In this issue

The topic of the 2013 NZAS conference was 'What is the value of science'. In this issue we carry two of the presentations given at the annual conference. The first, by Professor Sir Peter Gluckman, examines the value of science and matters affecting this value in the minds of the public and government. The second is by Dr David McNamara, an early-career emerging researcher, on his personal view on science's value and why he chose research as a career.

In his address, Peter Gluckman acknowledges the perennial nature of the need to demonstrate the value of public funding of science to the taxpayer and the need for the science community to do better at this.

After pointing out that government policy formation is strongly influenced by political dynamics and public opinion, and that investing more in science must be seen to have benefits that politicians can own, Peter compares the path taken by New Zealand with other small advanced economies in their public investment in science. He notes the underinvestment in New Zealand relative to small advanced economies such as Denmark, Israel and Singapore and explores possible reasons for this.

He also explores how a small advanced economy should operate its science funding system and maintains that, in view of the fundamentals of scale, a science system in a small country cannot simply be a scaled-down version of what operates in a large country.

Peter also touched on: the role and nature of peer-review in funding allocation; the climate of greater utilitarian attitude to public expenditure, and the consequent need to measure research impact and priorities; and the manner in which the policy and science communities can work more closely together to agree on what needs to be achieved.

In his address, Peter also commented on the value of incorporating the social sciences into New Zealand's biological and physical research efforts. For further insights into this, attention is drawn to the abstract of the paper by Philip Lowe *et al.*, *Why social scientists should engage with natural scientists,* carried on page 26. The abstract is accompanied by a URL to the authors' full paper.

David McNamara joined GNS Science in 2009, shortly after completing his PhD at the University of Liverpool. David is a structural geologist, who applies the scientific fundamentals of physics, chemistry and biology to the study of how rocks break and deform. The focus of his research at GNS Science has been on the geological aspects of energy.

In his address, David indicated that New Zealand is gifted with ideal geological settings that provide a wealth of renewable energy options which place the country in the enviable position of choosing where its energy future lies.

He pointed out that energy research goes hand in hand with other important scientific and social issues such as climate change and environmental conservation, and it's the ability to work in such a field that was the driving force for David choosing research as a career. He believes that the unique circumstances found here allow New Zealand to act as an example to other countries on how to successfully and responsibly utilise and manage a diverse range of energy resources as well as lead the way in renewable and clean energy research. For David, this global implication is one of the greatest values of science in New Zealand.

In *Not to be forgotten: New Zealand Association of Scientific Workers,* Geoff Gregory describes the early history (1941–54) of NZAS and the people who made up the membership of the early Association. Geoff has delved into past issues of *New Zealand Science Review* and committee minutes to bring us a fascinating story of the New Zealand science sector at the time. We meet notable figures from the past such as Drs Bill Sutch, the first president of the Association, Charles Fleming, the first recipient of the Research Medal, and Ernest Marsden, the first patron of NZAS.

Geoff has superbly pulled together the story of early years of the Association. It's a must-read for all members. In his concluding paragraph he writes,

> *During1954, it would elect a new patron, Dr Marsden (...), soon to become Sir Ernest [...], and the next President, Dr F B (Brian) Shorland, Director of DSIR's Fats Research Laboratory, a distinguished researcher, was also an astute negotiator and enthusiast for science [...]. It could look forward to a long future of working for scientists and the promotion of science in the wider community.*

Few would disagree that this last sentiment is what drives NZAS even now, and all will hope that Geoff Gregory's excellent account of the Association's first 13 years is but the first instalment of NZAS' seventy two-year history of promoting science.

Lydia Hingston**'s** science project on the effect of the antibiotics gentamycin, penicillin and tetracycline on four species of *Lactobacillus* probiotics was undertaken during years 12 and 13 at Queen Margaret College, Wellington.

The account of her study carried in this issue is an edited version of her Extended Essay towards the International Baccalaureate diploma. She also submitted her Essay to the NIWA Wellington Regional Science Fair, winning the Royal Society of New Zealand Wellington Branch Prize for best overall exhibit and a place in the week-long 'Realise the Dream' tour of science institutions from Auckland to Wellington.

Lydia has now started her tertiary study of Biomedical Science at the University of Auckland.

Finally in this issue we carry the obituary of Robert Martin (Robin) Williams CB, CBE and a review of the seven essays of the late Paul Callaghan GNZM, FRS, FRSNZ, collected in the recently published e-book *Paul Callaghan: Luminous Moments*. On reading the account of Robin's distinguished career and the essays chosen by Paul for publication shortly before his death, it is obvious that New Zealand can be proud of such 'men of science' as it can be of the 'emerging generations' as exemplified by David McNamara and Lydia Hingston

Allen Petrey
Editor