

The **2013 Fusarium Genetics Workshop** was held in conjunction with the 27th Fungal Genetics Conference at Asilomar, Pacific Grove, CA on Tuesday, March 12, 2013. The scientific program was put together by **Martijn Rep** (University of Amsterdam) and **Michael Freitag** (Oregon State University). Site organization and co-ordination was by **Anne Marie Mahoney** (Genetics Society of America). Program details are available online, as is a photograph of workshop participants (taken by **Peter van Dam**, University of Amsterdam; see if you can spot Smokey, Scott Gold's best friend).

There were a number of points of business. As has become tradition, opportunities for collaborative projects were discussed. Following the discussion at the meeting, two proposals on *Fusarium* were put forward as **JGI Community Sequencing Proposals** (letters of intent were due April 8, 2013). The proposal on "Exploring the supernumerary chromosomes of the *Fusarium solani* and *Fusarium oxysporum* species complexes: Reservoirs for functional genetic diversity" organized by **Jeff Coleman** and **Hans van Etten** has been selected for submission for a full proposal. JGI proposals are intended as community effort, thus input, suggestions and letters of support are welcome and requested. Please contact **Jeff Coleman** (jjamescoleman@gmail.com) to lend your support.

Two members of the Fusigroup Executive Committee, **Antonio DiPietro** and **Corby Kistler** rotate off in 2013. New members elected at the workshop are **Sung-Hwan Yun** (Soonchunhyang University, Korea) and **Robert Proctor** (USDA ARS, Peoria, IL, USA). Other current members of the committee are **Bettina Tudzynski (chair)**, **Martijn Rep**, **Michael Freitag**, **Kevin McCluskey** (collections), and **Igor Grigoriev** (sequencing center).

The **2014 Fusarium Genetics Workshop** will be held in conjunction with ECFG12 in Sevilla, Spain. The local organizers for the meeting are **Javier Avalos** (avalos@us.es) and **Carmen Limon**: carmenlimon@us.es. Both are in the Department of Genetics at the University of Sevilla.

Business from the last meeting:

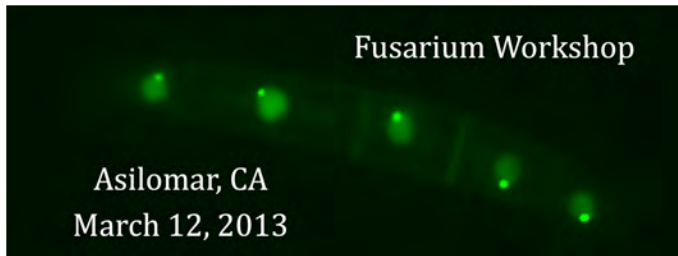
At the Marburg Fusarium workshop in 2012, **Kim Hammond-Kosack** (kim.hammond-kosack@rothamsted.ac.uk) agreed to collect information on mutants created by the *Fusarium* community that have led to cultures with no detectable change in phenotype. Quote from last year's report: *"While these mutants do not usually lead to publication, information on negative results nonetheless would be valuable for publication in collected form. Individuals with such mutants are encouraged to send information on the strains to Dr. Hammond-Kosack with the goal of preparing a list of genes that could lead to a small publication. ... Submission of useable data would lead to co-authorship on the paper."* Kim is still waiting for submission, so please contact her if you want to

contribute to this list

Related to the previous item, **Matias Pasquali** (matias.pasquali@gmail.com) agreed to generate a database of genes from all species of *Fusarium* for which mutants have been made. Quote: “*The purpose of the database will be to inform researchers of progress in order to avoid duplication of work, to acknowledge negative results, and to stimulate potential new collaboration and exchanges of mutants creating a virtual repository of Fusarium “knock-out” strains. Besides published work, information on unpublished mutants also may be included. A downloadable spreadsheet with requested information on strains can be provided by Dr. Pasquali.*” Matias is also waiting for submissions from the community.

Li-Jun Ma (lijun@psis.umass.edu) agreed to compile information on the currently sequenced genomes of *Fusarium* to promote collaboration and avoid redundancy. Quote: “*Information will be published at the Fusigroup web page and updated on a yearly basis. If you have genome sequence data and would like to share your work, please contact Dr. Ma.*” See the table below for a list of available genomes since last year (note that “completed” likely does not mean telomere to telomere sequence). There are definitely more genomes out there and if you want to contribute to the list, please send additional entries to Michael Freitag, freitagm@onid.orst.edu.

