



TEFOR Paris-Saclay Services



TEFOR Paris-Saclay aims at facilitating access to aquatic model organisms for basic & biomedical research.

TEFOR Paris-Saclay is an expert in fish models, primarily zebrafish & Xenopus.

TEFOR Paris-Saclay is an academic service provider affiliated with two parent institutions: CNRS & Université Paris-Saclay.

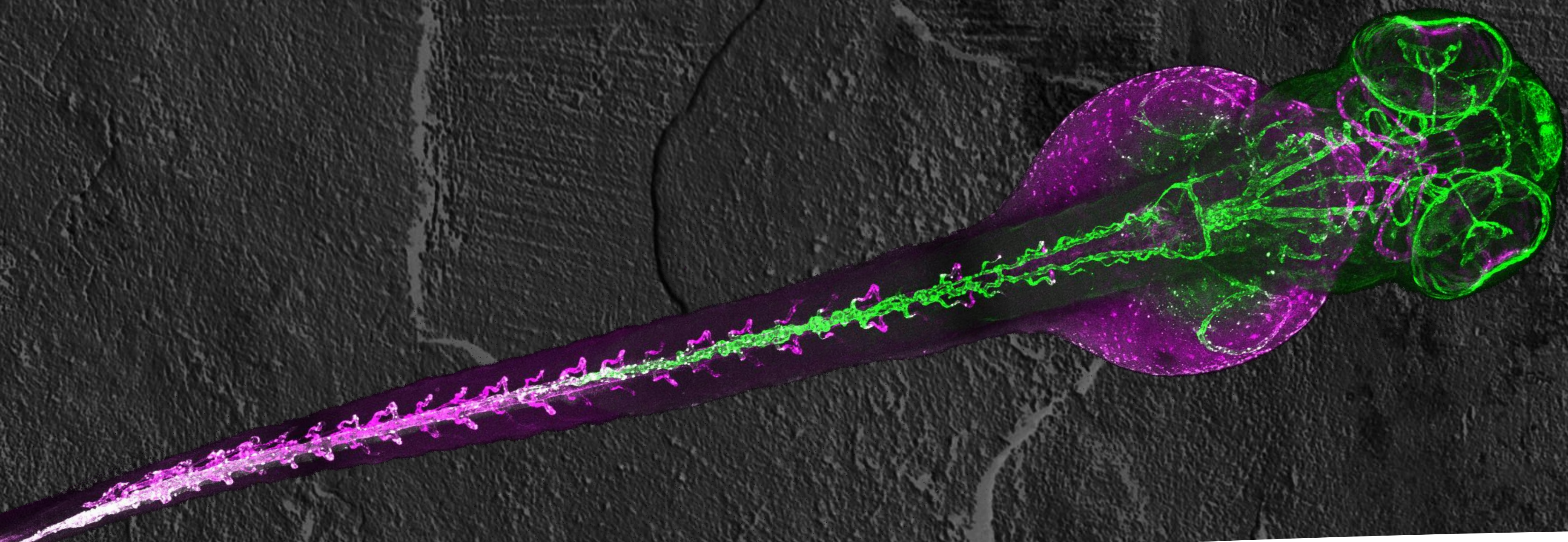
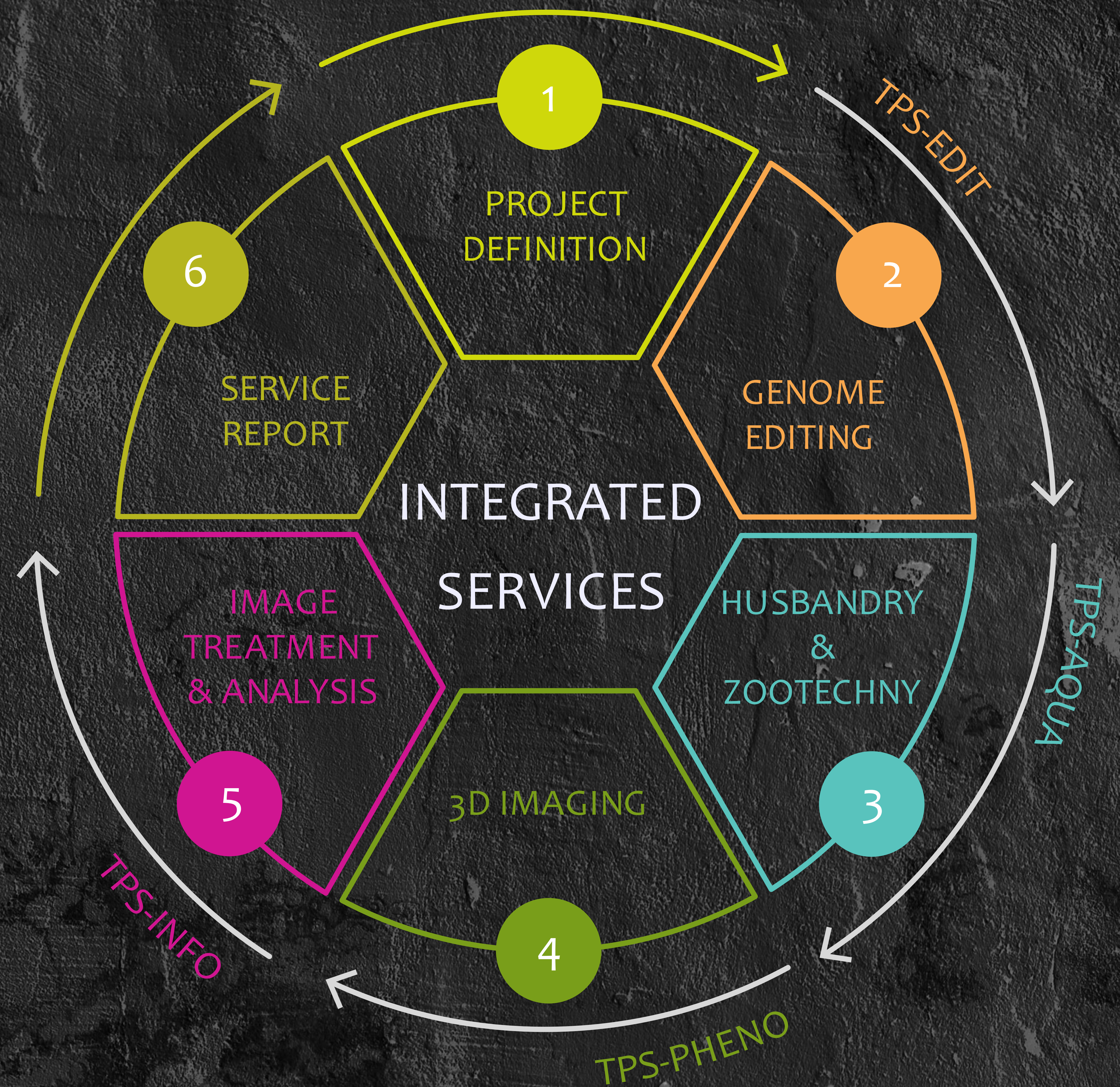


