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Contribution of PCR-SSCP, PCR-RFLP, isoelectric focusing and starch gel electrophoresis techniques in the study of phenetic and genetic polymorphism of *Echinococcus granulosus* in Tunisia

Myriam Oudni-M'Rad, Selim M'Rad, Mongi Mekki, Mohsen Belguith, Taoufik Sayadi, Francine Pratlong, Jacques J. Cabaret, Abdellatif Nouri, Rached Azaiez, Habib Mezhoud, et al.

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1st Three Countries Joint Meeting

French Society of Parasitology
German Society of Parasitology
Swiss Society of Tropical Medicine and Parasitology

“LIVING TOGETHER”



Physiopathology of Intracellular Parasitic Diseases

**Faculté de Médecine
de l'Université Louis Pasteur
4 rue Kirschleger
Strasbourg (France)**

13–16 June 2007

ORGANIZING COMMITTEE

Pr Dr E. CANDOLFI Pr Dr U. GROSS Pr Dr A. HEMPHILL

We gratefully acknowledge the support of :

LA VILLE DE STRASBOURG

L'UNIVERSITE LOUIS PASTEUR DE STRASBOURG

LA FACULTE DE MEDECINE DE STRASBOURG

LES HOPITAUX UNIVERSITAIRES DE STRASBOURG

ALL.DIAG INSTRUMENTS ET REACTIFS

BIOMERIEUX

BIOTRIN

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BORDIER AFFINITY PRODUCTS

DADE-BEHRING

DIAMED - FRANCE S.A.

DOMINIQUE DUTSCHER

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LAVOISIER EDITIONS SCIENTIFIQUES ET MEDICALES

LD-BIO DIAGNOSTICS

PAUL EHRLICH GESELLSCHAFT FOR CHEMOTHERAPY

PEPROTECH

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VIRION MEDICAL MICROBIOLOGY

The Meeting of the French Society of Parasitology, the German Society of Parasitology and the Swiss Society of Tropical Medicine and Parasitology is the 1st Three Countries Joint meeting. The meeting proposes a multidisciplinary approach to discuss the latest results on physiopathology and treatment of diseases caused by intracellular parasites of medical and veterinary importance such as malaria, toxoplasmosis, neosporosis, theileriasis, eimeriosis, leishmaniasis and trichinellosis. In addition, other aspects related to other parasitic diseases such as echinococcosis will also be discussed.

CONGRESS LOCALISATION

Faculté de Médecine
Université Louis Pasteur de Strasbourg
4 rue Kirschleger
67000 Strasbourg
(it is down town just next to the famous Petite France)

LOCAL ORGANIZING COMMITTEE

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Dr Odile VILLARD and Dr Jocelyn WALLER.

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Violaine PHILIPPE
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SCIENTIFIC PROGRAMM

Wednesday 13th June

14h00-18h00: SATELLITE MEETINGS

**Salle de Conférence des Instituts de Bactériologie – Parasitologie – Virologie,
3 rue Koeberlé, Strasbourg, deuxième étage**

14h00-16h00: meeting of the « Bureau » of the French Society of Parasitology (Société Française de Parasitologie)

16h00-18h00: meeting of the Centre National de Référence du Paludisme

17h00: Start of the registration (hall of the Faculty of Medicine)

19h00-20h00: KEYNOTE LECTURE

« Petit amphithéâtre » of the Faculty of Medecine

HUNTER Christopher

University of Pennsylvania, Philadelphia, USA

BALANCING PROTECTIVE AND PATHOLOGICAL IMMUNE RESPONSES

20h30: Get together party and Alsatian Wine Tasting at the Art Café of the “Musée d'Art Moderne et Contemporain” of Strasbourg

Thursday 14th June

08h00: Start of the registration (hall of the Faculty of Medicine)

8h30-9h00: Introduction by the "Directeur Général des Hôpitaux Universitaires de Strasbourg" and the "Vice-President Recherche de l'Université Louis Pasteur"

Session 1: CELLULAR BIOLOGY AND IMMUNOLOGY – I

9h00-10h30

Moderators: D. Dobbelaere and M. Thoma

9h00-9h45

HEUSSLER Volker

Bernhard Nocht Institute of Tropical Medicine, Hamburg, Germany

**PROTECT THEM FIRST TO KILL THEM LATER: HOW *PLASMODIUM*
EXOERYTHROCYTIC FORMS REGULATE THE SURVIVAL OF THEIR HOST CELLS**

9h45-10h00

HIPPE D., VUTOVA P., HÄCKER G., GROSS U., LÜDER C.G.K.

