brazil. D. GOODWIN¹, S.M. GENNARI², D.K.

HOWE³, J.P. DUBEY⁴, A.M. ZAJAC¹, D.S.

LINDSAY¹, ¹Department of Biomedical Sciences and Pathobiology,

Virginia Tech, Blacksburg, VA, USA, ²Faculdade de Medicina

Veterinária e Zootecnia, Universidade de São Paulo, São Paulo, Brazil, ³University of

Kentucky, Lexington, KY, USA, ⁴United States Department of Agriculture,

Agricultural Research Service, Beltsville, MD, USA.

4:30 PL16 Geographical Variation in the Prevalence of *Pneumocystis jirovecii* Dihydropteroate Synthase Mutations within Western Europe. M. RABODONIRINA¹,

A. NAHIMANA², R. WEBER³, P.

FRANCIOLI^{2,4}, J. BILLE⁵, P.M. HAUSER⁵,

¹Parasitology Unit, Croix-Rousse Hospital, Hospices Civils de Lyon,, Lyon, France,

²Hospital Preventive Medicine, Lausanne University Hospital, Switzerland,

³Division of Infectious Diseases, Zurich University Hospital, Switzerland,

⁴Division of Infectious Diseases, Lausanne

University Hospital, Switzerland, ⁵Microbiology Institute,

Lausanne University Hospital, Switzerland.

4:45 PL17 Seasonal Variation in Genotypes of *Pneumocystis jirovecii* Isolated from HIV-Infected Patients Undergoing Diagnostic Bronchoscopic Alveolar

Lavage. R.F. MILLER, H. EVANS, J. CASSELL, Centre

for Sexual Health and HIV Research, University College London,

London, UK.

5:00 PL18 *Cryptosporidium* Genotypes Recovered from Wastewater Effluents Entering a Rural New York Watershed. A. LUCIO-FORSTER, D.D. BOWMAN,

Cornell University, Ithaca, NY, USA.

5:15 PL19 Characterization of *Toxoplasma gondii* Isolates from Portugal. S. SOUSA¹, D. AJZENBERG², M.C.B. VIANNA³, N. CANADA⁴, L.

FREIRE¹, S. MEIRELES¹, J.M. CORREIA DA COSTA¹, P.L.

MARCET⁵, T. LEHMANN⁵, M.L. DARDÉ², P. THULLIEZ⁶, J.P.

DUBEY³, ¹Centro de Imunologia e Biologia Parasitária – INSA,

Portugal, ²Laboratoire de Parasitologie-Mycologie, CHRU Dupuytren, France,

³Animal Parasitic Disease Laboratory, United States Department of

Agriculture, Agriculture Research Service, Animal and

Natural Resources Institute, USA, ⁴Institute for

Biomedical Sciences Abel Salazar, Portugal, ⁵Division of Parasitic

Diseases, Centers for Disease Control and Prevention, USA, ⁶Laboratoire de la Toxoplasmose, Institut de Puériculture, France.

5:30 PL20 Prevalence and Incidence of Toxoplasmosis in HIV-Positive Patients in the Czech Republic. P. KODYM,¹ Š. HRDÁ,¹ L. MACHALA,² H. ROZSYPAL,² M. STANKOVA,² M. MALÝ¹,
¹National Institute of Public Health, Prague, ²AIDS Centre, Bulovka Teaching Hospital, Prague, Czech Republic.

5:45 PL21 Expression and Serologic Assesment of a Recombinant Poalr Tube Protein from *Encephalitozoon caniculi* (PTP3). Z. KUCEROVA^{1,2}, J. PRIEST², F. DELBAC³, G. VISVESVARA², W.E. SECOR², ¹Atlanta Research and Educational Foundation, Atlanta, GA, USA, ²Div. of Parasitic Diseases, Centers for Disease Control and Prevention, Atlanta, GA, USA, ³ Equipe Parasitologie Moleculaire et Cellulaire, Laboratoire Biologie des Protistes, Universite Blaise Pascal, Aubiere Cedex, France.

Platform Session 4 - "Host-Pathogen Interactions I" (Nigel Yarlett & Herbert Tanowitz, co-chairs) - Eduardo Viana II + III

4:15 PL22 *Trypanosoma cruzi*-Adipocyte Interactions: Implications for HIV/AIDS, F. NAGAJYOTHI, M.S. DESRUISSEAU, L.M. WEISS, P.E. SCHERER, H.B. TANOWITZ, Albert Einstein College of Medicine, BRONX, NY, USA.

4:30 PL23 Cells Infected with *Encephalitozoon* Microsporidia Show Inhibition of p53-Induced Apoptosis. C. DEL AGUILA¹, F. IZQUIERDO¹, A.G. GRANJA², C. HURTADO², S. FENOY¹, M. FRESNO², Y. REVILLA², ¹Facultad de Farmacia, Universidad San Pablo-CEU, ²Centro de Biología Molecular "Severo Ochoa", Universidad Autónoma, Madrid, Spain.

4:45 PL24 Serial Propagation of *Enterocytozoon bieneusi* of Human Origin in Rodents and in Cell Culture. X. FENG, D. AKIYOSHI, A. SHEORAN, Q. ZHANG, G. WIDMER, S. TZIPORI, Division of Infectious Diseases, Tufts University Cummings School of Veterinary Medicine, North Grafton, MA, USA.

5:00 PL25 Survival Pathway Signal Transduction Is Reduced in Alveolar Macrophages During *Pneumocystis* Pneumonia. M.E. LASBURY, P.J. DURANT, D. TSCHANG, C-H. LEE, Indiana University School of Medicine, Indianapolis, IN, USA.

5:15 PL26 Transforming Growth Factor-Beta Activation and Signaling in the Alveolar Environment During *Pneumocystis* Pneumonia. C.A. RAY, M.E. LASBURY, P.J. DURANT, D. TSCHANG, C-H. LEE, Indiana University School of Medicine, Indianapolis, IN, USA.

5:30 PL27 *Pneumocystis* Pneumonia and Sublethal Hyperoxia: Protection by Granulocyte-Macrophage Colony-Stimulating Factor (GM-CSF) and Corticosteroids. J.M. BECK^{1,2}, A.M. PRESTON¹, S.E. WILCOXEN¹, S.B. MORRIS¹, R. PAINE III^{1,2}, ¹University of Michigan Medical School, ²Department of Veterans Affairs Medical Center, Ann Arbor, MI, USA.

5:45 PL28 Calmodulin and GM-CSF Expression In Alveolar Macrophages During *Pneumocystis* Pneumonia. M.E. LASBURY, P.J. DURANT, D. TSCHANG, C-H. LEE,
Indiana University School of Medicine, Indianapolis, IN, USA.

6:00 - Evening

Happy Hour/Dinner - On Your Own or
Informal Organism-Based Dinners (to be arranged)

8:00

ISOP Movie Night (Wayne Coats, chair) - Eduardo Viana I

THURSDAY, JUNE 22

AM

8:00 – 10:00

Platform Sessions 5 and 6

Platform Session 5 - "Biochemistry/Physiology" (Nigel Yarlett & Aaron Bell, co-chairs) - Eduardo Viana I

8:00 PL29 The Diplomonad Fish Parasite *Spironucleus vortens* Utilizes Glucose and Produces Hydrogen under Anaerobic Conditions. C. MILLET, J. CABLE, D. LLOYD,
UK. Microbiology (Bios 1), Cardiff University, Wales,

8:15 PL30 *Trichomonas vaginalis* and *Giardia intestinalis* Produce Nitric Oxide. K.M. HARRIS, B. GOLDBERG, G. BIAGINI, D. LLOYD,
Microbiology, Cardiff University, Park Place,
Cardiff CF10 3TL, Wales, UK., Department of Chemistry, New York
University, Silver Building, New York, NY 10003, USA, Liverpool
School of Tropical Medicine, Liverpool, UK.

8:30 PL31 Effects of Polyamine Depletion by Difluoromethylornithine on Hydrogenosomes in *Trichomonas vaginalis*. , K.M. HARRIS^{1,2}, B. GOLDBERG², A. HANN¹, M.P. TURNER¹, R.E. LEWIS¹,
HAYES¹, A. K.M. LEMAR¹, D. LLOYD¹,
¹Microbiology (Bios1), Main Building, Cardiff University, Park Place, Cardiff CF10
3TL,Wales, UK., ²Department of Chemistry, New York University, New
York, New York 10003, USA.

8:45 PL32 Polyamine Biosynthesis by *Cryptosporidium parvum* and its Potential as a Chemotherapeutic Target. N. YARLETT^{1,2}, M. MORADA¹,
G. WU¹, ¹Haskins Laboratories, ² Department of Chemistry and
Physical Sciences, Pace University, New York, NY, USA.

9:00 PL33 Inflammatory Mononuclear Cells are a Source of Polyamines in *Pneumocystis* Pneumonia. C-P. LIAO, M.E. LASBURY, C. ZHANG, S-H. DURANT, C-H. LEE, Indiana
WANG, P.J. University School of Medicine, Indianapolis, IN, USA.