Species	NRRL #	Strain	Host	Sequence	Assembly	Annotation	funding	PI	RNA-seq
<i>F. oxysporum</i>	37622	HDV247	<i>Pisum</i>	Completed	completed	ongoing	USDA	Ma & Kistler	yes
<i>F. oxysporum</i>	32931	FOSC 3-a	Homo	Completed	completed	ongoing	USDA	Ma & Kistler	yes
<i>F. oxysporum</i>	54002	Fo47	soil	Completed	completed	ongoing	USDA	Ma & Kistler	
<i>F. oxysporum</i>	54003	MN25	<i>Lycopersicum</i>	Completed	completed	ongoing	USDA	Ma & Kistler	
<i>F. oxysporum</i>	54008	PHW808	Brassica/A	Completed	completed	ongoing	USDA	Ma & Kistler	
<i>F. oxysporum</i>	54004	PHW815	Raphanus/A	Completed	completed	ongoing	USDA	Ma & Kistler	
<i>F. oxysporum</i>	26381	CL57	<i>Lycopersicum</i>	Completed	completed	ongoing	USDA	Ma & Kistler	
<i>F. oxysporum</i>	54006	II5	Musa	Completed	completed	ongoing	USDA	Ma & Kistler	
<i>F. oxysporum</i>	26406		Cucurbita	Completed	completed	ongoing	USDA	Ma & Kistler	
<i>F. oxysporum</i>	25433		Gossypium	Completed	completed	ongoing	USDA	Ma & Kistler	
<i>F. pseudograminearum</i>	CS3096			Completed	completed	completed	Australia	D. Gardiner	Yes
<i>F. pseudograminearum</i>	Australia X						Australia	D. Gardiner	
<i>F. pseudograminearum</i>	Australia X						Australia	D. Gardiner	
<i>F. pseudograminearum</i>	Australia X						Australia	D. Gardiner	
<i>F. pseudograminearum</i>	Australia X						Australia	D. Gardiner	
<i>F. acuminatum</i> ,	Australia X						Australia	D. Gardiner	
<i>F. culmorum</i>	Australia X						Australia	D. Gardiner	
<i>F. equiseti</i>	Australia X						Australia	D. Gardiner	
<i>F. oxysporum</i>			chickpea	proposed			India	D. Gardiner	



Fusigroup Policy Committee

Antonio di Pietro, Chair
Bettina Tudzynski
Corby Kistler
Martijn Rep
Michael Freitag
Kevin McCluskey (collections)
Igor Grigoriev (sequencing center)

Program **ROOM: NAUTILUS**

9:00 Welcome - Martijn Rep and Michael Freitag

Functional Genomics

- 9:05 Sung-Hwan Yun (Soonchunhyang University, Asan, Korea)
"Genomic analysis of the *Fusarium graminearum* species complex in Korea"
- 9:25 Christian Sieber (Helmholtz Zentrum München, Germany)
"Comparative analysis of noncoding sequences in the *G. fujikuroi* species complex "
- 9:45 Martin Urban (Rothamsted Research, Harpenden, UK)
"Characterization of the small cyp51 family and update on the *F. culmorum* genome"
- 10:00 Li Guo (University of Massachusetts, Amherst, USA)
"Reconstruction of Gene Regulatory Networks in *Fusarium graminearum*"
- 10:15 Kristina Smith (Oregon State University, Corvallis, USA)
"Chromatin territories in *Fusarium*"