Inhibition of host cell apoptosis by *Toxoplasma gondii*: diverse strategies to ensure parasite survival

10h00-10h15

KULANGARA Caroline, AGAK George, VILLARD Viviane, CORRADIN Giampetro, FELGER Ingrid.

Evaluation and Characterization of new malaria blood-stage vaccine candidates

10h15-10h30

DONAGHY L., CABILLIC F., CORLU A., GUGUEN-GUILLOUZO C., GUIGUEN C., GANGNEUX J.P.

***Leishmania donovani* dendritic cell interactions: impact of hepatic microenvironment**

10h30-11h15: coffee break

Thursday 14th June

Session 2: CELLULAR BIOLOGY AND IMMUNOLOGY – II

11h15-13h00

Moderators: V. Heussler and C. Kulungara

11h15-12h00

DOBBELAERE Dirk

University of Bern, Switzerland

INTERPLAY BETWEEN *THEILERIA* AND HOST CELL

12h00-12h15

FROLET Cécile, THOMA Martine, BLANDIN Stéphanie, HOFFMANN Jules, LEVASHINA Elena.

Role of $\text{I}\kappa\text{B}$ / $\text{NF-}\kappa\text{B}$ signalling pathways in the antiparasitic response of the mosquito *Anopheles gambiae*

12h15-12h30

RUPP Ingrid, KÜHN Andrea, AGARWAL Shruti, PRADEL Gabriele.

Novel cell-to cell contacts between malaria sexual stages

12h30-12h45

BEHRENDT Jan Hillern, ZAHNER Horst, HERMOSILLA Carlos, TAUBERT Anja.

Reactions of cells of the innate immune system (PMN, NK cells, monocytes) against *Eimeria bovis*

12h45-13h00

REMER Katharina A, APETREI Calin, SCHWARZ Tobias, MOLL Heidrun.

Antigen-pulsed plasmacitoid dendritic cells induce T cell-mediated protection against *Leishmania major* in mice

13h00-14h00: lunch

Thursday 14th June

Session 3: CELLULAR AND MOLECULAR PARASITOLOGY – I

14h00-15h45

Moderators: M.-A. Hakimi and S. Stefanic

14h00-14h45

SOLDATI Dominique

University of Geneva, Switzerland

THE GLIDEOSOME: A MACHINERY TO ASSIST THE APICOMPLEXA IN MIGRATION

14h45-15h00

LUTZ Kathleen, DYACHENKO Viktor, TAUBERT Anja, HERMOSILLA Carlos, BECKMANN Svja, GREVELDING Christoph, ZAHNER Horst.

Characterization of *Eimeria bovis* microneme 4 protein (EbMIC4)

15h00-15h15

BLAINEAU Christine, TESSIER Magali, DUBESSAY Pascal, TASSE Lena, CROBU Lucien, BASTIEN Patrick, PAGES Michel.

Trypanosomatids possess a microtubule-depolymerising kinesin involved in flagellum length control

15h15-15h30

SCHMID A., SAUVAGE V., ESCOTTE-BINET S., AUBERT D., VILLENA I.

Identification and characterisation of ABC protein-encoding genes family in *Toxoplasma gondii*

15h30-15h45

SPYCHER Cornelia, RUG Melanie, KLONIS Nectarios, FERGUSON David J., HANSSEN Eric, COWMAN Alan F., TILLEY Leann, BECK Hans-Peter. (SSTMP student's research award 2007).

Characterization of the novel Maurer's clefts protein MAHRP1 in *Plasmodium falciparum*

15h45-16h15: coffee break

Thursday 14th June

Session 4: CELLULAR AND MOLECULAR PARASITOLOGY – II

16h30-18h00

Moderators: D. Soldati and A. Schmid

16h30-17h15

HAKIMI Mohamed-Ali

CNRS-Grenoble, France

HISTONE - MEDIATED GENE EXPRESSION IN EUKARYOTIC PARASITES

17h15-17h30

JAKOBI Vera, STUMM Christoph, PETRY Franz.

