Members of the National Press Club, distinguished guests; thank you for the opportunity to speak with you here today.

I want to start by acknowledging the traditional owners of the land we are meeting on today.

Europeans have been living in this part of the world for a little over 200 years.

Yet there are cave paintings in the hills just out the back of Canberra here that show that Indigenous Australians have been living here for at least 20,000 years.

It’s with that in mind that I’d like to acknowledge the traditional owners of this land, the Ngunnawal and Ngambri peoples, acknowledge their history and their culture, and pay respects to their elders past and present.

This afternoon I want to put two simple questions to you: Where do your medicines come from, and why should you care?

But first I’m going to ask you to imagine the following scene.

You wake up one morning and you read the newspaper headline: *Medicines scrapped in bid for Budget surplus*.

You read that as part of its drive for budget savings, the Government has withdrawn all prescription medicines and vaccines from the market.

This is going to save billions of dollars from the Pharmaceutical Benefits Scheme.

But there will be no more vaccines, for whooping cough or measles.

No more asthma puffers for children.

No more blood pressure tablets.

No more chemotherapy for cancer patients.

No more antidepressants or antibiotics.
And we all know someone taking at least one of those medicines.

So imagine the public outcry if that scenario were real.

Imagine the impact it would have on the health of ordinary Australians; what it would mean for hospital costs and the nation’s productivity.

And yet we never stop to think where our medicines and vaccines come from – except when suddenly we can’t get them anymore.

So, where DO your medicines come from and why should you care?

It’s a simple question with a number of complex answers.

The reality is not many people in the community actually have any idea where their medicines come from and most probably don’t think it matters all that much.

But I want to argue today that you should care where your medicines come from.

Because if we don’t stop and think about where the medicines or vaccines we’re taking do come from, we risk taking for granted that they will always be there when we need them.

We risk becoming complacent.

And if we take our medicines for granted, we may wake up one day and find that we don’t have them anymore.

So I’m going to tell you today both where medicines come from and why you should care.

And I’m also going to identify five key opportunities we have in Australia to ensure that the medicines industry can keep contributing to the health and wealth of our nation.

So where do your medicines and vaccines come from?

Well, medicines have been around for a long time.

By the time the first white settlers arrived in Australia, Aboriginal people had been using traditional medicines for thousands of years, taking natural ingredients from the Australian landscape.

For example, they used the oil from eucalyptus and tea trees as decongestants and as disinfectants. And they chewed the leaves of the paper bark tree to relieve headaches.

And on the other side of the world earlier this year, archaeologists found the wreck of a 2,000-year-old Roman trading ship lying at the bottom of the Mediterranean Sea.

Amongst the cargo they raised from the depths of the ocean were little clay bottles that were still intact and still sealed.
Inside were various herbs and plants, such as celery, onions and hibiscus, which still had their odour and, amazingly, were still well preserved after being at the bottom of the ocean – literally, since Jesus was a boy.

Archaeologists believe these were medicines and, if that’s right, they are the oldest medicines still preserved that have ever been found.

So medicines have been around a long time.

But they have certainly come a long way since the days of using simple herbs to treat people.

When you step back and think about some of the major technological developments in medicines over the last 100 years or so, there have been some amazing milestones.

The discovery and development of penicillin.

Vaccines that have all but eradicated diseases such as smallpox and polio.

Anti-retrovirals, which have transformed HIV/AIDS from a disease you die from into a chronic disease you live with.

The development of a cervical cancer vaccine.

And the emergence of an entire new dimension to the way we treat disease with the arrival of new biological medicines.

Today, the business of researching, discovering, developing, manufacturing, approving and marketing medicines is a global industry worth $850 billion annually to the world.

It employs millions of people worldwide in high skill jobs – people who are committed both to building successful businesses and finding cures for disease.

This is one of the great things about the medicines industry: that people can build successful commercial enterprises that generate wealth, employment and innovation and that make the world a better place.

The two objectives can, and do, co-exist.

It is an industry that works with the best that science has to offer and transforms it into medicines and vaccines that help make the world a better place for humanity.

The critical thing here to remember is that this process of bringing new medicines and vaccines to the global community is not easy.

In fact, it’s very difficult.