9:15 PL34 Identification and Characterization of *Pneumocystis* S-Adenosylmethionine Mitochondrial Transporter. O. PEREZ-LEAL, S. MERALI,
Temple University School of Medicine, Philadelphia, PA, USA.

9:30 PL35 Identification and Characterization of a Guanine Nucleotide Exchange Factor in *Tetrahymena thermophila*. A. BELL, C. GUERRA, P. SATIR, Dept. of Anatomy and Structural Biology, Albert Einstein College of Medicine, Bronx, NY, USA.

9:45 PL36 Behavioral Responses to Serum in *Trichomonas*. R. YAMNIK, N. YARLETT, M. LEVANDOWSKY, Haskins Labs, Pace University, New York, NY, USA.

Platform Session 6 - "Diagnosis & Methodologies" (Rob Miller, & Cécile-Marie Aliouat-Denis, co-chairs) - Eduardo Viana II+III

8:00 PL37 The Problems of Developing Molecular Diagnostic Tests for Opportunistic Pathogens: The Example of *Pneumocystis jirovecii*. J. HUGGETT¹, R.F MILLER², M. TAYLOR³, A. COSTELLO⁴, A. ZUMLA¹, ¹Centre for Infectious Diseases & International Health, University College London, UK, ²Centre for Sexual Health and HIV Research, University College London, UK, ³Wellcome Trust Centre for Human Genetics, Oxford, UK, ⁴International Perinatal Unit, Institute of Child Health, University College London, UK.

8:15 PL38 Setting up an Automatic Counting Method for *Pneumocystis* spp.: Speed, Reliability and Reproducibility. L. DUJARDIN¹, E.M. ALIOUAT^{1,2}, M. POTTIER¹, C.M. ALIOUAT-DENIS¹, E. DEI-CAS^{2,3}, T. DURIEZ¹, ¹Laboratoire de Parasitologie-Pharmacie de Lille, ²Laboratoire Ecologie du parasitisme, Institut Pasteur de Lille, ³Laboratoire de Parasitologie, CHRU, Faculté de Médecine, Lille, France.

8:30 PL39 Diagnosis of *Pneumocystis* Pneumonia in Patients with Hematologic Malignancies: Microscopy versus PCR. H.H LARSEN^{1,2}, B. LUNDGREN², O.J. BERGMANN³, J.O. JARLØV⁴, J.S. JENSEN⁵, J.D. LUNDGREN¹, ¹Copenhagen HIV Programme, and ²Department of Clinical Microbiology, Hvidovre University Hospital, ³Departments of Hematology and ⁴Clinical Microbiology, Herlev University Hospital, and ⁵State Serum Institute, Denmark.

8:45 PL40 Real-Time PCR for Detection of *Pneumocystis jirovecii* DNA from Bronchoscopic Lavage Fluid of Patients with and without *Pneumocystis* Pneumonia (PcP). R.F MILLER¹, J. HUGGETT², M. TAYLOR⁵, G. KOCJAN³, L.U. LIM², A. COSTELLO⁴, A. ZUMLA², ¹Centre for Sexual Health and HIV Research, ²Centre for Infectious Diseases and International Health, ³Department of Histopathology, ⁴International Perinatal Unit, Institute of Child Health, University College London, ⁵Wellcome Trust Centre for Medical Genetics, University of Oxford, Oxford, UK.

9:00 PL41 Matrix Assisted Laser Desorption/Ionization Time of Flight Mass Spectrometry-Based Analysis of *Giardia lamblia*. E.N. VILLEGAS¹, S.T. GLASSMEYER¹, M.W. WARE¹, S.L. HAYES², F.W. SCHAEFER III³, US EPA, ¹National, Exposure Research Laboratory, ²National Risk Management Research Laboratory, and ³National Homeland Security Research Center, Cincinnati, Ohio, USA.

9:15 PL42 A Yeast-Based Screening System for the Rapid Identification of Inhibitors of Microsporidian Methionine Amino Peptidase Type 2 (MetAP2). R. UPADHYA¹, H. ZHANG¹, L.M. WEISS^{1,2}, Departments of ¹Pathology and ²Medicine, Albert Einstein College of Medicine, Bronx, NY-10461, USA.

9:30 PL43 Molecular Characterization of the *Cryptosporidium parvum* Iowa Isolate kept in Different Laboratories. V.A. CAMA^{1,2}, M. ARROWOOD¹, L. XIAO¹, ¹Centers for Disease Control and Prevention, Atlanta, GA, ²Atlanta Research and Education Foundation, Atlanta, GA, USA.

9:45 PL44 Retrospective and Prospective Assessments of a New 5'-Nuclease Real-Time PCR Assay for Quantitative Detection of *Toxoplasma gondii* DNA. J. MENOTTI, Y.J.F. GARIN, M.C. SERUGUE, J. STANISLAWIAK, F. DEROUIN, Laboratory of Parasitology-Myecology, Saint-Louis Hospital, AP-HP, Paris, France.

10:00 - 10:15
Break

10:15 - 11:00
Platform Sessions 7 and 8

Platform Session 7 - "Late Breakers" (Mark Lasbury & Guy Cabral, co-chairs) - Eduardo Viana I

10:15 PL45 A Web-Based Resource for Studies on the Microsporidia. C. GIRE¹, R. SCHEUERMANN², L.M. WEISS³, ¹North Grumman IT Health Solutions, Rockville, MD., ²University of Texas, Southwestern Medical Center, Dallas, TX, ³Albert Einstein College of Medicine, Bronx, NY., USA.

10:30 PL46 [Mechanism of Lung S-Adenosylmethionine Depletion by Nicotine and its Effect on Development of *Pneumocystis Pneumonia*](#). C. MONCADA, S. MERALI, Temple University School of Medicine, Philadelphia, PA, USA.

10:45 PL47 *Toxoplasma gondii*: RNA Silencing Pathway and Applications. X. WANG, A. AL-RIYAH, F. AL-ANOUTI, G. SHAMIM, S. ANANVORANICH, University of Windsor, Department of Chemistry and Biochemistry, Windsor, Ontario, Canada.

Platform Session 8 - "Eukaryote Classification" (Lea Bleyman, chair) - Eduardo Viana II+III

10:15 PL48 The Revised Higher Classification of Eukaryotes: From the Past to the Present. D.H. LYNN, Department of Integrative Biology, University of Guelph, Guelph, Ontario, Canada.

10:30 PL48 Continued

10:45 PL48 Continued

11:00 - 1:00 PM
Platform Sessions 9 and 10

Platform Session 9 - "Host-Pathogen Interactions II" (Gordon L. Leitch & Michael Beers, co-chairs) - Eduardo Viana I

11:00 PL49 Efficacy of Recombinant Interferon Gamma and Specific Antibody for Treatment of Microsporidiosis Caused by *Encephalitozoon cuniculi* in SCID Mice. J. SALÁT, J. KOPECKÝ, Biological Center, Institute of Parasitology, Sciences of the Czech Republic and Faculty of Biological Sciences, University of South Bohemia, České Budejovice, Czech Republic. JELÍNEK, J. CHMELAR, J. Academy of

11:15 PL50 Effect of Interferon Gamma and Specific Polyclonal Antibodies on Infection of Murine Macrophage Cell Line PMJ2-R. J. JELÍNEK, J. SALÁT, J. KOPECKÝ, Biological Center, Academy of Sciences of the Czech Republic and Faculty of Sciences, University of South Bohemia, České Budejovice, Czech Republic. Institute of Parasitology, Biological

11:30 PL51 Effect of Gastrointestinal Defenses on *Brachiola algerae* Spore Germination, G.J. LEITCH, Whitney Laboratory for Marine Bioscience, University of Florida, St. Augustine, FL, USA.

11:45 PL52 Differential Attachment of *Acanthamoeba* and *Balamuthia* to Extracellular Matrix Glycoproteins. B. ROCHA-AZEVEDO^{1,2}, M. JAMERSON¹, G.A. CABRAL¹, F.C. SILVA-FILHO², F. MARCIANO-CABRAL¹, ¹Department of Microbiology and Immunology, Virginia Commonwealth University, School of Medicine, Richmond, VA, USA, ² Instituto de Biofísica Carlos Chagas Filho, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil.

12:00 PL53 Toll-like Receptor 2 Knockout Has No Effect on Phagocytosis of *Pneumocystis* Organisms by Alveolar Macrophages. C. ZHANG, S-H. WANG, M.E. LASBURY, D. TSCHANG, C-P. LIAO, P.J. DURANT, C-H. LEE, Indiana University School of Medicine, IN, USA.

12:15 PL54 A Tale of Two Mice: *Pneumocystis* Infection in Surfactant Protein-D-Deficient and Overexpressing Murine Models. E.N. ATOCHINA-VASSERMAN¹, D. JAIN, E. ABRAMOVA¹, J.M. BECK², A.M. PRESTON², H. KADIRE¹, Y. TOMER¹, M.F. BEERS¹, Dept. of Medicine, Univ. of PA, Philadelphia, PA and Dept. of Int. Med., Univ. of MI, Ann Arbor, MI, USA.