services@tefor.net
www.tefor.net



By combining expertise of its 4 teams:
TPS-AQUA, TPS-EDIT, TPS-PHENO & TPS-INFO,
TEFOR Paris-Saclay offers integrated services.

From zootechnics to image analysis support:
we do our best to meet your needs!

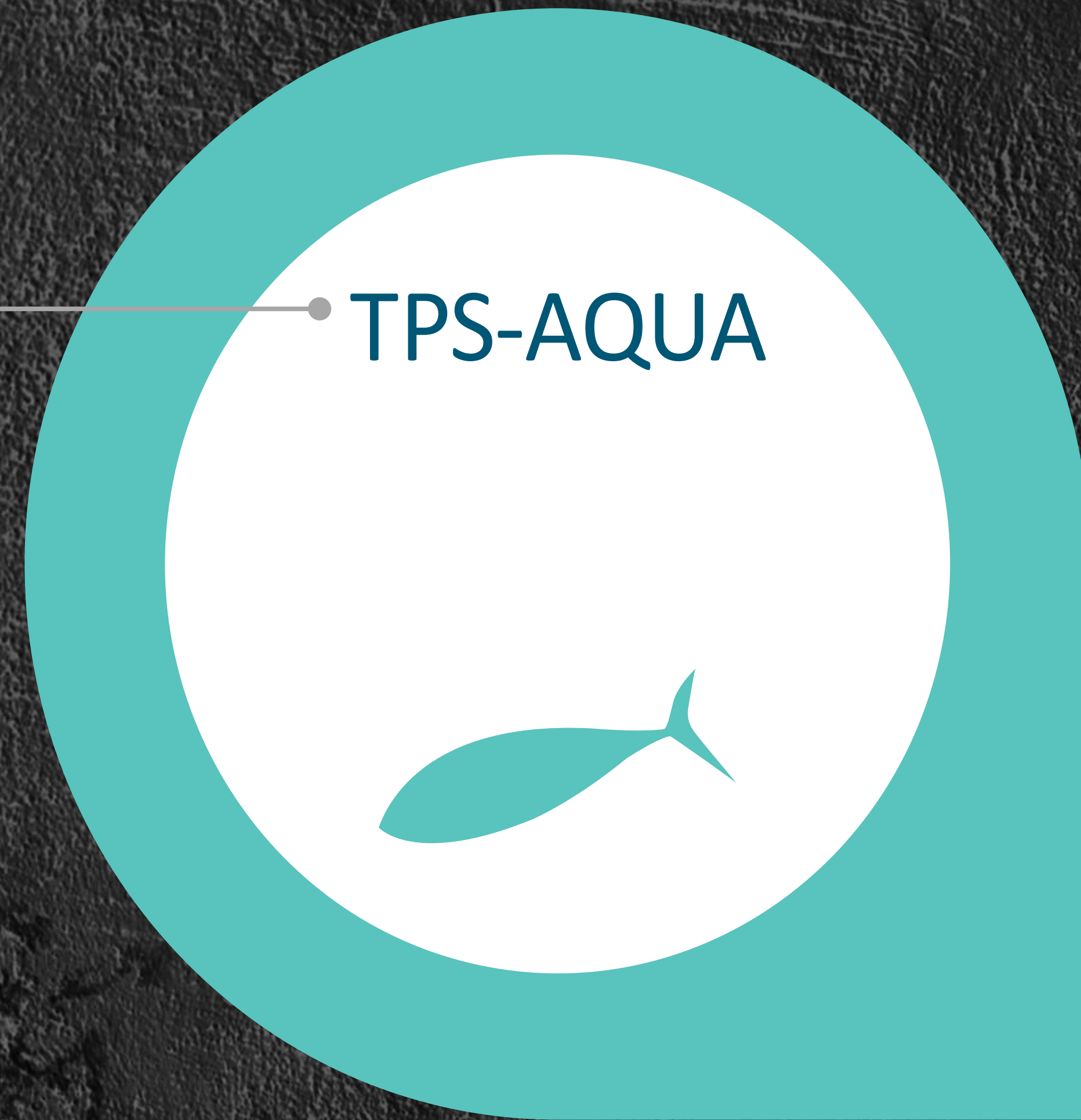


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Housing & Distribution

- Danio rerio*
- Oryzias latipes*
- Cichlidae*
- Astyanax mexicanus*
- Xenopus laevis*
- Xenopus tropicalis*

