



From the ISHAM Working Groups on *Black Yeasts and Related Fungi*
and on *Chromoblastomycosis*

**“Black Yeasts between
extremotolerance and
human pathology”**
an international Workshop

Thursday April 26 - Saturday April 28, 2007.



Centraalbureau voor Schimmelcultures
Fungal Biodiversity Centre
Institute of the Royal Netherlands Academy of Art and Sciences (KNAW)

The Workshop inaugurating the ISHAM-affiliated Working Groups “*Black Yeasts and Relatives*” and “*Chromoblastomycosis*” will be held at the Centraalbureau voor Schimmelcultures in Utrecht, The Netherlands.

Dates: Thursday April 26 – Saturday April 28, 2007.

Touristic excursion on Sunday April 29 for participants and accompanying persons.

Venue: Centraalbureau voor Schimmelcultures, Uppsalalaan 8, NL-2628 BC Utrecht, P.O. Box 85167, NL-3508 AD Utrecht, The Netherlands, Fax +31-30-251-2097, website www.cbs.knaw.nl.

Transportation: Utrecht is located in the centre of The Netherlands and easily accessible by public transport and car. A direct intercity train runs every 30 min from Schiphol International airport. **From Utrecht Central Station, we recommend to take a taxi** to your hotel: Motel De Biltsche Hoek, De Bilt. This hotel is located just outside Utrecht.

When arriving by car, follow highway A-28, get off at De Bilt. You will find the Motel at the end of first street at the right (De Holle Bilt, see map at <http://www.hoteliers.nl/de-bilt/van-der-valk-hotel-de-biltsche-hoek/>).

For general travelling details to the CBS, see our website www.cbs.knaw.nl.

Weather and dress: By the end of April, The Netherlands usually have their first nice days of Spring, with temperatures around 20°C. But the weather in this country is notoriously unpredictable; please bring a pullover, raincoat and umbrella.

Workshop fee: We tried to keep costs at a minimum for everyone; therefore participation to the Workshop is largely free. However, as many more participants have registered than we expected (which is great!), we have a significant financial problem. We therefore request everyone to donate € 10,- per day for drinks and snacks. Those who have registered after 15 Feb will be charged an additional € 100,-.

Hotel accommodation: A room has been booked for you in Motel Biltsche Hoek, De Bilt (www.hotels.nl/de/debilt/valk/), which is close to the CBS. Rooms are € 83,50 (single) or € 100,- (double), excluding breakfast (€ 10,-). Payment is at the hotel desk.

Start of the Workshop: A bus will be available at the hotel on Thursday 26 April at 13.30, and on Friday 27 April at 08.30, to bring you to the CBS.

Proceedings: In contrast to earlier announcements we do not need abstracts at this stage. The outcome of the Workshop should be the basis of an issue of *Studies in Mycology*, scheduled for publication Spring 2008, with additional papers in *Medical Mycology*. Manuscripts of full papers we agreed upon during the Workshop will be expected in the course of 2007, with 31 December as a deadline.

Information: Tineke van den Berg (+31-30-2122-645, van.den.berg@cbs.knaw.nl, concerning technical matters) and Sybren de Hoog (+31-30-2122-663, de.hoog@cbs.knaw.nl, concerning program).

The organizers,

Sybren de Hoog, Flavio de Queiroz Telles and Roxana Vitale.

Program

April 26: Thursday

13.30: Departure from hotel to CBS

14.00: Arrival at CBS

Name cards, programmes and coffee downstairs at the auditorium.

Module 1: Extremotolerance and origins of virulence

April 26: Thursday 14.00 – Thursday 19.00

*Extremotolerance (growth on dry rock, in acidic or salty environments, or at low temperatures) is frequently encountered in relatives of *Aureobasidium* (order Dothideales). Also *Exophiala*-like fungi (order Chaetothyriales) are increasingly recognized on rock, but their close relatives are found in skin disorders.*

Extremotolerant species usually grow as black cell clumps. Work of Paul Szaniszló and others has shown that meristematic growth may be a virulence factor. The origin of this behaviour is therefore essential to understand pathology of black yeasts.

François Lutzoni and coworkers located this origin in the rock-inhabiting lichens.

14.00 Intro: Welcome, ISHAM support, planning Stud Mycol.

Times are approximate.

