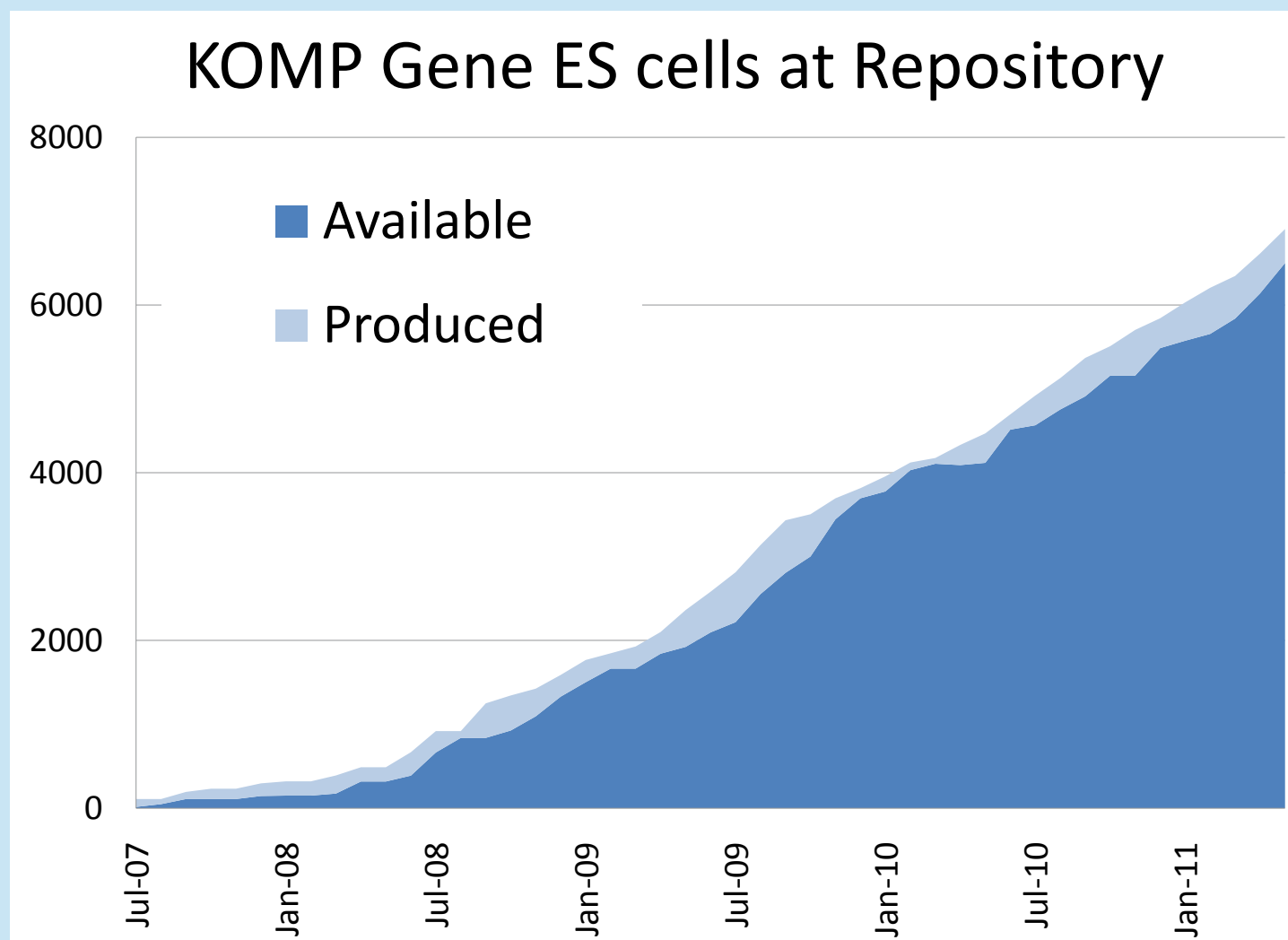


Introduction

The KOMP Repository is a consortium between UCD and CHORI, and serves as the distribution center for all products generated in the NIH KOMP Mutagenesis Program. As lead institution, UCD archives, maintains, conducts quality assurance, and fulfills orders for ES cell clones, live mouse lines, and frozen embryos and sperm, while CHORI does similarly for targeting vectors. The Repository ensures the viability, genotype, pathogen-free status, and chromosome count of KOMP products, and provides value-added services to researchers.