12:30 PL55 Alterations in Surfactant Protein A Form and Clearance During *Pneumocystis* Pneumonia. M.E. LASBURY, P.J. DURANT, D. TSCHANG, C-H. LEE, Indiana University School of Medicine, Indianapolis, IN USA.

12:45 PL56 Identification of Serum Proteins that are Elevated in Patients with *Pneumocystis jirovecii* Pneumonia. G. FANTONI¹, L. HUANG², G. HOEHN¹, R. KENNEY¹, S. YING³, P. MUNSON³, A. CHI², M. BENSLEY², J.L. DAVIS², A. SWARTZMAN², A. SUFFREDINI¹, J.A. KOVACS¹, ¹Critical Care Medicine Department, Clinical Center, National Institutes of Health, Bethesda, MD, ²Department of Medicine, San Francisco General Hospital, University of California, San Francisco, CA, ³Mathematical and Statistical Computing Laboratory, Center for Information

Technology, National Institutes of Health, Bethesda, MD,
USA.

Platform Session 10 - "Molecular Approaches in Protistan Ecology and General Ecology"
(David Montagnes & Joel Dacks, co-chairs) - Eduardo Viana II+III

11:00 PL57 An Ecological Perspective on Protistan Molecular Genetics. P.C. WATTS, C.D. LOWE, D.J.S. MONTAGNES, School of Biological Sciences, University of Liverpool, UK

11:15 PL57 Continued

11:30 PL58 Marrying Function and Genes in Protists, an Interdisciplinary Approach. D.J.S. MONTAGNES, C.D. LOWE, School of Biological Sciences, University of Liverpool, UK.

11:45 PL59 Molecular Approaches to Studying the Genetic Diversity and Adaptation (Ecology) of Marine Phytoplankton, L. K. MEDLIN Alfred Wegener Institute Marine Research, Bremerhaven Germany.

12:00 PL60 Detection and Persistence of Quahog Parasite Unknown in the Coastal Marine Environment. R.J. GAST¹, D.M. MORAN¹, K.R. UHLINGER², D.R. LEAVITT,³ R. SMOLOWITZ², ¹Woods Hole Oceanographic Institution, Woods Hole, MA, ²Roger Williams University, Bristol, RI, ³Marine Biological Laboratory, Woods Hole, MA, USA.

12:15 PL61 Spatial and Temporal Variation in Populations of Tide Pool Ciliates. F. TERRY¹, G. MCMANUS², B. COSTAS², L.A. KATZ^{1,3}, ¹Department of Biological Sciences, Smith College, Northampton, MA, ²Department of Marine Sciences, University of Connecticut, Groton, CT, ³Program in Organismic and Evolutionary Biology, University of Massachusetts, Amherst, MA, USA.

12:30 PL62 Biochemical Recognition of Prey by Planktonic Protozoa. E.C. WOOTTON, E.C. ROBERTS, Department of Biological Sciences, University of Wales Swansea, UK.

12:45 PL63 Annual Biomass and Secondary Production of Soil Ciliates in a Subtropical Moist Forest. D. ACOSTA-MERCADO¹, D. H. LYNN², ¹University of Puerto Rico, Mayagüez PR, ²University of Guelph, Guelph, CA.

PM

1:00 - 2:00

Lunch - Almada Negreiros + Restaurant

Rob Miller & Laurence Huang Group luncheon meeting - Vieira da Silva

2:00 - 4:00

Poster Session B - Eduardo Viana IV

PO23 *Toxoplasma gondii* Vaccine using *Brucella abortus* strain RB51 Expressing Dense Granule and Surface Antigens. A. BANDARA, M.N. SELEM, C.N. JORDAN, G.G. SHURIG, N. SRIRANGANATHAN, D.S. LINDSAY, Department of Biomedical Sciences and Pathobiology, Virginia Tech, Blacksburg, VA, USA.

- PO24** The Non-Peptidic HIV Protease Inhibitor Tipranavir and Two Synthetic Peptidomimetics (TS98 and TS102) Modulate *Pneumocystis carinii* Growth and Proteasome Activity of HEL299 Cell Line. F. MAZZA¹, E. TRONCONI¹, A. VALERIO¹, M. GROETTRUP², M. KREMER², A. TOSSI³, F. BENEDETTI³, A. CARGNEL¹, C. ATZORI¹, ¹II Dept. Infect. Dis., L. Sacco Hospital, Milan, Italy, ²Div Immunol, Dep Biol, University of Konstanz, Konstanz, Germany, ³University of Trieste, Trieste, Italy.
- PO25** Detection of HIV Protease Inhibitors in Epithelial Lining Fluid (ELF): Relevance for Modulation of *Pneumocystis* Infection in Course of HAART. C. ATZORI¹ P. VILLANI², M. REGAZZI², E. TRONCONI¹, F. MAZZA¹, A. VALERIO¹, M. MARUZZI¹, A. CARGNEL¹, ¹L. Sacco Hospital, Milan, ²IRCCS S. Matteo, Pavia, Italy.
- PO26** In Vitro Selection and In Vivo Efficacy of Piperazine- and Alkanediamide-linked Bisbenzamidines against *Pneumocystis* pneumonia. M.T. CUSHION^{1,2}, P.D. WALZER^{1,2}, A.D. ASHBAUGH^{1,2}, S.L. REBHOLZ^{1,2}, R. BRUBAKER³, J.J. VANDEN EYNDE⁴, A. MAYENCE⁴, T.L. HUANG⁴, ¹Veterans Affairs Medical Center, Cincinnati, OH, ²University of Cincinnati College of Medicine, Cincinnati, OH, ³The Christ Hospital, Cincinnati, OH, ⁴of Pharmacy, New Orleans, LA, USA.
- PO27** Iron Superoxide Dismutase (FeSODA) of *Leishmania donovani* is Targeted to the Mitochondria via the N-Terminal Pre-Sequence: Role of Positively Charged Amino Acid Residues. F.E. GETACHEW, L. GEDAMU, Department of Biological Sciences, University of Calgary, Calgary, AB, Canada.
- PO28** Combinations of Sterol Inhibitors Show Synergistic Effects against *Pneumocystis carinii* Viability in vitro. M.S. COLLINS, M.T. CUSHION, University of Cincinnati College of Medicine and the Cincinnati Veterans Administration Medical Center, Cincinnati, OH, USA.
- PO29** Comparative Study of Adhesion and Cytopathic Effects of Four Strains of *Acanthamoeba* Isolated from Different Sources. M. OMAÑA-MOLINA¹, P. BONILLA¹, D. HERNANDEZ¹, L. SALAZAR¹, R. CAMPOS¹, A. GONZÁLEZ-ROBLES³, G. CASTAÑÓN-GUTIERREZ³, ¹CyMA Project, Faculty of Superior Studies-UNAM, Tlalnepantla. Edo. de Mexico, Mexico, D. F., ²Department of Biochemistry of Superior School of Medicine IPN, Plan de San Luis y Díaz Mirón, México, D. F., ³Department of Experimental Pathology, Center for Research Advanced Studies of the IPN, Mexico City, Mexico.
- PO30** Encystation Process of *Naegleria fowleri*: Ultrastructural Study. B. CHAVEZ-MUNGUIÁ¹, M. OMAÑA-MOLINA², G. CASTAÑÓN-GUTIERREZ¹, D. HERNANDEZ-MARTÍNEZ², A. MARTÍNEZ-PALOMO¹, ¹Department of Experimental Pathology, Center for Research and Advanced

Studies of the IPN. Av.
Mexico, ²Faculty of Superior Studies
Barrios Av. 1, Tlalnepantla 54090, Mexico.

IPN 2508, Zacatenco, 07360 Mexico City,
Iztacala, UNAM,

PO31 Prevalence and Preliminary Genetic Characterization of *Cryptosporidium* spp. from Asymptomatic Heifers in Galicia (NW, Spain). J.A. CASTRO-HERMIDA¹, A. ALMEIDA², M.

GONZÁLEZ-WARLETA¹, J.M. CORREIA DA COSTA², M.

MEZO¹, ¹Centro de Investigaciones Agrarias de Mabegondo, Xunta de Galicia, España, ²Centro de Imunologia e Biologia Parasitária – INSA, Portugal.

PO32 Absence of *Pneumocystis jirovecii* Carriage in Healthy Immunocompetent Subjects with Normal Respiratory Functions. G. NEVEZ¹, E.

MAGOIS², K. GRESILLON¹, C. RACCURT¹, V. GOUILLEUX³,
V JOUNIEAUX², A. TOTET¹, ¹Department of Medical

Parasitology and Mycology, ²Department of Pneumology, ³Laboratory of immunology, University Hospital, Amiens, France.

PO33 Prevalence and Preliminary Genetic Analysis of *Giardia* from Adult Sheep in Galicia (NW, Spain). J.A. CASTRO-HERMIDA¹, A. ALMEIDA², M.

