Taiyo Yanamoto
“Just the right pigmentation”
X. Laevis embryos from top to bottom:
-Fully pigmented wild type.
-Pigmentation stemming from the oocyte. 200 µM PTU (1-phenyl-2-thiourea) was added to the buffer, inhibiting tyrosinase and therefore any further pigmentation.
-Pigmentation expressed from the male's wild type alleles. Achieved by crossing albino oocytes with wild type sperm.
-No pigmentation. Albino oocytes crossed with wild type sperm, kept in 200 µM PTU.

Charlie Softley
The red chevrons (A Tail of Two Halves) are a healed GRP explant with a somite marker, while the green dotted peacock-like curly embryo is the other half of the embryo left to survive. Here the acetelated tubulin are marked in green and the actin in red. The whole embryo image is a crispant with the dots showing multiciliated cells, the microtubules are also green and the actin is labelled red.

Kourtnie Whitfield
“Two Headed Friend.” A two headed X. laevis embryo stained for phalloidin (green), Sox3 (magenta), and DAPI (cyan), taken by the Zeiss LSM710 confocal.
of two cells. Image was taken on the Thunder
M205FCA fluorescence microscope.

Kate McCluskey
This is from a ~ stage 45 *Xenopus tropicalis* tadpole with immunofluorescence staining for the enteric nervous system (beta-tubulin, cyan) and gut muscle/actin (phalloidin, magenta). It was imaged on a Zeiss LSM710 at 40x. The title is "Spill Your Guts"

Helena Cantwell <helena.cantwell@berkeley.edu>
Title: "Frontstroke, backstroke”
Description: H2B-GFP transgenic *Xenopus laevis* tadpoles imaged in agar on Leica M165FC stereoscope.

Wenchao Qian
“Embryo on Fire”
Descriptions: Snapshot of β-catenin staining in vegetal pole of a late blastula embryo (stage 9). The image was taken in LSM 710 of CSHL imaging core. After imaging, pseudo-color (fire spectrum) based on the intensity of β-catenin was added in image J to show the contrast. As zygotic transcription begins in blastula embryos (on fire), zygotic β-catenin started to express, and stains for both cell boundary and nuclei.

“Migrating Neural Crest in Albino”
Description: Sox10:GFP transgenic *Xenopus laevis* albino embryos (stage 28) under fluorescence microscope. This Image was taken on Leica M165 in CSHL *Xenopus* course. Albino eggs were fertilized by sperm of transgenic Sox10:GFP male frog. Because there is no pigment in early albino tadpoles, Sox10 labeling is more evident than the labeling in tadpoles with pigment. Sox10 labels the neural crest tissues, which started to migrate from the top dorsal side, and form two distinct stripes.

“South Pole”
Descriptions: Maximum intensity projection of Z-stacks of β-catenin immunostaining in *Xenopus laevis late* blastula embryo (stage 9). The image was taken on LSM 710 of CSHL imaging core. After imaging, pseudo-color (16-color) based on the intensity of β-catenin was added in image J to show the contrast. β-catenin stains for both cell boundary and nucleus. After extensive BABB clearing, the wholemount embryo shows clear cell junctions and distinct nuclei seen from the bottom view. If imagine the embryo as Earth, then the vegetal pole is equivalent to the South Pole in relative position.

Josefine Hoeren
Title: Wer braucht schon Embryonen wenn er Gehirne haben kann?
(Translation: Who would need embryos if they could have brains?
Description: Video of an dorsal explant of a stage 15 Xenopus laevis embryo closing its neural tube.

“When your explant is growing up”
Description: Dorsal Explant done at stage 15 Xenopus laevis, cultured for four days and then imaged. With eyes.

“Getting your explant to glow”
Description: Dorsal Explant of stage 15 Xenopus laevis embryo fixed after 4 days. Stained by immunofluorescence against Sox3 (red) and f-Actin (green).

“Is it a brain or is it an animal”
Description: Brain of a stage 45 Xenopus laevis embryo stained by Immunofluorescence against Nulclei (cyan), f-Actin (red) and acetylated alpha-tubulin (green).

“Inside the hindbrain”
Description: Hindbrain of a stage 45 Xenopus laevis embryo where the rhombencephalon roof was peeled off to image the inside of the hindbrain. Stained by immunofluorescence against Nuclei (cyan), f-Actin (red) and acetylated alpha-tubulin (green).

