



Phylonix is a Contract Research Organization providing *in vivo* zebrafish assays for drug discovery and screening. Our toxicologists, biochemists, developmental biologists, aquaculturists and molecular biologists can perform general, organ and cell specific toxicity studies, pathology, gene profiling, cellular activity and behavioral studies. Custom assays can be designed for high throughput quantitative microplate analysis or multi-parameter visual assessment.

ADVANTAGES OF DRUG TESTING IN ZEBRAFISH

Zebrafish currently rival mice and rats as a popular laboratory animal model. Interest in zebrafish for drug screening is rapidly increasing due to several inherent advantages, including:

- *Short Experimental Time*
- *Access to All Developmental Stages*
- *Easy Manipulation for Automated or Visual Screens*
- *Drug Administration Directly to Fish Water or by Microinjection*
- *Rapid Vertebrate Organogenesis*
- *Statistically Significant Number of Animals per Test*
- *Small Amount of Drug Required*
- *Low Cost*

A NEW ERA IN ANIMAL TESTING

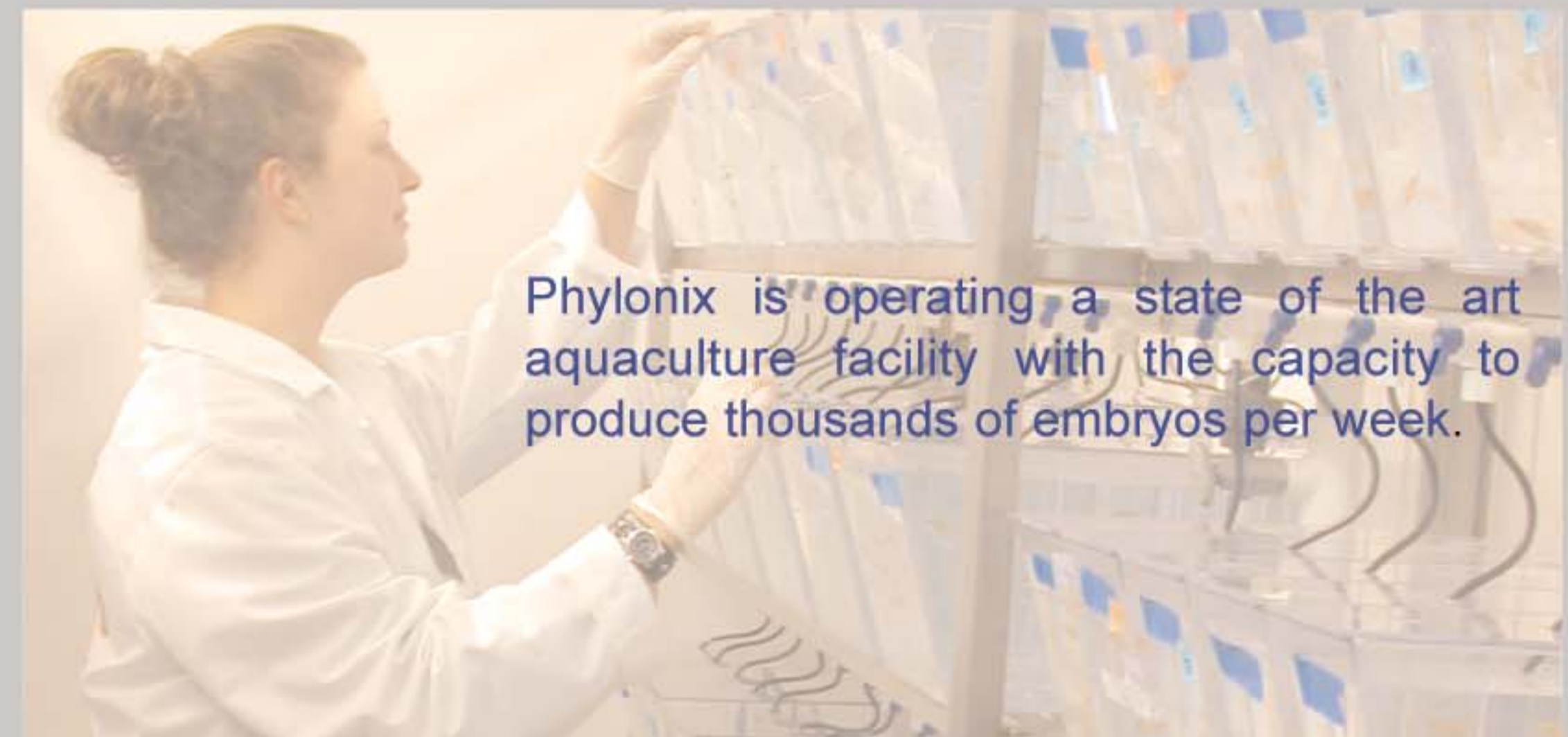
Services Include:

- *General Toxicity*
- *Specific Toxicity*
- *Cellular Activity*
- *Gene Profiling*
- *Genetic Toxicology*
- *Pathology*
- *Behavioral Studies*
- *Custom Designed Experiments*

Zebrafish develop rapidly. Three days after fertilization, the embryo is essentially complete, with a functioning heart, circulatory and nervous system. This rapid development is comparable to three months of human development. In addition, zebrafish have a relatively short generation time (2-3 months) and produce large clutches of embryos (100-200) per mating.

By day four, the zebrafish embryo has hatched and can eat and swim. Intestinal epithelial cells are polarized and express digestive enzymes. Hepatocytes secrete bile. Pancreatic islets and acini produce insulin and carboxypeptidase. Since zebrafish embryos are transparent, every event in early development can be observed visually. Quantitative endpoint assays can be performed using microplate readers, similar to cell based formats.

AQUACULTURE FACILITY



Phylonix is operating a state of the art aquaculture facility with the capacity to produce thousands of embryos per week.

Zebrafish Bioassays



Contact Phylonix

100 Inman Street, Suite 300
Cambridge, Massachusetts 02139
Tel: 617-441-6700
Fax: 617-441-6766

Website

www.phylonix.com

-FISH FIRST-

