In this issue

This issue has a range of articles, public statements, abstracts and news items. In our first article, Geoff Chambers presents a historical review of the debates over the mechanisms underlying evolution that raged in the 1970s. He outlines how the challenges to Darwin's hypothesis of natural selection were resolved by the 'Modern Synthesis' entailing single-gene models that explained how mutations could remain in populations even when they were deleterious. Kimura's 'Neutral Theory', which recognised that mutations have low non-directional selection coefficients, can accommodate modern findings of 'rampant genetic variation at the molecular (DNA) level' and now 'serves us best as an excellent null hypothesis'.

New Zealand banknote promotes rugby is the provocative title of John Campbell's article about a young man grafting away in the forwards, who learned to play at Nelson College and Canterbury College and twice played on Christchurch's hallowed turf at the late Lancaster Park. The young man was Ernest Rutherford and the banknote the New Zealand one hundred dollar note.

Rutherford's rugby career was undistinguished but as John points out it was an example of what we are in danger of losing in this professional era: grass roots rugby is played not for financial reward but for comradery, enjoyment, and team spirit. John's account also provides insights into Rutherford's persistence coupled with luck in the pursuit of a research scholarship that allowed him to grow his science career at Cambridge University.

The paper by Sarah Harrison *et al.*, *One Health Aotearoa: a transdisciplinary initiative to improve human, animal and environmental health in New Zealand,* draws our attention to the increasing recognition that complex health challenges at the human-animal-environmental interface require a transdisciplinary, 'whole-of-society' approach.

One Health Aotearoa brings together and facilitates interactions between people from diverse disciplines, links to stakeholders and communities, and engages with policy-makers, government operational agencies, and funders, thus providing a holistic and integrative systems-thinking approach to address priority questions and achieve desired comprehensive outcomes.

Also in this issue, we have two Public Statements. The first, *Renewing the Aotearoa New Zealand Science System,* calling for a connected, evidence-based, adequately funded research ecosystem, is a plea from the Association for a wide-ranging review – with teeth. Socioeconomic pressures from Covid-19 and the climate emergency suggest globally and nationally we are at a crossroad. The motivations for rethinking and reorganising the science system are outlined – its purpose and structure – to give us the information and tools to take the best path possible for the challenges ahead.

The second is the call from the presidents of seven New Zealand scientific associations for Ministerial intervention in Massey University's science cuts.

This October 2020 call is in the form of an open letter to Massey University's Executive and the Ministers of Tertiary Education and Research, Science and Innovation[1] and says the sheer magnitude of proposed change, its lack of clear definition, and intended purpose stand in stark contrast to the legislative definition of a university.

Association president, Prof Troy Baisden takes the discussion of Massey's proposals further in his President's Column.

Finally in this issue we carry the abstract of 'Glass ceilings in New Zealand universities: Inequities in Māori and Pacific promotions and earnings' by Tara G McAllister *et al.,* and then, as news items, Vladimir Šucha's and Marta Sienkiewicz's 'Science for Policy Handbook', The International Science Council and the United Nations' technical report on hazard definition & classification, and the University of Auckland's Faculty of Education and Social Work's report on state of creativity in New Zealand schools.

Allen Petrey
Editor

[1] See http://bit.ly/MasseyCuts