



Fantastic growth as the FGSC turns 50

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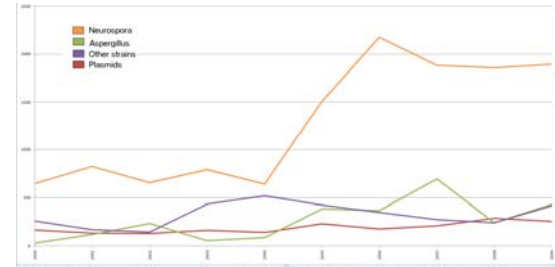
Growth of the FGSC collection



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 the FGSC recently

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 sequence 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
<i>rip-1</i>	Ribosomal protein
<i>un-16</i>	Ribosomal protein S9
<i>un-10</i>	EIF3b
<i>un-4</i>	Tim16
<i>un-25</i>	Ribosomal protein L13
<i>un-7</i>	Unknown/ <i>png-1</i>

Orders

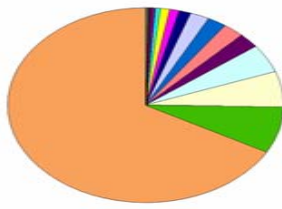
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Orders	459	396	355	335	463	478	560	631	644	620
Neurospora	644	824	656	791	640	1509	2174	1874	1859	1605
Aspergillus	167	136	133	161	141	230	176	211	289	255
Other strains	31	121	236	55	87	386	368	370	243	429
All Strains	779	1081	1025	1009	868	2125	2718	2455	2391	2324
Plasmids	258	171	146	435	519	425	349	263	241	416
Libraries	101	94	55	24	65	42	24	27	32	12
DNA	-	-	-	-	-	-	13	12	7	11
Arrayed strains	-	-	-	-	-	-	4,000	27,000	49,000	77,000

* Data for 2009 are current through 9/30/09
*660 were individual Neurospora KO strains

Orders come from equal numbers of US and foreign labs. Most orders are from academic/non-profit labs

Different species in the FGSC Collection

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



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 Acknowledgements

The materials in the FGSC collection continue to be of value to the research community we serve.

The Knockout strains from the Neurospora Functional Genomics program have been very useful to many researchers.

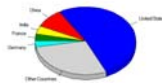
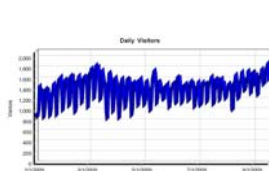
The materials in the FGSC collection are diverse within the limits of our mandate and continue to grow as the field of fungal genomics expands.

The value of materials in the collection may not be immediately apparent.

Research with temperature sensitive mutants in Neurospora has led to some interesting possibilities.

Strains with genetically defined characteristics are of use to an increasingly broad clientele

FGSC website is well used



Attracting visitors from around the world, the FGSC website receives over 3 million hits per year from over 100,000 unique visitors

The FGSC Advisory Board

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