14.00 Multilocus analysis of Arctic *Aureobasidium* suggests accelerated evolution *Sybren de Hoog¹, Nina Gunde-Cimerman² & Cene Gostinčar²*

¹Centraalbureau voor Schimmelcultures, Utrecht, The Netherlands

²Biotehnika Fakulteta, Katedra za Biologijo Mikroorganizmov, Univerza v Ljubljani, Ljubljana, Slovenia

14.30 Black fungi from lichens in arid habitats

Shagane Harutunyan & Martin Grube

Institute of Plant Sciences, Graz, Austria

15.00 Is the genus *Mycosphaerella* still monophyletic?

J.Z. Groenewald & P.W. Crous

Centraalbureau voor Schimmelcultures, Utrecht, The Netherlands

15.30 – 16.00 BREAK

16.00 Mycology can no longer afford to accommodate pleomorphic names

Pedro Crous

Centraalbureau voor Schimmelcultures, Utrecht, The Netherlands

16.30 Drought meets acid: new genera in two dothidealean subclades of extremotolerant fungi

Laura Selbmann, Sybren de Hoog, Constantino Ruibal, Laura Zucconi & Sylvano Onofri

Università degli Studi della Tuscia, DECOS, Viterbo, Italy

17.00 Evolution of lifestyles in the Eurotiomycetes

Cecile Gueidan¹, Constantino Ruibal², Sybren de Hoog³ & Francois Lutzoni¹

¹Duke University, Durham, USA

²Universidad Politécnica de Madrid, Madrid, Spain

³Centraalbureau voor Schimmelcultures, Utrecht, The Netherlands

Short break

17.30 Cellular responses of microcolonial rock fungi to long-term desiccation and subsequent rehydration

Anna Gorbushina

Geomicrobiology, ICBM, Oldenburg, Germany

18.00 Black fungi isolated from Antarctic lichens

Serena Ruisi, Silvano Onofri, Laura Zucconi, Martin Grube, Sybren de Hoog & Laura Selbmann

Università degli Studi della Tuscia, DECOS, Viterbo, Italy

18.30: Departure from CBS to hotel

19.00: Arrival at hotel.

**April 26: Thursday 20.00 – 22.00 Mixer with Flamenco music and dinner at hotel
*Biltsche Hoek, Bilthoven***

April 27: Friday

08.30: Departure from hotel to CBS

09.00: Arrival at CBS.

Times are approximate.

09.00 Black meristematic fungi from rocks and monuments: do they really like extreme habitats?

Filomena de Leo

Department of Microbiological Genetical and Molecular Sciences, Messina, Italy

9.20 Black Antarctic rock fungi on the International Space Station (ISS)

S. Onofri, D. Barreca, A. Agnoletti, E. Rabbow, G. Horneck, L. Selbmann, L. Zucconi

Università degli Studi della Tuscia, DECOS, Viterbo, Italy

09.50 Adaptations of *Hortaea werneckii* to hypersaline conditions. Taxonomic and physiological studies

Nina Gunde-Cimerman & Ana Plemenitas

Univerza v Ljubljani, Biotehnika Fakulteta, Katedra za Biologijo Mikroorganizmov, Ljubljana, Slovenia

10.10 Adaptations of *Hortaea werneckii* to hypersaline conditions. Molecular mechanisms of adaptations to hypersaline conditions

Ana Plemenitas & Nina Gunde-Cimerman

Univerza v Ljubljani, Biotehnika Fakulteta, Katedra za Biologijo Mikroorganizmov, Ljubljana, Slovenia

10.30 – 11.00 Coffee break

11.00 The effect of UV radiation on survival of halophilic/halotolerant black yeasts from solar salterns

Martina Turk & Nina Gunde-Cimerman

Univerza v Ljubljani, Biotehnika Fakulteta, Katedra za Biologijo Mikroorganizmov, Ljubljana, Slovenia

11.15 Expression of fatty acid modifying enzymes in halotolerant black yeast *Aureobasidium pullulans* subjected to salt stress

Cene Gostinčar & Nina Gunde-Cimerman

Univerza v Ljubljani, Biotehnika Fakulteta, Katedra za Biologijo Mikroorganizmov, Ljubljana, Slovenia

11.30 Multigene sequencing of melanized, rock-inhabiting fungi: a practical experience

Constantino Ruibal¹, Cecile Guedian², François Lutzoni² & Sybren de Hoog³

¹Universidad Politécnica de Madrid, Madrid, Spain

²Duke University, Durham, USA

³Centraalbureau voor Schimmelcultures, Utrecht, The Netherlands

12.00 Extremotolerant black yeast fungi as agents of fungal disease and objects of biotechnology

Nadja Yurlova

Saint-Petersburg State Chemical Pharmaceutical Academy, Saint-Petersburg, Russian Federation

