

Minutes Division of Fungi – Business Meeting 16th August 2017 – San Diego, California, USA

The meeting was called to order by Nicolai Vitt Meyling (Chair) at 8:00 PM.

Officers present (4): Nicolai Meyling (Chair), Stefan Jaronski (Chair elect), Ann E Hajek (Secretary/Treasurer), Dietrich Stephan (Member-at-Large)

Other members present (29)

Total Present: 33

Division of Fungi Annual Report: Nicolai Meyling delivered the Annual Report.

Current Officers

Position	Name	Year
Chair	Nicolai Vitt Meyling	2016-2018
Chair Elect	Stefan Jaronski	2016-2018
Secretary/Treasurer	Ann Hajek	2016-2018
Member-at-Large	Chad Keyser	2015-2017
Member-at-Large	Dietrich Stephan	2016-2018
Student Representative	Katharina Saar	2015-2017
Student Representative	Carina Ehrich	2016-2018

Election of Officers in San Diego, California, USA (2017)

There were two positions available on the committee this year: One Member-at-Large and a Student Representative.

Membership

Membership numbers for 2017 are slightly higher than last year with an increase in regular members. Membership has increased by 8.5% since 2012 (meeting in Buenos Aires, Argentina). All Division members are encouraged to make sure their dues are up to date and to encourage new members to register as Fungal Division members.

	2012	2013	2014	2015	2016	2017
Regular	77	105	68	69	67	74
Students	5	15	13	12	16	15
Total	82	120	81	81	83	89

Finances

The balance in the Fungus Division's account at the close of Fiscal Year (FY) 2016 was \$4,240.97. In 2016, the SIP Council agreed to provide \$ 2,500.00 in general funds (2 Speaker Awards= \$ 500.00 each; 2 Student Awards= \$ 750.00 each). The division granted 2 student awards of \$ 750.00 each and two speaker travel awards of \$500 each for attendance at the Tours meeting. Because some of the funding from council for speakers was not used, the Fungal Division had to return \$236 to Council. Then, Council awarded \$4,000 for awards to each division for the 2017 Golden Jubilee Celebration meeting.

Fungi Division Fiscal Year (FY) 2015 (May 1, 2015-April 30, 2016)

Opening Balance FY 2016	\$ 4,240.97
REVENUE FY 2016	
Membership Dues FY 2016	\$ 765.00
Interest FY 2016	\$ 12.71
Total Revenue FY 2016	\$ 5,018.68
EXPENSES FY 2016	
Student Travel Awards for 2016 (2x\$750.00 each)	\$ 1,500.00
Speaker Awards (2x \$500 each)	\$ 764.00
Total Expenses FY 2015	\$ 2,264.00
Net Revenue Before Fund Transfer	\$ 236.00
FUNDS TRANSFER FROM GENERAL FUNDS FY 2015	
Fund Transfer from General Funds FY2016	\$ 2,500.00
Total Fund Transfers	\$ 6,500.00
Net Revenue after Fund Transfers	\$ 4,000.00
End Balance	\$ 9,018.68
((Opening Balance+Revenue+Fund Transfer)-Expenses)	

Symposia, Workshops, Other Events: Tours, 2016

Fungi Division Symposium:

"How fungi mediate protection against herbivores and plant pathogens" *Organizers: Nicolai V. Meyling and Maya Raad*

Fungi-BDI Cross Divisional Symposium:

"Next Generation Sequencing" *Organizers: David Bass and Helen Hesketh*

COST-action meeting in collaboration with Fungi Division

"Ménage à trois -Three way interactions between plants, arthropods and microbes that benefit the plants" *Organizers: Richard Meadow*

Fungi Division had 36 Contributed oral presentations and 26 posters

San Diego Meeting 2017

Fungi Division Symposium:

“Insect defense against fungal pathogens: mechanisms, variations and efficacy”

Organized by Louela Castrillo

Cross-Divisional Symposium (Fungi, Nematodes, Microsporidia)

“Ecology of Invertebrate Pathogens”

Organized by Ann Hajek and David Shapiro-Ilan

There were 26 oral presentations (11 students) and 24 posters (5 students).

2/Division Student Travel Awards 2017

Carla Huarte-Bonnet

PhD student at Biochemistry Research Institute of La Plata, Argentina.

