

### Hot stuff in this issue

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### 5th NSMM & 22<sup>nd</sup> SSCM Meeting:

The next and fifth Scientific Meeting of NSMM, arranged in collaboration with the Swedish Society for Clinical Mycology, will take place on May 22<sup>nd</sup> 2008, Stockholm, Sweden. The meeting is held at "Teater-skeppet" which is situated in Stockholm harbour and during the lunch-break the ship will take us on a trip in the beautiful Stockholm archipelago.



We have the honour to have two distinguished invited key-note speakers: Theoklis Zaoutis from Children's Hospital in, USA who will talk on "Fungal Infections in the Neonatal and Pediatric Population" a topic which is highly relevant but less well studied in the Nordic countries and Rosemary Barnes from Cardiff University, UK who will talk on "Impacts of Diagnostics on Antifungal Treatment: Have New Developments brought us any further?" which with all the new tests being developed is a burning topic.

**Registration and abstract submission at [www.nsmm.nu](http://www.nsmm.nu) !** The number of participants is limited to 150 and applicants will be handled on a first come first serve basis. Registration fee NSMM or SCMM members: 20 €, non-members 40 €.

### Impacts of Diagnostics on Antifungal Treatment

#### Key-Note Speakers and Programme



Theoklis Zaoutis



Rosemary Barnes

#### Opening Ceremony and Fungal Infections in Selected Patient Populations

- 10:00 **Opening remarks and welcome**  
*Lena Klingspor, meetings secretary, Maiken Cavling Arendrup, president, NSMM.*
- 10:15 **Fungal Infections in the ICU population**  
*Tom Hartvig, Rigshospitalet, DK*
- 10:40 **Fungal Infections in the Haematological population**  
*Per Ljungman, Karolinska University Hospital, SE*

#### Keynote Lectures

- 11:05 **Fungal Infections in the Neonatal and Pediatric population**  
*Theoklis Zaoutis, Children's Hospital of Philadelphia, US*
- 11:50 Coffee break
- 12:15 **Impacts of Diagnostics on Antifungal Treatment: Have New Developments brought us any further?**  
*Rosemary Barnes, Cardiff University, UK*
- 13:00 Lunch

#### Laboratory and imaging drivers for antifungal treatment decision

- 14:00 **Epidemiologic Trends and Impact on Initial Antifungal Treatment.**  
*Peter Gaustad, Rikshospitalet, Oslo, NO*
- 14:30 **Antifungal Drug Monitoring – Current status**  
*Filip Josephson, Karolinska Univ Hospital, SE*
- 15:00 **The Impact of Histopathology on Antifungal Treatment**  
*Henrik Elvang Jensen, Dansk Veterinær Inst. DK*
- 15:30 **Imaging options in invasive fungal infections**  
*Kirsi Volmonen, Helsinki Univ Central Hosp. FI*
- 16:00 Coffee break
- 16:30 **Recent experiences with the Nordic EQA Programme**  
*Klaus Leth Mortensen, SSI, DK*

**Free Papers; Oral and Poster Presentations**

**NSMM AGM and Farewell dinner at the Ship (25€)**

### Annual General Meeting 2008

The AGM 2008 will be held May the 22<sup>nd</sup> at Teater-skeppet in Stockholm, just after the 5<sup>th</sup> scientific meeting.

This year the following members of the board have decided to resign: Malcolm Richardson FI (Vice-President of NSMM), and Jan Faergeman SE. Malcolm and Jan were both part of the group founding the Nordic Society of Medical Mycology in the autumn 2003 and have contributed greatly to the board and activities of the board. We thank them and wish them all the best. Peter Gaustad and Ditte Saunte have served a full 3-year period but accept re-election. Any members willing to stand for office as Board Member are off course most welcomed and should be nominated by at least two NSMM members no later than 3 weeks before the general assembly i.e. Thursday May 1<sup>st</sup> 2008. If more than one nomination is received, the Society shall proceed to elections by ballot at the AGM. The preliminary agenda for the AGM (propositions from the members remain to be included) is the following:

1. Report from the president  
Maiken Cavling Arendrup
2. Report from the general secretary  
Peter Gaustad
3. Report from the treasurer  
Ditte Saunte
4. Next scientific meeting  
Topic and Venue
5. Election of board members
6. Propositions from the members
7. Any other business

We once again encourage colleagues with interest in Medical Mycology and in becoming part of the NSMM board to contact us. We furthermore welcome any suggestions, propositions, and ideas from the members, please contact any of the board members (contact information available at the web-site [www.nsmm.nu](http://www.nsmm.nu))

### NRMM news

The third "Nordic EQA shipment" was distributed in the autumn 2007 and we are happy that the majority of the laboratories in Denmark, Norway and Sweden participated. Finland has been seeking a new representative for the NRMM board and thus did not participate in the 3<sup>rd</sup> distribution. However a new representative will be appointed at a national meeting in April and thus we expect that next distribution will be truly Nordic. Also this years EQA raised several important issues concerning diagnosing important fungal pathogens especially when in a mixed culture, and especially moulds

If interested you may order a copy of the report by contacting Klaus Leth Mortensen ([klm@ssi.dk](mailto:klm@ssi.dk)).

