

School of Energy, Environment and AgriFood
16th February, 2015

Cranfield
UNIVERSITY

Vincent Building
Cranfield, Bedfordshire,
MK43 0AL, England
Tel +44 (0) 1234 758308
Fax +44 (0) 1234 758380
www.cranfield.ac.uk

Prof. Dr. Drauzio Eduardo Naretto Rangel
Universidade do Vale do Paraíba
Instituto de Pesquisa e Desenvolvimento
Av. Shishima Hifumi, 2911 Urbanova,
São Jose dos Campos, SP Brasil

Re: Attendance of Conferences in Brazil with help from FAPESP

Dear Drauzio,

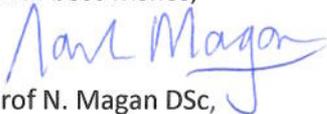
I would like to take this opportunity to thank you again for the excellent conference you organised on Fungal Stress late last year. This was a very timely conference for me and it enabled me to present our most recent research work and of course contribute to the special issue to be published in Current Genetics.

This support also enabled me to attend the Latin American Congress (MICROAL 2014) which was held in Iguazu, and organised partially by Dr Marta Taniwaki from Ital in Campinas.

Overall, this trip was exceptionally useful for me to meet many colleagues from Brazil and world-wide and also meet potential collaborators for research projects, especially via the Newton Fund which is funding a range of activities.

Thanks again for your help and that of FAPESP which enabled me to take this opportunity and to maximise the benefits scientifically and socially from this visit.

With best wishes,



Prof N. Magan DSc,
Head, Applied Mycology Group,
AgriFood Institute. (Email: n.magan@cranfield.ac.uk)



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Caro Professor Drauzio,

Desejo deixar meu testemunho de quanto foi interessante e estimulante a reunião da ISFUS em outubro de 2014.

Reuniões deste tipo, com pequeno número de participantes, todos especialistas na mesma área, permitem discussões de resultados e elaboração de novas ideias para pesquisas futuras, na maioria dos casos em novas colaborações. Isto traz grandes benefícios para ambas as partes.

Por outro lado, a participação ativa de estudantes e de jovens pesquisadores mostrou a todos o grande interesse existente na pesquisa de estresse em fungos.

Lembro ainda dos meus tempos de principiante, como era enorme a emoção de conhecer pessoalmente pesquisadores, até então apenas conhecidos por seus trabalhos publicados. Pude presenciar vários encontros deste tipo.

Muito obrigada pela oportunidade de participar deste evento !

Anita. D. Panek

Profa. Dra. Departamento de Bioquímica

Instituto de Química, UFRJ



Geisel School of Medicine at Dartmouth

Jay C. Dunlap

Hanover, New Hampshire 03755-3837

7400 Remsen Building

Nathan Smith Professor

TEL. (603)650-1108 FAX (603)650-1233

Chairman, Department of Genetics

Email: jay.c.dunlap@dartmouth.edu



Geisel School of Medicine at Dartmouth

Jennifer J. Loros

Hanover, New Hampshire 03755-3837

7400 Remsen Building

Professor, Department of Biochemistry

TEL. (603)650-1154

February 24, 2015

Dear FAPESP:

The topic of 'fungal stress' is central to a myriad of important disciplines, including medical mycology, chronobiology, plant and insect pathology, industrial microbiology, material sciences, and even astrobiology. Researchers across these fields remain largely isolated, however, as scientific meetings and journals become more specialized. The inaugural International Symposium on Fungal Stress (ISFUS) proved to be the perfect forum for fungal biologist of all sorts to finally meet face-to-face, share research and ideas, establish collaborations and form long-lasting friendships.

Despite the comprehensive nature of ISFUS, the number of attendees remained small by design. This proved integral to the meeting's success, giving researchers the chance to discuss their work in-depth with essentially all members of the diverse and intimate group. Moreover, junior-level scientists uniquely benefited from the opportunity to present, at the podium or the poster, and seek advice from all senior faculty over the five-day event. Thus, the impressive balance of diversity and size assuredly made the conference meaningful for all that attended.

Our participation at ISFUS allowed us to appreciate more fully the breadth of excellent fungal research taking place in Brazil, Europe and in our home country. We are honored to have contributed to the first ISFUS and look forward greatly to being part of many more to come. Thank you!

