

MAYNE PHARMA FINALISES OUT-LICENSING OF SUBA™-ITRACONAZOLE TO HEDGEPATH PHARMACEUTICALS

25 June 2014, Melbourne Australia: Mayne Pharma Group Limited (ASX: MYX) is pleased to announce it has completed the out-licensing of its SUBA™-Itraconazole intellectual property (IP) to US-based HedgePath Pharmaceuticals, Inc. (HPPI). This follows HPPI securing further funding to pursue the clinical development, registration and commercialisation of Mayne Pharma's patented oral formulation of itraconazole, known as SUBA™-Itraconazole, for the treatment of a variety of cancers in the United States.

As part of the Company's on-going IP/product out-licensing strategy, Mayne Pharma has acquired an equity stake of 41.5% in HPPI in return for granting HPPI an exclusive right to SUBA™-Itraconazole for anti-cancer applications in the US. Under this agreement, Mayne Pharma has appointed one director to the HPPI Board and two members to the Joint Development Committee. Mayne Pharma will supply HPPI with SUBA™-Itraconazole for use in clinical trials and for exclusive commercial supply following FDA approval. This agreement is independent of Mayne Pharma's commitment to progress the commercialisation of SUBA™-Itraconazole globally for the treatment of fungal infections.

As a result of acquiring this equity stake, Mayne Pharma will recognise for accounting purposes non-cash out-licensing revenue of between A\$4.0-4.5m in this financial year, subject to the completion of a final valuation.

Mayne Pharma's CEO, Mr Scott Richards, said "We are very pleased HPPI has secured this funding which will support the development of SUBA™-Itraconazole as a potential treatment for solid tumours. The management of HPPI have continued to progress the development program and expect to file an Investigational New Drug (IND) application shortly and then commence a Phase II study of basal cell carcinoma in patients with Basal Cell Carcinoma Nevus Syndrome in the coming year."

"We believe out-licensing our SUBA™-Itraconazole intellectual property through the partnership with HPPI provides Mayne Pharma shareholders with a significant stake in a novel cancer program. In the US, there are more than two million¹ new cases of prostate, lung and skin cancers reported per annum and the pharmaceutical market size to treat these diseases exceeds US\$5 billion² and is forecast to grow more than 5% per annum over the coming decade. We look forward to working with the HPPI management team to further the development program in the clinic and to commercialisation."

¹ American Cancer Society and Skin Cancer Foundation

² Datamonitor Healthcare, 2012



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About Mayne Pharma

Mayne Pharma is an ASX-listed specialty pharmaceutical company that develops and manufactures branded and generic products, which it distributes globally; either directly or through distribution partners and also provides contract development and manufacturing services.

Mayne Pharma has a 30-year track record of innovation and success in developing new oral drug delivery systems and these technologies have been successfully commercialised in numerous products that have been marketed around the world.

Mayne Pharma has two drug development and manufacturing facilities based in Salisbury, Australia and Greenville, USA with expertise in formulation complex oral dose forms including highly potent compounds, controlled substances, modified release products and inherently unstable compounds.

About SUBA™-Itraconazole in cancer

SUBA™-Itraconazole is a patented formulation, which has improved absorption and significantly reduced variability compared to conventional itraconazole capsules. These benefits provide enhancements to patients and prescribers with reduced intra- and inter-patient variability, enabling a more predictable clinical response and a reduction in the amount of active drug administered in order to deliver the required therapeutic blood levels.

Although itraconazole is used extensively to treat fungal infections globally, the product appears to have notable anti-cancer effects through two key mechanisms, being the control of cell division via the Hedgehog pathway³ and anti-angiogenesis effects. Research has shown that inappropriate activation of the Hedgehog pathway can lead to the formation of a number of cancers.

Itraconazole has demonstrated its ability to inhibit the Hedgehog signalling pathway in animal models and in clinical studies of patients with cancer. In animal studies, itraconazole has also demonstrated an anti-angiogenic effect (i.e., inhibiting the formation of new blood vessels), which may be important in controlling the proliferation of cancerous cells and tumours. In clinical studies of patients, itraconazole administration has been associated with improved disease control in patients with advanced lung cancer, skin cancer and prostate cancer. HPPI's SUBA™-Itraconazole cancer development program will investigate the use of the product as an inhibitor of two key mechanisms in the progression of cancer.

Recent clinical studies investigating itraconazole in cancer include:

- **Skin cancer** – Itraconazole was tested in an Exploratory Phase II study in patients with basal cell carcinoma (BCC) and showed itraconazole has anti-BCC activity by reducing BCC cell proliferation by 45%, hedgehog activity by 65% and tumour area by 24%. The Phase II study was led by Stanford University and published in February 2014 (Kim et al. *Journal of Clinical Oncology* 2014, 32:745-751).
- **Lung cancer** - Itraconazole was tested in a Phase II study in conjunction with Pemetrexed in metastatic nonsquamous non-small-cell lung cancer patients and showed significant improvements in median overall survival. The median overall survival of advanced lung cancer patients was extended from 8 months with current first-line treatment (namely, pemetrexed

³ The Hedgehog signalling pathway is a major regulator of cellular processes in vertebrates, including cell differentiation, tissue polarity and cell proliferation.

disodium) to 32 months when treated in combination with oral itraconazole. The Phase II study was led by John Hopkins University and published in October 2013 (Rudin et al. Journal of Thoracic Oncology 2013, 8:619-623).

- **Prostrate cancer** - Itraconazole was tested as a treatment for men with metastatic castrate resistant prostate cancer in a multi-institutional Phase II trial led by Johns Hopkins University and published in February 2013 (Antonarakis et al. The Oncologist 2013, 18:163-173), which showed a significant correlation between higher itraconazole blood levels and slowing the progression of the cancer and an extension in the duration of progression-free survival.

About HedgePath Pharmaceuticals

HedgePath Pharmaceuticals, Inc. is a clinical stage biopharmaceutical company that is seeking to repurpose the FDA approved antifungal pharmaceutical itraconazole as a potential treatment for cancer. HPPI is the exclusive licensee of a patented formulation of itraconazole, called SUBA™-Itraconazole, which clinical studies have shown to have greater bioavailability than conventional itraconazole capsules. Based on published research, HPPI believes that inhibiting the Hedgehog pathway could delay or possibly prevent the development of certain cancers in humans. Leveraging research undertaken by key investigators in the field, HPPI plans to explore the effectiveness of SUBA™-Itraconazole as a cancer inhibitor and to pursue its potential commercialization. HPPI has offices in Tampa, Florida and San Diego, California.