12.30 *Cystocoleus*, *Racodium*, and *Racoleus* gen. nov.: nomenclature and phylogenetic relationships

David Hawksworth

Madrid, Spain

13.30 – 14.30 Lunch break

Module 2: Ecology and virulence factors of Chaetothyriales

April 27: Friday 13.30 – Friday 19.00

Black yeasts belonging to this order have a remarkable clinical potential. They are not commonly isolated from the environment, but seem to live in rather weird habitats, such as on creosote-treated wood, in biofilters, and in steam baths. Several of these habitats (including the human body) are man-made, and this suggests that a unique factor determines the shift from natural to artificial environments. Francesc Prenafeta-Boldu and coworkers thought that this factor might be the assimilation of monoaromatic toxins, and supposed that this ability could also explain the recurrent pathogenicity of these black yeasts.

Times are approximate.

14.00 *Ochroconis*, a phylogenetic maverick

Regine Horre¹, Hyun-ja Choi² & Kittipan Samerpitak³

¹Federal Institute for Drugs and Medical Devices, Bonn, Germany

²Institute of Microbiology, University of Bonn, Bonn, Germany

³Centraalbureau voor Schimmelcultures, Utrecht, The Netherlands

14.15 CDC42, SSH

Shuwen Deng¹, Mark Arendhorst², Bert Gerrits van den Ende¹ & Arthur Ram²

¹Centraalbureau voor Schimmelcultures, Utrecht, The Netherlands

²Leiden, The Netherlands

14.30 The metabolism of aromatic xenobiotics as a possible virulence factor in black yeast fungi

Francesc Prenafeta-Boldú¹ & Sybren de Hoog²

¹GIRO Technological Centre, Madrid, Spain

²Centraalbureau voor Schimmelcultures, Utrecht, The Netherlands

14.50 Alkylbenzene assimilation, a new virulence factor?

Jingjun Zhao^{1,2}, Jingsi Zeng¹ & Sybren de Hoog¹

¹Centraalbureau voor Schimmelcultures, Utrecht, The Netherlands

²Department of Dermatology, Union Hospital, Fujian Medical College, Fuzhou, P.R.China

15.00 *Exophiala oligosperma* R1 isolated from an acidic lake utilizes organic nitriles as nitrogen sources

Andreas Stolz

Universität Stuttgart, Institut für Mikrobiologie, Stuttgart, Germany

15.30 – 16.00 Break

Module 3: Clinical aspects of Chaetothyriales

April 27: Friday 16.00 – Friday 19.00

The spectrum of diseases caused by Chaetothyrialean black yeasts is remarkable: in no other fungal group pathology is such a consistent phenomenon with such a diversity of clinical syndromes. Diseases range from superficial to systemic, in the latter case very often in otherwise apparently healthy patients. Predilection differs with the species. A remarkable feature connecting disease in warm- and cold-blooded animals is the occurrence of fish-associated species in skin infections of human extremities with poor blood circulation.

Times are approximate.

16.00 Pitfalls in diagnosing cerebral phaeohyphomycosis. A case report

Kathrin Tintelnot

FG Mycology, Robert Koch Institut, Berlin, Germany

16.10 Detection of *Exophiala dermatitidis*, an emerging brain pathogen

Montarop Sudhadham, Bert Gerrits van den Ende & Sybren de Hoog

Centraalbureau voor Schimmelcultures, Utrecht, The Netherlands

16.40 ITS rDNA-based phylogenetic reconstruction in black yeasts and their relatives using DNA walking Divergence Program

Rachel Caligorne

Fiocruz-Brazil, Belo Horizonte, Brazil

17.00 A biochemical study of some *Exophiala* species

Kheira Hammadi

Department of Biology, Faculty of Sciences, University of Mostaganem, Algeria

17.30 – 18.00 Break

18.00 *Exophiala jeanselmei* eumycetoma transmitted from a walking stick in a lymphoma patient

Amos Adler, G. Rahav & Itzhak Polacheck

Department of Clinical Microbiology and Infectious Diseases, Hadassah Medical Center, Jerusalem, Israel

18.15 Non-healing leg ulcers in a lung transplant recipient due to *Exophiala*

spinifera

Deanna Sutton¹, Sybren de Hoog², Mike Rinaldi¹, C Kovarik³ & J Harris³

¹University of Texas Health Science Center, San Antonio, TX, USA

²Centraalbureau voor Schimmelcultures, Utrecht, The Netherlands

³University of Pennsylvania Hospital, Philadelphia, USA

18.30 *Exophiala xenobiotica* from the scalp of a 12-yo male mimicking tinea capitis