Sincerely,

Prof. Jay Dunlap, Prof. Jennifer Loros, and Dr. Kevin Fuller

Department of Genetics

Geisel School of Medicine at Dartmouth

Hanover, NH, USA



Your message from	Your reference	Our reference	Date
-	-	-	13 Febr. 2015

Re: Research stay in Brazil

Dear Sir, Madam,

From 18 Oct. till 14 Nov. 2014, I have spent a research stay in Brazil.

First, I have participated in the BBEST conference in Campos do Jordao, which was concerned with the production of bioenergy from renewable resources. I gave a lecture at the conference on 'Polygenic analysis of complex traits for development of superior industrial yeast strains for first- and second-generation bioethanol production'. The conference was very informative and I have made several interesting contacts with Brazilian researchers.

Subsequently, I participated in a visit to the Sao Manoel sugar and ethanol mill, which was a very interesting and educational experience.

We are currently establishing a Brazilian-Belgian company, GlobalYeast, which will be based in Rio de Janeiro and Leuven, and the presentations and contacts at the conference were very useful in this respect. On 24 Oct. I had a meeting with our Brazilian VC investor.

Subsequently, I participated in the Fungal stress conference in Sao José dos Campos. I gave an invited lecture on: 'Polygenic analysis of multiple stress tolerance traits in *Saccharomyces cerevisiae* by pooled-segregant whole-genome sequence analysis'. The meeting was very well organized and included many interesting lectures by well-known scientists in the field. I have also enjoyed this meeting very much.

In the week of 3 till 7 Nov. I visited together with the future CEO of GlobalYeast, Marcelo do Amaral, several large Brazilian Companies active in the field of 1st and 2nd generation bioethanol production and/or the production of green chemicals from renewable resources. These companies are putative customers of GlobalYeast. Our plans for the spin-off company were very well received.

From 10 till 12 Nov. I participated in the workshop on 'Second Generation Bioethanol 2014' at the CTBE in Campinas. I presented an invited lecture on 'Polygenic analysis of complex traits for development of superior industrial yeast strains for first- and second-

VIB

Department of
Molecular Microbiology

K.U.Leuven

Laboratory of Molecular
Cell Biology

Kasteelpark Arenberg 31
box 2438
3001 LEUVEN-HEVERLEE
BELGIUM
Tel.: +32 16 32 15 00
Fax: +32 16 32 19 79

first.name.surname
@mmbio.vib-kuleuven.be

www.vib.be
www.bio.kuleuven.be/mcb



generation bioethanol production'. This was also a very interesting and informative workshop and the tour of the facility was very impressive. I also had a meeting with the director of CTBE to discuss possible collaboration with our spin-off company GlobalYeast.

In all, this research stay in Brazil has been very stimulating, both from a scientific viewpoint and with respect to the preparation of our spin-off company GlobalYeast. In the mean time, all VC's have approved their investment, the target date for incorporation of GlobvalYeast is end of Febr. 2015, which is now very close. This should create a new and strong link between Brazil and Belgium in the field of renewable energy, both in research and in industrial valorisation.



Yours sincerely,

Prof. Dr. Johan Thevelein
Professor of Molecular Cell Biology, KU Leuven
Director Department of Molecular Microbiology, VIB

February 26, 2015

Dr. Drauzio Eduardo Naretto Rangel
Universidade do Vale do Paraiba
Instituto de Pesquisa e Desenvolvimento
Av. Shishima Hifumi, 2911 Urbanova
São Jose dos Campos, SP Brasil

Dear Drauzio,

I wanted to express my personal thanks for your efforts at developing and organizing the International Symposium on Fungal Stress (ISFUS) held at Universidade do Vale do Paraiba, Instituto de Pesquisa e Desenvolvimento, Brazil from October 25 to 31, 2014. This meeting was unique in that it not only brought together some of the best international researchers dealing with fungal biology to present their research, but also highlighted important contributions by Brazilian scientists to the field, demonstrating that research in Brazil is competitive with some of the best from around the world.

In addition to the scientific sessions of the meeting, I would like to thank you for the opportunity, organized by yourself, to submit an article to a special issue of *Current Genetics*, one of the leading peer-reviewed journal in microbial genetics. I am happy to indicate that our article was accepted, and although in press for less than several months, has already been cited several times! This is a strong indication of interest in our research field dealing with use of fungi for the biological control of insects.

Attending the ISFUS meeting has also led to several collaborations including from scientists in Brazil, Argentina, Germany, and even ones from the US that I did not know until attending this meeting. It is very rare for such significant outcomes to occur at a meeting. I look forward to your continued success and well as seeing your contributions both in the scholarly journals and towards proving much needed solutions to problems involving pest control. I appreciate your kindness and that of the many Brazilians I was fortunate to meet with and talk to.

