# Introducing **Xenbase v5.0** including Phenotypes, a new look and integrated *X. tropicalis* v10.0 genome.

## *Xenopus* Phenotypes now live!

**Anatomy Phenotypes**, e.g., phenotypes of gross morphology, organ, tissue, cellular and molecular changes or aberrant behavior, are now curated from published articles. **Manual Expression Phenotype** (aka EP) captures the vast amount of *Xenopus* data from *changes in gene expression* from ISH and IHC data. Similarly up and down regulated gene expression identified in high throughput sequencing projects (e.g., RNA-Seq) from GEO as captured as **Computed Expression Phenotypes**. Phenotypes are curated from a wide range of experiments including morpholino, TALEN and CRISPR gene knockout/knockdown, transgenes and mutations, effects of toxins, reagents and drugs, and other experimental perturbations and stressors. Curation is ongoing, and more data is added every day, with our highest priority being *Xenopus* models of human disease.

Explore the **Phenotype Search** here .
- Searching phenotypes is easy - just enter any gene symbol or tissue, organ, or cell type to find relevant phenotype data.
- Disease models can be searched by disease name or their associated gene(s)
- A video tutorial showing you how to navigate around Phenotypes is coming soon!

Need help? Click here for a quick guide to the Phenotype Search.

Contact us with questions or feedback: Xenbase@ucalgary.ca

Thanks to our volunteer Phenotype beta-testers who provide insights and feedback. Thank you Jessica, Cindy, Robb, Scott, Margaret, Nicole, Pai, Agustin, Peter, Thomas, Maria-Belén and Dan,!
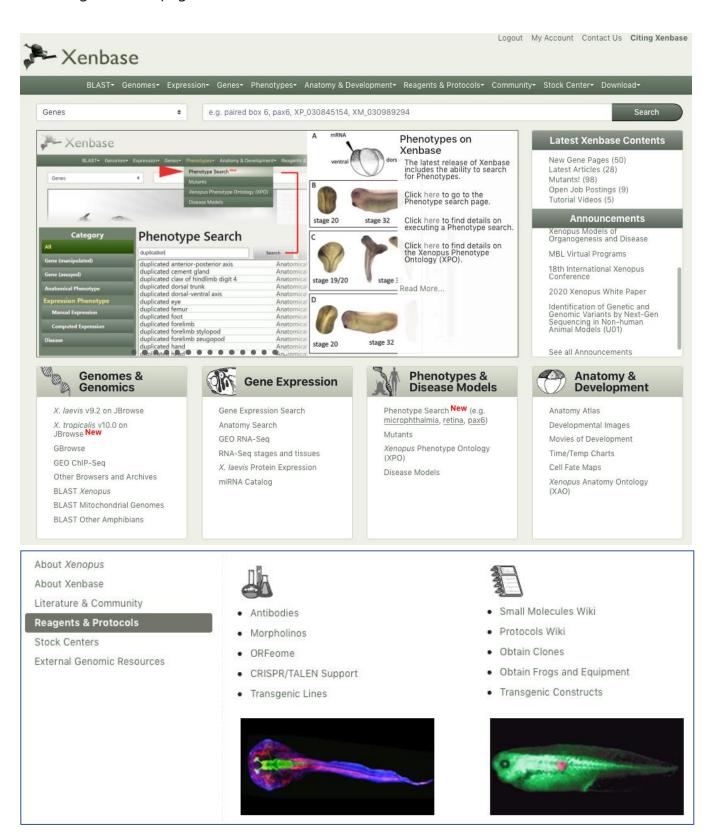
## New Xenbase Homepage Design

Our redesigned homepage has a cleaner look and more stream-lined menus and links.  We hope you like it!   Changes to note:
- The **Quick Search** is now across the top of the homepage.
- News, announcements and article spotlight still in front and center in the rotating carousel.
- A new tile for **Phenotypes & Disease Models**.
- **Genomes & Genomics**, **Gene Expression**, **Anatomy & Development** tiles collate the most used resources.
- **Literature**, **Community**, **Reagents & Protocols**, **Stock Centers** are all now accessed from the lower panel) as well as general information about Xenbase and *Xenopus* as a model.
- All content is available via drop down menus in the header as before.

