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University College Dublin (UCD) Zebrafish Facility Environmental Parameters V.3

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ABSTRACT

Environmental factors and animal husbandry conditions are known to have implications in outcome of study results. To this end, environmental parameters (i.e. temperature, pH and conductivity) of our zebrafish facility are constantly monitored to ensure constant/limited variations to be introduced in the environment. Our facility comprises of a recirculating water system with filtration, sterilization and automatic adjustment of water parameters (pH, conductivity, temperature) with a capacity of over 4,000 litres of water, it houses over 20,000 adult fish in 1-, 3-, and 10-litre tanks. A separate nursery system houses up to 12,000 larvae aged from 6 to 30 days post fertilisation. Embryos up to 5 day post fertilisation are grown on Petri dishes in an incubator. Within the facility are also cultured feeding organisms for zebrafish: Paramecium and brine shrimp. This facility is equipped with the infrastructure to perform microinjections and microscopy. Techniques such as PCR amplification, cloning, DNA sequencing, in-situ hybridization, immunohistochemistry, embryo microinjection (transgenics) and fluorescent microscopy are fully operational within the lab.We have provided information of our facility and key parameters measured for our zebrafish lines housed in University College Dublin, for 2018. These conditions are applicable to all recent peer-reviewed articles published by our lab.

UCD Zebrafish facility environmental monitoring_2018.pdf