



ASX & Media Release

PATRYS
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Patrys Reports Progress on Preclinical Programmes

- PAT-SM6 shows increased anti-myeloma activity when combined with other multiple myeloma drugs
- Production of IgM antibodies has been achieved in the CHO cell system
- PAT-SM6 being investigated for use as a novel and sensitive cancer diagnostic tool
- Novel anti-cancer IgMs and their targets being investigated
- Chimeric antigen receptor (CAR) T cell programme commenced

Melbourne, Australia; 24 July, 2014: Patrys Limited (**ASX: PAB**), a clinical stage biotechnology company is pleased to provide a Company update on the preclinical programmes and external collaborations for its shareholders and the broader market.

PAT-SM6 in combination with other multiple myeloma (MM) drugs:

In order to support the planned upcoming clinical trial, a combination study of PAT-SM6 and carfilzomib, Patrys is currently conducting an extensive preclinical programme investigating the anti-myeloma activity of PAT-SM6 in combination with the marketed, blockbuster MM drugs carfilzomib, bortezomib and lenalidomide. To date, preliminary results demonstrate that PAT-SM6 works in combination with the marketed drugs in a synergistic manner resulting in a higher level of killing of MM cells than if the drugs are used as single agents. Data also suggest that PAT-SM6 has the ability to convert MM cells from being resistant to bortezomib and carfilzomib (proteasome inhibitors) to being sensitive to those drugs. Further experiments are currently being conducted in this area in collaboration with Myelomax, France.

Producing IgM antibodies in the CHO cell system:

Currently, Patrys manufactures IgM antibodies using the PER.C6 cell system, which has proved to be highly reliable in producing a high yield of GMP-quality material for clinical trials. However, many large pharmaceutical and biotechnology companies, with expertise in anti-cancer antibodies, utilise an alternative cell system, called the CHO cell system. Therefore, in order to enhance the attractiveness of Patrys' IgM antibodies to future potential partners, the Company has entered into collaboration with CSIRO to explore the possibility of producing the Patrys IgM antibodies in the CHO system.

To date, CSIRO have been successful in expressing the pentameric form of the PAT-SM6 antibody in CHO cells and further experiments optimising and improving the yield of PAT-SM6 are currently ongoing. Additional and detailed information on this important project will be forthcoming in the next 3-4 months.

PAT-SM6 as a cancer diagnostic tool:

Patrys has an ongoing collaboration with the Macquarie University, Sydney, as part of a three year Australian Research Council (ARC) linkage grant. This project aims to combine Macquarie's new super dot nanocrystal fluorescent technology with PAT-SM6 in order to produce a novel and highly sensitive diagnostic tool that could be used to detect MM cells in the blood of MM patients. Currently, the research group is developing reliable and strong labelling techniques that can be used to attach the super dot nanoparticles to PAT-SM6.



Developing PAT-SM6 as both a novel therapeutic *and* as a diagnostic tool for MM will enhance the attractiveness of the product to potential future partners.

Novel anti-cancer IgMs and their targets being investigated:

Patrys has a new collaboration with Monash Institute (MIMR-PHI), Melbourne, investigating four early-stage anti-cancer IgM antibodies and their cellular targets. It is anticipated that, if successful, this project will enable Patrys to progress these four IgMs into formal preclinical development and to file intellectual property around both the antibodies and the novel anti-cancer targets. Novel anti-cancer antibodies and their targets are highly sought-after and are likely to bring additional substantial value to the Patrys pipeline.

Chimeric antigen receptor (CAR) T cell programme commenced:

Patrys has recently commenced a collaboration programme with a global biotechnology company to genetically engineer T cells through the introduction of a chimeric antigen receptor (CAR). These engineered T cells have the ability to produce a more targeted and potent attack against cancer cells. Many major pharmaceutical and biotechnology companies are engaged in CAR research and numerous clinical trials using these modified T cells are now underway. Although early data from these trials look promising, it is acknowledged by experts in the field that engineered T cells directed against *novel* anti-cancer targets are required.

All of Patrys' IgM antibodies in both clinical and preclinical development are directed against novel anti-cancer targets. Therefore, in this CAR project, parts of these IgM antibodies will be utilised to generate the genetically engineered T cells which, in turn, will attack and kill cancer cells expressing the novel target.

CEO, Dr Marie Roskrow commented "We are making significant progress with a number of our preclinical programmes and are beginning to see some exciting, and potentially very important, results. Robust preclinical data is critical to support the ongoing and planned clinical programmes and there is no doubt that data from these projects will enhance the visibility of the Patrys portfolio to potential future licensing partners as well as to generate new intellectual property which will bring value to our shareholders. We look forward to reporting additional data as it becomes available."

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About Patrys Limited:

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