Deanna Sutton¹, Sybren de Hoog², Mike Rinaldi¹, B.A. Cohen³ & William Merz³

¹University of Texas Health Science Center, San Antonio, TX, USA

²Centraalbureau voor Schimmelcultures, Utrecht, The Netherlands

³Johns Hopkins, Baltimore, MD, USA

18.45 Waterborne *Exophiala* species infecting cold blooded animals

Jamal Harrak

Centraalbureau voor Schimmelcultures, Utrecht, The Netherlands

18.00 Phylogeny of the *Exophiala spinifera* clade in search of new virulence factors

Jingsi Zeng, Jamal Harrak, Bert Gerrits van den Ende & Sybren de Hoog

Centraalbureau voor Schimmelcultures, Utrecht, The Netherlands

18.15 Elucidation of a secondary structure of ITS2 of the genus *Exophiala*

Gerhard Haase¹ & Sybren de Hoog²

¹University Hospital, RWTH Aachen, Aachen, Germany

²Centraalbureau voor Schimmelcultures, Utrecht, The Netherlands

18.45 Antifungal susceptibility testing patterns in the genus *Exophiala*

Annette Fothergill

Fungus Testing Laboratory, San Antonio, USA

April 27: Friday 19.00 – 20.00 Walk through the meadows for dinner at restaurant *De Witte Zwaan*, De Bilt.

April 28: Saturday

08.30: Departure from hotel to CBS

09.00: Arrival at CBS

Module 4: Chromoblastomycosis

Sesseion organized by the ISHAM Working Group on Chromoblastomycosis

Chairpersos: Flavio de Queiros Telles and Roxana Vitale

April 28: Saturday 09.00 – Saturday 16.00

Chromoblastomycosis is a unique disease entity, occurring only in the order Chaetothyriales, and there even limited to only four species, which are not each other's nearest neighbours. Understanding of the disease is of great clinical as well as fundamental relevance. The muriform cell plays an essential role in the disease process. The origin of some of the species concerned seems to be in cactus spines implying extremotolerance, while the human host shows an adaptive cellular immune response suggesting a shift to primary pathogenicity. The prevalence of the disease in endemic areas is a major public health problem.

Times are approximate.

09.00 *Cladophialophora yegresii* sp. nov., a low-virulent sister species of *C. carrionii*

Sybre de Hoog

Centraalbureau voor Schimmelcultures, Utrecht, The Netherlands

09.30 Biodiversity of the genus *Cladophialophora*

Hamid Badali, Bert Gerrits van den Ende & Sybre de Hoog

Centraalbureau voor Schimmelcultures, Utrecht, The Netherlands

10.00 Antifungal therapy in treatment of murine infection by *Cladophialophora bantiana*

M. Mariné & J. Guarro

Universitat Rovira I Virgili, Reus, Spain

10.15 Molecular epidemiology of the agents of chromoblastomycosis and one mutant of *Fonsecaea monophora* in South China

Liyan Xi

Department of Dermatology and Venereology, The Second Affiliated Hospital, Sun Yat-Sen University, Guangzhou, P.R. China

10.45 – 11.15 Break

11.15 Chromoblastomycosis successfully treated with combination of terbinafine and itraconazole

Junmin Zhang, Xiqing Li, Liyan Xi, Changming Lu

Department of Dermatology, The Second Affiliated Hospital, Sun Yat-Sen University,
Guangzhou, P.R. China

11.45 Chromoblastomycosis in Mexico. Clinical and therapeutic experience.

Four faces of Chromoblastomycosis

Alexandro Bonifaz, A. Saúl, J. Araiza & Mariana Cruz

Hospital General de México, México DF

12.15 Eco-epidemiological, clinical and therapeutic aspects of chromoblastomycosis in Brazil

Flavio de Queiroz Telles

Universidade Federal do Paraná, Curitiba, Brazil

12.45 Antifungal susceptibility of *Cladophialophora carrionii*

Roxana Vitale

CONICET and INEI Dr. Carlos Malbrán, Buenos Aires, Argentina

13.15 Chromoblastomycosis research in Pará State, Amazon Region, North of Brazil: clinical aspects, itraconazol therapeutic outcomes, a new medium for sclerotics induction and their interaction with Langerhans cells

Claudio Guedes Salgado

Laboratório de Dermato-Imunologia UEPA/UFPA/Marcello Candia, Marituba, Brazil

13.45 – 15.00 Lunch

15.00 – 16.00 Discussions: Future of Working Groups; preparation of Proceedings for *Studies in Mycology* and *Medical Mycology*.