Differential expression of *Cryptosporidium parvum* genes *in vitro* and *in vivo*

17h30-17h45

STEFANIC Sasa, HEHL Adrian B.

Regulated Export of Cyst Wall Material in *Giardia lamblia* depends on universally conserved factors of the secretory apparatus

17h45-18h00

STELTER Kathrin, EI-SAYED Najib M., SEEBER Frank.

Molecular evidence for a plastid in the early dinoflagellate *Perkinsus marinus*

18h30-19h30: General assembly meeting of respective societies

SFP: *Petit amphithéâtre*

SGTP, SSMTP, SSTMP: *Conférence Room of the Institutes of Bactériology – Parasitology – Virology, 3 rue Koeberlé, 2nd floor*

20h45: Boat trip from Petite France to European Institutions

Friday 15th June

Session 5: NEW ANALYTICAL TOOLS FOR PARASITIC DISEASES

9h00-10h30

Moderators: S. Croft and S. Sonda

9h00-9h45

WASTLING Jonathan

University of Liverpool, Great Britain

**PROTEOMICS FOR ALL - ACCESSIBILITY AND EXPLOITATION OF PROTEOME DATA
IN PARASITOLOGY RESEARCH**

9h45-10h00

SARIC Jasmina, LI Jia, WANG Yulan, KEISER Jennifer, HOLMES Elaine, UTZINGER Jürg.

**Experimental infection in mice with the intestinal fluke *Echinostoma caproni*. Does
metabonomics offer a new approach in parasite diagnostic?**

10h00-10h15

LI Jia, UTZINGER Jürg, WANG Yulan, NICHOLSON Jeremy K., WILSON Ian, SINGER Burton H,
WITTLIN Sergio, HOLMES Elaine.

A metabolic investigation of *Plasmodium berghei* infection in the mouse

10h15-10h30

GIANINAZZI Christian, SCHILD Marc, SCHNELL Barbara, MÜLLER Norbert, SCHÜRCH Nadia,
GOTTSTEIN Bruno.

Pathogenic free living amoebae: diagnostic tools and research focus

10h30-11h00: coffee break

Session 6: MEDICAL PARASITOLOGY AND THERAPY

11h00-12h45

Moderators: J. Wastling and C. Gianinazzi

11h00-11h45

CROFT Simon

DNDI, Geneva

TOWARDS NEW TREATMENTS FOR THE TRYPANOSOMIASES AND THE LEISHMANIASES

11h45-12h00

CHAPPUIS François.

Field experience with eflornithine for the treatment of second-stage *T. b. gambiense* human African trypanomiasis

12h00-12h15

MÜLLER Norbert, STERK Maaike, HEMPHILL Andrew, MÜLLER Joachim.

***In vitro* drug-resistance formation in *Giardia lamblia* is associated with altered surface antigen expression**

12h15-12h30

SONDA S., STEFANIC S. HEHL AB.

Sphingolipid biosynthesis as a target for chemotherapy against *Giardia lamblia*

12h30-12h45

RAKOTOMANGA Michaëlle, SAINT-PIERRE-CHAZELET Michèle, LOISEAU Philippe.

Modifications of the lipid metabolism in miltefosine-resistant *Leishmania donovani* promastigotes

POSTER SESSION

And lunch

12h45-14h00

**Session 7: ARTHROPOD VECTORS AND EMERGING
VECTOR – BORNE DISEASES**

14h00-15h45

Moderators: L. Gern and I. Vouldoukis

14h00-14h45

GERN Lise

University of Neuchatel, Switzerland

TICK – BORNE DISEASES

14h45-15h00

SCHMID Nicole, DEPLAZES Peter, HOBY Stefan, RYSER MARIE-Pierre, EDELHOFER Renate, MATHIS Alexander.

Epidemiological and molecular genetic investigations of *Babesia divergens* / *B. capreoli*-like parasite findings in free-ranging wild ruminants in eastern Switzerland

15h00-15h15

BOULANGER Nathalie, MARCHAL Claire, WACHSMANN Dominique, SIBILIA Jean, PIEMONT Yves, JAULHAC Benoit.