A fourth "Nordic EQA shipment" is currently under preparation at the Rikshospitalet/Norwegian Institute of Public Health in Oslo and is planned to be distributed in the autumn. It is our hope that the majority of

the Nordic microbiological laboratories handling samples from hospitalised patients will participate.

### "NRMM Breakpoints" for Antifungals and *Candida*

	AMB		CAS**		5-FC		FLU		ITR		VOR*	
	S (<X)	R (>X)	S (<X)	R (>X)	S (<X)	R (>X)	S (<X)	R (>X)	S (<X)	R (>X)	S (<X)	R (>X)
Denmark	1	1	2		4	16	2	4	0.125	0.5		
Finland****												
Norway	1	1	1	1	8	8	2	4	0.125	0.5		
Sweden	1	1	2		4	16	2	4	0.125	0.5	1	

\*Breakpoints for voriconazole are pending. Species specific cut off values are indicated below

*C. albicans* 0.064 µg/ml

*C. parapsilosis* 0.125 µg/ml

*C. tropicalis* 0.125 µg/ml

*C. glabrata* 1 µg/ml

*C. krusei* 1 µg/ml

Testing is not recommended

Testing is not recommended

\*\*Breakpoints for caspofungin are pending. The suggested limits for susceptibility are based on the national wildtype distributions. In Sweden isolates with MICs greater than 2 will be interpreted as having reduced susceptibility.

\*\*\* BP in Finland are to be decided at a meeting in April 2008

Setting breakpoints is a complex process and involves knowledge on wild-type MIC distributions (i.e. what are the MICs for a normal *Candida* spp), pharmaco-kinetics and pharmaco-dynamics (PK/PD) of the antifungal compounds, and relationships between treatment and clinical outcome.

Breakpoints for antifungals are suggested by the EUCAST Antifungal Susceptibility Testing Sub-committee in Europe and by CLSI in the US. Recently, the first final breakpoints were published as a technical note from EUCAST: Fluconazole S:  $\leq 2$   $\mu\text{g/ml}$  and R:  $>4$   $\mu\text{g/ml}$  (Clin Microbiol Infection 2008, 14(2):193-5.).

However, for a number of other compounds no final breakpoints have yet been set. It is the opinion of the EUCAST committee that if substantial data does not exist that successful outcome can be expected for a fungal isolate with a MIC higher than what is normal for this species, the breakpoint should be set according to the wild-type distribution of the species (so that only "normal isolates are reported as susceptible). If evidence will arise in the future that infections caused by isolates with elevated MICs are in fact treatable, the breakpoint will be elevated accordingly. The motivation of this conservative approach is to avoid recommending treatment of isolates for which we do not have sufficient data to be sure that they are in fact as susceptible as the wild-types.

In the NRMM board breakpoints have also been discussed and the opinion follows that of EUCAST. Currently the recommendations for interpretations of MIC values are as displayed in the table above and general recommendations are below:

### NRMM Treatment recommendations

In general candins are not the preferred drugs for *C. parapsilosis* and *C. guilliermondii*, and the azoles are not recommended for *C. glabrata*, *C. krusei*, *C. norvegensis* and *C. inconspicua*.

For yeasts the following compounds are cidal: Amphotericin B and candins. They may have superior activity than static azoles.

### Diagnostic Topics

Therapeutic drug monitoring has become increasingly important in patients with antifungal infections.

For voriconazole variability in metabolism, interactions, and toxicity are the major drivers, for itraconazole and posaconazole variable bioavailability. The Danish experiences are the following:

Concentration Level	Vori (No. 154)	Itra (No. 52)	Posa (No. 22)
Un-detectable	12%	25%	18%
Below level <sup>a</sup>	31%	27%	27%
In level <sup>b</sup>	53%	48%	55%
Above level <sup>c</sup>	4%	-	-

<sup>a</sup> Below level: Voriconazole: 0,1-0,99  $\mu\text{g/ml}$ , Itraconazole and posaconazole: 0,1-0,49  $\mu\text{g/ml}$

<sup>b</sup> In level: Voriconazol: 1-6  $\mu\text{g/ml}$ , Itra- og posaconazol:  $\geq 0,5$   $\mu\text{g/ml}$

<sup>c</sup> Above level: Voriconazol:  $>6$   $\mu\text{g/ml}$

We can of course not know if some samples are taken after the patient ceased therapy, but the data suggest that a number of patients are not optimally treated.