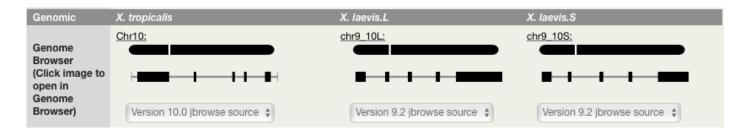 See next page for the new look Xenbase homepage!

Our designed homepage is cleaner, less cluttered and makes room for new features.
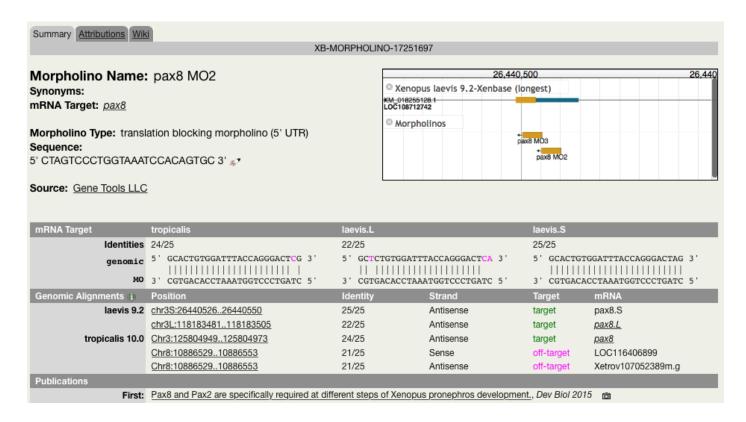
## Latest *X. tropicalis* v10.0 genome is now fully integrated in Xenbase.

- The new *X. tropicalis* v10.0 genome is everywhere it should be across Xenbase- on the Gene Pages, as an option BLAST, on JBrowse and GBrowse, and incorporated on MO pages.
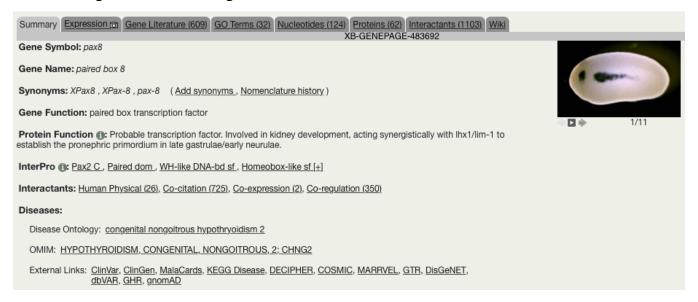


## Improvements to Morpholino Pages

- Morpholinos are now aligned to *X. tropicalis* v10.0 and *X. laevis* v9.2 to show target and off-target hits. *Did you know there are 2670 Xenopus MOs in Xenbase ?*
- Morpholino JBrowse track is now available for both *X. tropicalis* v10.0 and *X. laevis* v9.2.
- Morpholino pages also have a snapshot of the MO aligned to new genomes.

## Improvements to Gene Pages

- Link to CRISPRscan tracks (Guide RNAs for Coding regions) and available Mutant lines (from NXR and EXRC) now listed as Reagents on Gene Pages.

- Rat orthologues added with links to the Rat Genome Database (RGD).

- UniProt proteins and InterPro Links now on Gene Page/Protein tab.

- More Disease resources (see External Links) added to summary: COSMIC, MARRVEL, GTR, dbVAR, GHR and gnomAD.

- Gene Pages for all mtDNA genes and mitochondrial tRNAs.



## Citing Xenbase

If you use Xenbase, please cite us in your papers. Xenbase (http://www.xenbase.org/, RRID:SCR_003280)

***General article on Xenbase:*** *Karimi et al. 2018, NAR 46:D1:D861-868, doi:10.1093/nar/gkx936.*

***GEO data:*** *Fortriede et al. 2020, NAR 48:D1:D776–782. doi:10.1093/nar/gkz933*

***Disease Research****: Nenni et al. 2019, Frontiers in Physiology, Vol.10, doi:10.3389/fphys.2019.00154*

Impressed? Find a bug? Contact us with comments, questions or feedback: Xenbase@ucalgary.ca