Lyme disease and innate immunity: role of resident cells in the cutaneous inflammation

15h15-15h30

BOUSSAA Samia, BOUMEZZOUGH Ali, MAHAMDALLIE Shazia, READY Paul, PESSON Bernard.
Isoenzyme and mitochondrial DNA characterization of *Phlebotomus perniciosus* morphs in southern Morocco

15h30-15h45

SCHAFFNER Francis, FLACIO Eleonora, BECKER Norbert, MATHIEU Bruno, JEANNIN Charles, DELATTE H el ene, FONTENILLE Didier, FAILLOUX Anna-Bella, L UTHY Peter, PLUSKOTA Bjoern, DELAUNAY Pascal.

***Aedes albopictus* surveillance and vectorial risk for France, Germany and Switzerland**

15h45-16h15: coffee break

Friday 15th June

**Session 8: CLINICAL SESSION OF TROPICAL MEDICINE AND
PARASITOLOGY**

16h30-18h00

Moderators: M. Gallachi and F. Chapuis

16h30-16h45

LANDRY Pierre, KETTERER Jean-Paul.

A worm in the lungs

16h45-17h00

MICHELET Lorraine, RAKONTONDRAZAKA Mahenintsoa, ANDRIANTSEHENO Marcellin,
CAROD Jean-François, BOUCHIER Christiane, TALARMIN Antoine, GAY Frédéric.

Contribution of the molecular biology to the diagnosis and the phylogeny of cysticercosis

17h00-17h30

BLUM Johannes A, BURRI Christian, HATZ Christoph.

Sleeping glands and sleeping hearts. The role of endocrine disorders and the heart in sleeping sickness

17h30-17h45

TAOUFIQ Zacharie, CONTI Marc, TEFIT Maurel, MAZIER Dominique, VOULDOUKIS Iannis.

Thwarting *Plasmodium falciparum*-induced oxidative stress within endothelial cell: prospects in severe malaria therapy

17h45-18h00

GUILLOT Jacques, EPE Christian, FISHER Maggie, GENCHI Claudio, MIRO Guadalupe,
THAMSBORG Stig, Van KNAPEN Franz, DEPLAZES Peter.

ESCCAP: a consistent approach to the diagnosis and treatment of companion animal parasites in Europe

21h00: Gala dinner at "Maison Kammerzell"

Saturday 16th June

Session 9: HUMAN AND ANIMAL HELMINTHS

9h00-10h45

Moderators: K. Brehm and H. Babba

9h00-9h45 : **BOIREAU Pascal**, *ENVA, Paris, France* : **THE DEVELOPMENT OF THE TRICHINELLA NURSE CELL AND THE ROLE OF STAGE – SPECIFIC PROTEINS**

9h45-10h00

DUPOUY-CAMET Jean, De BRUYNE Aymeric, ANCELLE Thierry.

Human trichinellosis acquired from wild boar meat: a continuing parasitic risk in France

10h00-10h15

JACKSON Yves, PASTORE Roberta, SUDRE Philippe, LOUTAN Louis, CHAPPUIS François.

Outbreak of *Diphyllobothrium latum* following a wedding dinner in Geneva, Switzerland

10h15-10h30

WICHT Barbara, de MARVAL Floriane, GOTTSTEIN Bruno, PEDUZZI Raffaele.

Evidence of imported diphyllbothriasis (*Diphyllobothrium nihonkaiense* and *D. dendriticum*) in Switzerland

10h30-10h45

OUDNI-M'RAD Myriam, CABARET Jacques, M'RAD Selim, MEKKI Mongi, BELGUITH Mohsen., SAYADI Taoufik, NOURI Abdellatif, AZAIEZ Rached, MEZHOUH Habib, BABBA Hamouda.

Tunisian *Echinococcus granulosus* sheep strain in three hosts (sheep, cattle and man) : same or several ?

10h45-11h15: coffee break

Session 10: ECHINOCOCCOSIS

11h15-13h00

Sponsored by the Paul Ehrlich Gessellschaft for Chemotherapy

Moderators: P. Boireau and F. de Marval

11h15-12h00: **BREHM Klaus**, *University of Würzburg, Germany*: **INTIMATE TALKS ON THE MOLECULAR LEVEL: HOW PARASITIC HELMINTHS AND THEIR HOSTS DO IT?**

12h00-12h15

SPICHER Martin, ARUNASALAM Naguleswaran, HEMPHILL Andrew.

