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AusBiotech CEO: Biotech is unpredictable economic market

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AusBiotech, which is Australian biosciences' flagstaff industry organization comprising of a network of over 3,000 life sciences companies, has been providing representation and services to promote the global growth of Australian biotechnology for the past 25 years. Dr Anna Lavelle, chief executive officer, AusBiotech, Australia, speaks about the latest developments that have taken place in the association for the past two years and also how AusBiotech's is cultivating a supportive environment to enable companies to grow and advance their commercial interests. Here are the excerpts from her interview.

What are the major developments/activities/achievements of the Association in the last two years?
The last two years have been a significant period for AusBiotech and for the Australian biotechnology industry, with: major achievements in public policies impacting the sector, such as the introduction of the 'Research and Development Tax Incentive'; the building of a strong showcase platform to attract investment in promising Australian biotechnology companies; and the anniversary celebrations, marking 25 years since AusBiotech began as the Australian Biotechnology Association (ABA) to support the growth of the industry. Meanwhile the industry organization has continued to deliver expanded services and networking events, and the flagship annual industry conference that attracts more than 1400 people from around the globe each year to share views and latest happenings.

What are the major policies developments and changes in the field of bioscience that have happened recently in the country?
The strong performance of the biotechnology sector in an unpredictable economic market, underscores the industry's success, maturation, and resilience. The Australian biotech industry was named the fifth most innovative in the world, by the Scientific American World View magazine (2011). There's a buzz amongst investors, most notably about the value offering available in Australia, and increasing activity in mergers and acquisitions, as well as licensing deals.

Dominating AusBiotech's advocacy agenda has been the work we have done in representing the membership's interests on public policy issues with the potential for profound impacts, with the main focus on supporting the delivery of capital to our sector via the R&D Tax Incentive and addressing the campaign by others to ban patents on biological materials. The introduction of the $1.8 billion R&D Tax Incentive program legislation last year was a momentous and pivotal inflection point for Australian innovation; the type we as a community will look back on in admiration and congratulate its architects' foresight. It was the culmination of years of campaigning, planning consulting and AusBiotech advocacy, which was initially flagged as part of the Australian Innovation Review of 2008, known as the Cutler Review.

What is the size of the life science industry in your country and the split size of pharma/biotech/medtech industry?
Despite the challenges of the global economy and the degree of difficulty in building a biotechnology and life sciences sector from scratch, Australia is doing very well by any comparative measure, with an impressive return on investment from a maturing stock of quality companies. Australian biotechnology boasts a raft of success stories and a world-class industry. Australia is already a leading location for biotechnology companies with over 900 biotechnology companies (400 therapeutics and diagnostics and 500 - 900 medical technology companies (Innovation Dynamics, 2008 & IBIS World, 2005)). The Australian biotechnology sector is still dominated by human therapeutics companies, but encompasses the fast-growing sectors in agriculture, food technology, medical devices and diagnostics, industrial applications and cleantech.

With respect to industry credentials, there are currently 100 ASX-listed life sciences companies, with a market capitalization of $40.7 billion (BioForum, Oct 2012). In a global context, the Australian biotech sector boasts the largest listed biotechnology sector as a proportion of GDP in the world (Beyond Borders, 2011). As 2013 commenced, Sirtex Medical was hailed a stand-out performer for 2012 and some analysts are tipping the biotech sector to be a "hot space" in 2013. At the close of trade on Christmas Eve, the S&P Indices replaced Integra Mining Limited with Sirtex Medical (SRX) on the S&P/ASX 200 and the good news didn't end there for the oncology treatment developer. Having freshly joined the S&P/ASX 200, Sirtex took second place for the highest share price increase for 2012 at 193 percent, on the back of its September report of a 37 per cent increase in sales of lead product, SIR-Sphere microspheres. The performance prompted The Australian Financial Review (7 Jan 2013) to refer to Sirtex as the "poster child for the medical research and bio-pharmaceutical sector."