GONZÁLEZ-WARLETA¹, J.M. CORREIA DA COSTA², M. MEZO¹, ¹Centro de Investigaciones Agrarias de Mabegondo, Xunta de Galicia, España, ²Centro de Imunologia e Biologia

Parasitária – INSA, Portugal.

PO34 Genetic diversity of *Pneumocystis jirovecii* in Sweden. J. BESER, M. LEBBAD, S. BOTERO, P. HAGBLOM, V. FERNANDEZ, Department of Parasitology, Mycology and Water Microbiology, Swedish Institute for Infectious Disease Control, and the Microbiology and Tumor Biology Center, Karolinska Institute, Stockholm, Sweden.

PO35 Level of Proinflammatory Cytokines in Patients with COPD and Colonized by *Pneumocystis jirovecii*. F. MUÑOZ-LOBATO¹, C. DE LA HORRA¹, M.A. MONTES-CANO¹, V. FRIAZA¹, N.

RESPALDIZA¹, L. RIVERO¹, F.J. MEDRANO², J.M. VARELA², E. CALDERÓN², ¹Reina Mercedes Investigation Unit, ²Internal Medicine Service, Virgen del Rocío University Hospital, Sevilla, Spain.

Sevilla, Spain.

PO36 Prevalence of *Pneumocystis jirovecii* Colonization among European Patients with Chronic Pulmonary Diseases. E.J. CALDERON¹, E. DEI-CAS², B. LUNDGREN³, G. NEVEZ⁴, M.C. PREVOST⁵, P. ROUX⁶, P. HAUSER⁷, O. MATOS⁸, on behalf of Eurocarinii project, ¹Virgen del Rocio University Hospital, Seville, Portugal, ²Institut Pasteur, Lille, France, ³Hvidovre Hospital, Copenhagen, Denmark, ⁴University Hospital-South Hospital, Amiens, France, ⁵Hopital Purpan, Toulouse, France, ⁶Faculté de Médecine Saint-Antoine, Paris, France, ⁷Hospital Preventive Medicine, Lausanne, Switzerland, ⁸Instituto de Higiene e Medicina Tropical, Lisbon, Portugal.

Lausanne, Switzerland, ⁸Instituto de Higiene e Medicina Tropical, Lisbon, Portugal.

Portugal.

Portugal.

PO37 Frequency of *Pneumocystis jirovecii* Colonization Among Cystic Fibrosis Patients with Lung Transplant. V. FRIAZA¹, N. RESPALDIZA¹, C. DE LA HORRA¹, F.J. DAPENA², F. MUÑOZ-LOBATO¹, I. MATEOS³, F.J. MEDRANO⁴, M.A. MONTES-CANO¹, E. CALDERÓN⁴, J.M. VARELA⁴, ¹Reina Mercedes

Reina Mercedes

Investigation Unit, ²Cystic Fibrosis Unit, ³Microbiology Service, ⁴Internal Medicine Service, Virgen del Rocío University Hospital, Sevilla, Spain.

- PO38** Evaluation of Commercial Depuration in Bivalves Contaminated with *Cryptosporidium parvum* Oocysts. I.M. PEREIRA DA FONSECA¹, P. RAMOS², F. RUANO², A. DUARTE¹, J.M. CORREIA DA COSTA³, A.C. ALMEIDA⁴, M.L. FALCÃO⁴, M. I. FAZENDEIRO¹, ¹CIISA, Faculdade de Medicina Veterinária, Lisboa, Portugal, ²Dpt. Aquicultura, IPIMAR/INIAP, Lisboa, Portugal, ³Centro de Imunologia e Biologia Parasitária, INSA, Porto, Portugal, ⁴Lab Microbiologia das Águas, INSA, Lisboa, Portugal.
- PO39** Prevalence of Co-Infection of *Pneumocystis carinii* f. sp. *suis* and Porcine Circovirus-2 from Pig Lung Obtained from Slaughterhouses in the Southern and Mid-Western Regions of Brazil. E.M.C. SANCHES¹, L. FERREIRO¹, C. PESCADOR², L.G. CORBELLINI², A.P. RAVAZZOLO³, D. DRIEMEIER², ¹Laboratory of Veterinary Mycology, ²Laboratory of Veterinary Pathology, ³Laboratory of Veterinary Immunology, Departamento de Patologia Clínica Veterinária, Faculdade de Veterinária, Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, RS, Brazil.
- PO40** Molecular Markers to Evaluate Stage Conversion of *Toxoplasma gondii* in Recrudescence of Toxoplasmosis in the Immunocompetent Host. C. CONTINI, R. CUTRERA, V. BIONDINI, S. SERACENI, Infectious Diseases, University of Ferrara, Ferrara, Italy.
- PO41** Cryptosporidiosis in HIV-Positive Patients from Medellín (Colombia). L. NAVARRO-I-MARTINEZ¹, A.J. DA SILVA², J.H. BOTERO GARCÉS³, M.N. MONTOYA PALACIO³, C. DEL ÁGUILA⁴, F.J. BORNAY-LLINARES¹, ¹Universidad Miguel Hernández de Elche, Alicante, Spain, ²Centers for Disease Control and Prevention, Atlanta, GA, USA, ³Universidad de Antioquia, Medellín, Colombia, ⁴Universidad CEU-San Pablo, Madrid, Spain.
- PO42** High Prevalence of DHPS Polymorphisms Associated with Sulfa Resistance in South African *Pneumocystis jirovecii* Strains. L.A. DINI¹, M. DU PLESSIS¹, M.L. WONG², A. KARSTAEDT², V. FERNANDEZ³, J.A. FREAN¹, ¹National Institute for Communicable Diseases, Johannesburg, South Africa, ²Department of Medicine, Chris Hani Baragwanath Hospital, Johannesburg, South Africa, ³Department of Parasitology, Mycology and Environmental Microbiology, Swedish Institute for Infectious Disease Control, Stockholm, Sweden.
- PO43** Multiple Epitopes can be Formed by Limited Amino Acid Variations in the Major Surface Glycoprotein of *Pneumocystis jirovecii*. J.V. KOCH, K. DALY, P.D. WALZER, VAMC, University of Cincinnati, Cincinnati, OH, USA.
- PO44** *Pneumocystis carinii* PRT1/MSR/MSG Gene Clusters Assembled from Shotgun Sequences. S.P. KEELY¹, B. SLAVEN², M.T. CUSHION^{2,3}, A.G. SMULIAN^{2,3}, J.R. STRINGER¹, Departments of ¹Molecular Genetics, and ²Internal Medicine, University of Cincinnati, ³Cincinnati VA Medical Center, Cincinnati, OH, USA.

4:15 - 5:00

Platform Sessions 11 and 12

Platform Session 11 - "Epidemiology II" (Gilles Nevez & Carmen de la Horra co-chairs) -
Eduardo Viana I

4:15 PL64 Genotypes of *Enterocytozoon bieneusi* in Mammals in Portugal. M.L. LOBO¹, L. XIAO², V. CAMA², F. ANTUNES³, O. MATOS¹, ¹Unidade de Protozoários Oportunistas/VIH e outras
Protozooses, UPMM, Instituto de Higiene e Medicina Tropical, Lisboa, ²Division of Parasitic Diseases, National Center for Infectious Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia, USA, ³Clinica Universitária de Doenças Infecciosas, Faculdade de Medicina (H.S.M.), Universidade de Lisboa, Portugal.

4:30 PL65 *Pneumocystis jirovecii* Multilocus Genotyping in Immunocompromised Patients. M.C. COSTA¹, F. ESTEVES¹, F. ANTUNES², O. MATOS¹, ¹Instituto de Higiene e Medicina Tropical, Unidade de Protozoários Oportunistas/VIH e outras Lisboa, Portugal. ²Clínica de Doenças Infecciosas, Hospital de Santa Maria, Lisboa, Portugal.

4:45 PL66 *Pneumocystis* Dihydropteroate Synthase (DHPS) Mutations and HIV-Associated *Pneumocystis* Pneumonia (PcP). L. HUANG¹, D. WELSH², R.F. MILLER³, C.B. BEARD⁴, G.G. LAWRENCE⁴, M. FOX⁴, A. SWARTZMAN¹, M. BENSLEY¹, D. CARBONNET², J.L. DAVIS¹, A. CHI¹, J.L. JONES⁴, ¹University California San Francisco, ²Louisiana State University, ³University College London, ⁴Centers for Disease Control and Prevention (CDC), USA.

Platform Session 12 - "Host-Pathogen Interactions & Pathogenesis" (James Beck & José Antonio Castro Hermida, co-chairs) - Eduardo Viana II+III

4:15 PL67 *Pneumocystis* Colonization and Cigarette Smoke Exposure in the Development of Emphysema in a Mouse Model. J.M. BECK^{1,2}, A.M. PRESTON¹, J.E. PITZER¹, T. LING¹, R. PAINE III^{1,2}, P.J. CHRISTENSEN^{1,2}, ¹University of Michigan Medical School and ²Department of Veterans Affairs Medical Center, Ann Arbor, MI, USA.

