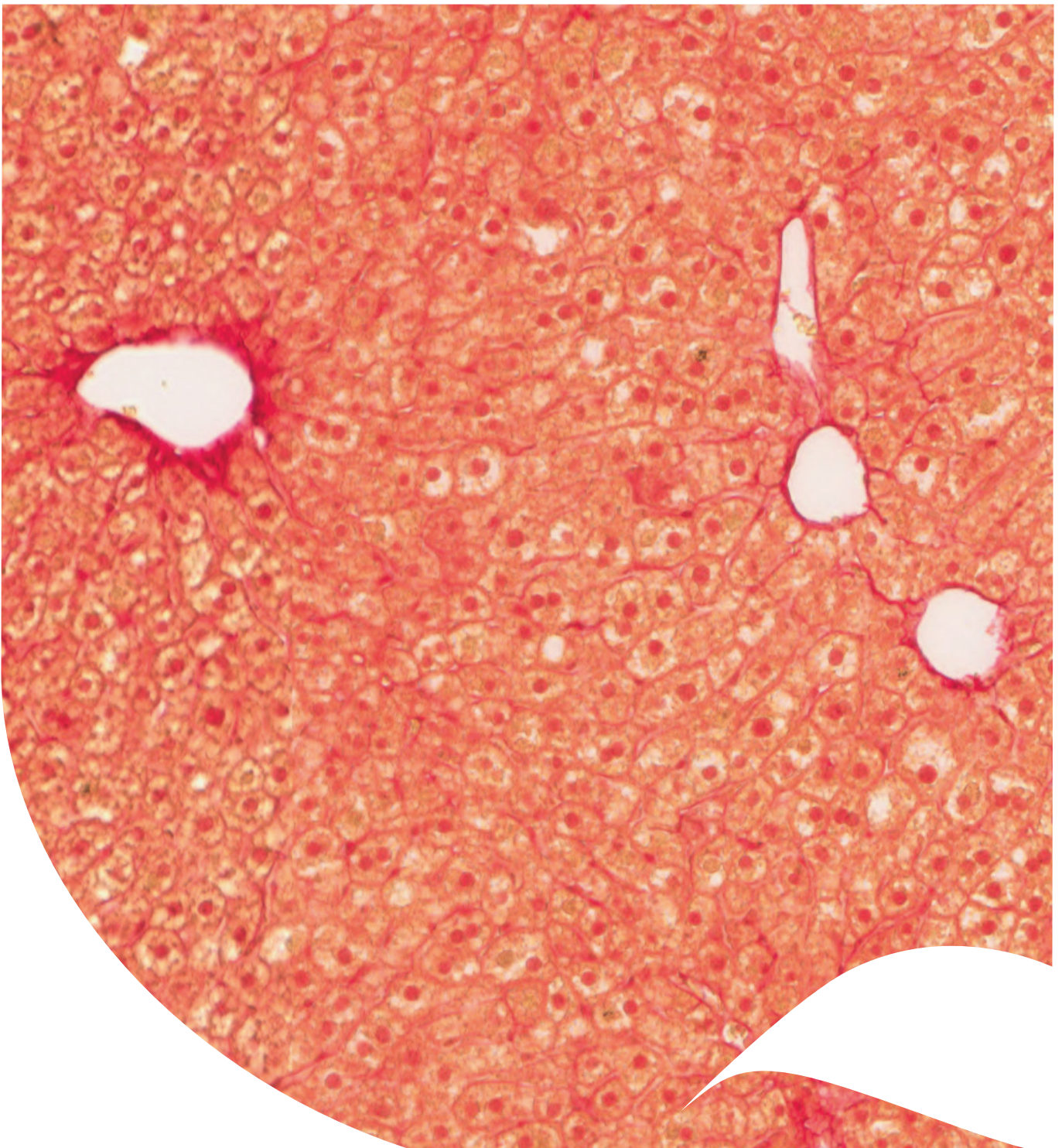


Biomedical Sciences
Endocrinology and Metabolism



The endocrinology and metabolism (Chen) laboratory is fully equipped for molecular and cellular biology studies of endocrine cells. In addition to our capability to carry out routine PCR, Western, cell culture, ELISA, histology and indirect calorimetric assessment in mice, we have four single cell patch clamp recording systems for ion channel studies, which allow us to simultaneously record intracellular calcium, single cardiomyocyte contraction/relaxation and single cell hormone exocytosis (membrane capacitance and amperometry).

Services

The Chen laboratory has well established non-obese T2D, obese pre-diabetes and obese diabetes mouse models. We also have transgenic mouse lines with specific growth hormone axes marked by GFP (GFP-GHRH, GFP-GH) for single cell studies. We have established a full range of pituitary hormone and pancreatic islet hormone supersensitive assays that allow us to record detailed hormone profiles in mice.

Equipment

With our established supersensitive assays and unique tail-blood sampling from conscious free moving mice, the Chen lab is currently the only laboratory able

to measure and analyse the pulsatile component of mouse hormonal secretion patterns. Our lab is also interested in key metabolic regulatory hormones, such as leptin, insulin, GH, adiponectin, orexin, GLP-1, glucagon, etc. in mouse models of human disease. Our single cell recording suites provide a unique platform for cell functional analyses.

The University of Queensland (UQ)

For more than a century, The University of Queensland (UQ) has maintained a global reputation for delivering knowledge leadership for a better world.

The most prestigious and widely recognised rankings of world universities consistently place UQ among the world's top universities.

UQ has also won more national teaching awards than any other Australian university. This commitment to quality teaching empowers our 53,600 current students, who study across UQ's three campuses, to create positive change for society.

Our research has global impact, delivered by an interdisciplinary research community of more than 1500 researchers at our six faculties, eight research institutes and more than 100 research centres.

UQ's School of Biomedical Sciences

The University of Queensland's School of Biomedical Sciences is making ground-breaking advances in modern medical science and providing students with the theoretical and practical skills for an exciting career in academia and industry.

Our innovative research encompasses the research spectrum from basic discovery through translational pathways to medical solutions, including:

- Investigation of cellular processes such as protein trafficking, cell signalling and organelle function.
- Study of how the dysregulation of bodily processes can cause serious human disorders such as infertility, Alzheimer's disease and autism.
- Musculoskeletal and neuromotor analyses to improve whole-body movement performance.
- Novel approaches to heal conditions such as spinal injury, motor neurone disease and cancer.

Contact

Professor Chen Chen

E: chen.chen@uq.edu.au

W: biomedical-sciences.uq.edu.au/research/groups/endocrinology-and-metabolism

W: biomedical-sciences.uq.edu.au/profile/972/chen-chen

CRICOS Provider 00025B



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

CREATE CHANGE