

BIO 2016 – Shareholder Update

21 June 2016



Dear Shareholder,

As I write this I am returning from a busy round of overseas investor meetings which have provided valuable opportunities to showcase the work Pharmaxis is undertaking, brief potential partners and highlight the achievements of the past 12 months.

Key among the opportunities has been attendance at the [2016 BIO International Convention](#), the annual global event for biotechnology in San Francisco. This is a vast and fast-moving event which this year was attended by almost 16,000 industry leaders from 76 countries. The BIO Business Forum hosted a record-breaking 35,700 [partnering](#) meetings with more than 3,400 companies participating.

The drug discovery efforts at Pharmaxis are very much commercially driven and this is an important event for us to conduct market research amongst our target customers – Big Pharma. I'm pleased to report that interest in Pharmaxis is growing and I was forced to turn down some 100 requests for meetings in order to focus on an ambitious set of objectives. These have been reported on in a pre and post interview I conducted with the Bioshares publication (available on the [Pharmaxis](#) website) but I wanted to expand on some of those themes here in a direct communication to Pharmaxis shareholders.

The most important objective was to connect with companies with whom we have previously discussed our LOXL2 anti fibrotic program to keep them informed of progress and timelines. My conclusions were that:

- Liver disease and NASH (Non Alcoholic Steatohepatitis) in particular remains on the priority list for many Big Pharma companies who are looking to supplement their pipelines with drug programs that will complement their in house efforts. The competitor drugs currently about to enter phase 3 are attracting a lot of attention because of their stage of development but there is no sense that these first drugs will solve the problem. There is plenty of room for effective drugs with novel mechanisms of action and, with Deutsche Bank putting a forecast of \$35 billion on the NASH market by 2025, there are a lot of big companies investing in this space.
- Enthusiasm for LOXL2 as a target remains very high in spite of Gilead's decision to stop its phase 2 Idiopathic Pulmonary Fibrosis study with its LOXL2 antibody. We have good data showing much higher levels of inhibition of the enzyme than the antibody achieved in identical conditions so I remain convinced that our LOXL2 small molecule inhibitor program will generate a competitive partnering process after completing phase 1 clinical trials. The deal values for phase 1 and phase 2 transactions in the fibrosis space are very significant.

We also wanted to evaluate interest in our neuro inflammation SSAO/MAOB program amongst companies that are looking for Alzheimer's drugs. Do they believe that the target has a place in treatment and what pre-clinical models would convince them of the potential value? What other

neurology indications do they think it might be appropriate for? The answers to these questions will guide our next steps in the pre-clinical development plan. I learned that:

- Finding disease modifying treatments for Alzheimer’s disease remains a priority for many companies with predictions that this will be the first trillion dollar market. Pharmaxis is coming quite late to this market but I was encouraged by the interest we received in our SSAO/MAOB dual inhibitor program. Some companies felt that there remained a strong need for a centrally acting non-steroidal anti-inflammatory and were keen to follow up with us after BIO.
- Some companies also thought that the target might be appropriate for other indications. Something else to consider and seek to validate through disease specific models.

BIO is a great place to test research targets/ideas with multiple players. Pharmaxis has an inhaled antisense product in its portfolio (ASM8) that has already been in a number of phase 2 clinical trials. Originally positioned for acute asthma we believe that the global market for this indication might have moved on and reduced the opportunity and we are keen to explore other alternatives. It hits multiple inflammatory targets and has a profound effect on eosinophils so we continue to consider potential applications.

- I discussed ASM8 with a number of orphan drug companies. A number of them expressed interest and we will continue to explore potential collaborations. We are looking for a partner to invest in a proof of concept study and share in any downstream value created.
- ASM8 is a nebulised treatment which, whilst a potential handicap in many markets that have moved on to biologics for steroid resistant asthma, could still be attractive in the Chinese market. I met a number of Chinese companies who will now undertake diligence on our program and assess developing it further.

Lastly I spoke with several smaller companies and universities / research institutes who have interesting anti-inflammatory or anti fibrotic programs for potential in licensing and hope that some of them will bear fruit in the future. We will be driven first of all by the science and looking for collaborations where we can add value with our proven expertise in drug discovery and clinical development.

I’ll be writing to you again in July with the Quarterly Report and full year financial results. As you will have noted from our recently released [investor presentation](#) it promises to be a busy next few quarters for Pharmaxis.

Sincerely,



Gary Phillips

Chief Executive Officer