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In addition, the PricewaterhouseCoopers ten year report (BioForum, Oct 2012) shows the Australian Life Sciences Index has consistently outperformed the NASDAQ Composite Index and the All Ordinaries since mid-2006. Despite the GFC and the reduction in venture capital availability, biotechnology has delivered to investors. Take away the three majors from the Life Sciences Index and in 2008 the Index parted ways with the All Ordinaries and has dramatically out-performed it since, almost quadrupling its performance in the latest reading. In four years the often-cited index has failed to come anywhere close to biotechnology's SME performance. The NASDAQ Biotech Index, perhaps the best comparative measure of US biotechs, hit a 12-year high in July, but is nevertheless trailing behind the performance of the Australian Life Sciences Index. Admittedly the Australian stocks have come off a lower base but the result demonstrates a portfolio approach is an attractive investment option.

Australia's comparative advantage comes from its world-class science and medical research, its capacity for international partnerships, cost effectiveness, and a transparent and effective regulatory system. More recently the Federal Government has introduced a research and development tax incentive, which is attracting global investor attention. The emerging trends of foodtech and cleantech have gained momentum in Australia, and the medtech sector is surging forward, to follow in the footsteps of medtech industry pioneers, Cochlear and ResMed. There are more than 500 medical device companies in Australia. Of the ASX-listed biotech companies, 40 are medical device companies. Total market capitalisation of listed medical devices companies was $9.546 billion (PricewaterhouseCoopers, BioForum, Q2, FY2012). The medical diagnostics sector is a similar size (AusBiotech CEO Industry Position survey 2012).

What are the major challenges faced by the bioscience industry in the country and how can the association be instrumental in streamlining them?
When it comes to fundamental discovery in science and biomedical research, Australia is a legitimate and impressive global contributor, producing three percent of the world's research publications with only 0.3 percent of the population. However, our ability to translate this strength into tests, cures, treatments and vaccines to benefit the Australian community could be so much better than it is currently. The Global Innovation Index (INSEAD, 2012) ranks Australia 13th in terms of innovation input and 31st in innovation output. Impressive. But when these figures are converted to innovation efficiency ratio of output over input, Australia dives to a ranking of 107 out of 141 countries assessed. This stark measure shows that Australians are brilliant at coming up with ideas but inefficient at translating them into products.

In a recent submission to the (McKeon) Strategic Review of Health & Medical Research on how to increase the levels of commercially sponsored translation of research, the Association of Australian Medical Research Institutes (AAMRI) used triadic patents to measure commercialization success, as these patents are registered for the same invention in the US, Europe and Japan. AAMRI found Australia ranks 20th in the OECD in terms of triadic patents per capita, which accounts for less than 0.8 percent of the world's triadic patents. AAMRI said: "Australia's commercial translation of Government-funded research is poor by international standards...This represents tens of thousands of inventions not capitalised on each year, and means as a nation we are losing out on returns on our investment in research in terms of attracting private and foreign investment for product development, profits from the sale of products, taxation revenue, and patient benefits."

So why is Australia's performance so poor in translating its demonstrated advantage in the area of biotech innovation into products and services for the community?
One often-cited reason is the poorly-targeted and under-resourced government programs for commercialisation, particularly at the early stages of company development. Australia's biopharmaceutical industry outperforms the wine or automotive industries' exports and yet there is still little industry support for commercialization in the life sciences sector. The Federal Government spends more than $8 billion annually (ABS, 2010) on research and experimental development, with about 98.5 percent provided to the research end of the spectrum, leaving only about 1.5 per cent of that spent on commercialization: translating the research into products. It is estimated that half of the commercialization funding goes to the automotive industry.

It's often said in industry circles that the Australian Government is good at supporting research end of the R&D spectrum, but the development end is continually left wanting. Different types of government support are needed, from direct industry assistance to business environment changes like taxation and reduced compliance costs. It takes a minimum of 6.3 years for evidence to reach peer-reviewed publication, followed by an average of 9.3 years to implement the evidence clinical practice. It takes an average of 12 years and $1 billion dollars to bring a medicine from discovery to regulatory approval. This is an area that requires long-term and patient investment, well beyond the scope of an electoral cycle.