“Single, Double or Triple Brainbow?
Description: Two Brainbow transgenic Xenopus laevis Embryos around stage 45. Picture edited wit ImageJ Fire LUT.

Cristina Raya
“Neurultion on Fire” VIDEO
Image Leica
Organism X. Laevis
Channel: Empty

“Counerpoise”
Leica microscope,
Magenta LUT =mCherry membrane marker,
Cyan LUT = memGFP marker

“Mount dorsal”
Image Leica
Organism X. Laevis
Tools TopoJ

“Half n’ Half”
Image Leica
Organism X. laveis
Channel: Red. Green, Empty

Adrian Romero
Kidney in a window: This is a Pax8 transgenic kidney (magenta) of a stage 30 embryo. Nuclei are marked in cyan. Membrane is marked in neon green. This image was taken through a windowed embryo (epithelial layer was peeled off in the kidney position of the embryo). This image includes a video (dancing in a window kidney) where the kidney cells movements are shown (Pax 8:GFP reporter) . The image was taken using Confocal Zeiss LSM710.

Kidney in a globefrog: After an injury, the kidney was unable to regenerate itself, generating an edema. In yellow the expression of pax8 in a transgenic frog. In pink the soft tissues, in black the melanocytes and in blue the edema. The image was taken using Leica fl. stereoscopes (Thunder M 205FCA).

Goodbye kidney: CRISPR-cas9 embryos have Dyrk1a protein function affected. The phenotype shows the kidney disruption in the proximal tubes (lectin staining in green). Since the lectin is not specific, it stains the hatching gland too. The image was taken using Leica fl. stereoscopes (Thunder M 205FA).

Calvin John Leonen
“Mitosis in action” Mem-mCherry, H2B-neonGreen, Zeiss LSM710 confocal VIDEO

“Janus (two-faced)” Mem-mCherry, H2B-neonGreen, Leica fluorescence stereoscope M165FC

Pisces/Yin and Yang Mem-mCherry, H2B-neonGreen, Leica fluorescence stereoscope M165FC

“Rapunzel” Mem-mCherry, H2B-neonGreen, Leica fluorescence stereoscope M165FC

Simeonova Iva

“Set a heart on fire" : Transgenic Sox-10 GFP xenopus embryo, captured with a Leica Stereomicroscope M165FC. Left : A fluorescent dextran tracer injected at the 1-cell stage turns all cells positive. Right : The Neural crest cells express a Green Fluorescent Protein (Sox-10-GFP), here in yellow and red, Fire LUT, horizontal transformation. Those cells contribute to heart development, among other lineages.
The image represents 2 individuals facing each other, the "resulting emotions" are implied by the migrating cells giving rise to the heart and highlighted by the Fire LUT.

"**Infinite possibilities**" : Transgenic Sox-10 GFP xenopus embryo, Leica Stereomicroscope M165FC. Red : Dextran tracer injection at the 2-cell stage results in only half of embryo colored at latter developmental stages. Green : The Neural crest cells are visualized by the expression of a Green Fluorescent Protein (Sox-10-GFP). Those cells have the potential to give rise to multiple cell lineages during development.
The two embryos together form an infinity sign, suggestive of both the potential of this cell type and the potential of the Xenopus as a model organism.

"**Leave a trace**": Xenopus embryo in motion, captured with a Leica Stereomicroscope M205C FCA. Image processed with the acquisition software.
The motion of the embryo generates a trace highlighted by the image processing. The whole embryo is suggestive of a fossil preserved thought time, implicitly representing the trace that the Xenopus course training will leave in all of us :-)

Mari Tolonen

1. Title: Spreading like wildfire!
Description: Animal cap explants from stg 12-22 stage embryos expressing LifeAct-mCherry mRNA, labeling filamentous actin.
The timelapse (12 h) was acquired in Zeiss LSM710 confocal microscope, denoised in ImageJ and colorized using the "Red Hot" LUT.

2. Title: The Handshake
Description: Spreaded animal cap "sandwiched" explants expressing both H2B-mCherry and H2B-mNeonGreen mRNA, labeling nuclei.
The timelapse (4,3 h) was acquired in ImageExpress Pico by Molecular Machines, adjusted in ImageJ and colorized using Cyan and Magenta LUTs.