Sincerely,

Nemat O. Keyhani, Ph.D.
Professor
University of Florida
Dept. of Microbiology and Cell Science
Bldg 981, Museum Rd., Gainesville, FL 32611
Tel: 352-392-2488, Email: keyhani@ufl.edu



UNIVERSIDADE FEDERAL DO RIO DE JANEIRO
INSTITUTO DE QUÍMICA



Rio de Janeiro, 26 de fevereiro de 2015.

Dr. Drauzio Eduardo Naretto Rangel, Ph.D.
Universidade do Vale do Paraíba
Instituto de Pesquisa e Desenvolvimento
Av. Shishima Hifumi, 2911 Urbanova
São Jose dos Campos, SP Brasil

Prezado Dr Rangel,

Foi de extrema importância para a o grupo de pesquisa “Estresses Ambientais”, que coordeno na UFRJ, seu amável convite para participar do *International Symposium for Fungal Stress*, ocorrido na UNIVAP, 2014, e apresentar nossos resultados a uma platéia composta por cientistas proeminentes em seus respectivos campos.

A reunião foi muito proveitosa e produtiva! O programa do simpósio abrangeu a resposta ao estresse em uma ampla variedade de espécies de fungos e leveduras, incluindo detecção e sinalização, alterações na expressão gênica, processos celulares afetados pelo estresse, aquisição de tolerância ao estresse e aplicações biotecnológicas. Por causa da natureza universal da resposta ao estresse, uma visão mais aprofundada da resposta dos microrganismos melhora a nossa compreensão dos mecanismos de defesa de eucariontes primitivos ao homem e, por conseguinte, nos fornece a base necessária para aplicações em Medicina, Indústria, Agricultura e Meio Ambiente. Por esta razão, o tema atrai cientistas e profissionais que trabalham em diversas áreas.

Foi uma grande oportunidade de interagir com os principais pesquisadores de diversas partes do mundo e aprender com suas contribuições recentes! Como fruto desta participação foram publicados duas revisões (Eleutherio E, Panek A, et al, Revisiting yeast trehalose metabolism. *Curr Genet.* 2014, DOI 10.1007/s00294-014-0450-1; CRAY, J. A., STEVENSON, A., ALL, P., BANKAR, S. B., ELEUTHERIO, ELIS C. A., EZEJI, T. C., SINGHAL, R. S., THEVELEIN, J. M., TIMSON, D. J., HALLSWORTH, J. E., Chaotropicity: a key factor in product tolerance of biofuel-producing microorganisms. *Curr Opin Biotechnol*, 2015, em publicação); a doutoranda Raquel de Souza Paredes, minha orientada pelo Programa de Pós-graduação Bioquímica da UFRJ, visitará o laboratório do Prof J. Thevelein, Universidade de Leuven, Bélgica; e o Prof J. Hallsworth, Universidade de Belfast, Irlanda, visitará nosso laboratório em julho deste ano.

Parabenizo, portanto, sua iniciativa em organizar tal evento que contribui imensamente para o desenvolvimento da pesquisa brasileira!

Atenciosamente,


Prof.a Elis Cristina Araujo Eleutherio

Dep. Bioquímica, Inst. Química, UFRJ
21941-909, Rio de Janeiro, RJ, Brazil
Phone: +55-21-2562-7735
E-mail: eliscael@iq.ufrj.br



Centraalbureau voor Schimmelcultures

Fungal Biodiversity Centre

Institute of the Royal Netherlands Academy of Arts and Sciences (KNAW)

Professor Drauzio Rangel
Universidade do Vale do Paraíba
São José dos Campos
São Paulo
Brazil

Utrecht, 23 February 2015

Dear Professor Rangel,

Many thanks that I could attend the International Symposium on Fungal Stress (ISFUS) held in São José dos Campos from October 26th to 31th on the topic of Fungal Stress. The meeting of different experts on this topic was unique and interactions with them gave rise to a number of cooperations. These include a cooperation with you on a stress resistant strain of the fungus *Trichothecium roseum*, which we discussed during an extended stay after the conference. Our cooperation is also illustrated by a co-author ship on an influential paper published in the high impact ISME Journal.

