



ASX & Media Release

Patrys Acquires License to Novel Nucleus-Penetrating Antibody Assets Developed at Yale University

- **Acquisition provides Patrys with license rights to a portfolio of novel anti-DNA antibodies that penetrate into cell nuclei**
- **Novel pre-clinical oncology assets and platform have multiple potential applications to treat a range of cancers**

Melbourne, Australia; 29 March, 2016: Patrys Limited (**ASX: PAB**) has acquired a worldwide license to develop and commercialise as anti-cancer agents a portfolio of pre-clinical novel anti-DNA antibodies and antibody fragments/variants discovered at Yale University. The antibodies have the unusual ability to penetrate into cancer cell nuclei and inhibit DNA repair mechanisms, and have potential application as stand-alone therapies and as adjuncts to augment existing therapies or to help overcome resistance associated with DNA repair mechanisms.

Patrys has acquired the license for the novel anti-DNA antibody platform through a scrip acquisition, of Nucleus Therapeutics Pty Ltd (Nucleus) in a tranching transaction with a value of up to A\$720,000.

Based on the current number of shares on issue, and successful completion of a range of milestones that trigger the issue of Patrys shares to satisfy tranche payments, the vendors, including Yale University, will ultimately own approximately 14.36% of Patrys' issued capital.

The lead candidates licensed from Yale are autoantibodies known as 3E10 (Deoxymab) and 5C6. These novel antibodies have the capacity to penetrate cancer cell nuclei, damage DNA, inhibit DNA repair, and kill DNA repair-deficient cancer cells. Both Deoxymab and 5C6 when used as single agents are selectively toxic to cancer cells with DNA repair deficiencies such as those with mutations in the BRCA2 and PTEN genes. The mechanisms of action of both Deoxymab and 5C6 have possible advantages over poly ADP ribose polymerase (PARP) inhibitors as these antibodies are able to inhibit both single and double-stranded DNA repair pathways and cause accumulation of DNA damage in cancer cells. This suggests potential utility in a range of cancers, including some rare diseases like glioblastoma.

As well as showing single agent potential, the antibodies have the ability to sensitise cancer cells to radiation and chemotherapy and interfere with cancer cells' ability to sustain themselves through DNA repair.

Deoxymab and 5C6 are the subject of three patent applications which have been lodged by Yale University, the University of California Los Angeles and the United States Department of Veterans Affairs. Protection is being pursued in major markets such as Europe, Japan and the US. These



patent applications cover both the use of Deoxymab and fragments/variants thereof to treat cancer, and protection will extend to 2035.

“We are delighted to have finalised the acquisition and to be the licensee of these exciting new assets” said Dr James Campbell, Patrys’ Chief Executive Officer. “Our team has evaluated numerous potential assets from around the globe, and we feel confident that these assets offer a favourable risk/reward profile for our shareholders. This acquisition elevates and expands Patrys’ oncology pipeline beyond IgM technologies, and gives Patrys a strong position in a new field of immuno-oncology.”

Patrys will initiate and manage pre-clinical studies of a number of lead candidates to guide an eventual clinical development strategy for the new assets, working closely with the inventors from Yale University.

Inventor of Deoxymab and Yale radiation oncologist, Dr. James Hansen, added: “We are very excited to be working with the Patrys team on a shared vision of building a world-class oncology franchise, which integrates our anti-DNA antibodies with Patrys’ strengths in product development.”

The transaction has three potential tranches, with each tranche being settled in Patrys shares based on the volume weighted average price (VWAP) of Patrys shares for the 7 days prior to the completion of a milestone. The first milestone has been achieved, and requires the issue of Patrys shares to satisfy the first tranche payment of A\$360,000 to the vendors. The second tranche will be triggered by the granting of specified patents associated with the Yale technology, and will result in the issue of Patrys shares to satisfy the second tranche payment of A\$180,000. The final tranche, triggered upon the first dosing of a patient in a phase 1 clinical trial will also result in the issue of Patrys shares to satisfy the final tranche payment of A\$180,000.

For the purposes of ASX Listing Rule 3.10.3, Patrys advises that it proposes to issue a maximum of 50,033,425 fully paid ordinary shares (ranking equally with ordinary shares on issue) at a price of 0.7 cents per share to Nucleus shareholders in connection with the first tranche of the transaction described above. No shareholder approval will be sought in relation to this proposed issue. The terms of the Yale license agreement are confidential, but include standard obligations including an agreed development plan, milestones and a sliding scale of annual net royalties on eventual sales.

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About Patrys Limited:

Based in Melbourne, Australia, Patrys (ASX: PAB) is focused on the development of antibodies as therapies for a range of different cancers. Patrys has a pipeline of anti-cancer antibodies that enable both internal development and partnering opportunities. More information can be found at www.patrys.com

About BRCA2 and PTEN Gene Mutations:

Certain types of cancers occur when DNA repair goes awry because of inherited gene mutations. BRCA2 is a tumour suppressor that, when damaged or deficient, can lead to malignancies such as breast, ovarian, pancreatic, and prostate cancers while PTEN mutations are related to breast, brain gliomas and astrocytomas, head and neck carcinoma, endometrial and thyroid tumour development.

About 3E10 and 5C6 anti-DNA antibodies:

A nuclear-penetrating lupus anti-DNA autoantibody 3E10 (Deoxymab) is novel cancer therapy that has the capacity to penetrate cancer cell nuclei, inhibit DNA repair, and kill DNA repair-deficient cancer cells. The antibody preferentially localises to tumours and has the ability to sensitise cancer cells to radiation and chemotherapy and interfere with their ability to sustain themselves through DNA repair. Furthermore, 3E10 when used alone can selectively kill cancer cells with DNA repair deficiencies such as those with mutations in the BRCA2 and PTEN gene. These characteristics of 3E10 open up new possibilities for treating BRCA2 and PTEN-related cancers. Yale University has also found that 5C6, an anti-DNA autoantibody that can penetrate cells, has a toxic effect on BRCA2-deficient cells in colon cancer.

Recent publications for this work can be found at the following websites:

<http://cancerres.aacrjournals.org/content/75/11/2285.long>

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4496662/>

<http://www.nature.com/articles/srep05958>