Fantastic growth as the FGSC turns 50

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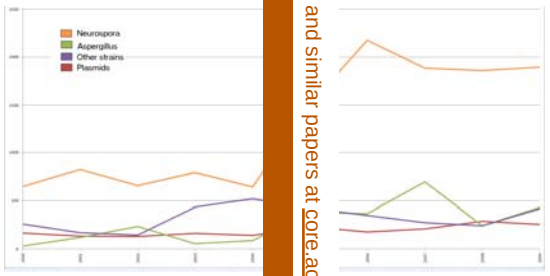
Growth of the FGSC collection

Growth has included both the number of strains and the number of genes represented by mutants at the FGSC

The FGSC is a Global Resource for research materials.
Since 2000, we have sent materials to laboratories in 50 countries.



Numbers of items distributed by

ntly

Neurospora gene deletion mutant strains

While only 1,500 genes were identified as classical mutants, we now have mutants for almost every gene from the sequenced genome.

Biology of Temperature Sensitive mutants in Neurospora

There are over 60 TS mutants of *Neurospora crassa*, most of which have no function or DNA seqence associated with them. We have explored the possibility of identifying some of these using a map-based complementation approach.

We have identified five such genes and are developing un-16 as a selectable marker for transformation

TS Lethal gene	function
rip-1	Ribosomal protein
un-16	Ribosomal protein S9
un-10	EIF3b
un-4	Tim16
un-25	Ribosomal protein L13
un-7	Unknown/ *png-1*

Orders

	2000	2001	2002	2003	2004	2005	2009
Orders	459	396	355	335	463	478	620
Neurospora	644	824	656	791	640	1509	1895
Aspergillus	167	136	133	163	141	230	255
Other strains	31	121	236	55	87	386	429
All Strains	779	1081	1025	1009	868	2125	2324
Plasmids	258	171	146	435	519	425	416
Libraries	101	94	55	24	65	42	12
DNA	-	-	-	-	-	-	11
Arrayed strains	-	-	-	-	-	-	77,000

* Data for 2009 are current through 9/9/09

*660 were individual Neurospora KO strains

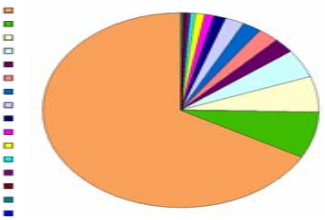
Orders come from equal numbers o

Most orders are from academic/no

eign labs.

Different species in the FGSC Collection

# strains	Species
13500	**Neurospora crassa*
897	**Aspergillus nidulans*
672	*Neurospora intermedia*
531	**Fusarium sp.*
299	*Neurospora tetrasperma*
274	*Neurospora sitophila*
253	*Schizophyllum commune*
241	*Sordaria sp.*
152	*Neurospora discreta*
134	**Magnaporthe grisea*
131	**Aspergillus niger*
75	*Pichia pastoris*
52	Neurospora hybrid
28	*Ascobolus sp.*
26	*Gelasinospora sp.*
21	**Aspergillus fumigatus*



28 additional species with 7 or fewer isolates
* 22 strains from sequencing programs

Complementation of TS lethal mutants in Neurospora

No DNA Genomic DNA PCR Product

Conclusions and Acknow

nts

•The materials in the FGSC collecti
community we serve.

) be of value to the research

•The Knockout strains from the Neu
been very useful to many researchers

ctional Genomics program have

•The materials in the FGSC collecti
and continue to grow as the field of

within the limits of our mandate
nics expands.

•The value of materials in the collec

be immediately apparent.

•Research with temperature sensitive
interesting possibilities.

Neurospora has led to some

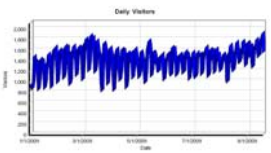
•Strains with genetically defined cha
clientele

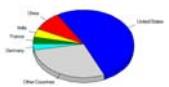
e of use to an increasingly broad

The FGSC is supported by award nu
Foundation and receives additional f
US National Institutes of Health.

57 from the US National Science
ward 5P01GM068087-04 from the

FGSC website is well used





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