



22 August 2014  
Ministry of Business, Innovation and Employment  
Science Investment Group  
PO Box 5762  
WELLINGTON 6145

Dear Madam or Sir,

## **Re: Submission on the Draft National Statement of Science Investment**

### **Adding Fuel to a Thriving Bioeconomy**

NZBIO is the industry association for New Zealand's bioscience community. Our role is to help advance New Zealand's economic growth by assisting companies developing high value businesses from bioscience. We recognise that New Zealand already has a world renowned bioeconomy. New Zealand biotechnology has recently been ranked 8<sup>th</sup> in the world (Scientific American Worldview 2014), where each country's biotech performance was evaluated across seven categories: productivity, intellectual property protection, intensity, enterprise support, education/workforce, foundations and policy and stability. With modest improvements in key areas, it is conceivable for New Zealand to climb even higher in these rankings, ahead of Australia (4<sup>th</sup>) and Denmark (3<sup>rd</sup>).

*With our proximity to Asia and close links with biotech powerhouses such as the US, Singapore and even Australia, the New Zealand Biotech industry is very well positioned to bring significant benefits to our economy.*

However, New Zealand's export economy is heavily biased towards the primary sector. If the ratio of exports to GDP is to increase to 40% by 2025 to meet MBIE's Business Growth Agenda targets there will need to be significant growth in value of primary based-products, including high value food products. There will also need to be continued diversification into areas such as health care, medicines, medical devices and diagnostic products. All of these areas will require considerable investment in bioscience and this investment will be translated into value by companies in the sector led by NZBIO. This makes the Draft National Statement of Science Investment ("the Statement") of considerable importance to our organisation.

NZBIO sees the Statement as laying out some very broad high level goals and aspirations from Government. The Statement gives considerable detail on the input-side of government funded R&D schemes, but provides little information on the mechanism by which the Government proposes conversion to impact of research in industry. The Statement does not show a strategic approach as to how the two are connected. In particular it does not clearly address how research can be effectively connected to industry, especially how research workers can be given the skills and incentives to work with industry and how those connections can be funded. It does not sufficiently address how New Zealand can remain connected to changing international trends which open up new opportunities and markets for innovation and innovative technical products.

NZBIO finds that while the Statement sets out a broad framework for the system, and substantial descriptive detail on the individual funding schemes that comprise it, it does not give a convincing strategy for how the priorities will be addressed.

### **Increase Level of Investment**

NZBIO strongly supports targeting high growth- high productivity sectors including continued support of primary sector research and research that will support diversification of our economy into the high tech manufacturing sector, including healthcare, medical devices, pharmaceutical development and diagnostics.

NZBIO strongly supports increasing Government investment in R&D and the target of investing 0.8% of GDP, but we are disappointed with the caveat “as fiscal conditions allow”. Investment in R&D is a driver of economic growth and the Government should commit absolutely to an increase.

**Recommendation 1:** That the Government increase its investment in R&D to 0.8% GDP by 2020.

This would, under current conditions, mean an investment of around \$1.8bn which is only a modest acceleration of the investment proposed in the Statement to 2015/16.

### **Improve Commercialisation**

Commercialisation has become more complex and funders more risk averse. The amount of funding available to take research projects to the point where they are sufficiently advanced to attract private sector investment is not adequate and a substantial amount of research is wasted as a result. In particular, in the life science area, industry investors require clinical proof of concept and current funding levels severely restrict the ability of publicly funded researchers to undertake trials.

**Recommendation 2:** That commercialisation funding be increased from the current total of around \$12m pa to \$50m.

This would allow longer term involvement of industry with commercialisation projects and also the gathering of clinical data. NZBIO strongly supports the work of KiwiNet, Return on Science and the health Innovation hub and will continue to work with them and its members to bring New Zealand Innovation to market.

While the Statement recognises the need to increase government funding, we also need to assist our science companies and investors to attract offshore investment to support commercialisation.

**Recommendation 3:** That programmes that enable New Zealand scientists to engage with researchers, industries and regulatory agencies in other countries are developed and enhanced.

### **Improve Connections between Research and Industry**

Researchers currently receive little training in how industry works and are not well incentivised to engage with industry, locally or internationally, as part of their career progression. There is little movement of personnel between industry and academia which is a driver of technical uptake in other regions such as Scandinavia.

**Recommendation 4:** That courses to improve researcher understanding of industry be supported, particularly for Ph.D. and post. doctoral level researchers, and that direct contacts with industry (including time spent working in industry) be recognised in the career progression of researchers.

## **An Overall Strategy for New Zealand Research**

There has been considerable change in the New Zealand science system recently, particularly with the introduction of the National Science Challenges, Callaghan Innovation and the recent review of the Centres of Research Excellence. Many of these changes have been introduced to fix particular issues with the system with little apparent sense of coordination. The current funding system, described in the Statement, contains a broad range of schemes requiring the establishment of governance bodies to set research and commercialisation strategies without clear overarching objectives. Such schemes include the Primary Growth Partnership, Centres of Research Excellence, Partnership funding and the National Science Challenges. This encourages each group to address the challenges faced in its own area in a fragmented fashion and also imposes considerable overhead.

**Recommendation 5:** That Government develop a research strategy for the desired outcomes of its investment in research and how they will be achieved over and above a description of the input-side funding schemes in place.

This strategy would build on the current Draft Statement to link its high level objectives for Government investment R&D with the structural description of the funds in a co-ordinated manner.

We also need to acknowledge that the geographical isolation of New Zealand makes it a challenge to attract existing R & D capability. Incentives should be implemented, or augmented to stimulate local investment and attract offshore R & D companies and investment. Such incentives can include more attractive tax treatment of R & D and patent box approaches that have been successfully implemented overseas.

**Recommendation 6:** That Government invite, and provide incentives for, major and medium sized foreign biotech companies to conduct R & D in New Zealand.

These strategies also need to recognise the evolving landscape and demographics of New Zealand's young researchers and entrepreneurs.

**Recommendation 7:** That Government develop a research strategy that recognises the changing demographic of our young researchers and entrepreneurs, such that this evolving resource can be fully leveraged to face the worlds changing economic geography.

## **Conclusion**

The core role of NZBIO is bringing together researchers, industry and Government so New Zealand benefits from the applications of bioscience. The organisation will continue to work with all the organisations in the New Zealand science system, particularly MBIE, Callaghan Innovation, the Universities and CRIs and NZBIOs industry members to get value from the country's investment in bioscience research. Innovation in this area will be a key driver of New Zealand's economic success

both in the primary sector and the high value manufacturing sector and NZBIO will continue to contribute to that success

Thank you for the opportunity to comment on the Draft National Statement of Science Investment.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Will Barker', is centered on a light green rectangular background.

Will Barker

CEO

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