Working guidelines for naming *Xenopus* transgenics and mutant lines

These working nomenclature guidelines were developed in consultation with the *Xenopus* stock centers, following best practices used by all other model organisms. Using standard nomenclature is critical to make your research accessible to the broad scientific community and to ensure consistency and provenance.

1. Transgenic Constructs: Overview

STANDARD Tg CONSTRUCT NAME

Tg(enhancer or promoter:ORF or gene symbol)$^{\#Lab\ code}$

Example: *Tg(cryga:GFP)^{2Grngr}*   A gamma crystallin GFP construct from the Grainger Lab

Example: *Tg(Rno.elas:DNthra-GFP)^{1Ryff}*

Construct with Rat elastase promoter driving dominant negative thyroid hormone receptor, from the Ryfell Lab.

- Brevity and clarity in the transgenic construct name are encouraged.
- *Tg* indicates transgene, and the entire construct name is *italicized.*
- The most salient features of the transgene should be described within parentheses, no spaces.
- List regulatory sequences to the left of colon (:) and coding sequences to right.
- Use the official gene symbol for *Xenopus* genes (e.g., *tubb2b* not NBT).
- Fluorescent proteins are capitalized or start with a capital letter (e.g., GFP, Katushka, Tomato)
- Fluorescent protein prefixes are in lower case (e.g., eGFP, mCherry) (do not underline).
- Hyphens (–) indicate fusion proteins (do not use equals sign = or double colons ::)
- Modified functionality (e.g., CA = constitutively active, DN = dominant negative) is indicated as prefix to gene symbol, (e.g., *DNthra*).
- If gene sequence(s) are from another species, precede gene symbol with 3-letter species code, and a period (eg., *Dre.ins* ; Hsa=human, Rno=rat, Dre=zebrafish, Mmu=mouse, Ssa=salmon, etc).
- Multiple cassettes are separated by a comma (,) (e.g, *Tg(tubb2b:GFP,NBTtau:GFP)^{1Amaya}*
- Where one regulatory sequence drives more than one coding sequence, state regulatory sequence once and separate coding sequences with a comma (e.g, *Tg(CMV:GFP,RFP)^{2Senk}*).
- Origin/source is identified with a serial number and ILAR lab code, in superscript, at end of name.
- Do not indicate the method used for transgenesis (e.g., sperm-mediated, pTrangenesis, REMI).
- Engineered sequences (e.g., GFP, Cre, rtTA, tetO) do not need foreign/bacterial species prefixes.
- Do not include the size of the promoter/enhancer cis-regulatory sequence in the Tg name, rather report this in the full description of the transgene in the publication and in stock center record.
- The full transgenic construct or line name should be included in the methods section. Once fully defined, it is acceptable to use an abbreviated name in the body of a manuscript. Example *Tg(Rno.elas.DNthra-GFP)^{1Ryff}* could be simplified to *Tg(elas:DNthra-GFP).*

2. Transgenic *Xenopus* Lines: Overview

STANDARD Tg *XENOPUS* LINE NAME

Species.Tg(enhancer or promoter:ORF or gene symbol)$^{\#Lab\ code}$

Example: *Xtr.Tg(cryga:GFP)^{3NXR}*
A *X. tropicalis* Tg line carrying a gamma crystallin GFP construct, the third line made by the NXR

Each maintained Tg *Xenopus* line is given an official, stable name that is based on the Tg construct(s) used, with the following additions:

• Species is indicated using a 3-letter code, followed by a period (.).

> *Xla* is the abbreviation for *X. laevis*
> *Xtr* is the abbreviation for *X. tropicalis*

• Each line should be fully described, including background strain, and generation number if known.

• When a sequence of the alternate *Xenopus* species is used i.e., a *X. laevis* line that carries a construct made with *X. tropicalis* sequence, indicate this within the cassette/construct name using the 3-letter abbreviation, as is done for other foreign genes.

Example: *Xla.Tg(Xtr.shh:eGFP)^{2NXR}*
This Tg *X. laevis* line carries a *X. tropicalis* sequence for the sonic hedgehog gene cis-regulatory elements, driving enhanced GFP. The second line with this transgene established by the NXR.

3. Mutant *Xenopus* Lines: Overview

STANDARD MUTANT *XENOPUS* LINE NAME

Species.gene symbol or phenotype$^{mutation\#Lab\ code}$

Example: *Xla.apc^{tm5Vlemx}*
The 5th mutant *X. laevis* line generated by TALEN targeted mutation of the adenomateous polyposis coli (*apc*) gene, from the Vleminckx lab.

• Each maintained mutant *Xenopus* line is given an official, stable name.
• Species is indicated using a 3-letter code, *Xla* or *Xtr*, followed by a period.
• The line is named after the location of the mutation, whether it is known (use a gene symbol) or unknown (use a described phenotype), in italics, with no spaces.
• The mutation type is indicated in superscript (e.g., tm=targeted mutation, ins=insertion m=mutation, del=deletion), followed by a serial number and ILAR lab code.