

YOU ONLY NEED TO READ THE TSUNAMIS

Genetic Control of Morphogenesis in Vertebrates | @jrmarmor.bsky.social | CABD

THERE IS AN OCEAN OF KNOWLEDGE TO BE DISCOVERED AS TO HOW TO CONTROL THE BEHAVIOR OF CELLS DURING ORGAN FORMATION OR CANCER TREATMENT.

FEW CAN FISH NEW SOLUTIONS IN ITS TROUBLED WATERS.

WELCOME ADVENTURER! FEAR NOT, FOR WE HAVE A NAVIGATION TRICK WE LEARNED FROM THE MEDAKA FISH: **MECHANOBIOLOGY**. YOU JUST HAVE TO LEARN HOW TO READ THE TSUNAMIS.

IT INVOLVES STUDYING HOW CELLS RESPOND TO MECHANICAL STIMULI TO CONTROL THEIR PROLIFERATION, SURVIVAL, MIGRATION AND REGENERATIVE CAPACITY. WE DO IT WATCHING TELEOSTS GASTRULATION.

1 WATCH THE WATERS

DETECT GENES AND REGULATORY ELEMENTS INVOLVED IN MECHANOTRANSDUCTION AND CHROMATIN ARCHITECTURE.

FOR THIS PURPOSE, WE COMPRESS THE EMBRYOS AND APPLY DIFFERENT ANALYTICAL METHODS.

- RNA-SEQ
- ATAC-SEQ
- GFP
- LOW-C

2 CATCH THE FISH

IDENTIFY DIFFERENTIALLY EXPRESSED GENES AND DIFFERENTIALLY OPEN CHROMATIN REGIONS USING BIOINFORMATICS.

MARCKSL1 CTGFA

3 RIDE THE WAVE

DISCOVER THE FUNCTION OF THESE GENES BY CREATING MUTANTS USING CRISPR-CAS9 TECHNOLOGY.

THERE ARE MANY MORE WAVES TO SURF AND MANY MORE SOLUTIONS TO FISH FOR.

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YOU

TO DO THIS, WE WILL NEED NEW NAVIGATORS TO JOIN THE CREW. SO, ARE YOU READY TO JOIN THE RESEARCH TEAM?