4:30 PL68 *Pneumocystis murina* Inoculation Results in an Increase in Airway Hyperresponsiveness and Also Promotes Sensitization to other Exogenous Antigens in Immunocompetent BALB/c Mice. S. SWAIN, N. MEISSNER, A. HARMSSEN,
Department of Veterinarian Molecular Biology, Montana State University, Bozeman, MO, USA.

4:45 PL69 Gastric Mammalian Cryptosporidia: Susceptibility of Southern Multimammate Mouse (*Mastomys coucha*) to *Cryptosporidium andersoni* Infection. M. KVÁC^{1,3}, Z. ONDRÁCKOVÁ², D. KVETONOVÁ¹, B. SAK¹, J. VÍTOVEC³, ¹Institute of Parasitology, Biological Centre of the Academy of Sciences of the Czech Republic, ²Faculty of Biological Sciences and ³Faculty of Agriculture, University of South Bohemia in České Budejovice, Czech Republic.

5:00 - 6:00

Plenary Session: ISOP Hutner Awardee Lecture - Eduardo Viana II & III

5:00 L1 Protist Genomes: A Strange Brew of Broken Rules. PATRICK KEELING,
Department of Botany, University of British
Columbia, Vancouver, BC, Canada.

6:00 - Evening

Happy Hour/Dinner - On Your Own or
Informal Organism-Based Dinners (to be arranged)

8:00 -

ISOP Student Travel Fund Auction (Linda Hufnagel & Robert Zackroff, co-chairs) - Eduardo
Viana I

FRIDAY, JUNE 23

AM

8:00 – 11:00

Symposium 2 - "Intracellular and Host-Pathogen Intracellular Trafficking" (Steve Hajduk
convener) - Eduardo Viana II+III

8:00 S5 African Trypanosomes: Intracellular Trafficking of Host Defense Molecules.
S.L. HAJDUK¹, A.M. SHIFLETT¹, S.D. FAULKNER¹, L.F.COTLIN²,
¹Marine Biological Laboratory, Woods Hole, MA,
²University of Alabama at Birmingham, Birmingham, AL, USA.

8:40 S6 Regulation of GPI Valence by Conditional Dimerization in African
Trypanosomes. K.J. SCHWARTZ, J.D. BANGS, Department of
Medical Microbiology and Immunology, University of
Wisconsin Medical School, Madison, WI.

9:20 S7 *Leishmania*: Trafficking and Function of Acylated Proteins. D.F. SMITH,
Immunology & Infection Unit, Department of
Biology, University of York, York, UK.

10:00 - 10:15

Break

10:15 S8 Host Remodeling by Malaria Parasites. K. HALDAR, Northwestern University,
Feinberg School of Medicine, Dept. Pathology, Chicago, IL,
USA.

10:55 S9 The *Toxoplasma gondii* Parasitophorous Vacuole Membrane: Transactions
Across the Border, A.P. SINAI¹, A.M. MARTIN¹, T. LIU², B.C. LYNN²,
¹Department of Microbiology Immunology and Molecular Genetics,
²Department of Chemistry, University of Kentucky, Lexington,
KY, USA.

AM-PM

11:35 - Rest of the Day
Lisbon Outing/Tour

6:00 - Evening

**Happy Hour/Dinner - On Your Own or
Informal Organism-Based Dinners (to be arranged)**

SATURDAY, JUNE 24

AM

8:00 - 10:00

Platform Sessions 13 and 14

Platform Session 13 - "Biodiversity" (John Clamp & Laura Wegener Parfrey, co-chairs) - Eduardo Viana I

8:00 PL70 A New Generation Archiving System for Cilioprotists of Southern New England. E. FREMEN, L.A HUFNAGEL, University of Rhode Island, Kingston, RI, USA.

8:15 PL71 18s rRNA Gene Sequences Reveal Diversity Within the Genus *Zoothamnium* (Ciliophora, Peritrichia). J.C. CLAMP, North Carolina Central University, Durham, NC, USA.

8:30 PL72 Barcoding Protists: A Trailblazing Study on a Ciliate Genus of Closely Related Species, *Tetrahymena*, C. CHANTANGSI, M.C. STRÜDER-KYPKE, D.H. LYNN, Department of Integrative Biology, University of Guelph, Guelph, Ontario, Canada.

8:45 PL73 Discovery and "Bar-Coding" of New Species of the Trypanosomatidae by the Analysis of Spliced Leader RNA Gene Sequences in Environmental Samples. D.A. MASLOV¹, X. XU¹, S. WESTENBERGER², V.A. YURCHENKO³, J. LUKEŠ⁴, N.R. STURM², D.A. CAMPBELL², ¹University of California, Riverside, CA, ²University of California, Los Angeles, CA, ³Yeshiva University, Bronx, NY, USA, ⁴Institute of Parasitology, České Budejovice, Czech Republic.

9:00 PL74 Placement of Diverse Amoebae on the Eukaryotic Tree of Life. J. GRANT¹, E. BARBERO¹, J. COLE², J. M. LOGSDON³, D.J. PATTERSON⁴, L. A. KATZ¹, ¹Smith College, Northampton MA, ²American Type Culture Collection, Manassas VA, ³University Iowa, Iowa City, IA, ⁴Marine Biological Laboratories, Woods Hole, MA, USA.

9:15 PL75 Distribution of *Acanthamoeba* in More and Less Polluted North Sea Coastal Sediments. D.A. MUNSON,¹ J-P. DUCROTOY², T.A. PAGET², ¹Washington College, Chestertown, MD, USA, ²The University of Hull, Hull, UK.

9:30 PL76 Distribution of *Cryptosporidium* Species and Subtypes in Water Samples in Portugal. M. ALVES¹, A.M. RIBEIRO², C. NETO², E. FERREIRA², M.J. BENOLIEL², F. ANTUNES³, O. MATOS¹, ¹Unidade de Protozoários Oportunistas/VIH e Outras Protozooses, UPMM, Instituto de Higiene e Medicina Tropical, Lisboa, Portugal. ²Laboratório Central da EPAL, Unidade de Análises, Equipa de Microbiologia, Lisboa, Portugal. ³Clínica Universitária de Doenças Infecciosas, Faculdade de Medicina (Hospital de Santa Maria), Lisboa, Portugal.

9:45 PL77 Protozoan Diversity in Two Different Water Bodies in Shebeen El-Koum, El-Menofeya Province, Egypt. M. GALAL, E. KHALLAF, M. EL-SEHEMY, Zoology Department, Faculty of Science, Menofeya University, Shedeen El-Koum, Menofeya, Egypt.

Platform Session 14 - "Gene Expression and Recombinant Proteins" (Philippe Hauser & Marina Costa, co-chairs) - Eduardo Viana II+III

8:00 PL78 Structure of the Locus Associated with Transcription of a Variable Surface Antigen Gene Family in *Pneumocystis murina*. S.P. KEELY¹, M.J. LINKE², M.T. CUSHION², J.R. STRINGER¹, Departments of ¹Molecular Genetics, Biochemistry and Microbiology and ²Internal Medicine, University of Cincinnati Cincinnati, OH, USA.

8:15 PL79 Structure, Expression, and Evolution of Ribosomal DNA in *Pneumocystis*. S.P. KEELY, J.M. FISCHER, M.T. CUSHION, J.R. STRINGER, University of Cincinnati, Cincinnati, OH, USA.

8:30 PL80 Microarray Analysis of the *Pneumocystis carinii* Transcriptome. A.G. SMULIAN, B.E. SLAVEN, J. DEMLAND, M. COLLINS, M.T. CUSHION. University of Cincinnati College of Medicine, and Cincinnati VAMC, Cincinnati, OH, USA.

8:45 PL81 Functional Gene Analysis of *Pneumocystis carinii* by Complementation of Yeast Genes. P.M. HAUSER,¹ L. CERUTTI,² V. SIMANIS,³ ¹Institute of Microbiology, University Hospital of Lausanne, ²Swiss Institute of Bioinformatics, Lausanne, ³Swiss Institute for Experimental Cancer Research, Epalinges, Switzerland.

9:00 PL82 Analysis and Functional Classification of Transcripts Expressed by *Pneumocystis carinii* during Fulminate Infection. M.T. CUSHION¹, A. G. SMULIAN¹, B.E. SLAVEN¹, T. SESTERHENN¹, A. POROLLO², J. MELLER², ¹University of Cincinnati College of Medicine and the Cincinnati Veterans Administration Medical Center, Cincinnati, OH; ²Childrens Hospital Research Foundation, Cincinnati, OH, USA.

9:15 PL83 Characterization of the *Pneumocystis carinii* Lanosterol Synthase (*PcErg7*) Gene and Protein in Yeast. T. JOFFRION, M.S. COLLINS, M.T. CUSHION, University of Cincinnati College of Medicine and the Cincinnati Veterans Administration Medical Center, Cincinnati, OH, USA.

9:30 PL84 Recombinant *Pneumocystis carinii* S-Adenosylmethionine: Sterol Δ^{24} Methyltransferase (SAM:SMT) Expressed in Heterologous Systems. E.S. KANESHIRO, S.M. HUNT, S.W. NKININ, , Department of Biological Sciences, University of Cincinnati, Cincinnati, OH, USA.