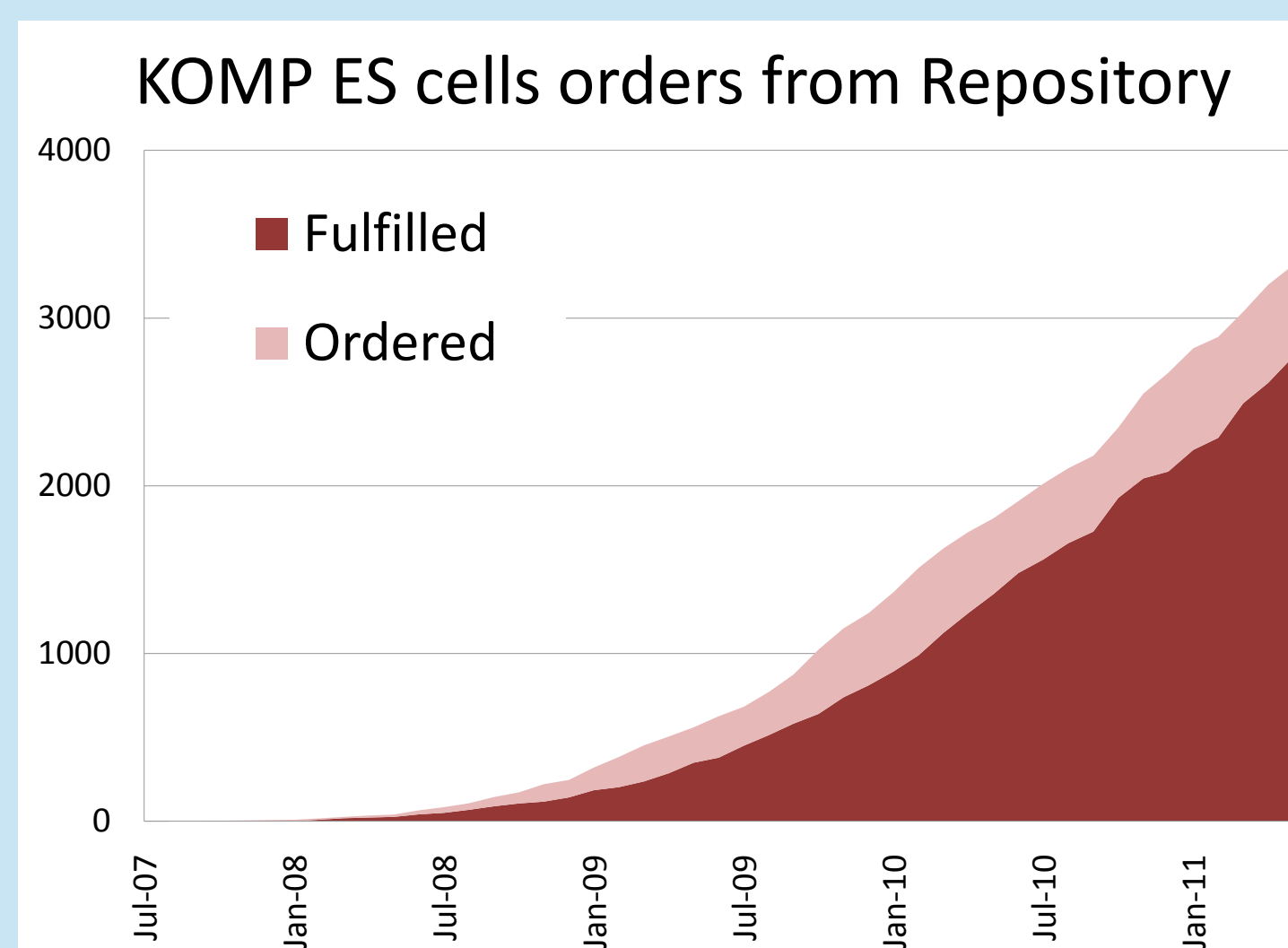
Archiving and Distribution

To date, the Repository has imported 75,302 targeted ES cell clones for 6909 unique genes (82% of total production) from the two KOMP mutagenesis teams (CHORI-Sanger-UC Davis [CSD] Consortium and Regeneron, Inc.). After quality assurance testing, 70,754 ES cell clones for 6503 genes (94% of importation) have been released for distribution (see figure below).