With best wishes



JAN DIJKSTERHUIS
Senior Scientist
Applied and Industrial Mycology



CBS-KNAW BIODIVERSITY CENTRE
Uppsalalaan 8, 3584 CT Utrecht, The Netherlands
T: +31.30.2122654 E: j.dijksterhuis@cbs.knaw.nl

7 February 2015

Re: International Symposium on Fungal Stress (ISFUS), October 2014

Dear FAPESP

I have worked in full-time research on fungal stress for 25 years so am fully aware that Brazilian science lies at the heart of this internationally important field, in relation to yeast metabolism and stress tolerance for bioethanol production; biological control; bioprospecting to utilize natural biodiversity for biotechnological or pharmaceutical purposes; and the key activities of trehalose, the incredible stress metabolite that enables Earth's biosphere to function under hostile conditions.

Whereas my own career has focused on fungal stress, I had actually never attended any meeting on this topic because - despite its relevance to many current world issues including the energy crisis (biofuels), food security (eg biocontrol of fungal pathogens or insects pests), antibiotic resistance (biosprospecting for new pharmaceuticals) etc - I have never heard of any meeting directly on the subject. It was therefore a joyous and intellectually stimulating event not only attend a meeting on fungal stress, but to do so in Brazil.

What is more, this meeting was not so large as to be impersonal and unproductive (my recent experience of speaking at an American Society for Microbiology meeting in San Francisco (USA) with 10 000 delegates was relatively unrewarding from both a scientific and personal viewpoint (it was difficult to find or meet anybody). By contrast, the ISFUS meeting was intimate and yet highly stimulating. Also, importantly, it brought together giants of the field (e.g. Prof. Anita Panek from Brazil, Prof. Johan Thevelein from the Netherlands, Prof. Naresh Magan, UK) as well as mid-career researchers such as myself and a good number of enthusiastic young scientists (the next generation of researchers) including undergraduate and PhD students from Brazil and some from the USA and Europe.

Despite their unique and profound contribution to our understanding of fungal science, and their formidable reputation and standing in the international community I had not met many of the delegates before including Profs. Anita Panek, Drauzio Rangel and Elis Eluetherio (Brazil) and Profs. Luis Corrochano, Javier Avalos, Enrique Cerdá-Olmedo, Francesc Posas, from Spain, and Raymond St. Leger (USA). And yet, over the past 20-25 years I have consistently cited the publications of these scientists as the novelty and applicability of their considerable research outputs underpins this field.

It was particularly important to be able to stay for several days once the conference had finished in order to spend time in the laboratory of Prof. Rangel, to work on a joint manuscript (with Prof. Rangel and Dr. Dijksterhuis, The Netherlands) and to plan future work and research visits including exchanges of PhD students who wish to spend time in my laboratory in the UK (Brazilian students) and in Prof. Rangel's laboratory in Brazil (UK students). Prof. Rangel and I published a research paper together just after the conference

(in November 2014) in the *Nature*-fold journal *ISME J* (impact factor 9+) and have another article accepted for *Current Genetics* as well as two more in preparation for this journal. Furthermore, we hope to meet again in order to work together during the summer of 2015 and beyond.

During the ISFUS meeting, I was able to learn much about Brazilian science and as a result have begun several other collaborations including with Prof. Eleutherio (UFRJ) on biofuels; indeed we already submitted a manuscript to *Current Opinions in Biotechnology* (impact factor 8+) that has now been reviewed and is at the stage of minor revisions. I also have plans to spend time in the group of Italo Delalibera Jr. University of Sao Paulo/ESALQ (as well as Prof. Rangel and Prof. Eleutherio) during a planned 2015 research visit.

It was a delight to interact with the enthusiastic students from the Rangel research group, and to present joint posters at ISFUS with them based on our collaborations. This conference has already modified the trajectory of my own research and in addition I made many new friends. Despite having been in academia for 25 years and having attended many conferences, this is the most productive meeting I attended as attested by the fact that an *ISME J* paper, a *Current Opinions in Biotechnology* paper, and a *Current Genetics* paper have been published in its wake (within weeks) and several more (two for *Current Genetics* plus others) are on the way. Indeed, I can confidently say that in terms of enjoyment, warmth, scientific stimulation, publication outputs and development of new connections and collaborations this was far and away the ultimate meeting I ever attended.

So, in summary, I wish to commend and thank you whole-heartedly for your sponsorship and also wish to commend and thank Prof. Rangel for his warmth, energetic pursuit of science and hospitality (he left us all with strong memories of a productive meeting, strong memories of new friendships formed, and a lovely impression of Brazil). Both Prof. Rangel and this ISFUS meeting have done an immeasurable amount to raise the (already impressive) profile of Brazil in the microbiology and biotechnology fields.