9:45 PL85 Characterization of the Interactions between the *Pneumocystis* Rho-Type GTPase, Cdc42, and the Scaffold Protein Scd2. A.G. SMULIAN, R. TANAKA, University of Cincinnati College of Medicine, and Cincinnati VA Medical Center, Cincinnati, OH, USA.

10:00 - 10:15
Break

10:15 - 12:00

Platform Sessions 15 and 16

Platform Session 15 - "Transmission" (Laurence Huang & Bettina Lundgren, co-chairs) - Eduardo Viana I

- 10:15 PL86** The Roles of Insects in the Epidemiology of the Opportunistic Protists
Cryptosporidium, and *Giardia* in Agricultural Systems
Supporting Diverse Livestock and Wildlife Populations. D.B. CONN¹,
T.K. GRACZYK², L.TAMANG², D.A. CONN³, ¹Berry
College, Mount Berry GA, USA, ²Johns Hopkins University,
Baltimore MD, USA, ³North American Scientific Enterprises (NASCENT),
Monteagle TN, USA.
- 10:30 PL87** Microsporidia Species Known to Infect Humans Present in Aquatic Birds;
Implications for Waterborne Transmission? T.K.
GRACZYK¹, A. SLODKOWICZ- KOWALSKA², L. TAMANG¹, S.
JEDRZEJEWSKI², A. NOWOSAD³, P. ZDUNIAK
³, P. SOLARCZYK², A.S. GIROUARD¹, A.C. MAJEWSKA², ¹Johns
Hopkins Bloomberg School of Public Health, Baltimore, MD, ²Poznan University of
Medical Sciences, Poznan, Poland, ³Adam Mickiewicz University, Poznan,
Poland.
- 10:45 PL88** Infectivity of Microsporidian Spores after Exposure to Temperature Extremes and
Chemical Disinfectants. X. LI¹, R. FAYER², ¹Veterinary Medical
Teaching and Research Center, University of California-
Davis, Tulare, CA, ²Environmental Microbial Safety
Laboratory, Agricultural Research Service, U.S. Dept. of
Agriculture, Beltsville, MD, USA.
- 11:00 PL89** *Pneumocystis* Colonization in Healthcare Workers (HCW) Caring for HIV-Infected
Patients, L. HUANG¹, S. FISCHER², H. MASUR², A. CHI¹, C.
HUBER², M. BENSLEY¹, J. HERNANDEZ¹, J.
KOVACS² ¹University California San Francisco, CA, ²National
Institutes of Health, Bethesda, MD, USA.
- 11:15 PL90** Primary *Pneumocystis* Infection in Infants Hospitalized with Acute Respiratory
Tract Infection. H.H. LARSEN^{1,2}, M-L. VON LINSTOW³, B.
LUNDGREN², B. HØGH³, H. WESTH² J.D. LUNDGREN¹,
¹Copenhagen HIV Programme, Departments of
²Clinical Microbiology and ³Paediatrics, Hvidovre University
Hospital, Denmark.
- 11:30 PL91** Probable *Pneumocystis jirovecii* Inter-Human Transmission in a French Hospital
Pediatric Unit and in the Community. I. DURAND-JOLY^{1,2,3}, M.
CHABÉ¹, N. GANTOIS¹, N. HEOUAINE², S.
MOULRONT², D. CAMUS^{1,3}, E. DEI-CAS^{1,3}, ¹EA-3609-
CH et U-Lille-2, ²Centre Hospitalier de Dunkerque, ³Institut Pasteur de
Lille, France.
- 11:45 PL92** Additional Data on Vertical Transmission of *Pneumocystis carinii* f.sp. *oryctolagi*.
C.A. SANCHEZ¹ and D.M. CHABÉ², V. CONSEIL³, N.
GANTOIS³, E.M. ALIOUAT², I. DURAND-JOLY^{3,4},

C. LÓPEZ⁵, E. DEI-CAS^{3,4}, S.L. VARGAS¹,¹Respiratory
Infections Laboratory, Biomedical Sciences Institute, University of
Chile School of Medicine, Santiago, Chile, ²Laboratory of Parasitology-Mycology
(EA-3609), Faculty of Pharmacy of Lille, Lille, France, ³Ecology of
Parasitism (EA3609), Lille Pasteur Institute, Lille, France,
⁴Parasitology-Mycology (EA-3609), Lille-2 University Hospital
Centre, Lille, France, ⁵Instituto de Salud Pública de Chile, Santiago, Chile.

Platform Session 16 - "Cell Biology II" (Christine Sundermann & Ann Cali, co-chairs) - Eduardo Viana II+III

- 10:15 PL93** Interaction Between Alveolar Cells and *Pneumocystis carinii* : A Confocal Microscopy Study. I. LADEN², L. HELIOT³, E. DEI-CAS^{2,4}, M. POTTIER¹, C. SPRIET³, P. THUILLIER¹, T. DURIEZ¹, E.M. ALIOUAT^{1,2}, ¹Laboratoire de Parasitologie-Zoologie, Faculté de Pharmacie de Lille, ²Laboratoire Ecologie du parasitisme, Institut Pasteur de Lille, ³Laboratoire d'Imagerie Cellulaire fonctionnelle, Institut Biologique de Lille, ⁴Laboratoire de Parasitologie, CHRU, Faculté de Médecine, Lille, France.
- 10:30 PL94** *Cryptosporidium parvum*: Potential Axenic Development Versus Long Term Survival of Oocysts. M.J. ARROWOOD, L.T. XIE, Centers for Disease Control and Prevention, National Center for Zoonotic, Vector-borne and Enteric Diseases, Division of Parasitic Diseases, Atlanta GA, USA.
- 10:45 PL95** Rhomboid-like Proteins in *Toxoplasma gondii*. T. DOWSE^{1,2}, L. SHEINER², P. PINO^{1,2}, D. SOLDATI², ¹Department of Biological Sciences, Sir Alexander Fleming Building, Imperial College London, London, U.K., ²Department of Microbiology and Molecular Medicine, Faculty of Medicine, University of Geneva, Geneva, Switzerland.
- 11:00 PL96** Functional Evidence for an Aquaporin in the Microsporidium *Encephalitozoon cuniculi*. K. GHOSH^{1,2}, C. CAPPIELLO¹, A. CALI², P.M. TAKVORIAN², L.M. WEISS¹, ¹Albert Einstein College of Medicine, Bronx, NY, ²Rutgers University, Newark, NJ, USA.
- 11:15 PL97** Localization of a Microsporidia ADAM (a Disintegrin and Metalloprotease) Family Member in *Encephalitozoon cuniculi* and *E. intestinalis*. C.E. JOLLY, M.E. LESTER, J.R. HAYMAN, Department of Microbiology, East Tennessee State University, James H. Quillen College of Medicine, Johnson City, TN, USA.
- 11:30 PL98** Identification of a Microsporidia Protein Potentially Involved in Spore Adherence to Host Cells. T.R. SOUTHERN, C.E. JOLLY, M.E. LESTER, J.R. HAYMAN, Department of Microbiology, James H. Quillen College of Medicine, East Tennessee State University, Johnson City, TN.
- 11:45 PL99** Characterization of the Intracellular Fate of the Microsporidian Pathogen *Encephalitozoon cuniculi*. K. RÖNNEBÄUMER, V. FASSHAUER, J. WAGENER, W. BOHNE, U. GROSS, University of Goettingen, Institute of Medical Microbiology, Kreuzberggring 57, D-37075 Goettingen, Germany.

12:00 - 1:00 PM

Plenary Lecture - ISOP Vice President's Address - Eduardo Viana II+III

12:00 L2 Studies of Protistan Diversity in Antarctica. R.J. GAST¹, D.M. MORAN¹, M.R. DENNETT¹, D.J. BEAUDOIN¹, D.A. CARON² ¹Woods Hole Oceanographic Institution, Woods Hole, MA, ²University of Southern California, Los Angeles, CA, USA.

PM

1:00 - 2:00

Lunch - Almada Negreiros + Restaurant

2:00 - 4:00

Poster Session C - Eduardo Viana IV

PO45 Evidence for a Diverse Actin Gene Family in the Freshwater Testate Amoeba *Arcella hemisphaerica*. E. BARBERO¹, J. GRANT¹, D. LAHR², L.A. KATZ¹, ¹Department of Biological Sciences, Smith College, MA, USA, ²Department of Zoology, University of São Paulo, São Paulo-SP, Brazil, ³Program in Organismic and Evolutionary Biology, University of Massachusetts, Amherst, MA, USA.

PO46 *Pneumocystis jirovecii* Genotypes in European Patients with Chronic Obstructive Pulmonary Diseases. A. TOTET¹, K. GRESILLON¹, O. MATOS², B. LUNDGREN³, H.H. LARSEN³, P. ROUX⁴, P. HAUSER⁵, G. NEVEZ¹, ¹Amiens University Hospital, Amiens, France, ² Institute of Hygiene and Tropical Medicine, Lisbon, Portugal, ³Hvidovre Hospital, Hvidovre, Denmark, ⁴Saint-Antoine University Hospital, Paris, France, ⁵Lausanne University Hospital, Lausanne, Switzerland.