10:30 – 11:00 coffee break

Gene Regulation, Secondary Metabolites and Development

- 11:00 Jörg Bormann (Biozentrum Klein Flottbek, Hamburg, Germany)
"The ATF/CREB transcription factor Atf1 is essential for full virulence, deoxynivalenol production and stress tolerance in *Fusarium graminearum*"
- 11:15 Frances Trail (Michigan State University, East Lansing, USA)
"Unraveling the genetics of perithecium form and function in *F. graminearum*"
- 11:30 Gopal Subramaniam (Agriculture and Agri-Food Canada, Ottawa, Canada)
"Leucine metabolism regulates *Tri6* expression"
- 11:45 Simon IpCho (USDA ARS Cereal Disease Laboratory, St. Paul, USA)
"Innate Immunity in *Fusarium graminearum*"
- 12:00 Jose Espino (Westfälische Wilhelms-Universität Münster, Germany)
"*In planta* expression of secondary metabolite gene clusters in *F. fujikuroi*"
- 12:15 Bob Proctor (Mycotoxin Research Unit, ARS, USDA, Peoria, USA)
"Don't judge a book by its cover: uniform organization of the fumonisin biosynthetic gene cluster belies its complex evolutionary history"

12:30 – 2:15 lunch break

Pathogenicity, and Population Biology

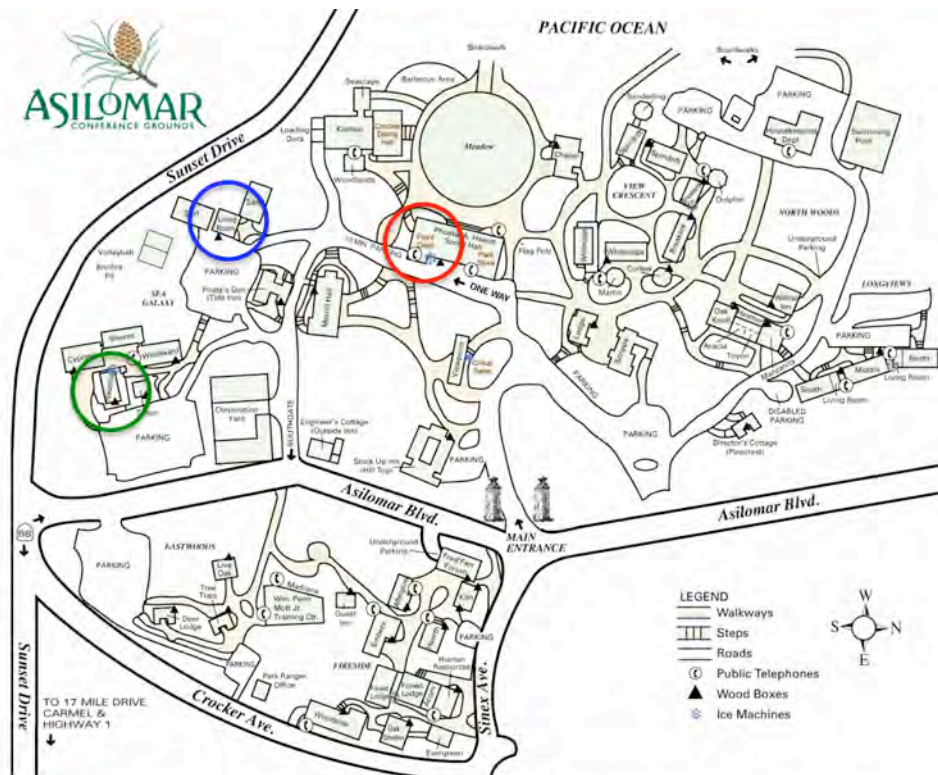
- 2:15 Igor Grigoriev (DOE Joint Genome Institute, Walnut Creek, USA)
"The latest call for Community Sequencing Proposals from JGI"
- 2:30 Donald Gardiner (CSIRO Plant Industry, Brisbane, Australia)
"The *Fusarium pseudograminearum* genome: shaped by multiple events of lateral gene acquisition"

- 2:45 Nadia Ponts (INRA Centre de Bordeaux Aquitaine, Bordeaux, France)
 "Fgap1-mediated response to oxidative stress in trichothecene-producing *Fusarium graminearum*"
- 3:00 Sarah Schmidt (University of Amsterdam, The Netherlands)
 "Expression of Fol genes during infection of tomato and the prediction of novel effector genes in the *Fusarium oxysporum* species complex"
- 3:15 David Turrà (University of Cordoba, Spain)
 "RNA-seq reveals host signal-induced transcriptional reprogramming in *F. oxysporum*"
- 3:30 Chris Rampitsch (Agriculture and Agri-Food Canada, Winnipeg, Canada)
 "Comparative secretome analysis of *Fusarium graminearum* and two of its non-pathogenic mutants under nitrogen-limitation *in vitro*"