TPS-AQUA



TPS-EDIT



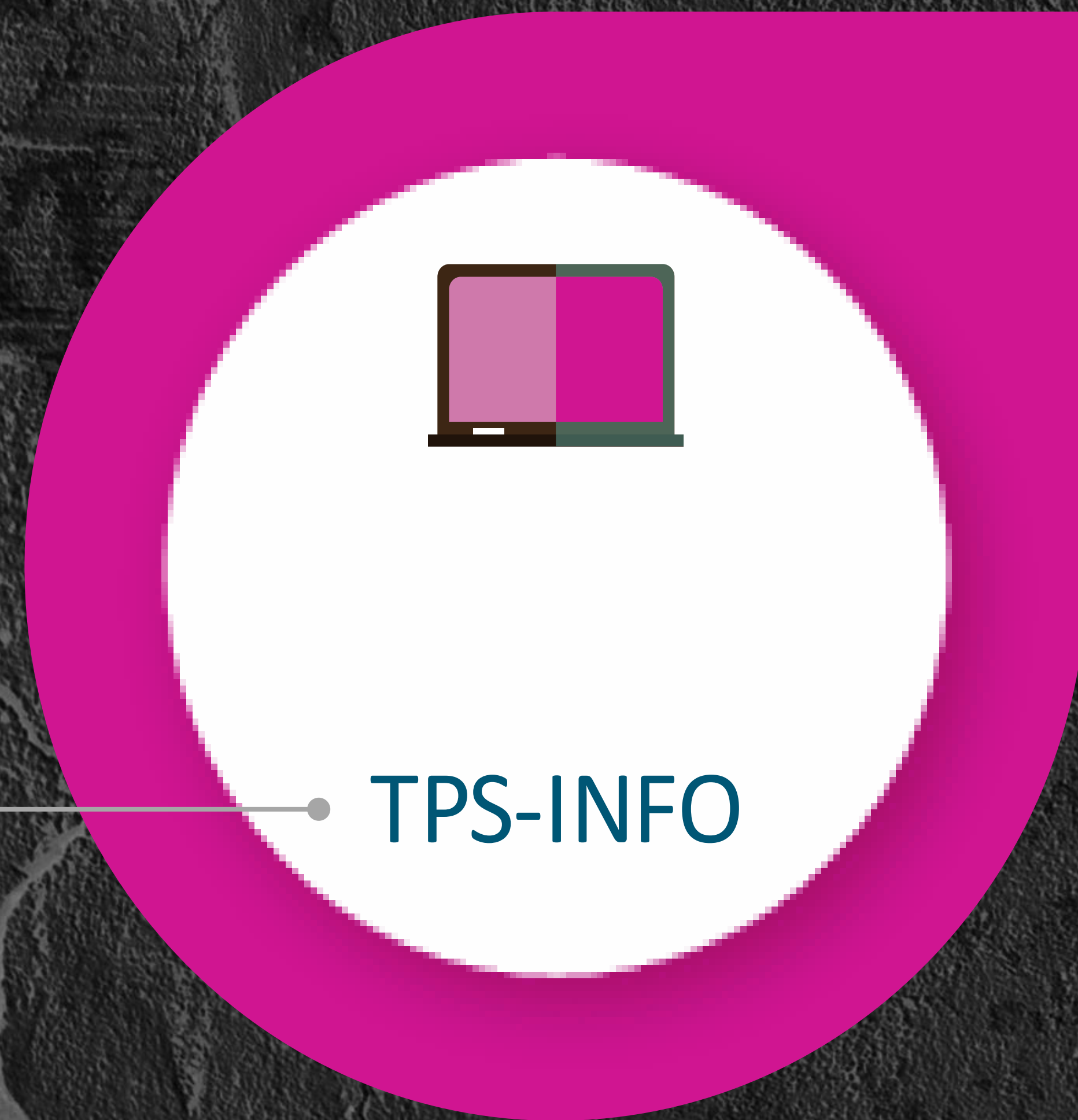
CRISPR-Cas9 Genome Editing

- Knock-Out
- CRISPANTS
- Knock-In
- Prime/Twin-Prime Editing
- Base Editing

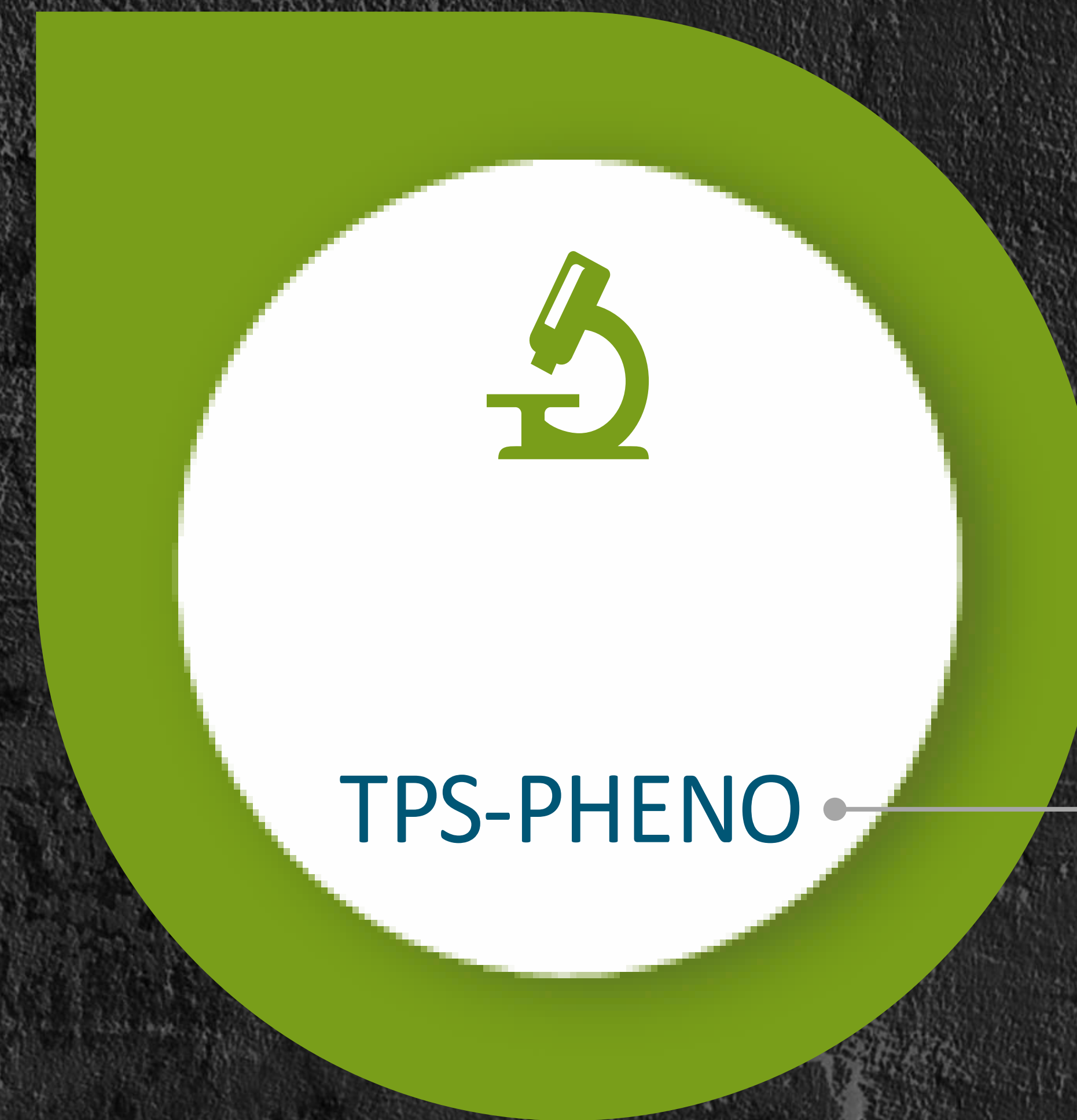
Image analysis tools for:

- Deformation analysis
- Volumetry
- Particle counting
- Neuroanatomical atlases

TPS-INFO



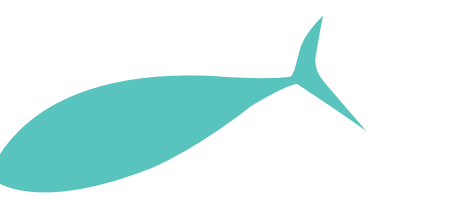
TPS-PHENO



- Tissue Clearing
- Whole specimen labelling
- Antibody testing
- Morphometry
- High Content Screening
- Customized services

Image treatment & analysis

3D imaging



FISH MODELS

Danio rerio
Oryzias latipes
Cichlidae
Astyanax mexicanus

XENOPUS MODELS

Xenopus laevis
Xenopus tropicalis

HOUSING

We can house your lines on a weekly, monthly or annual basis.