PO47 Usefulness of a Second Sputum Assessment for Diagnosis of *Pneumocystis jirovecii* Pneumonia. B. BUSTAMANTE^{1,2}, E. NEYRA², E. GONZALES², K. VERDONCK², R. VELANDO², C. CASTRO², E. GOTUZZO^{1,2}, ¹Department of Infectious Diseases, Tropical Medicine and Dermatology of the Hospital Nacional Cayetano Heredia, ²Instituto de Medicina Tropical Alexander von Humboldt-Universidad Peruana Cayetano Heredia, Lima, Perú.

PO48 Using *Tetrahymena thermophila* to Study the Role of Protozoa in Inactivating Viruses. M.D.O. PINHEIRO¹, M.E. POWER¹, B.J. BUTLER¹, V.R. DAYEH¹, R. SLAWSON², L.E.J. LEE², D.H. LYNN³, N.C. BOLS¹, ¹University of Waterloo, Waterloo, ON, ²Wilfrid Laurier University, Waterloo, ON, ³University of Guelph, Guelph, ON, Canada.

PO49 Evaluating Support for Eukaryotic Supergroups and the Search for Sister Groups of Foraminifera. L.W. PARFREY¹, E. BARBERO², E. LASSER², J. GRANT², D.J. PATTERSON³, L.A. KATZ^{1,2}, ¹Program in Organismic and Evolutionary Biology, University of Massachusetts, Amherst, MA, ²Department of Biological Sciences, Smith College, Northampton, MA, ³ Bay Paul Center for Genomics, Marine Biological Laboratory, Woods Hole, MA, USA.

- PO50** Development of Serologic Responses to *Pneumocystis* in a Cohort of Patients with Cystic Fibrosis. N. RESPALDIZA¹, M. MONTES-CANO¹, J. DAPENA², C. DE LA HORRA¹, I. WICHMAN³, I. MATEOS⁴, V. FRIAZA¹, F. MUÑOZ-LOBATO¹, J.M. VARELA⁵, E. CALDERÓN⁵, FJ. MEDRANO⁵, ¹Reina Mercedes Investigation Unit, ²Cystic Fibrosis Unit, ³Immunology Service, ⁴Microbiology Service, ⁵Internal Medicine Service, Virgen del Rocío University Hospital, Seville, Spain.
- PO51** Detection of Proteasome in *Pneumocystis carinii* and its Modulation by Specific Proteasome Inhibitors. E. TRONCONI¹, F. MAZZA¹, A. VALERIO¹, M.T. RINAUDO², M. PICCININI², A. ANSELMINO², A. CARGNEL¹, C. ATZORI¹, ¹L. Sacco Hospital, Milan, Italy, ²University of Turin, Turin, Italy.
- PO52** Occurrence of Co-infection of *Pneumocystis carinii* and Porcine Circovirus 2 in Wild Boar Herds of Brazil, E.M. CAVALLINI SANCHES¹, M.R. BORBA², P. ZLOTOWSKI², A. SPANAMBERG¹, D. DRIEMEIER², A.P. RAVAZZOLO³, L. FERREIRO¹, ¹Setor de Micologia Veterinária, ²Setor de Patologia Veterinária, ³Setor de Imunologia Veterinária, Departamento de Patologia Clínica Veterinária, Faculdade de Veterinária, Porto Alegre, RS, Brazil.
- PO53** Free-Living Amoeba: Detection, Morphological and Molecular Identification of the *Acanthamoeba spp* in Hemodialysis Unit. F. DENDANA¹, H. SELLAMI¹, F. MAKNI¹, F. CHEIKHROUHOU¹, A. SELLAMI¹, F. JARRAYA², J. HACHICHA², A. AYADI¹, ¹Parasitology and Fungi Molecular Biology Laboratory, Habib Bourguiba Hospital -Sfax, ²Nephrology Ward, Hedi Chaker Hospital – Sfax, Tunisia.
- PO54** Evaluation of the Cythopathogenic Mechanisms of Two Strains of *Acanthamoeba* Isolated from Contact Lenses on Hamster Cornea. M. OMAÑA-MOLINA¹, L.I. SALAZAR-VILLATORO, A. GONZALEZ-ROBLES, ¹Faculty of Superior Studies Iztacala, UNAM, Barrios Av. 1, Tlalnepantla 54090, Mexico, ²Department of Experimental Pathology, Center for Research an Advanced Studies of the IPN, Mexico City, Mexico.
- PO55** In vitro Culture of *Pseudoloma neurophilia*, a Common Microsporidian of Zebrafish (*Danio rerio*). V.G. WATRALL¹, R.B. KAUFFMAN², M.L. KENT¹, ¹Department of Microbiology, Oregon State University, ²Oregon Dept. Fish & Wildlife, Center for Fish Disease Research, Oregon State University, Corvallis, OR, USA.
- PO56** Large Scale Analysis of Introns and Splice Site Elements in the *Pneumocystis carinii* Genome. B.E SLAVEN¹, A.G. SMULIAN¹, M.T. CUSHION¹, T. SESTERHENN¹, A. POROLLO², J. MELLER², ¹University of Cincinnati College of Medicine and Administration Medical Center, ²Childrens Hospital the Cincinnati Veterans Research Foundation, Cincinnati, OH, USA.
- PO57** Attempt to Infect Lovebirds and Budgerigars by Zoonotic Microsporidia *Encephalitozoon hellem*. M. KAMLER¹, M. DOLEŽALOVÁ¹, D. MODRÝ^{1,2}, ¹Department of Parasitology, University of Veterinary and Pharmaceutical Sciences,

Brno, Czech Republic, ²Institute of Parasitology, Academy of Sciences of the Czech Republic, České Budejovice, Czech Republic.

PO58 Genetic Characterization of *Cryptosporidium* spp. Isolates from Humans in North of Portugal. A. ALMEIDA¹, M. L. DELGADO¹, S. SOARES², A. CASTRO^{1,2}, E. SILVA², M. J. MOREIRA², C. MENDONÇA², N. CANADA², A. TOMÁS³, J. M. CORREIA DA COSTA^{1,2}, ¹Centro de Imunologia e Biologia Parasitária – INSA, Portugal, ²Centro de Estudos de Ciência Animal – ICETA, Portugal, ³Instituto de Biologia Molecular e Celular, IBMC, Portugal.

PO59 *Cryptosporidium* Population Genetics: Evidence of Clonality in France and Haiti. T. NGOUANESAVANH¹, K. GUYOT¹, G. CERTAD^{1,2}, Y. LE FICHOUX³, C. CHARTIER⁴, R-I. VERDIER⁵, J-C. CAILLIEZ⁶, D. CAMUS^{1,7}, E. DEI-CAS^{1,7}, A-L. BAÑULS⁸, ¹Ecologie du Parasitisme (EA 3609), Institut Pasteur de Lille, France, ²Cátedra de Parasitología, Escuela de Medicina “José María Vargas”, Universidad Central de Venezuela, Caracas, Venezuela, ³Parasitologie-Mycologie, Centre Hospitalier Universitaire de Nice, France, ⁴AFSSA Laboratoire d'études et de recherches caprines, Niort, France, ⁵Centre GHESKIO, Port au Prince, Haïti, ⁶Laboratoire Environnement et Santé, Université Catholique de Lille, France, ⁷Parasitologie-Mycologie, Centre Hospitalier Régional et Universitaire de Lille, France, ⁸Génétique et Evolution des Maladies Infectieuses, IRD, Montpellier, France.

PO60 Geographic Variation in Epitopes of Major Surface Glycoprotein as Determined by Reactivity to Multiple MsgC Clones. K. DALY¹, J.V. KOCH¹, E. CALDERON², P.D. WALZER¹, ¹VAMC, University of Cincinnati, Cincinnati, OH, USA, ²Virgen del Rocío University Hospital, Seville, Spain.

PO61 Investigation into the Mechanism of IGTP-Dependent IFN γ Inhibition of *Toxoplasma gondii* in Astrocytes as Revealed by Transcriptional Analysis. S. HOGAN, T. WOODS, K. MCINNERNEY, S.K. HALONEN, Montana State University, Dept of Microbiology, Bozeman, MT, USA.

PO62 Genotyping of *Giardia duodenalis* Isolates from Dogs in the United States using a β -*Giardin* PCR-RFLP. A.V. SCORZA¹, S.M. CACCIO², R. BURNETT¹, M.R. LAPPIN¹, ¹Colorado State University, Ft. Collins, CO, USA, ²Istituto Superiore di Sanità, Rome, Italy.

PO63 Genotyping of *Giardia lamblia* from Human Faeces by PCR-RFLP and Sequencing Analysis. M.C. SOUSA¹, J.B. MORAIS², T. COSTA², S. MAGALHÃES², J. POIARES-DA-SILVA¹, ¹Laboratório de Microbiologia e Parasitologia, Centro de Estudos Farmacêuticos, Faculdade de Farmácia, Universidade de Coimbra, ²LabFafe, Laboratório de Análises Clínicas S.A., Fafe, Portugal.