***In vitro* and *in vivo* activities of the anti-cancer agent 2-methoxyestradiol (2ME2), either alone or in combination with albendazole, against *Echinococcus multilocularis* metacestodes**

12h15-12h30

MEJRI Naceur, GOTTSTEIN Bruno.

Identification of an *Echinococcus multilocularis* cysteine protease that digests eotaxin, a CC pro-inflammatory chemokine

12h30-12h45

BEN NOUIR Nadia, NAGULESWARAN Arunasalam, NUNEZ Sandra, GIANINAZZI Christian, HEMPHILL Andrew, MÜLLER Norbert, NOURI Abdellatif, BABBA Hamouda, GOTTSTEIN Bruno.

Cloning and expression of a cDNA encoding the P29 protein with potential usefulness in serologic follow-up of human cystic echinococcosis

12h45-13h00

KNAPP Jenny, SIMONNET Christine, SUDRE Bertrand, CHIRICA Mircea, PELLEGRIN Carole, CASTAING Denis, BART Jean-Mathieu, MILLON Laurence, GRENOUILLET Frederic, BOTTEREL Françoise, PIARROUX Renaud.

Echinococcosis due to *Echinococcus vogeli* in a jaguar hunter: diagnosis confirmation by molecular identification

POSTERS PRESENTATIONS

P1 - MALARIA, OVERCOMING THE IMMUNOLOGICAL GAP ?

ABDELRAHMAN Tamer¹, DODERER Cécile¹, SENEGAS Alexandre¹, STEINMETZ Thomas¹, GUNTZ Philippe², CAZENAVE Jean-Pierre², AKADDAR Aziza¹, DAHAN Rachel¹, BOMBARD Stéphane³, FILISSETTI Denis¹, and CANDOLFI Ermanno¹.

P2 - BIOLOGICAL AND BIOPHYSICAL ANALYSIS OF CATESTATIN A NOVEL NATURAL ANTIMALARIAL PEPTIDE DERIVED FROM CHROMOGRANIN A.

AKADDAR Aziza¹, SUGAWARA Masae⁴, DODERER Cécile¹, MAHATA Sushil², AUNIS Dominique³, BECHINGER Burkhard⁴, METZ-BOUTIGUE Marie-Hélène³ * and CANDOLFI Ermanno^{1S*}

P3 - TOXOPLASMA GONDII TRIGGERS SECRETION OF INTERLEUKIN-12 BUT LOW LEVEL OF INTERLEUKIN-10 FROM THE THP-1 HUMAN MONOCYTTIC CELL LINE.

ALDEBERT Delphine^a, DURAND François^a, MERCIER^a, Corinne, BRENIER-PINCHART Marie-Pierre^a, CESBRON-DELAUW Marie-France^a, PELLOUX Hervé^a

P4 - IS DEMODEX SP CAN BE PLAY A ROLE IN GENESIS OF CHRONIC BLEPHARITIS ?

ANANE Sonia¹, ANANE-TOUZRI Raja², BELHDAJ Slaheddine¹, MALOUCHE Nedja³, EL AICH Fatma⁴, BELTAIEF Omar², ZHIQUA Raja², KAOUECH Emira¹, JEDDI Amel³, MEDDEB-OUERTANI Amel², KALLEL Kalthoum¹, CHAKER Emna¹

P5 - ISOENZYME CHARACTERIZATION OF PHLEBOTOMUS PAPATASI (DIPTERA, PSYCHODIDAE) FROM MARRAKESH MOROCCO.

BOUSSAA Samia^{1,2}, PERROTEY Sylvie², BOUMEZZOUGH Ali¹, HARRAK Rajae³, HILALI Soumyia³ and PESSON Bernard²

P6 - THE ACTIVITY OF NITRO- AND BROMO-THIAZOLYL-SALICYLAMIDE COMPOUNDS (THIAZOLIDES) AGAINST BESNOITIA BESNOITI INFECTION IN VERO CELLS.

CORTES H. C. E.^{1*}, MUELLER N.², ESPOSITO M.², LEITAO A³, NAGULESWARAN A.² and HEMPHILL A.^{2*}

P7 - POTENTIAL OF DIRECT RAPID HISTOCHEMICAL RABIES DETECTION FOR RABIES DIAGNOSIS IN DEVELOPING COUNTRIES.