“Molecular characterization of *Beauveria bassiana* genes involved in uptake and degradation of insect hydrocarbons”

Presentation Wednesday 2:00 pm (Fungi Division #3): “Alkane-grown *Beauveria bassiana*: Mycelial pellets formation, oxidative stress induction and cell surface alterations”

Received \$750.

Ronaldo Alves Pereira Jr.

PhD student Federal University of Goiás, Brazil.

“Effects of UVB radiation on *Metarhizium* spp.: Evaluation of photoprotectants and the development of irradiated conidia on culture medium and on *Rhicephalus microplus* cuticle”

Presentation Tuesday 10:45 (Fungi Division #2): “Over-expression of genes may reveal increased tolerance against UV-B radiation in *Metarhizium* spp. conidia produced on culture medium supplemented with riboflavin (vitamin B2)”

Received \$750.

Special Golden Jubilee Fungi Division Student Travel Award 2017 (low income country)

Never Zekeya

PhD student at The Nelson Mandela African Institution of Science and Technology, Tanzania.

“Developing an improved strategy for sustainable management of Tomato leaf miner (*Tuta absoluta*, Meyrick) in Tanzania”

Presentation Monday 4:30 pm (Fungi Division #1): “Entomopathogenic activity of *Aspergillus flavus* against tomato leaf miner, *Tuta absoluta*, in Tanzania”

Received \$1,200.

3/Division Speaker Awards 2017

Three awards were given to speakers at the symposium “Insect defense against fungal pathogens: mechanisms, variations and efficacy” organized by Louela Castrillo

Renata Borba: *Behavioral defenses* (Received \$1,000)

Judy Chen: *Genomics/Transcriptomic* (Received \$750)

Jorge Contreras-Garduño (unfortunately, this talk was cancelled and award not presented)

4/2017 Election of New Officers for Fungal Division

There were two positions available on the committee this year: One Member-at-Large and a Student Representative.

Member at large nominations were Drauzio Rangel (nominated by Mark Goettel and Don Roberts) and Pasco Avery (nominated by Surendra Dara)

Pasco Avery won the election.

Student representative nominations were Sihun Kim from Korea (nominated by Drauzio Rangel, Annette Jensen and Helen Hesketh) and Rodrigo Javier Lopez Plantey (nominated by himself). Rodrigo Javier Lopez Plantey won the election.

Current Officers are:

Chairperson	Nicolai Meyling	2016-2018
Chairperson-Elect	Stefan Jaronski	2016-2018
Secretary-Treasurer	Ann Hajek	2016-2018
Member-at-Large	Dietrich Stephan	2016-2018
Member-at-Large	Pasco Avery	2017-2019
Student Representative	Rodrigo Javier Lopez Plantey	2017-2019
Student Representative	Carina Ehrich	2016-2018

5/2017: New Business Items for Discussion

5.1/Division awards for Queensland, 2018 (August 12-16)

Suggestion for awards from Fungi Division for 2018 (SIP Council will support \$1,500/division in 2018)

Student Travel Awards

2 Student Travel Awards of \$800, with an extra \$400 for each for registration fees (2x\$400) = \$1200 each for two students (unanimous vote for this)

Discussion:

Just as a first rule, the Fungal Division cannot give any one awardee more than \$1250.

Meeting attendees were concerned that travel to Australia will be expensive and so the amount for a student travel award was increased to include the cost of registration.

Suggestions included: Students applying for the award must include a budget for the full cost of the trip so the student is aware what this will cost (being done by the Microbial Control Division).

Have an earlier deadline for student applications so that airfare is more economical and also this gives more time for choosing another, if the first applicant can't come after all (so move the deadline to March).

Speaker Awards

If a speaker is an SIP member, no travel funds should be offered from the division. Considering that the division will provide \$ 2,400 for two student awards, any support for an invited speaker (outside SIP) will be limited, if any.

Stefan Jaronski suggested that we should look to Pacific Rim for symposium speakers (so less \$\$ needed for travel).

Suggestion to ask Roma Gwynn to ask industries if they would support individual students.

5.2/Announcement from ARSEF (Richard Humber)

Rich Humber announced that he will retire in 7 days (end of August 2017). He said that ARSEF will continue and he wants everyone to continue keeping the collection active, both by depositing samples and requesting samples.