PO64 [Draft Assembly of the *Pneumocystis carinii* Genome.](#) B.E SLAVEN¹, J. MELLER², A. POROLLO², T. SESTERHENN¹, A. G. SMULIAN¹, M.T. CUSHION¹, ¹University of Cincinnati College of Medicine and the Cincinnati Veterans

PO65 Complement Protein Expression and Activation and Alveolar Damage
During *Pneumocystis* Pneumonia. M.E. LASBURY, P.J. DURANT,
D. TSCHANG, C-H. LEE, Indiana University School of Medicine,
Indianapolis, IN, USA.

PO66 Public Health Impact of Protists as Opportunistic Pathogens in Developing
Countries of Africa. O.L. EDOSA¹, O. UREVBU², ¹Oseghale Lucky
Edosa, Ambrose Alli University, Ekpoma, ²Okoye
Urevbu, Delta State University, Abraka, Nigeria.

4:00 - 4:15

Break

4:15 - 6:00

Platform Sessions 17 and 18

Platform Session 17 - "Pathogenesis and Therapy" (Rob Miller & Chao-Hung Lee, co-chairs) -
Eduardo Viana I

4:15 PL100 Prevention of Recrudescence of Toxoplasma Encephalitis using Ponazuril in an
Immunodeficient Mouse Model. S.M. MITCHELL, A.M.
ZAJAC, J.P. DUBEY, D.S. LINDSAY, Department of Biomedical
Sciences and Pathobiology, Virginia Tech, Blacksburg,
Virginia, USA.

4:30 PL101 Marijuana Exacerbates Neuropathy and Inhibits Macrophage Chemotaxis in Mice
Infected with *Acanthamoeba culbertsoni* F. MARCIANO-
CABRAL, E. RABORN, G. A. CABRAL, Department of
Microbiology and Immunology, Virginia
Commonwealth University, School of Medicine, Richmond, VA, USA.

4:45 PL102 Second-Line Treatment and Outcome of HIV-Associated *Pneumocystis jirovecii*
Pneumonia 1989-2004: Data from Three Cohorts. J. HELWEG-
LARSEN¹, T.L. BENFIELD², C. ATZORI³, R. MILLER⁴,
¹Department of Infectious Diseases, Rigshospitalet University
Hospital, Copenhagen, Denmark, ²Copenhagen HIV Programme,
Hvidovre University Hospital, Copenhagen, Denmark, ³II Department of Infectious
Diseases, Luigi Sacco Hospital, Milan, Italy, ⁴Centre for Sexual Health and
HIV Research, University College London, London, UK.

5:00 PL103 Role of Type I Interferons in Modulation of the TH-2-Mediated Immune Responses
during the Clearance of *Pneumocystis* Infection of the Lung:
Comparative Analysis of Gene Expression Analysis of Pulmonary Dendritic
Cells (DCs) Isolated from Wildtype and IFNAR KO Mice after
Infection with *Pneumocystis*. N.N.
MEISSNER¹, S. HAN¹, K. MCINNERNEY², A.G. HARMSSEN¹, ¹Department of
Veterinary Molecular Biology, ²Functional Genomics Facility, Department of
Microbiology, Montana State University, Bozeman, MT,
USA.

5:15 PL104 Microaerophilic Conditions Increase the Viability and Affect Drug Responses of *P.*
carinii in vitro. T. JOFFRION, M.S. COLLINS, M.T. CUSHION,

University of
Cincinnati Veterans Administration Medical
OH, USA.

Cincinnati College of Medicine and the
Center, Cincinnati,

5:30 PL105 Caspase-9 as a Target for Therapy of *Pneumocystis* Pneumonia. M.E. LASBURY, D. TSCHANG, P.J. DURANT, C-H. LEE, Indiana University School of Medicine, Indianapolis, IN, USA.

5:45 PL106 High Prevalence of DHPS Polymorphisms Associated with Sulfa Resistance in South African *Pneumocystis jirovecii* Strains. L.A. DINI¹, M. DU PLESSIS¹, M.L. WONG², A. KARSTAEDT², V. FERNANDEZ³, J.A. FREAN¹, ¹National Institute for Communicable Diseases, Johannesburg, South Africa, ²Department of Medicine, Chris Hani Baragwanath Hospital, Johannesburg, South Africa, ³Department of Parasitology, Mycology and Environmental Microbiology, Swedish Institute for Infectious Disease Control, Stockholm, Sweden.

Platform Session 18 - "Molecular Biology & Epidemiology" (Lihua Xiao & Luisa Costa, co-chairs) - Eduardo Viana II+III

4:15 PL107 The Sequence of the *Pneumocystis carinii erg11* Gene that Codes for Sterol 14 α -Demethylase. S.W. NKININ¹, S.P. KEELY², J.R. STRINGER², E.S. KANESHIRO¹, ¹Department of Biological Sciences, ²Department of Molecular Genetics, Biochemistry & Microbiology, University of Cincinnati, Cincinnati, OH, USA.

4:30 PL108 Expressed *Pneumocystis carinii* MSG Genes Can be Created from Segments of Donor Genes by Apparent Gene Conversion. S.P. KEELY¹, E.M. ALIOUAT², E. DEI-CAS³, M.T. CUSHION^{4,5}, J.R. STRINGER¹, Departments of ¹Molecular Genetics, ²Internal Medicine, University of Cincinnati, ³VA Medical Center, Cincinnati, OH, USA, ⁴Faculté de Pharmacie, ⁵Institut Pasteur de Lille & Centre Hospitalier Universitaire, Lille, France.

4:45 PL109 Is Genetic Variability of the Alveolate Parasite *Hematodinium* Host-Specific? K. HAMILTON¹, D. MORRITT¹, P. SHAW¹, ¹School of Biological Sciences, Royal Holloway, University of London, U.K.

5:00 PL110 Wide Occurrence of *Cryptosporidium bovis* and the Deer-like Genotype in Bovines. Y. FENG¹, Y. ORTEGA², G. HE³, P. DAS⁴, X. ZHANG⁵, R. FAYER⁶, W. GATEI¹, V. CAMA¹, L. XIAO¹, ¹Centers for Disease Control and Prevention, Atlanta, GA, ²University of Georgia, Griffin, GA, ³Chinese Academy of Agricultural Sciences, Shanghai, China, ⁴Rajendra Memorial Research Institute Of Medical Sciences. Patna, India, ⁵Jilin University, Changchun, China, ⁶U. S. Department of Agriculture, Beltsville, MD.

5:15 PL111 Development of a Multilocus Sequence Typing Tool for *Cryptosporidium hominis*. W. GATEI^{1,2,3}, C.A. HART⁴, R.H. GILMAN⁵, P. DAS⁶, J. LINDO⁷, V. CAMA^{1,4}, L. XIAO¹, ¹Centers for Disease Control and Prevention, Atlanta, GA, USA, ²Kenya Medical Research Institute, Nairobi, Kenya, ³Atlanta Research and Education Foundation, Atlanta, GA, USA, ⁴Department of Medical Microbiology, University of Liverpool, UK, ⁵The Johns Hopkins University, Baltimore, MD, USA,

⁶Rajendra Memorial Research Institute of Medical Sciences, Patna, India,

⁷The University of West Indies, Kingston, Jamaica.

5:30 PL112 Knee Arthritis Associated with Microsporidian-Like Spores in a Patient with Profound Aplasia. M. RABODONIRINA¹, G.S. VISVESVARA², A. GENOT³, J.Y. BLAY⁴, L.X. XIAO², V.A. CAMA⁵, T. FASSIER⁵, ¹Parasitology Unit, Croix-Hospices Civils de Lyon, Lyon, France, ²Division of Parasitic Diseases, National Center for Infectious Diseases, Centers for Disease Control and Prevention, Atlanta, USA, ³Biochemistry Laboratory, Croix-Rousse Hospital, Hospices Civils de Lyon, Lyon, France, ⁴Claude-Bernard University and Medical Oncology Unit, Edouard Herriot Hospital, Hospices Civils de Lyon, Lyon, France, ⁵Medical Intensive Care Unit, Croix-Rousse Hospital, Hospices Civils de Lyon, Lyon, France.

5:45 PL113 A New Isolate of Mammalian Microsporidia and Experimental Infection of *Spodoptera littoralis* (Lepidoptera: Noctuidae). M. KAMLER¹, B. KOUDELA^{1,2}, D. MODRÝ^{1,2}, J. VÁVRA^{2,3}, ¹Department of Parasitology, University of Veterinary and Pharmaceutical Sciences, Brno, Czech Republic, ²Institute of Parasitology, Academy of Sciences of the Czech Republic, České Budejovice, Czech Republic, ³Department of Parasitology, Faculty of Science, Charles University, Prague, Czech Republic.

6:00 - 9:00

Closing Dinner, Awards, ISOP Business Meeting