16.00 Sybren de Hoog: Working Groups of ISHAM

18.00: Departure from CBS to Utrecht central

22.00: Departure from Utrecht central to hotel

April 28: Saturday 18.00 Bus to Utrecht central, short walk along the Oude Gracht (Old Canal), enjoy aperitive at cafés. 20.00 Thai dinner in one of the unique medieval cellars, with Thai dance performance. 22.00 Return to the hotel by bus.

Posters presented at the Workshop

ISHAM Working Group Black Yeasts

Tinea nigra. Report of 19 cases

Alexandro Bonifaz, Mariana Cruz, Javier Araiza, Marco Hernández & Leonel Fierro

Hospital General de México, México DF

Molecular and physiological diversity among clinical and environmental isolates of *Fonsecaea pedrosoi*

V.A. Vicente¹, M.R. Pie^{2,3}, J.A.N. Marques⁴, I.B. Kwiatkowski¹, S. Astolfi-Filho⁴ & A.A. Pizzirani-Kleiner⁴

¹Departamento de Patologia Básica, Universidade Federal do Paraná, Curitiba, Brasil

²Departamento de Zoologia, Universidade Federal do Paraná, Curitiba, Brasil

³Grupo Integrado de Aqüicultura e Estudos Ambientais, Universidade Federal do Paraná, Curitiba, Brazil

⁴Escola Superior de Agricultura Luiz de Queiroz/Universidade de São Paulo (ESALQ/USP), Piracicaba, Brasil

Immunogenic cell wall and polysaccharides of *Exophiala spinifera*

H. Guerim¹, G.L. Sasaki¹, V.A. Vicente², P.A. Czelusniak^{1,2}, S.M. Zanata², F. Queiroz-Telles², O.F.V. Sarah² & M. Iacomini²

¹Departamento de Bioquímica e Biologia Molecular, Curitiba, Brasil

²Departamento de Patologia Básica, Universidade Federal do Paraná, Curitiba, Brazil

Searching for the natural niche of black yeast-like fungi in Nigeria

Innocent Nweze

University of Nigeria, Nsukka, Nigeria

Relationships between free living amoeba and *Exophiala* species

Catherine Kauffmann-Lacroix

Laboratoire de Parasitologie et Mycologie Medicale, Poitiers, France

Some Biomolecules of *Exophiala jeanselmei*: Carbohydrate containing α -Galf units characterization and molecular tools production

Czelusniak, P. A.1,²; Zanata, S. M. ²; Vicente, V. A. ²; Souza, L.M.¹; Guerim, H. ²; Iacomini, M.¹; Queiroz-Telles, F. ³; Sasaki, G.L.¹

¹Departamento de Bioquímica e Biologia Molecular

²Departamento de Patologia Básica

³Hospital de Clínicas, Universidade Federal do Paraná, CP 19046, CEP 81531-990, Curitiba - PR, Brazil. e-mail: sassaki@ufpr.br

Immunogenic cell wall and polysaccharides of *Exophiala spinifera*

Guerim, H. ²; Sasaki, G. L. ¹; Vicente, V.A. ²; Zanata, S. M. ²; Souza, L.M.¹; Oliveira, S. F. V. ²; Czelusniak, P.A.1,²; Attili-Angelis, D. ³

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²Departamento de Patologia Básica, Universidade Federal do Paraná, CP 19046, CEP 81531-990, Curitiba - PR, Brazil

³Departamento de Bioquímica e Microbiologia, UNESP - Rio Claro, SP, Brazil. e-mail: sassaki@ufpr.br

Cutaneous infection by *Cladophialophora elegans* in a child with Human Immunodeficiency Virus

*Carvalho, V. O.*²; *Vicente, V. A.*¹; *Pinheiro, R. L.*^{1,3}; *De Hoog, G. S.*⁵; *Queiroz-Telles, F.*³; *Cruz, C. R.*²; *Marinoni, L. P.*²; *Attili-Angelis, D.*⁴; *Kwiatkowski, I. B.*¹; *Lima, H. C.*²

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²Departamento de Dermatologia Pediátrica