Yours faithfully

John Hallsworth

Dr. John E. Hallsworth

E-mail: j.hallsworth@qub.ac.uk

Staff URL:

<http://www.qub.ac.uk/schools/SchoolofBiologicalSciences/People/DrJEHallsworth/>

Latest publication list: [http://pure.qub.ac.uk/portal/en/persons/john-e-hallsworth\(e1cf09c0-fd10-4bd4-be53-d90b7061e488\)/publications.html](http://pure.qub.ac.uk/portal/en/persons/john-e-hallsworth(e1cf09c0-fd10-4bd4-be53-d90b7061e488)/publications.html)

Google Scholar Citations:

<https://scholar.google.com/citations?hl=en&user=YQuw2sMAAAAJ>



UNIVERSIDAD DE SEVILLA

DPTO. GENETICA

FACULTAD DE BIOLOGIA

AVDA. REINA MERCEDES, 6

41012 SEVILLA

Fundação de Amparo à Pesquisa do Estado de São Paulo
FAPESP
R. Pio XI, 1500 - Alto da Lapa
CEP 05468-901 São Paulo/SP – Brasil

February 25, 2015

Dear Sirs,

We would like to express our gratitude to FAPESP (São Paulo Research Foundation), to the Universidade do Vale do Paraíba, and to Prof. Drauzio Eduardo Naretto Rangel for supporting the International Symposium on Fungal Stress that took place at the Universidade do Vale do Paraíba (SP) during October 25-31, 2014 (<http://web.univap.br/isfus>). The Symposium was supported by a grant from FAPESP and it was a great success. The Symposium attracted prestigious speakers from Brasil and other countries, which had the opportunity to interact with students and among themselves.

The Symposium was organized by Prof. Rangel from the Instituto de Pesquisa e Desenvolvimento at UniVap with the help of Ms. Alene Alder-Rangel. The organizers made an extraordinary effort to attend the participants before and during the meeting, making our stay a fully fruitful and rewarding experience. During the Symposium we had the opportunity to learn about recent developments and novel discoveries in the field of fungal stress from a variety of approaches and organisms. The participants of the symposium were experts in different disciplines, from fungal molecular biology and genetics to fungal physiology and pathogenesis. Many of the discussions were of great relevance for Brazilian economy, for example, the discussion of novel strategies to protect plant crops using entomopathogenic fungi for biological control.

We congratulate Prof. Rangel and his organizing committee for their great job during the organization of the Symposium, and we thank UniVap and FAPESP for the opportunity to learn and enjoy the warm hospitality of Brasil.

Sincerely yours.

Enrique Cerdá Olmedo
Prof. of Genetics
University of Seville
Spain

Javier Avalos
Prof. of Genetics
University of Seville
Spain

Luis M. Corrochano
Prof. of Genetics
University of Seville
Spain



Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

Dept. Forest Mycology & Plant Pathology
Prof. Roger Finlay

2015-02-22

Prof. Dr. Drauzio Eduardo Naretto Rangel
Universidade do Vale do Paraíba
Instituto de Pesquisa e Desenvolvimento
Av. Shishima Hifumi, 2911 Urbanova
São Jose dos Campos, SP Brasil
12244-000

Dear Drauzio

This is just a brief word of thanks for your excellent organisation of the ISFUS International Symposium on Fungal Stress. I was very much impressed by the range and breadth of topics that were involved and by the high quality of work that the other participants are involved in. Aside from the other international scientists that I met it was very nice to see such a good mix of young Brazilian students at the start of their careers, but also to be given the opportunity to look back on the many achievements and long, distinguished careers of older scientists such as Anita Panek and Donald Roberts. Their work must truly be an inspiration for the younger scientists. I met many new colleagues at the meeting and was particularly stimulated by some of the discussions I had with John Hallsworth, Jan Dijksterhuis, Naresh Magan, Raymond St Leger, Nemat Keyhani and Brian Lovett. The format of the meeting promoted a tremendous interchange of ideas and I learned a lot during the short time I was in São Jose dos Campos. I am sure I will maintain contact with many of these scientists and follow their work in the future. I am certain that your domestic students must have gained a great deal from this impressive international gathering and hope that it will stimulate their careers as well. Thank you again for all the hard work of you and your colleagues, and of course for the financial help from your sponsors in Brasil.

With best regards,

A handwritten signature in blue ink, appearing to read 'R. Finlay', with a stylized flourish at the end.

Prof. Roger D. Finlay,

Uppsala BioCenter
Department of Forest Mycology & Plant Pathology
SLU, Box 7026
SE-750 07, Uppsala, SWEDEN