



**Australian Government**

**Chief Scientist**

**MEDIA RELEASE**

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### **THE PRESCRIPTION FOR THE FUTURE: PRECISION MEDICINE**

Your future healthcare will be increasingly fine-tuned to your unique personal needs, reports a new Occasional Paper from the Office of Australia’s Chief Scientist.

“We know that every human is a one-off result of their genes and their life experiences,” Chief Scientist Dr Alan Finkel said. “Advances in science and technology are clearing the way to what medicine has always aspired to provide: person-specific, custom-fit care.”

The Occasional Paper explores the promise of precision medicine, a term capturing the collective impact of advances in genomics, data science and computing. It draws on a report produced by Australia’s Learned Academies, working collaboratively as ACOLA.

The cost of sequencing a genome has fallen from over \$100 million in the early 2000s to \$1000 today, making the technology far more accessible to laboratories and clinics.

The technologies accelerating biomedical research are also transforming bedside care, in the form of more targeted treatments and more timely and accurate diagnostic tests. This can be seen in the hundreds of cancer patients already receiving customised therapy based on genome analysis, and metabolic defects being identified in newborn babies more rapidly and accurately than ever before.

Lead author of the report Professor Robert Williamson highlighted Australia’s potential. “Australia has and will continue to make a strong contribution through our research,” Professor Williamson said. “The challenge for policymakers is to ensure the benefits are widely shared.”

Dr Finkel, also emphasised the importance of public policy in guiding the healthcare transition ahead. “Precision medicine can ensure that Australian life expectancies remain amongst the highest in the world, but patients must have confidence that their personal data will be protected.”

The paper can be downloaded at [www.chiefscientist.gov.au](http://www.chiefscientist.gov.au). The Learned Academies’ report can be downloaded at <https://acola.org.au/wp/pmed/>.

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