If it were easy anyone could do it.
But the fact is, you need the commercial resources of a medicines company to bring a medicine to market.

On average, the cost of developing a new medicine is around $1.4 billion and it takes 12 to 15 years to take that medicine from the laboratory to the patient.

To give you an example, Professor Ian Frazer’s cervical cancer vaccine developed at the University of Queensland was first patented in 1991. But it wasn’t until 2007 that the vaccine, Gardasil, was listed on the Pharmaceutical Benefits Scheme.

That’s 16 years in development.

The time it takes to bring a new medicine to market is substantially longer than it takes, for example, to bring a new car to the market, or a new iPad.

And the commercial risks for companies developing new medicines are, frankly, enormous.

For every 10,000 potential new medicines a company might start with in the laboratory that could possibly turn out to be a new medicine, only one will actually end up being a medicine that makes it to market and is taken by patients.

One medicine out of 10,000.

At various points through the development process the other 9,999 potential medicines are whittled out, but the company still has to cover the costs of taking these 9,999 medicines through the development process.

Those medicines drop out for various reasons. It might be that the medicine proves not to be as clinically effective as originally thought. It may be due to safety reasons. It may be that the medicine proves not to be commercially viable.

All of this is commercially risky for the company.

Given the time it takes to develop a medicine and get it approved, the company effectively only has about 11 years left of the medicine’s remaining patent life to cover the costs of developing that medicine, plus the cost of testing all the other failures, and then getting a commercial return.

People sometimes ask why do medicines cost so much money.

Hopefully you can see that for a company to engage in this process it has to expect a decent commercial return otherwise it may as well pack up and go and invest in something much less risky, like real estate or just go and put its money in the bank.

It also explains why we need pharmaceutical and biotech companies to do this investment.

I don’t know about you, but if someone came to me and asked me to take on the risk of investing over a billion dollars in developing a product with a 1 in 10,000 chance of success, I’d be politely telling them to go and get lost.
Yet, it’s these sorts of numbers that have delivered the medicines and vaccines we have today that have made lives better for millions of people around the world.

At this point, you are probably thinking ‘so what?’

And it’s a fair question.

These are all very interesting statistics, but why should anyone care how difficult it is for companies to develop medicines and vaccines?

Isn’t that their job?

If they can’t be commercially successful in developing a medicine isn’t that their problem?

Well, yes it is .... to a point.

But here’s the thing, if the industry collectively is not successful at developing medicines over the long term .... it’s everyone’s problem.

This might all seem like a boring technical economic discussion for pinheads about profit and risk.

And it is.

Until suddenly it’s your kid who has cancer and needs the latest cancer medicines.

It’s your ageing mother slowly developing dementia.

It’s your arthritis that’s so bad, the old medicines don’t work and it’s too painful to play with the grandkids.

Or it’s you that’s one day diagnosed with breast cancer or prostate cancer, in the prime of your life.

Where your medicines come from matters to everyone.

In Australia, we can be extremely proud of the industry’s contribution to the health and wealth of the nation.

Not many people know this, but Australia actually does have some significant capability in developing medicines for the world using great science, innovation and technical knowhow.

- One of GlaxoSmithKline’s major global manufacturing plants to supply the world with Relenza, the influenza anti-viral medicine, is located right here in Australia, in Boronia in the outer eastern suburbs of Melbourne

- Relenza, incidentally, was developed by an Australian company, Biota.
- AstraZeneca is a major supplier of medicines to the rapidly growing Chinese market. Its factory in North Ryde in Sydney is AstraZeneca’s global single source manufacturer to China for an asthma and lung disease medicine.

- Australia supplies around a quarter of all poppies required to make medicinal opiates, which are grown in Tasmania.

- CSL, a leading Australian-owned manufacturer of vaccines and medicines, is one of Australia’s leading industrial companies.

- IDT Limited, an Australian-owned company based in Melbourne, exports active ingredients for cancer medicines to companies all over the world.

- Leo Pharma, a Danish company, has production facilities on the Gold Coast in Queensland that manufacture active ingredients for skin conditions.

- And there’s a clutch of up and coming Australian biotech companies, like Acrux, Pharmaxis, Mesoblast and Biotron that are developing new medicines in Australia and starting to export to markets overseas.

I could go on, but you get the idea.