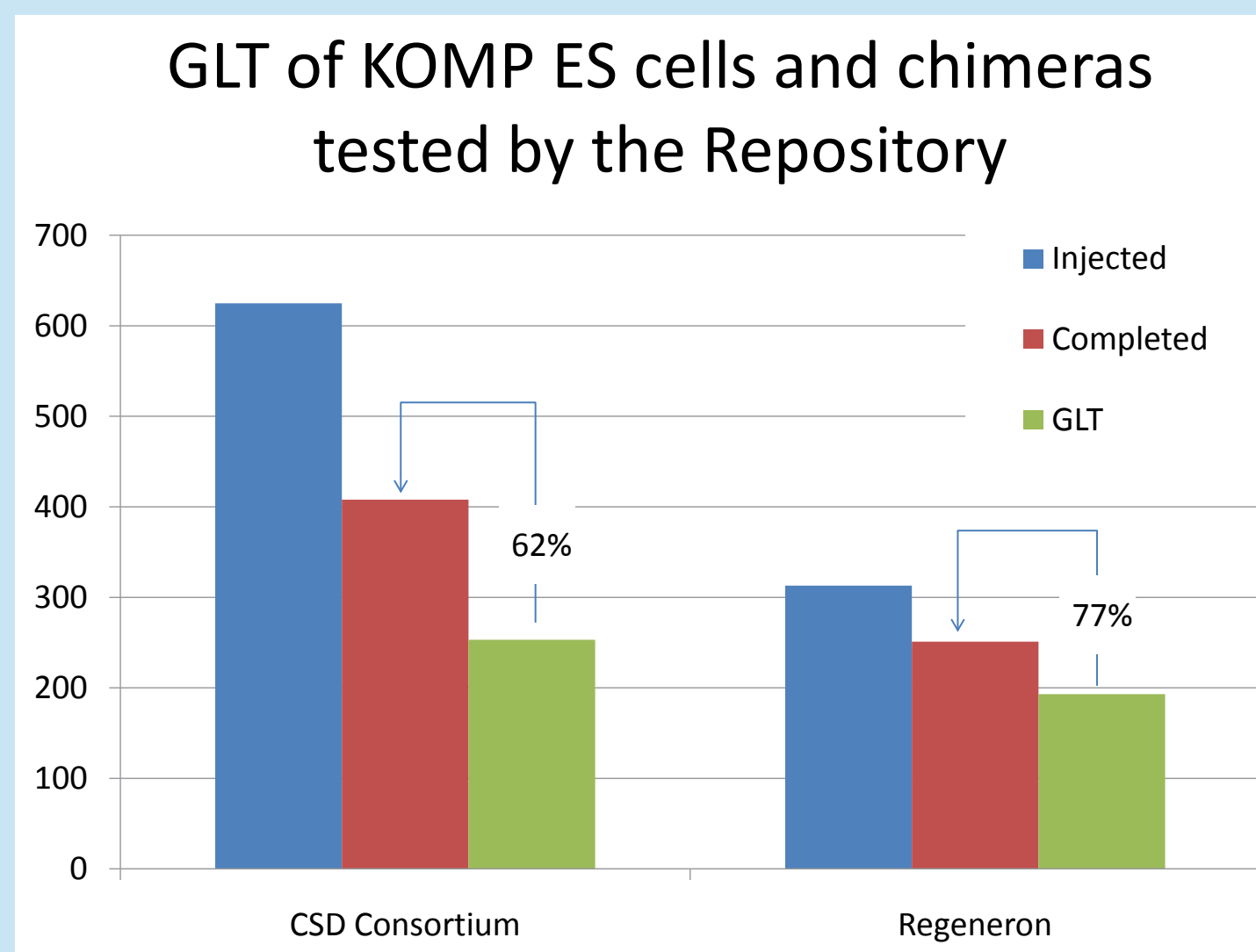
Eventually, products for 8,500 knockout targeted genes, most conditional ready, will be available.

