ASX Announcement

Race Initiates University of Newcastle Collaboration to Develop a Genomics-based Companion Diagnostic for Zantrene

- **Project aims to develop a companion diagnostic for Zantrene® as a precision oncology cancer treatment**
- **Study will utilise the latest RNA genomics tools to identify genetic biomarkers associated with cancer sensitivity to Zantrene at the individual nucleotide level**
- **Led by experienced genomics researcher Professor Murray Cairns of the University of Newcastle (UON).**

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3 November 2021 – Race Oncology Limited ("Race") is pleased to announce that it has entered into a collaborative preclinical research program with The University of Newcastle to develop a companion diagnostic to support the use of Zantrene® as a precision oncology treatment, targeting the FTO protein. Eminent genomics researcher, Professor Murray Cairns of the University of Newcastle, will lead the project.

Precision oncology utilises companion diagnostic tests to identify genetic changes in a patient's cancer that render the cancer sensitive to a particular anti-cancer treatment[1]. By matching treatment to the cancer's sensitivities, patients gain better treatment outcomes and avoid unnecessary side effects. Anti-cancer drugs with a companion diagnostic have a significantly increased probability of being approved by regulatory agencies like the US Food and Drug Administration, the European Medicines Agency and Australia's Therapeutic Goods Administration[2].

This project entitled "*Genome-wide epitranscriptomic analysis of N6-methyl-adenosine modification at nucleotide resolution using RNA sequencing to identify biomarkers of aberrant tumour RNA methylation*" builds on patentable IP developed by Race and will utilise the latest RNA genomics technologies to identify clinically relevant biomarkers of Zantrene sensitivity in human cancer cells and tissue samples.

This work complements the recently announced FTO biomarker collaborative program with the Chaim Sheba Medical Center (ASX announcement: 27 October 2021) by focusing on understanding the m^6A methylation status of RNA transcripts at the nucleotide level. This collaboration will provide critical mechanistic data on the effects of FTO inhibition by Zantrene in various cancer types.

The work is expected to support current and future clinical trials of Zantrene and provide the scientific basis for developing a clinically validated and Race-proprietary genetic companion diagnostic test for the targeted use of Zantrene in cancer treatment.

Chief Scientific Officer, Dr Daniel Tillett said: *"Race is extremely pleased to be working with Professor Cairns on this project. He is one of the leading researchers in the RNA genomics field and his background and expertise will maximise our chances of a successful outcome. For companies like Race, having a proprietary companion diagnostic is of increasing importance for our precision oncology clinical programs and will add significant IP protection around Zantrene."*

Professor Cairns said: *"Zantrene's potency as an FTO inhibitor provides an exciting new opportunity to target cancer by altering its RNA metabolism. I look forward to working with Race to develop a companion diagnostic for the drug's precision usage in clinical oncology".*

This preclinical research program is to start immediately with results to be reported over the coming 12 months.

1. Prasad, V., Fojo, T. & Brada, M. Precision oncology: origins, optimism, and potential. *Lancet Oncol* **17**, e81–e86 (2016).

2. Valla, V. *et al.* Companion Diagnostics: State of the Art and New Regulations. *Biomark Insights* **16**, (2021).

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About Professor Murray Cairns

Professor Cairns is an NHMRC Senior Research Fellow, and Brawn Senior Fellow at the University of Newcastle's College of Health, Medicine and Wellbeing. He heads the Precision Medicine Laboratory in the school of Biomedical Sciences and Pharmacy, which comprises a team of post-doctoral fellows, research assistants, bioinformaticians and research higher degree students. Professor Cairns has leveraged expertise in bioinformatics and high-throughput sequencing to establish an internationally recognised laboratory specialising in complex trait genomics. He is a leader in genetically informed precision medicine and is developing transformative approaches to address the problem of heterogeneity in the treatment of complex disorders.

Professor Cairns has attracted more than $14 million in funding to support his research programs, which have led to publications in the highest-ranking journals in the field, including *Nature, Science, Cell, Nature Biotechnology, Nature Genetics, Nature Reviews Genetics, Nature Neuroscience and Molecular Psychiatry*. Collectively, these publications have received more than 14,000 citations. His high-impact collaborative studies highlight an international reputation for research in complex disease genomics, posttranscriptional gene regulation, systems biology, and precision medicine.

About Race Oncology (ASX: RAC)

Race Oncology is an ASX listed precision oncology company with a Phase 2/3 cancer drug called Zantrene®.

Zantrene is a potent inhibitor of the Fatso/Fat mass and obesity associated (FTO) protein. Overexpression of FTO has been shown to be the genetic driver of a diverse range of cancers. Race is exploring the use of Zantrene as a new therapy for melanoma and clear cell renal cell carcinoma, which are both frequent FTO over-expressing cancers. The Company also has compelling clinical data for the use of Zantrene as a chemotherapeutic agent with reduced cardiotoxicity in Acute Myeloid Leukaemia (AML), breast and ovarian cancers and is investigating its use in these areas.

Race is pursuing outsized commercial returns for shareholders via its 'Three Pillar' strategy for the clinical development of Zantrene.

Learn more at www.raceoncology.com.

Release authorised by:

Phil Lynch, CEO/MD on behalf

of the Race Board of Directors

phillip.lynch@raceoncology.com

Media contact:

Jane Lowe

+61 411 117 774

jane.lowe@irdepartment.com.au