DÜRR Salome¹, MINDEKEM Rolande², NAISSENGAR Service³, NIEZGODA Michael⁴, ZINSSTAG Jakob¹

P8 - ANALYSIS OF PLASMODIUM FALCIPARUM VAR GENE REPERTOIRE EXPRESSED IN CHILDREN FROM PAPUA NEW GUINEA.

FALK Nicole, KÄSTLI Mirjam, QI WEIHONG and BECK Hans-Peter

P9 - MOLECULAR MECHANISMS OF TEP1-DEPENDENT PARASITE KILLING IN ANOPHELINE MOSQUITOES.

FRAITURE Malou, WYDER Stefan, BLANDIN Stéphanie, SHIAO Shin-Hong, TROXLER Laurent, IRVING Phil, LEVASHINA Elena

P10 - ANALYSIS OF THE B-TUBULIN GENE FROM VITTAFORMA CORNEAE SUGGESTS BENZIMIDAZOLE RESITANCE.

FRANZEN Caspar, SCHÖLMERICH Jürgen, SALZBERGER Bernd

P11 - IDENTIFICATION AND SUBCELLULAR LOCALIZATION OF NOVEL PLASMODIAL MEMBRANE PROTEINS.

FRITSCH Jürgen¹, KRAUSE Eberhard², SCHÜMANN Michael², LEIPPE Matthias¹, GELHAUS Christoph¹,

P12 - FUNCTIONAL CHARACTERIZATION OF *PLASMODIUM* ACTIN CAPPING PROTEIN.
GANTER Markus¹, SCHUELER Herwig², MATUSCHEWSKI Kai¹

P13 - *ASCARIS SUUM*, AN INTESTINAL PARASITE, PRODUCES MORPHINE
GOUMON Yannick¹, METZ-BOUTIGUE Marie-Hélène¹, STEFANO George B²

P14 - *ACANTHAMOEBA* SPECIES IN KERATITIS PATIENTS. PARASITE IDENTIFICATION IN CORNEAL, TAP WATER AND SOIL SAMPLES.
GRIMM Felix¹, MATHIS Alexander¹, MAURER Pascal² and THIEL Michael A².

P15 - IDENTIFICATION OF *NEOSPORA CANINUM* MAG1 PROTEIN AS A DENSE GRANULAR COMPONENT SECRETED WITHIN THE CYST WALL AND CYST MATRIX.
GUIONAUD Christophe¹, HEMPHILL Andrew², MEVISSSEN Meike¹ and ALAEDDINE Ferial¹

P16 - CEREBRAL OR DISSEMINATED TOXOPLASMOSIS CONSECUTIVE TO PRIMARY ACQUIRED INFECTION IN TWO HIV-INFECTED PATIENTS.
HAMANE Samia¹, DE CASTRO Nathalie², GARIN Yves J.-F.¹, THIERY Guillaume³, GALLIEN Sébastien², PAVIE Juliette², COQUET Isaline³, DEROUIN Francis¹, MOLINA Jean-Michel², and MENOTTI Jean¹

P17 - CURRENT EPIDEMIOLOGICAL STATE OF LEISHMANIASIS IN TUNISIA: WHAT HAPPENED?
HAOUAS Najoua^a, GORCII Mohamed^a, CHARGUI Najla^a, CHAKER Emna^b, KALLEL Kalthoum^b, AOUN Karim^c, BOURATBINE Aida^c, AKROUT Ferial Messaadi^d, BEN SAID Moncef^e, MEZHOUD Habib^a, AZAIEZ Rached^a, BABBA Hamouda^a.

P18 - RNA POLYMERASE II: CONSERVATION OF THE FUNCTIONS BETWEEN YEAST, HUMAN AND *PLASMODIUM FALCIPARUM*.
HAZOUME Adonis, RINALDI Bruno, VIGNERON Marc

P19 - EVALUATION OF A NOVEL ELISA FOR SCHISTOSOMIASIS SEROLOGY.
HOUZE Sandrine, EISELE L., GENOUX F., VASLIN L., Le Bras J.