³Hospital de Clínicas, Universidade Federal do Paraná, Curitiba – PR, Brazil

⁴Departamento de Bioquímica e Microbiologia, UNESP - Rio Claro, SP, Brazil

⁵Centraalbureau voor Schimmelcultures (CBS), Utrecht, The Netherlands

Black grain mycetoma caused by *Exophiala jeanselmei*

*Queiroz-Telles F*¹; *Danucalov T*¹; *Hoffman C*¹ & *Queiroz-Telles J*¹

Hospital de Clinicas, Federal University of Parana, Brazil

Isolation and characterization of herpotrichiellaceous black yeasts from different environments in the State of Paraná, Southern Brazil

*Vicente, V. A.*¹; *Attili-Angelis, D.*⁵; *Pie, M. R.*²; *De Hoog, G. S.*⁶; *Queiroz-Telles, F.*⁴; *Cruz, L. M.*³; *Pizzirani-Kleiner, A. A.*⁵

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⁵Escola Superior de Agricultura Luiz de Queiroz, Universidade de São Paulo, Piracicaba - SP, Brazil

⁶Centraalbureau voor Schimmelcultures (CBS), Utrecht, The Netherlands

ISHAM Working Group Chromoblastomycosis

Molecular and physiological diversity among clinical and environmental isolates of *Fonsecaea pedrosoi*

*Marques, J. A. N.*³; *Pie, M. R.*²; *Vicente, V. A.*¹; *Kwiatkowski, I. B.*¹; *Spartaco, A. F.*³; *Pizzirani-Kleiner, A. A.*³

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³Escola Superior de Agricultura Luiz de Queiroz, Universidade de São Paulo, Piracicaba - SP, Brazil

Chromoblastomycosis caused by different species of *Exophiala*

*Queiroz-Telles, F*¹, *Vicente V*² & *Wanke B*²

¹Hospital de Clinicas, Federal University of Parana, Curitiba, Brazil

²Department of Pathology, Federal University of Parana, Curitiba, Brazil

³Oswaldo Cruz Foundation, Rio de Janeiro, Brazil

A special case of human chromoblastomycosis

Sabrina Campolina & Rachel Caligorne

Fiocruz-Brazil, Belo Horizonte, Brazil

April 29: Sunday

April 29: Sunday 10.00 – 20.00 [participation fee = € 45,-] Tulip tour by bus to flower centres Lisse and Hillegom, with lunch at 17th century Leiden, walk along Amsterdam canals and light jazzy fungus dinner at café *Chez Uzzi* in Amsterdam. Arrival at the hotel 20.30, resp. at your own expense at Schiphol airport.

- 09.30 – 10.30 Bus drive to Leiden. (*park de put bij de Molen*) Snack and drink in the bus.
- 10.30 – 12.00 Short walk in Leiden: bridges, canals, donjon
- 12.00 – 13.30 Lunch in Leiden. (*van der werf stads café steenstraat 2*)
- 13.30 – 15.00 Tour through tulip fields (Leiden, Lisse, Hillegom)
- 16.00 Arrival in Amsterdam. (*CS*)
- 16.00 – 18.00 Walk along 17th Century canals, ending in *Chez Uzzi*. (*muidersstraat 18*)
- 20.00 Departure, either to Schiphol at your own expense, or by bus to the hotel