Since beginning operations 4 years ago, the Repository has fulfilled 2770 (84%) of the 3316 orders received for ES cell clones, usually within 8-12 weeks of request (see figure below). The Repository receives and fulfills more than 100 orders per month for vectors, ES cell clones, and mice.



Germline Transmission

Most investigators use KOMP ES cells and/or chimeras obtained from the KOMP Repository to generate mutant mouse colonies for hypothesis-driven scientific study. Thus far, the Repository has injected 938 unique clones into either BALB/c or B6D2F1xB6 host blastocysts to produce chimeras for germline transmission (GLT) testing. Of 659 clones for which test crosses have been completed, 446 (68%) had transmitted successfully through the germline (see figure below).



These data suggest that injection of 3 clones per gene will ensure a >96% GLT (1-[0.32 x 0.32 x 0.32]).

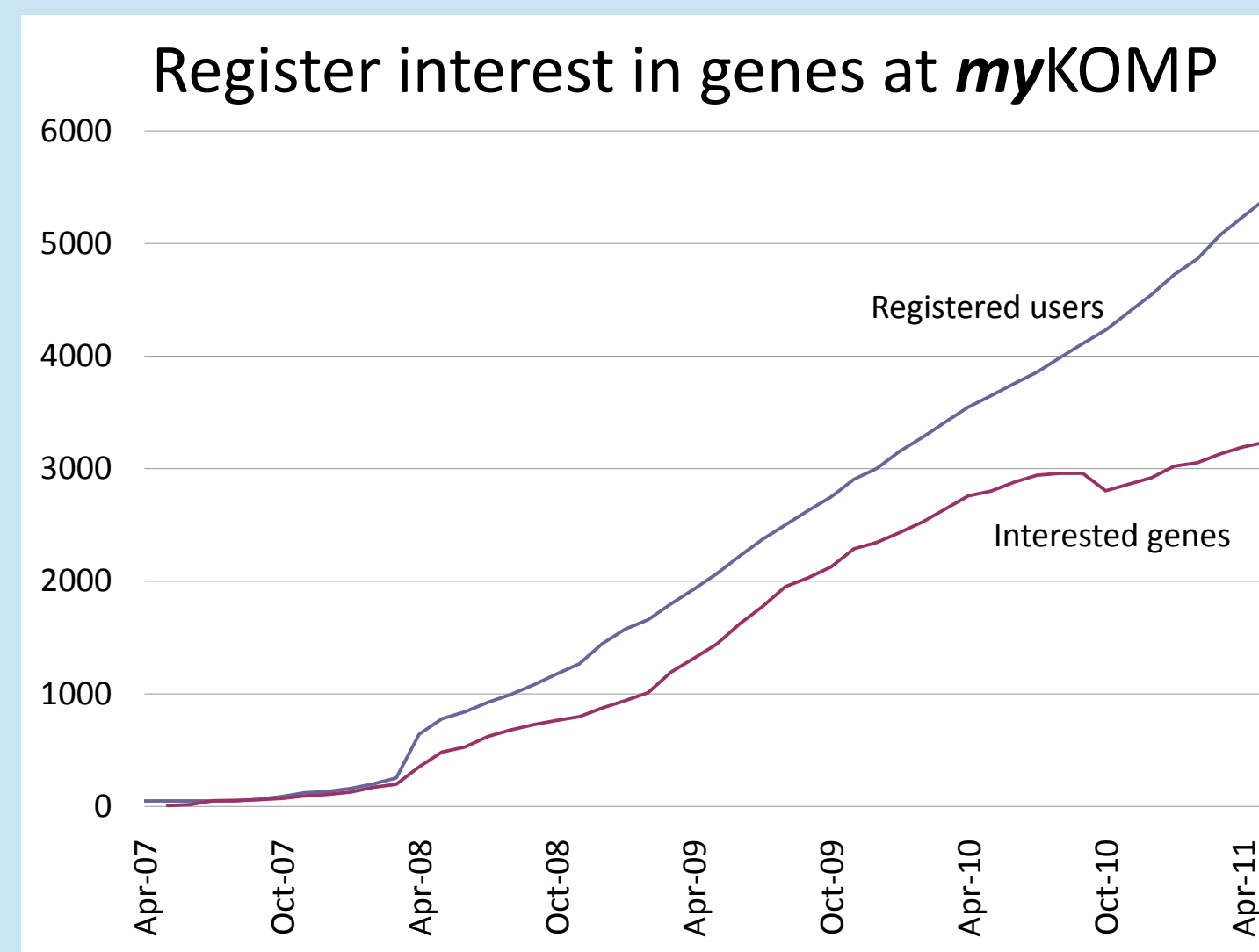
Products and Services

A variety of KOMP products and value-added services are available to both academic and commercial (for-profit) entities. Because the NIH intended the resource to become self-sustaining, fees charged to obtain KOMP products are used to ensure continued maintenance and operation of the KOMP Repository. Special pricing packages are available to reduce costs to researchers. For example, instead of purchasing an individual ES cell clone for \$648, a customer can save by purchasing a "premium ES cell package" for \$2801, which includes up to 3 injectable clones per gene and guaranteed quality control assurance, including chromosome count. Or, investigators can purchase a "premium microinjection service" for \$10,691, which guarantees production of at least one >50% male chimera (see table below).

Costs charged by KOMP Repository	
Products and Services	Fee
Vector (one clone, glycerol stock)	\$300
ES cell clones	
Basic (1 targeted clone for gene)	\$648
Advanced (up to 3 clones for gene)	\$1,296
Premium (Advanced + QC guarantee)	\$2801
Mutant mice	
Live (per mouse, SPF status)	\$339
Rederivation (litter, "barrier" status)	\$4,279
Microinjection	
Basic (up to 40 liveborn offspring)	\$6323
Premium (chimera guaranteed)	\$10,691
Germplasm (frozen sperm/embryos)	\$518/\$1231
Cryorecovery (frozen sperm/embryos)	\$4662/\$2591
Germline transmission (GLT) testing	\$2741