DISTRIBUTION

of tissues or individuals from wild-type strains

FISH MODELS

- Embryos
- Larvae
- Juveniles
- Adults

XENOPUS MODELS

- *X. laevis* oocytes
- Embryos
- Tadpoles
- Adults

OTHER REQUESTS

Please contact us: services@tefor.net



CRISPANTS

Provision of mosaic F0 individuals with random frameshift mutations representing more than 90% of alleles.

Up to 3 genes (biallelic KO in F0): 2 months

Standard application: production of lines of interest with complete genetic depigmentation in a single generation.

KNOCK-IN

Precise insertion of ≥ 5 kb:

- Fluorescent proteins
- Tags (Gal4, dTag, hibit, etc)
- "Loxable" secondary fluorescent reporter with strong short promoters (heart, lens, hatching gland)
- Conditional KO (loxP, DECAI, Flp-FRT)
- Cellular control systems (NTR2, optogenetic proteins)
- Point mutation

Heterozygous stable line (F2): 9 months
Homozygous stable line (F3): 12 months

KNOCK-OUT

- Imprecise short or long deletions
- ATG removal
- Splicing KO (exon excision without frameshift)

Heterozygous stable line (F2): 8 months
Homozygous stable line (F3): 11 months

PRIME/TWIN-PRIME EDITING

Insertion of point mutations or short sequences (< 50 bp).

- loxP
- Flp-FRT
- attB/P
- Precise deletions (PrimeDel)

Heterozygous stable line (F2): 9 months
Homozygous stable line (F3): 12 months

BASE EDITING

Nucleic acid substitutions for SNP replication (human disease modeling/phenotype repair):
 ABE (A \rightarrow G) or CBE (C \rightarrow T) or CGBE1 (G \rightarrow C)

Heterozygous stable line (F2): 9 months
Homozygous stable line (F3): 12 months

TISSUE CLEARING

Clearing of your samples using solutions derived from CUBIC.

Samples can be sent to us already fixed, or we can house the individuals to be tested until the desired stage of study.

ANTIBODY TESTING FOR IF

We can test for you any antibody of interest (with tissue clearing and/or lipophilic counterstaining).

WHOLE SPECIMEN LABELLING

Phenotyping of lines expressing GFP or mCherry at stages 5-7 dpf. Samples may be processed in groups of 12, 24, 48 or 96 individuals

- Morphology: lipophilic counterstaining and/or nuclear labelling.
- Advanced characterisation: lipophilic counterstaining or nuclear labelling + one or two antibodies of your choice.

Standard antibodies:

GFP, mCherry, RFP, S100, PCNA, PH3, TH, 5-HT, ZO-1, znp1, PSDmarker, HuC/D, mcm2, GS

HIGH CONTENT SCREENING

For 5-7 dpf zebrafish, we can perform semi-automated confocal acquisition for 3D imaging of up to 96 individuals in a single session.

MORPHOMETRY

We offer standard services for morphometric comparisons based on nucleus/lipid co-labelling at 5-7 dpf.

CUSTOMIZED SERVICES

We offer customized services for the preparation and imaging of samples of your choice.

IMAGE ANALYSIS TOOLS FOR

DEFORMATION ANALYSIS

Statistical volumetry

Based on non-rigid image registration, we can detect and quantify local deformations of your specimens in relation to corresponding wild-type specimens or TPS atlas models.

CELL/PARTICLE COUNTING

Using classical or machine-learning approaches, we can automatically detect and count cells, nuclei or other fluorescent particles in your samples.

STATISTICAL VOLUMETRY

Rigid image registration, threshold based segmentation, and volumetric analysis of antibody labels or transgenic expression patterns.

NEUROANATOMICAL ATLASES

If technically possible and desired, we can integrate your data into one of our atlases. This makes them accessible to the public and can be beneficial when publishing your results (FAIR-principles).

CUSTOMIZED DEVELOPMENT OF DATA ANALYSIS TOOLS

Our tools are available and open to all. In addition to the tools already available, we are open to new scientific questions and can develop new procedures with or for you.



TEFOR Paris-Saclay Services

Prices on request

services@tefor.net

tefor.net/nous-contacter/



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