-short talks (5 min total)

-open discussion

-Fusigroup business

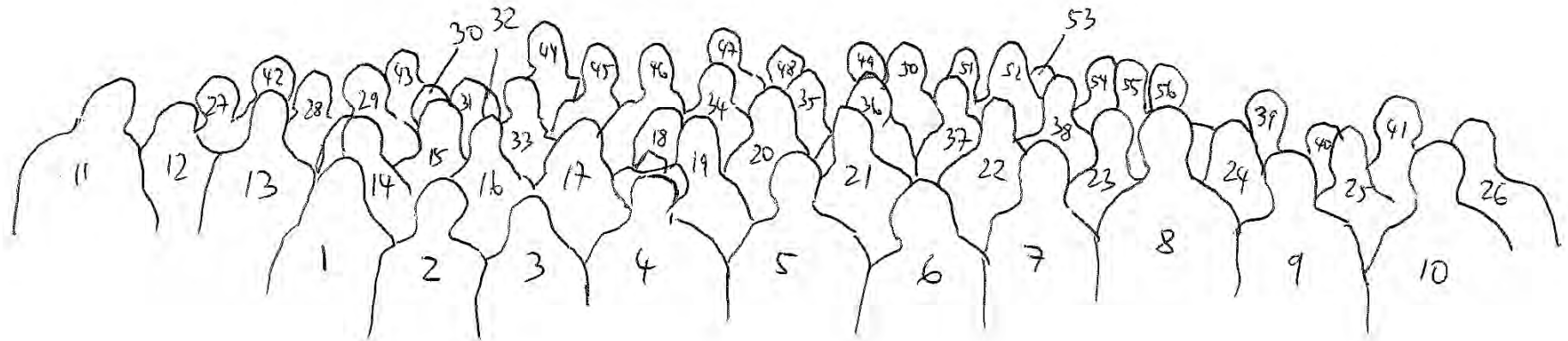


- Asilomar Conference Grounds – Registration Desk (Rooms and Meals)
- Workshop Registration (Monday, March 11, 5 – 8 pm, Surf and Sand)
- Fusarium Workshop (Tuesday, March 12, 9 am – 4:30 pm, Kiln)

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Participants:

1 Eva-Maria Niehaus	11 David Turra	27 Li-Jun Ma	42 Nadia Ponts	not shown:
2 Bettina Tudzynski	12 Ana Lilia Martinez-Rocha	28 Marike Boenisch	43 Rasmus Frandsen	Martijn Rep
3 Melania Figueroa	13 Joerg Bormann	29 Wilhelm Schaefer	44 Antonio Di Pietro	Ahmad Fakhoury
4 Hans van Etten	14 Jose Espino	30 ?	45 Katja Schaefer	Jorge Garcia-Martinez
5 Corby Kistler	15 Mennat El Ghalid	31 Gustavo Bravo	46 Sung-Hwan Yun	Kim Hee-Kyoung
6 Shermineh Shahi	16 Sabine Albermann	32 ?	47 Christian Sieber	Natalia Requena
7 Charlotte van der Does	17 Gesabel Navarro-Velasco	33 Isabel G. Roncero	48 Gopal Subramaniam	Seongmi Jo
8 Ido Vlaardingerbroek	18 Cristina Corral	34 Robert Proctor	49 Todd Ward	Guotian Li
9 Martin Urban	19 Heather Hallen-Adams	35 Gretchen Kuldau	50 Li Guo	Jonathan P Anderson
10 Xiangqian Li	20 Sarah Schmidt	36 Kristina Smith	51 Jack Kennell	Biju Chellappan
	21 Scott Gold	37 Kim Hammond-Kosack	52 Kathryn Bushley	Natalia Florencio Martins
	22 Christof Rampitsch	38 Thomas Baldwin	53 ?	Narges Sedaghat Telgerd
	23 Petra Houterman	39 Daren Brown	54 Donald Gardiner	Marta Castrillo Jimenez
	24 Frances Trail	40 Jeffrey Coleman	55 Simon IpCho	Ting-Fang Wang
	25 Lynn Epstein	41 Peter van Dam	56 Matias Pasquali	
	26 Michael Freitag			