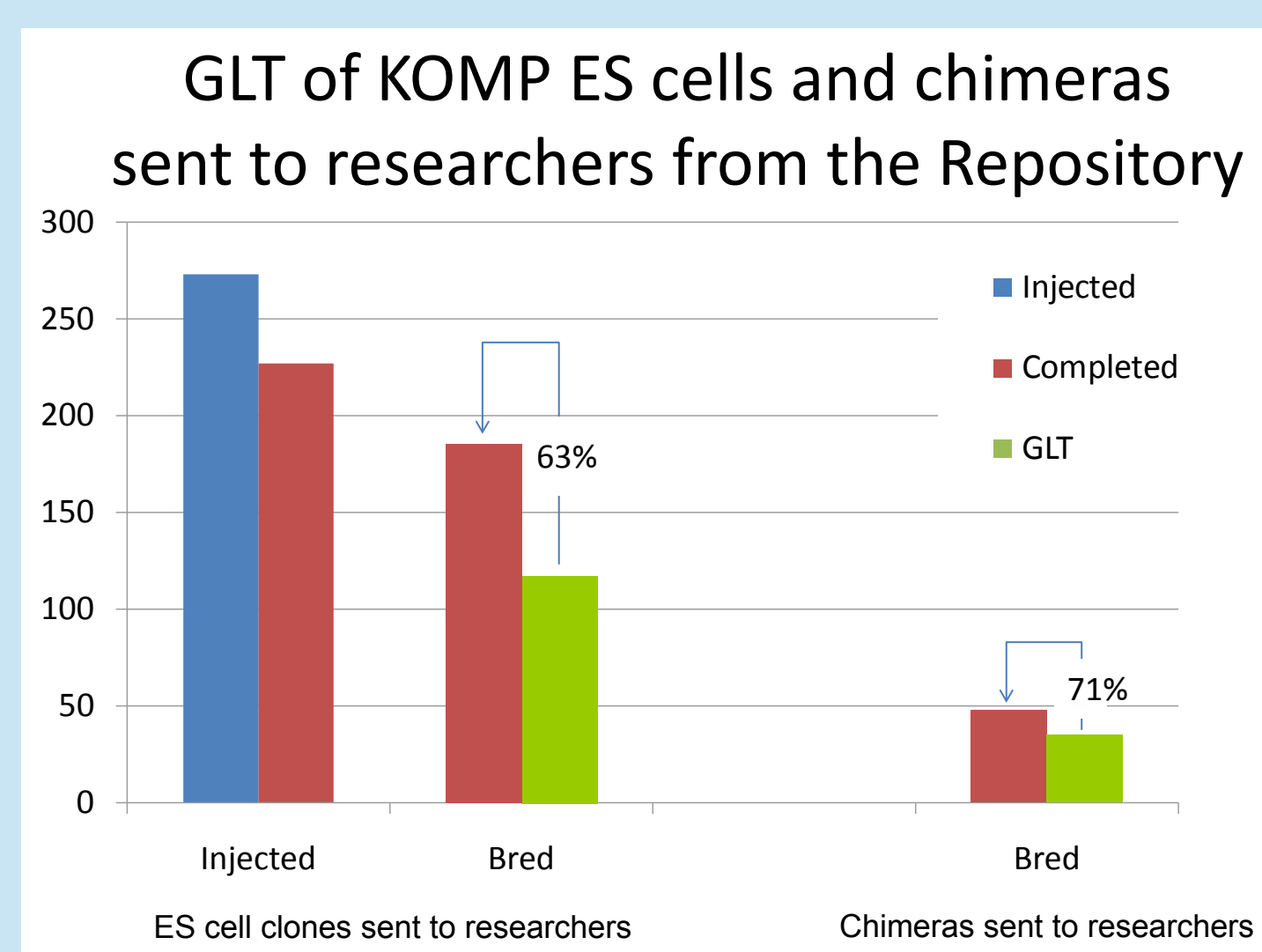
KOMP Registered Users

The Repository also provides an opportunity for researchers to create a **myKOMP** account and register interest in KOMP genes. When products become available for distribution, a researcher who has registered interest will receive an automated email announcing that the gene product they are interested in can now be ordered from the Repository. To date, more than 5000 users have created accounts at komp.org and expressed interest in over 3200 genes (see figure below).



Customer Feedback

In an effort to seek feedback on the utility of KOMP products, the Repository surveyed researchers on their success using KOMP ES cells. In response to an email questionnaire to 524 investigators who had ordered 454 clones, 209 (42%) respondents reported that 227 (83%) of 273 clones injected thus far had resulted in the birth of chimeras. Of these, 117 (63%) of 185 clones that have completed GLT testing had transmitted successfully through the germline. In another survey of 70 customers who had ordered microinjection and delivery of chimeras, 52 (74%) reported that 34 (71%) of 48 clones that produced chimeras and have completed GLT testing had transmitted successfully through the germline (see figure below).



KOMP Sharing Plan

NIH-funded investigators can fulfill their obligations under the NIH Sharing Policy by depositing

mice made in their laboratory from KOMP products. Under the KOMP Sharing Plan, researchers who return at least 2 germline-confirmed, heterozygous KOMP mutant male mice on a congenic C57BL/6N genetic background within 1 year of purchase of ES cell clones and/or chimeras will receive an immediate cash refund of 50% the cost of purchasing ES cells, or \$1000 refund of the cost of microinjection.

The mice you send back to the KOMP Repository will be cryopreserved, archived for safety and security, and made available for distribution to the research community.

KOMP Webpage

The Repository maintains an easily-navigable website (www.komp.org) where users can search, browse, and order products and services from the online catalog.



At komp.org, users can also register interest in genes and receive automatic notices when products become available, access customer and technical services (1-888-KOMP-MICE, service@komp.org), receive news updates, follow the KOMP blog, view FAQs, and download relevant protocols.

Significance

Besides ensuring the utility, longevity, and vitality of this unique resource, the KOMP Repository is key to the success of KOMP-Phase 2, which seeks to functionally annotate all protein coding genes in the mammalian genome.

Acknowledgements

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