P20 - EVALUATION OF VIDIA TOXO IMMUNOGLOBULIN M (IgM) AND IgG ASSAYS IN COMPARAISON WITH VIDAS TOXO IgM AND IgG ASSAYS.
HOUZE Sandrine¹, MARTINEAU F., LE BRAS J.

P21 - ISOENZYMATIC VARIABILITY OF *LEISHMANIA INFANTUM* IN TUNISIA : ABOUT 254 HUMAN STRAINS.
KALLEL Kalthoum¹, BELHADJ Slaheddine¹, PRATLONG Francine², HAOUAS Najoua³, KAOUECH Emira¹, ANANE Sonia¹, DEDET Jean-Pierre², BABBA Hamouda³, CHAKER Emna¹

P22 - CYTOKINE AND CHEMOKINE PROFILS IN AQUEOUS HUMOR AND SERA OF PATIENTS WITH OCULAR TOXOPLASMOSIS: PRELIMINARY DATA.
LAHMAR Ibtissem^{1,3}, ABOU-BACAR Ahmed¹, BABBA Hamouda³, SCHOLLER-GUINARD Marie¹, BENYAHIA Salim⁴, KHAIRALLAH Moncef⁴, SPEEG-SCHATZ Claude⁵, BOURSIER Tristan⁵, GARWEG Justus², and CANDOLFI Ermanno¹

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LAHMAR Ibtissem^{1,3}, SCHOLLER-GUINARD Marie¹, MARCELLIN Luc², ROUX Michel⁴, MOUSLI Marc¹, BABBA Hamouda³, and CANDOLFI Ermanno¹

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LIST Claudia¹, MÜLLER Norbert², FELGER Ingrid¹

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MICHEL Chloé¹, MARCHAL Claire¹, PERROTEY Sylvie¹, WACHSMANN Dominique¹, SIBILIA Jean², PIEMONT Yves², JAUHAC Benoit², BOULANGER Nathalie¹

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MORF Laura¹, KULANGARA Caroline², REGÖS Attila³, STEFANIC Sasa¹, SONDA Sabrina¹ and HEHL Adrian B.¹

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M'RAD Selim^a, OUJNI-M'RAD Myriam^a, FILISSETTI Denis^b, MEKKI Mongi^c, BELGUITH Mohsen^c, NOURI Abdellatif^c, CANDOLFI Ermanno^b, AZAIÉZ Rached^a, MEZHOUH Habib^a, BABBA Hamouda^a

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NSANZABANA Christian^{1,2}, CRAMERI Andreas¹, TANNER Marcel¹, BETSCHART Bruno², GENTON Blaise¹ and BECK Hans-Peter¹

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OUJNI-M'RAD Myriam^a, M'RAD Selim^a, MEKKI Mongi^b, BELGUITH Mohsen^b, SAYADI Taoufik^c, PRATLONG Francine^d, CABARET Jacques^e, NOURI Abdellatif^b, AZAIÉZ Rached^a, MEZHOUH Habib^a, BABBA Hamouda^a

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PERVIEUX Lynda^a, COURTIOUX Bertrand^a, VATUNGAA Gedeao^b, JOSENANDOB Theophile, JAUBERTEAU-MARCHAN Marie-Odile^c, BOUTEILLE Bernard^a, BISSER Sylvie^{a,d*}

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PFAFF Alexander W^a, MOUSLI Marc^a, SÉNÉGAS Alexandre^a, MARCELLIN Luc^b, TAKIKAWA Osamu^c, KLEIN Jean-Paul^a, CANDOLFI Ermanno^a

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SCHAUMBURG Frieder¹, ENGLERT Nadine², HINTZ Martin², HIPPE Diana¹, GROSS Uwe¹, JOMAA Hassan², and LÜDER Carsten G.K.¹

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SCHÖPFLIN Sonja¹, MÜLLER Ivo², FELGER Ingrid¹

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VOULDOUKIS Ioannis¹, SVIGAS Thomas², TSELIOS Ioannis³, TSOKATARIDIS Yiannis⁴, TAOUFIQ Zacharie¹, TEFIT Maurel¹, MAZIER Dominique¹, CONTI Marc¹.

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WICHT Barbara¹, RUGGERI N.¹, DE MARVAL F.², RICCARDI N.³, TONOLLA M.¹, DEMARTA A.¹, PEDUZZI R.¹