The medicines industry employs 14,000 people in Australia.

That’s 14,000 ordinary Australians, like you and me, who work around the country every day in companies bringing medicines to the community.

Whether they work as a clinical researcher developing a new medicine or vaccine. Or as a medical expert looking at the best uses for the medicine.

Or as a sales representative working with your local doctor, or as a regulatory expert navigating the maze of regulations governing the industry, all of these Australians make an important contribution to the nation that is too often overlooked or sometimes deliberately ignored.

The industry exports medicines to countries all over the world which earns Australians $4 billion each year.

Now, to put this into perspective, that’s more than Australia’s total exports of cars and more than our total exports of wine.

So, while Australians are rightly proud of our exports of cars, wine and beer, in fact we export more in medicines and vaccines than any of these.

And the industry invests $1 billion a year in research and development in Australia, making it a more important R&D performer than the car industry and putting it in the same league as the mining and financial services industries.

The companies in the Australian medicines industry conduct about 700 clinical trials each year.
As well as being good for Australia’s research and innovation effort, they also allow 18,000 Australians each year to participate in trials of new experimental medicines. This provides patients with an opportunity to potentially have access to cutting edge new treatments they may not otherwise get.

Recently I had the privilege of meeting a patient who is benefiting directly from a clinical trial being conducted in Australia.

Alfred lives in Melbourne and has prostate cancer. He has had various treatments over the years and has been living with prostate cancer for the last decade.

He is currently on a clinical trial for a new prostate cancer drug developed by several companies in partnership with researchers in Australia and overseas.

While this prostate cancer medicine is not yet commercially available, Alfred is benefiting from that treatment and explained at a recent forum in Melbourne how he believes the treatment is making a material difference to his management of prostate cancer.

One of the real pleasures of my job is that occasionally, in the midst of all the statistics and the policy debates and the arguments and the politics, you really get a reminder about why, at the end of the day, we are all here doing all this stuff.

It’s making lives better for people like Alfred.

And Alfred, if you’re watching – I hope you are doing well!

The science behind how medicines get developed is fascinating as well.

It is truly amazing sometimes where researchers discover new treatments for disease.

Here’s another question for you to ponder: What do a yew tree, a Gila monster lizard, and a Caribbean sponge all have in common?

They have all inspired medicines that today people take to get better.

The Pacific yew tree provides the raw ingredient for the cancer medicine, paclitaxel which is on the Pharmaceutical Benefits Scheme.

Also on the Pharmaceutical Benefits Scheme is the diabetes medicine, Byetta.

Byetta is the synthetic version of an enzyme found in the saliva of the Gila monster, a lizard from the south-western deserts of the United States.

And Cytarabine, modelled on compounds from the Caribbean sponge, treats leukemia and lymphoma.

The fact is, none of these would have benefited Australians today if it weren’t for the companies in the medicines industry that invest in developing these medicines.
I find it incredible that despite all the advances in the development of medicines over the years, we as a society often singularly fail to recognise the benefits of those treatments.

We have come to take them for granted.

And it matters.

So now you know where your medicines come from.

Which takes me to my next question: why should you care?

You may still be sitting there thinking ‘so what?’

‘That all sounds very interesting.’

‘All that stuff about thousands of medicines and jobs and lizards all sounds great, but why should I care?’

‘Why should I care where my medicines come from?’

Well the point is you should care.

Because if we don’t care about where our medicines come from, we risk becoming complacent and taking for granted something that may come to an end if we don’t think about it.

If medicines companies cannot continue to develop new treatments, if it gets too difficult, if there are too many barriers and not enough pathways, it is everyone’s problem.

If the world forgets where its medicines come from; if we get it wrong, we compromise the development of new medicines in the future. And our grandchildren will be using the same medicines that we use today.

In other words, they will miss out on the extraordinary medical innovation of the kind that has benefited our generation over the past 40 years.

And what a shameful legacy that would be.

You might think I’m being over-dramatic, but it’s actually already happening.

You hear stories from time to time of what happens when the community takes for granted where its medicines come from.

- A government deferring the listing of new medicines on the Pharmaceutical Benefits Scheme in Australia.
- Or women having to pay full price for hormone replacement therapy.
- Or shortages of medicines in hospitals here in Australia.
Or a lack of new medicines and vaccines to treat antimicrobial resistance, influenza or tropical diseases in developing countries.