What are the major focus areas of the country? Is it manufacturing, drug discovery, research or services?
Australia is showing strong comparative advantages and capabilities in manufacturing and medical discovery and exports. The majority of companies responding to the AusBiotech CEO Industry Position survey 2012 (62.0 percent) are manufacturing. 46.0 percent of the overall respondents are manufacturing in Australia and 34.0 percent are manufacturing overseas. There is a crossover of 18.0 percent of companies manufacturing both overseas and in Australia. Australia has a competitive and comparative advantage in 'high tech, high cost, low volume' manufacturing, for example as is used in the production of elaborately transformed goods such as medical devices and bio- pharmaceuticals.

Australia's competitive edge is also shining through as pharmaceutical manufacturing exports are on the rise. Pharmaceuticals have officially taken over as Australia's number one export, with $4.1 billion in 2011-12. This is substantially more than the car industry at $2.8 billion and more than double the wine industry at $2 billion, for the same period. Australia is home to numerous world-class medical research organizations, including the Garvan Institute, Institute for Molecular BioScience, Menzies Research Institute, John Curtin School of Medical Research, Walter and Eliza Hall Institute of Medical Research (WEHI), Australian Institute of Bioengineering and nanotechnology, Brain Institute, Diamentina Institute, The Lowy Research Centre, Victor Chang Cardiac Research Institute, Baker Medical Research Institute, The Burnett Centre and South Australian Research & Development Institute.

What is the plan of action of the association for the next two years?
The plan for the next two years will see AusBiotech's active stake in policy and advocacy activities continue, informed by the 2013 CEO Industry Position Survey that is currently underway. The organization is also supporting the industry with a range of projects. Of note is AusBiotech's international investment series and the most recent project is supporting the governance of Boards to increase their attractiveness to investors. AusBiotech Investment offers a comprehensive series of national and international investor events as a global platform for Australian life sciences companies to showcase their company's offering for partnership and investment. Biotechnology and mining are the only Australian industries to actively seek investment in this way and it has proven to be a successful formula.

At AusBiotech 2011, research and consulting firm, Insync Surveys, conducted an independent and confidential review (AusBiotech, 2012) of Australian Summit, which has been held annually since 2009. While it's difficult to quantify, investors were asked to estimate the value of deals they expect from investment discussions they initiated at ALSIS 2011, and the actual value of deals that were done. The results show that between $33 and $99 million had been invested in the presenting companies a result of the 2010 and 2009 events. At the conclusion of the 2011 event, $228 million worth of deals were in discussion, suggesting the Summit would generate substantially more investment than previous years.

The "Board Enhancement" project, which has just commenced, was designed to support and enhance the governance of Boards of Directors leading life sciences companies, with two documents. In addition to the 'best practice' message that the project's resulting documents will provide to investors and others, it also, very importantly, seeks to support and build the capability and understanding of less experienced directors or those new to life sciences. Providing clear guidelines assists the company executive by reinforcing the necessary steps that the company and its Directors will need to consider in its responsibilities. What is well appreciated is that innovative, technically-focussed companies in the life science sector have different pressures, such as mandatory regulatory considerations and a different business cycle than many other industries. Therefore, directors of such companies do require additional knowledge, not generally learnt from available materials or taught in mainstream governance courses.

In partnership with the Victorian Government, the ASX, venture capitalists and company CEOs and chairs, the project will have two prongs (resulting in the two documents). While the first part will see update/improve and reproduce a Code of Best Practice for use by innovative life science companies; part two will produce a practical guide for directors of public and private life sciences companies. With 2013 looming as another challenging year on the economic front, and will include the uncertainty created by an election, the biotechnology industry pins its hopes on the vision and commitment of our country's policy makers and their will and capability for nation-building leadership. It also pins its hopes on the proven ability to attract overseas investment and to develop technology to a stage that represents value and opportunity for partners and ultimately the community.