



## **ASX RELEASE**

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Director

### **NOXOPHARM TO INITIATE RADIOTHERAPY CLINICAL STUDIES**

- **NOX66 to extend reach from potentiating chemotherapy to potentiating radiotherapy**
- **Guidance to market on major program initiative.**

As foreshadowed in the Company's recent Prospectus, the Company post-IPO intended to expand its clinical pipeline and clinical assets.

Noxopharm today announced that it has initiated a major research program testing the ability of NOX66 to promote the anti-cancer effects of radiotherapy. The program will involve clinical trials in Australia and overseas. This program will run in parallel with the Phase 1a/1b/2a study being established in Europe where NOX66 is being tested in combination with chemotherapy.

The details of the clinical studies will be released in due course, but involve the use of NOX66 with radiotherapy in specific cancer types including metastatic prostate cancer, particularly where multiple tumours are present and irradiation of all tumours is impractical, and where the dosage of radiotherapy is palliative because of the advanced nature of the disease.

Radiotherapy suffers the same challenge as chemotherapy – cancer cells learn how to survive the therapy. Many of the mechanisms that lead to chemotherapy drug-resistance are the same that lead the cell to resist radiotherapy (radio-resistance). The ability of the active ingredient of NOX66, idronoxil, to cancel cancer drug-resistance mechanisms is believed to have the potential to provide the same benefit for radiotherapy.

Noxopharm CEO, Graham Kelly, said, “We have good reason to believe that idronoxil possesses a potent ability to overturn radio-resistance mechanisms. One of the major benefits that we see for this effect is the ability to turn dosages of radiotherapy only intended to provide a temporary anti-cancer effect, into a far more meaningful anti-cancer effect. Our objective is to bring to market the first drug capable of providing this urgently-needed benefit across multiple cancer types and which does not compromise the safety of the patient.”

“The main benefits that we see in expanding our clinical program in this way are the dual effects of de-risking the Company’s commercial position while at the same time broadening the commercial potential of NOX66. Having the same drug able to provide a potent benefit for the two main frontline anti-cancer therapies opens up an extraordinary and unique market opportunity.”

The program is based around pilot clinical studies in several countries including Australia involving relatively small numbers of patients with specific cancer types. The Company currently is putting in place the infra-structure to support an expanded clinical program. The cost of the program is within the Company’s budgeted expenditure for the next 18 months.

### **About Idronoxil**

Idronoxil is an experimental anti-cancer drug that works by cancelling the mechanisms in cancer cells that allow it to survive. These include the cancer cell’s ability to maintain a range of mechanisms believed responsible for its ability to resist the killing effects of chemotherapies and radiotherapy when healthy cells are killed by the same treatments. A key cell control system responsible for survival, including the development of resistance mechanisms, is the PI3 kinase/AKT signalling complex that is over-expressed in most cancer cells. Idronoxil cancels this key pro-survival control mechanism, but importantly only in cancer cells. The upstream primary target of idronoxil is the enzyme, tumour-specific external NADH oxidase 2 (or ENOX2), which is responsible for maintaining the transmembrane electron potential across the cancer cell’s external cell membrane. Loss of this potential directly inhibits the PI3 kinase/Akt signalling mechanism.

## **About NOX66**

NOX66 is an innovative dosage formulation developed specifically to protect idronoxil from being inactivated in the human body by Phase 2 metabolism. Its purpose is to ensure that most idronoxil administered remains in an active form.

## **About Radiotherapy and Radio-resistance**

Despite advances in cancer therapy in non-cytotoxic areas such as immunotherapy, therapies that physically damage DNA leading to the death of cancer cells remain the frontline therapy for most forms of cancer. Cancers of the prostate, lung and brain are three such families of cancer where radiotherapy continues to be a primary form of therapy, which it does by physically damaging the cancer cell's DNA. The cell dies when the damage exceeds the ability of the cell to repair it.

Cancer cells either start with or acquire over time the ability to resist radiotherapy, with over-expression of the PI3 kinase/AKT control mechanism thought to be a key factor, leading to such outcomes as over-active DNA repair mechanisms. Despite considerable effort, including developing drugs that target this control system, an effective means of cancelling out radio-resistance has yet to be developed.

## **About Noxopharm**

Noxopharm is an Australian drug development company with offices in Melbourne and Sydney. The Company has a primary focus on the development of drugs to address the problem of drug- and radio-resistance in cancer cells, the major hurdle facing improved survival prospects for cancer patients. NOX66 is the first pipeline product, with later generation drug candidates under development in an R&D program.

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## **Forward Looking Statements**

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