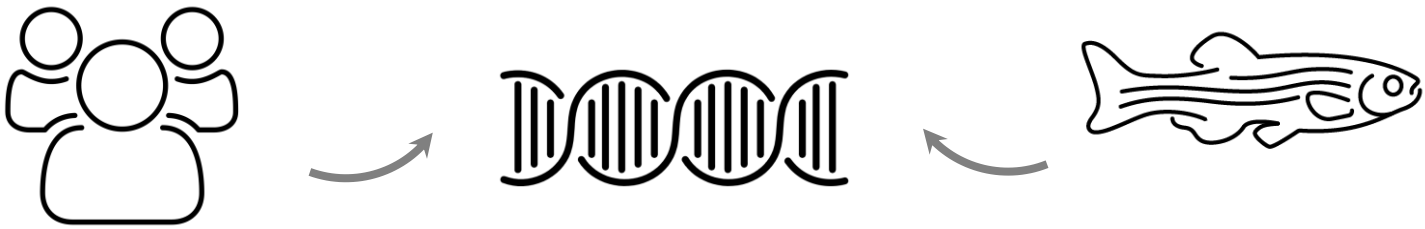
The Zebrafish as a Research Tool

Zebrafish as a research model



- There are thousands of chemicals in our environment.
- We are always exposed to mixtures of chemicals.

- Humans and zebrafish share >70% similar genes.
- 84% of human disease genes are also in zebrafish.

- Humans and zebrafish have many of the same organs.
- Zebrafish develop very quickly – from a single cell to swimming fish in 5 days.

Zebrafish as a chemical screening tool

- Zebrafish are small and easy to use, allowing us to rapidly assess thousands of chemicals.
- Some chemicals can affect DNA and cell signaling to change the way animals develop.
- Changes in zebrafish development identifies chemicals that may be hazardous to humans. We measure dozens of effects in these chemical screens.

Can Evaluate

- Which chemicals may pose a higher risk than others to human health
- Effects of individual and real-world mixtures of chemicals.

Cannot Evaluate

- The actual effect of a chemical on the human body
- The precise amount of a chemical that may cause a harmful effect in humans

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