eppendorf

EPPENDORF AWARD FOR YOUNG EUROPEAN INVESTIGATORS

Phong Nguyen
Utrecht, Netherlands

2024 Finalist

Mechanisms on Completely Regenerating an Injured Heart

»The zebrafish can robustly regenerate its heart following injury. This is driven by the surviving endogenous cardiomyocytes being able to dedifferentiate, re-activate proliferation and generate new cardiomyocytes. Successful methods to induce proliferation have been intensively studied. However, the control of proliferation as well as how de novo cardiomyocytes redifferentiate and mature in order to integrate with the surrounding myocardium remains unclear.
My research examined calcium handling dynamics and found a gene called Lrrc10, a regulator of calcium acted as a negative regulator of proliferation and induced maturation. Lrrc10's dual function was also conserved in human iPSC-derived cardiomyocytes and mouse cardiomyocytes. Human iPSC-derived cardiomyocytes are commonly used for cell-based therapies, disease modelling and drug screens. However, their embryonic-like characteristics limits their use to fully recapitulate the adult human context. My research provides insights into the mechanisms required to induce cells to a more mature state and can have the potential to produce cell models that better represent adult cardiomyocytes.«

Dr. Phong Nguyen
At the time of application:
PostDoc at the Hubrecht Institute, Bakkers Group,
Upsalalaan 8, 3584CT Utrecht – Netherlands
E-Mail: p.nguyen@hubrecht.eu

Read more about our Award finalist Dr. Phong Nguyen

www.eppendorf.com/award

The Eppendorf Award is presented in partnership with

nature