All of these, in part, stem from the broader community forgetting or not valuing how medicines really get developed, the companies that do that development, and the sort of help those companies need to develop and deliver those medicines.

So what should we be concerned about?

If we all agree that we should care about how our medicines are developed, what are the key policy drivers of a viable medicines industry that can continue contributing to healthcare and economic prosperity?

Well, in Australia at least I think there are five:

- A social licence to operate
- A responsible approach to pricing
- A robust intellectual property framework
- A stable and predictable policy environment; and
- Support for R&D, investment and manufacturing.

The first of these is the medicines industry’s social licence to operate in the community.

By this I mean, the rights and obligations the medicines industry has to serve society.

This is critically important.

Because a license to operate is a fragile thing.

It is being hotly debated here and around the world at the moment in different contexts.

The industry itself is constantly becoming more aware of its responsibilities in the community: be it in terms of how it researches its medicines; publishes the results of its research; markets its medicines; designs its packaging and labelling; how it conducts itself in relating to patients and doctors; or in philanthropic support to the broader community.

I believe the industry has responded, and will continue to respond to these responsibilities as they change and develop with changing community expectations.

But equally, the community has to reflect on the industry’s licence to operate.

The industry needs to be here.
It should be promoting itself, developing its medicines, marketing those medicines, and developing brands.

The industry is sometimes criticised for having brands, investing in marketing, wanting to make a profit, and being commercially successful.

But is it fair to criticise the pharmaceutical companies for doing all this when, in reality, it is part of being a business, like a business in any other industry?

Now obviously, the medicines industry is in a special place.

We are not talking about the development of the latest plasma screen, vacuum cleaner or space rocket.

We are talking about the industry that develops the medicines and vaccines that save lives and make the world a better place.

The industry that has already helped consign diseases like polio and smallpox to the history books. An industry that is continuing to transform the way people live their lives.

And that does come with special obligations and responsibilities.

But while commercial success, profit, branding, marketing, investing and shareholder returns are accepted as normal in just about every other industry, the medicines industry is called to account for doing that.

And yet, it is this drive for success, the investment of time and money, and the hard work of the companies and the people in the industry to both be a commercial success and help prevent and cure disease that gives us the medicines we have today.

Medicines to treat illnesses such as cancer, heart disease, depression, HIV/AIDS, arthritis, measles and asthma.

The second driver is a responsible approach to pricing prescription medicines. Now of course governments always want to get the best medicines they can for the cheapest price.

But ultimately, you get what you pay for.

The medicines you are taking for your cholesterol, your arthritis, your cancer, your asthma took a lot of time, energy, risk and money to develop.

Manufacturers need to make a sufficient commercial return on those medicines so they can continue to develop new ones in the future.

If they don’t, those companies can go and invest in housing, or bonds, or term deposits and earn the same amount of money for a lot less risk.
That's why medicines have a price: so that more medicines can get developed in the future.

This is often lost in the debate about the price of medicines, but it is a key to improving human health and ensuring a viable medicines industry.

Third is a robust intellectual property framework.

The medicines industry has one of the longest lead times for bringing new products from research to market of any high tech manufacturing industry.

It takes longer to bring a new product to market for medicines than it does for computer software, consumer electronics, or semiconductors.

Developing new medicines just won't happen if companies cannot be confident they will be able to secure sufficient commercial return on their investment.

This is why the industry gets so concerned about things like intellectual property and patents.

Proposals we've seen in Australia to ban the patenting of all biological materials just don't make sense.

And while just about every other industrialised country in the world agrees that companies should have legal protection of their clinical trial data from being used by competitor companies, and are actually increasing that period of time – Australia is way behind international best practice by providing only five years’ protection.

Fourth, there is the need for predictability in the policies governments use to regulate and subsidise medicines.

We’ve seen around the world in the wake of the Global Financial Crisis governments desperately trying to rebuild their shattered budgets and find savings any way they can.

Regrettably, an easy target for this short-term grab for cash is the supply of pharmaceuticals.

Across Europe we have seen wave upon wave of reform, restrictions, price cuts and budget cutbacks all aimed at reducing spending on medicines and cutting returns to pharmaceutical companies.