Participants

| | Name | City | Land |
|-----|-----------------------------|------------------|--------------------|
| 1. | Hamid Badali | Utrecht | Netherlands |
| 2. | Alexandro Bonifaz | Mexico | Mexico |
| 3. | William Broughton | Geneve | Zwitserland |
| 4. | Eva Burger | Sao Paulo | Brazil |
| 5. | Rachel Caligiorne | Belo Horizonte | Brazil |
| 6. | Sabrina Campolina | Belo Horizonte | Brazil |
| 7. | Sybren de Hoog | Utrecht | Netherlands |
| 8. | Filomena De Leo | Messina | Italy |
| 9. | Shuwen Deng | Utrecht | Netherlands |
| 10. | David Ellis | Adelaide | Australia |
| 11. | Annette W. Fothergill | San Antonio | USA |
| 12. | Bert Gerrits v.d. Ende | Utrecht | Netherlands |
| 13. | Anna Gorbushina | Oldenburg | Germany |
| 14. | Cene Gostincar | Ljubljana | Slovenia |
| 15. | Ewald Groenewald | Utrecht | Netherlands |
| 16. | Marizeth Groenewald | Utrecht | Netherlands |
| 17. | Martin Grube | Graz | Austria |
| 18. | Josep Guarro | Reus | Spain |
| 19. | Cecile Gueidan | Durham | USA |
| 20. | Nina Gunde-Cimerman | Ljubljana | Slovenia |
| 21. | Gerhard Haase | | Germany |
| 22. | Kyra Hammadi | Mostaganem | Algeria |
| 23. | Jamal Harrak | Utrecht | Netherlands |
| 24. | David Hawksworth | Madrid | Spain |
| 25. | Regine Horr  | Bonn | Germany |
| 26. | Al-Zahraa Karam El-Din | Cairo | Egypt |
| 27. | Catherine Kauffmann-Lacroix | POITIERS Cedex | FRANCE |
| 28. | Xiqing Li | Guangzhou | China |
| 29. | Marcal Marin  | Reus | Spain |
| 30. | Tadeja Matos | Ljubljana | Slovenia |
| 31. | Mohammed Najavzadeh | Utrecht | Netherlands |
| 32. | Abdel Hafeez NIMIRi | Khartoum north | SUDAN |
| 33. | Emeka Nweze | Nsukka | Nigeria |
| 34. | Silvano Onofri | Viterbo (I) | italy |
| 35. | Ana Plemenita | Ljubljana | Slovenia |
| 36. | Itzhack Polacheck | Jerusalem | ISRAEL |
| 37. | Francesc Prenafeta Bold  | Barcelona | Spain |
| 38. | Flavio Queiroz-Telles | Curitiba | Brazil |
| 39. | Constantino Ruibal | Madrid | ESPA A |
| 40. | Serena Ruisi | Viterbo (I) | italy |
| 41. | Claudio Salgado | Marituba, Par  | Brazil |
| 42. | Kittipan Samerpitak | Bangkok | Thailand |
| 43. | Laura Selbmann | Viterbo (I) | italy |
| 44. | Margit Sieberer | Utrecht | Netherlands |
| 45. | Andreas Stolz | Stuttgart | Germany |
| 46. | Montarop Sudhadham | Utrecht | Netherlands |
| 47. | Deanne A. Sutton | San Antonio | USA |
| 48. | Kathrin Tintelnot | Berlin | Duitsland |
| 49. | Martina Turk | Ljubljana | Slovenia |
| 50. | Anneriet van Duin | Rotterdam | Netherlands |
| 51. | Roxana Vitale | Federal | Argentina |
| 52. | Maria Anna Viviani | Milan | Italy |
| 53. | Grit Walther | Utrecht | Netherlands |
| 54. | Liyan Xi | Guangzhou | China |
| 55. | Nadezhda Yurlova | Saint-Petersburg | Russian Federation |
| 56. | Jingsi Zeng | Utrecht | Netherlands |
| 57. | Junmin Zhang | Guangzhou | China |
| 58. | Jingjun Zhao | Utrecht | Netherlands |
| 59. | Mohammad Zia | Esfahan | Iran |

Combined antifungal therapy in the treatment of a disseminated infection by *Cladophialophora bantiana* in a murine model

Marçal Mariné, Josep Guarro

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Background: *Cladophialophora bantiana* is a human pathogen melanized fungus, which causes cerebral infections in immunocompetent patients. These infections present a high mortality and effective treatment does not exist yet. We have evaluated the efficacy of several antifungal drugs that previously showed some in vivo or in vitro activity, i.e. flucytosine (5FC), posaconazole (PSC), micafungin (MFG) and voriconazole (VRC), alone or in combination.

Methods: Groups of 10 male OF1 mice were established for each treatment. Mice were inoculated intravenously with 2×10^6 CFU/mouse of the strain FMR 8697, which caused 100% mortality within 20 days after challenge. The animals received amphotericin B (1.5 mg/kg), VRC (40 mg/kg), 5FC (180 mg/kg), PSC (100 mg/kg) or MFG (10 mg/kg) alone and in the following combinations: VRC + MFG, VRC + 5 FC, VRC + MFG + 5FC, PSC + MFG, PSC + 5 FC and PSC + MFG + 5FC. Treatments started 24h after inoculation and continued for 10, 15 or 30 days. Mice were checked daily for 60 days. The survival curves were compared among groups using the log-rank test.

Results: 5FC, PSC and all the combinations tested significantly improved the survival of mice, but none of them prolonged survival beyond day 30 after inoculation. Only the triple combination of PSC + 5FC + MFG given for 30 days, allowed a survival of 100% of the mice for 60 days after the inoculation.