Azole concentration determinations are currently done at:

Dept of Clinical Pharmacology  
Karolinska University Laboratory, Huddinge  
141 86 Stockholm  
Phone +46 8 58587899  
Sweden [www.karolinska.se](http://www.karolinska.se)

Unit of Mycology and Parasitology  
Statens Serum Institut  
Artillerivej 5  
DK-2300 Copenhagen  
Phone +45 3268 3215 or 3268 3223  
Denmark [www.ssi.dk](http://www.ssi.dk)



Concentration determination by bioassay. (Kindly provided by C. Lundin)

### TIMM 2011 – should we go for it?

The NSMM board is tempted to go for hosting the Trends In Medical Mycology (TIMM) conference in Copenhagen in 2011. A formal bid should be prepared and submitted before May 1<sup>st</sup>. We see this as a possible opportunity to put the Nordic Society at the global map. Any comments or suggestions are welcome.

The 4<sup>th</sup> TIMM will be in Athens, Greece 18 – 21 October 2009.

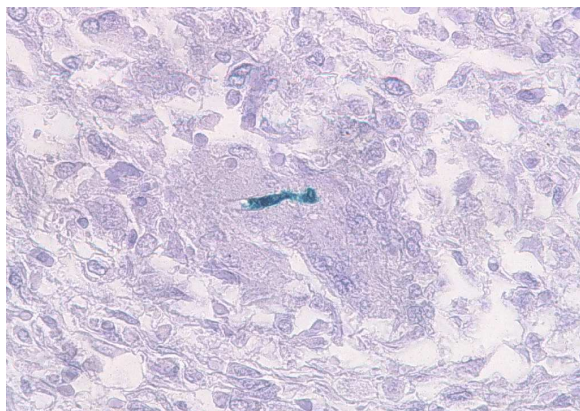


### NSMM Course in Histopathology

#### Histopathology in Medical Mycology: Theory to Practice

A one-day course on the diagnosis of fungal infections by histopathology will be held at the Department of Pathology, Karolinska, Huddinge, Stockholm on May 21st 2008 by Professor Henrik Elvang Jensen, University of Copenhagen, Denmark. The course will cover the most important mycoses with focus on the diagnosis including discussions of methods, diagnostic strength, differential diagnoses, pitfalls, etc. The course will be a composition of lectures and practical exercises at the microscope for the morphological recognition of fungi. The application of immunohistochemistry for the identification of fungi to the genus and/or species level in tissue will be covered in the lectures.

The course is aimed at clinical microbiologists and pathologists with interest in medical mycology. The number of participants is limited to 10 due to its hands-on design, and registrations will be handled on a first come first serve basis and unfortunately this number has already been reached. If members would be interested in participating in a possible future course please contact Henrik Elvang-Jensen at [helj@life.ku.dk](mailto:helj@life.ku.dk)



Zygomycetes hyphae (Kindly provided by H Elvang Jensen)

### ECMM news

During the IUMS Congresses 2008 which will be held in the beautiful city Istanbul, 5-15 August 2008 and hosted by the Turkish Microbiological Society, Society of Microbial Ecology and Society of Chemotherapy, there will be three congresses, one of which focus on Mycology: XII. International Congress of Mycology (5-9 August 2008). Information on the conference is available at <http://iums2008.org/Mycology.aspx>

A number of ECMM working groups are now active targeting Scedosporiosis, Zygomycosis, ICU candidosis, Malassezia and a pulmonary mycoses registry. Interested colleagues can visit the ECMM web site for further information on the work of these working groups.

Finally, as no venue has yet been selected for the TIMM conference in 2011 bids are open for national and Nordic societies. Informal contact has been made to the NSMM, and if interested colleagues in the NSMM society are willing to contribute to a future TIMM congress in the Nordic region please contact Maiken Cavling Arendrup at [mad@ssi.dk](mailto:mad@ssi.dk)

### Sponsors

Again this year it has been possible to raise sponsor support for this year's meeting in Stockholm. We gratefully thank

Merck Sharp & Dohme AB  
Pfizer AB.  
Schering-Plough AB  
Swedish Orphan AB

(in alphabetic order) for their generous contributions.

On behalf of the Society:



Maiken C. Arendrup  
President NSMM