5.3/2016 Symposia ideas for San Diego

Suggestions:

- Understanding the effect of host plant allelochemicals on trophic interactions and susceptibility of arthropod pests infection by fungal entomopathogens. (Pasco Avery)
- Can fungal entomopathogens be used as "body guards" for plants?: role of HIPVs in pest management systems (Pasco Avery; potentially cross divisional with Virus Division/Kelli Hoover)
- Attract and kill/how does the insect behave/ is it attracted and how does it leave and disperse/does it work? (cross divisional with MCD)

Additional broad suggestion:

Use of Entomopathogenic fungi in the Pacific Islands (e.g., sugarcane grubs, locusts in Australia); cross divisional with MCD

5.4/ General Discussion

Question about Duties of Division Officers:
Fungi Division Officers duties (2016)

- **Chair:** Lead FD; Prepare and lead the FD business meeting; Write FD report; Delegate other running tasks to officers
- **Chair Elect:** Run the process for FD Research Highlights
- **Secretary/ Treasurer:** Write FD finance report; Write Minutes from the FD business meeting
- **Members-at-large 1:** Run the process of getting jurors for FD student presentations
- **Member-at-large 2:** Run the process of getting chair persons to FD sessions
- **Student Representative:** Fungi Division newsletter and Facebook editorial committee

Remember to check out and be involved with the Facebook, Newsletter, YouTube

- Co-editor for SIP Newsletter needed!
- Activity on SIP Facebook (and Twitter)
- YouTube channel

Encourage (continued) membership of SIP, especially among younger members. The new Young Scientist Early Career Award requires that nominees are SIP members, and have been members last two years! So if you want to be nominated, renew your membership.



Recipients of 2017 student travel awards were:

- A) Carla Huarte-Bonnet, Argentina
- B) Ronaldo Alves Pereira Jr., Brazil
- C) Never Zekeya, Tanzania

Awards presented by Division Chair Nicolai Meyling



Some Fungi Division members and invited speakers after division symposium, San Diego.

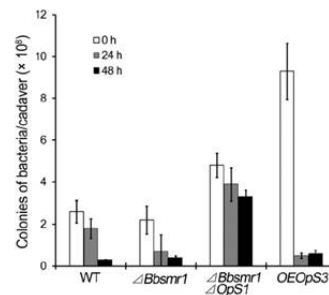
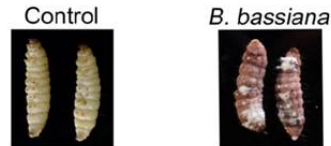
The two selected Research Highlight from Fungi Division 2017

PNAS PNAS

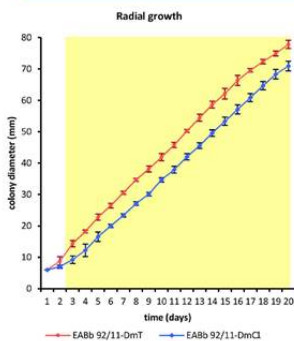
Regulatory cascade and biological activity of *Beauveria bassiana* oosporein that limits bacterial growth after host death

Yanhua Fan^{a,1,2}, Xi Liu^{a,1}, Nemat O. Keyhani^b, Guirong Tang^a, Yan Pei^a, Wenwen Zhang^a, and Sheng Tong^a

- Oosporein well-known secondary metabolite produced by *Beauveria* spp.
- Genome: dissecting oosporein gene cluster.
- Oosporein not significant for virulence.
- Oosporein produced in insect cadavers 24-48 h after host death.
- Suppression of opportunistic bacteria.
- Significant for securing cadaver for conidial production.



PLOS PATHOGENS



RESEARCH ARTICLE

Studies on the Virome of the Entomopathogenic Fungus *Beauveria bassiana* Reveal Novel dsRNA Elements and Mild Hypervirulence

Ioly Kotta-Loizou^{1*}, Robert H. A. Coutts²

- Mapping the virome of *Beauveria bassiana*.
- 21% of isolates (n=75) with diverse viral infections.
- Polymycoviruses and smallest virus ever found!
- Clearing *B. bassiana* for virus affects phenotype, including virulence.

Beauveria bassiana small Narna-like virus (BbSNLV)



- Add to biocontrol agent = more virulent?