Conclusions: A combined therapy using PSC, 5FC and MFG may have a potential role in the treatment of *C. bantiana* infections

Relationships between free living amoeba and *Exophiala* species ?

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According to most authors, free living amoebae play an important role as reservoirs for potential pathogens frequently isolated from water. In our hospital, amoebae of the genus *Acanthamoeba* and *Hartmanella* are often recovered from water taps. We investigated in this work the ability for *Acanthamoeba castellanii* and *Hartmanella vermiformis* to allow growth and/or survival of *Exophiala* sp. Co-cultivation of *A. castellanii* ATCC 30234 and *H. vermiformis* ATCC 50256 (106 trophozoites /ml) and *Exophiala* sp. (105 blastoconidia /ml) were carried out. Interactions were evaluated by mycological culture and percentage of trophozoites with ingested blastoconidia. The effect of the different supernatants were also carried out: the supernatants of *Exophiala* on the viability of each strain of free living amoeba and the effect of amoeba supernatants on the growth of blastoconidia of *Exophiala*. In our conditions, the cocultivation of *Exophiala* with *A. castellanii* and *H. vermiformis* showed opposite effects, whereas the supernatants of these two amoebae had the same positive effect on the growth of the yeast. The supernatant of *Exophiala* blastoconidia had no effect on the viability of the trophozoites of the two tested amoebae. After this preliminary work, further studies are now necessary to investigate the potential role of free living amoebae in the protection and the growth of *Exophiala* in water.

A biochemical study of some *Exophiala* species

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Two Black Yeasts (*Exophiala xenobiotica*, *Exophiala spinifera*) isolated from patient with *Tinia corporis* and *Tinia capitis* were studied for their abilities to produce a secondary we melabolites antibiotic-like .The fermentation study of the two black yeasts was demonstrated in shaker culture of F.U.M (fermentation unit medium). The outcome for a qualitative identification of the produced Antibiotic-like has been shown by the Thin-layer chromatography and Betina classification methods .Two types of Antibiotic-like have been revealed: a Penicillin-like substance produced by strain *Exophiala xenobiotica* and unknown substance obtained by *Exophiala spinifera*.

***Exophiala jeanselmei* eumycetoma transmitted from a walking stick in a lymphoma patient**

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We describe a case of *Exophiala jeanselmei* eumycetoma in a 76-year old male patient. The patient suffered from an advanced-stage T-cell lymphoma and was treated with supportive treatment. The patient was using a walking stick that was imported to Israel from Guatemala, when he developed a wart-like nodule on his palm. *Exophiala jeanselmei* was isolated both from his lesion and from his walking stick. Identification of the isolate was confirmed by the mycological reference laboratory of UTMB Galveston, TX. The isolate was deposited in their culture collection (UTM 5455). The patient was treated with oral itraconazole and partial regression of the lesion. However, he passed away soon after due to his primary malignancy. This is the first case of *Exophiala* infection described in Israel. This case demonstrates the potential role of imported objects as vectors for infection.

Lifestyle evolution and substrate transition in the erpotrichiellaceous black yeast fungi and related taxa (Chaetothyriomycetidae)

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One characteristic of the subclass Chaetothyriomycetidae is its diversity in lifestyles and habitats. Amongst the most diverse order is the Chaetothyriales, which includes saprophytes, plant parasites, as well as animal or human parasites. This order has been shown to be sister to the Verrucariales, a group including mainly lichenized species. Together with the Pyrenulales, another mostly lichenized group, these three orders are recognized as forming this ecologically heterogeneous subclass. Recently, several studies have shown that some highly adapted fungi isolated from rock surfaces and with peculiar lifestyles also belong to the order Chaetothyriales. These rock-inhabiting fungi are found in semiarid and even desert habitats, and have been shown to be well adapted to extreme environmental conditions. Three ribosomal RNA genes (nucSSU, nucLSU, and mtSSU) and the protein-coding gene RPB1 were used to estimate the phylogenetic relationships between members of this subclass. The taxon sampling includes saprophytes, opportunistic vertebrate parasites, lichens, plant parasites and rock-inhabiting fungi. Preliminary results showed that the most recent common ancestor of Chaetothyriales and Verrucariales was most likely colonizing rock surfaces. Within the Chaetothyriales, multiple switches occurred between saprophytes, vertebrate parasites and rock-inhabiting fungi. Revealing the phylogenetic relationships between these groups of fungi will help to understand the evolution of lifestyles and substrate transitions in the Chaetothyriomycetidae.