This is all being done in the name of short-term cost containment without any real regard for the long-term consequences of this on the future development of medicines for humanity.

And this is an important point.
We need to ensure we don’t follow Europe’s lead in slashing health budgets. We’ve seen the mistakes being made in Europe, both in economic management and in healthcare management, where patients are being denied medicines – much like the scenario I outlined at the beginning.

We must make sure we don’t make those same mistakes in Australia, but if policymakers forget where our medicines come from, we run the risk of doing so.

For more than 60 years, Australians have benefited from the Federal Government’s reimbursement scheme for medicines, the Pharmaceutical Benefits Scheme.

And the medicines industry has, rightly, been a central player here, constructively engaging with governments, other stakeholders in the health system, and the broader community to make it the success that it is today.

The high watermark of this engagement was reached last year with the signing of the Memorandum of Understanding between Medicines Australia, and the Federal Government.

This agreement set a good four-year framework for managing the PBS in a way that secured savings for the Government to list new medicines, predictability for industry, and process improvements to the PBS that are benefiting patients.

This agreement, I believe, is one of the best pieces of collaborative public policymaking the Labor Government has achieved with business since it was elected in 2007.

Which makes it all the more incredible that earlier this year the Government would introduce what is, effectively, a new process for approving medicines on the PBS by substantially extending the Federal Cabinet’s ability to defer indefinitely the listing of new medicines.

This was done without consultation with industry, or anyone else for that matter. It lacked any transparency or predictability and was done without defensible justification.

It was bad policy. It was bad for patients, bad for companies, bad for the health sector, and bad for the government.

In the last few weeks the Government has come to the table to resolve the issue and that’s encouraging.

But there are still some issues to be work through, not least how Cabinet is going to consider new medicines in the future.

In a high-income, developed country like Australia the Government should be able to afford to subsidise new medicines for sick people.

From the point of view of the companies that make the medicines that were deferred, it causes uncertainty, a lack of predictability, and enormous commercial problems.
It shows what happens when you don’t stop and think about where your medicines come from.

And the final driver of a viable medicines industry is a supportive policy environment to encourage innovation, research and manufacturing in Australia.

At a time when Australia is debating the future of manufacturing in this country, we have, right under our noses, an industry that already delivers so much to the community and economy through jobs, skills, wages, exports and R&D.

An industry that has an excellent industrial relations record and generates good exports, foreign investment, high-skill, high wage-jobs and some of the best scientific minds in the world.

An industry that has a low carbon footprint for the economic growth it generates.

It is a perfect industry for a country that is trying to develop a smart, high-wage, high-skill, innovative, low carbon economy.

Yet, while we have a toehold in the global medicines industry, we could be doing so much more.

If we were serious about building on the industrial capability we already have in this country, we should be backing Australia’s medicines industry and encouraging it to reach its potential.

We have the people, the skills, the ideas, the research, the infrastructure, the companies, the history and the critical mass to take the next steps and make Australia a key niche player in the global medicines industry.

If we want to.

The Australian industry is, however, under challenge.

After much growth through the 1990s and first half of the 2000s, exports have stalled at $4 billion a year and R&D has plateaued at $1 billion a year.

Employment has not grown for a long time.

And, incredibly, while the rest of the world is seeing growth in the number of clinical trials being performed to test new medicines, the number of new trials in Australia has fallen for the last three years by an average of 13 per cent a year. That’s not sustainable.

There are both challenges and opportunities for the Australian medicines industry from the growth of emerging markets, particularly in Asia.

We can develop this industry even further into one of the key Australian high-tech industries to help set up a post mining-boom future.
If we stop and think about where our medicines come from.

So, in conclusion, the way humanity develops medicines and vaccines has come a long way over the last few thousand years from the village medicine man in ancient Australia or the Roman Empire to today’s multi-billion dollar, commercial, science-based, global pharmaceutical industry.

And humanity is the better for it.

Today’s medicines industry does good things.

The people in it do good work.

But we need to remember that.

We need to remember where our medicines come from.

And we all need to care about that: so that the kind of benefits from medical advances our generation has enjoyed over the past few decades can be enjoyed by generations to come.

Thank you.