ASX Announcement

Race Initiates FTO & ALKBH5 Drug Discovery Program

- **Important step in the discovery of new m^{6}A RNA targeted drugs in pursuit of Race's Pillar 3 'Beyond Zantrene' strategy**
- **Will utilise the latest NMR-based fragment screening to identify novel drug candidates that cannot be discovered by other drug screening approaches**
- **Program led by Professor Martin Scanlon through the Monash Fragment Platform at Monash University.**

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27 September 2022 – Race Oncology Limited ("Race") is pleased to announce that it has contracted the *Monash Fragment Platform* (MFP) at Monash University to complete a fragment-based screening program aimed at discovering novel drugs that inhibit the m^{6}A RNA demethylases FTO and ALKBH5. Eminent medicinal chemist and Director of the MFP, Professor Martin Scanlon, will lead the project.

All intellectual property developed in the project will be owned exclusively by Race.

RNA Epitranscriptomics

Important scientific discoveries made over the last decade have identified dysregulation (loss of control) of RNA epigenetics (epitranscriptomics) as a key driver of cancer and other complex diseases[1]. Two of the major players in this dynamic regulatory system are the Fatso/FaT and Obesity associated (FTO) and ALKBH5 proteins. FTO and ALKBH5 are the only m^{6}A RNA demethylases found in humans and are major global regulators of the m^{6}A RNA levels in cells[2].

Changes in the expression of FTO or ALKBH5 has a profound impact on cancer growth, spread and resistance to treatment. Inhibiting FTO or ALKBH5 activity is able to kill or slow the growth of a wide range of cancers, including leukaemia, breast, lung, ovarian, gastric, brain, melanoma, pancreatic, kidney and many more. Race Oncology's most advanced asset Zantrene® (bisantrene dihydrochloride) is a potent inhibitor of FTO (IC_{50} 142nM)[3] and is the only m^{6}A RNA demethylase inhibitor and RNA epitranscriptomic drug in the clinic.

NMR Fragment Based Drug Screening

To build on our success in the RNA epitranscriptomics space, Race is aiming to discover new, potent and selective inhibitors of FTO and ALKBH5 for use in cancer and other indications. To advance this program, Race has contracted the Monash Fragment Platform to complete a fragment screening campaign using the latest techniques in

nuclear magnetic resonance spectroscopy (NMR). In this approach, a library of diverse small molecules ('fragments') will be tested by NMR for their ability to bind to the FTO and ALKBH5 proteins. Molecules that are found to bind to the proteins will be transformed into drug leads and ultimately clinical drug candidates in a follow-up medicinal chemistry campaign. This screening program will start immediately with results reported over the coming 12 months. The total cost of the project is $286,786 and is expected to be eligible for the ATO 43.5% R&D Tax Rebate.

Race Principal Scientist, Professor Mike Kelso said: *"Race is extremely pleased to be working with Professor Scanlon and his experienced team on this important project. The discovery and patenting of new FTO and ALKBH5 inhibitors will greatly strengthen Race's drug development pipeline and add valuable assets to our expanding IP portfolio. Drawing on my career in medicinal chemistry, I relish the downstream challenge of evolving molecules discovered in this campaign into clinic-ready FTO and ALKBH5 inhibitors as innovative new treatments for cancer and other diseases."*

Professor Scanlon said: *"Developing next-generation medicines requires outstanding discovery science. The Monash Fragment Platform was established to help researchers accelerate this long and complex journey. We are delighted to be working with Race to use our established Fragment-Based Screening technology to identify novel inhibitors for FTO and ALKBH5."*

Race Chief Executive Officer, Phil Lynch said: *"Addition of new FTO inhibitors to Race's drug pipeline creates major value as it grows Race 'Beyond Zantrene' and positions us as a world leading RNA epitranscriptomics pharma company."*

1. Sun, T., Wu, R. & Ming, L. The role of m6A RNA methylation in cancer. *Biomed Pharmacother* **112**, 108613 (2019).
2. You, Y. *et al.* Recent Advances of m6A Demethylases Inhibitors and Their Biological Functions in Human Diseases. *Int J Mol Sci* **23**, 5815 (2022).
3. Su R *et al*. Targeting FTO Suppresses Cancer Stem Cell Maintenance and Immune Evasion. Cancer Cell **38**:1–18 (2020).

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About Professor Martin Scanlon and the Monash Fragment Platform

The Monash Fragment Platform (MFP) is part of the Monash University Technology Research Platform Network (MTRP). The aim of MFP is to facilitate access to the transformative technology of Fragment-Based Drug Design through its multidisciplinary technology network. MFP supports Australian academic groups and pharma companies to accelerate their drug discovery R&D programs using a fee-for-service model. Martin Scanlon is Scientific Director of the MFP and Professor of Medicinal Chemistry at the Monash Institute of Pharmaceutical Sciences. He has published over 100 papers in high-ranking international journals, and has led more than 30 successful fragment-based discovery campaigns at MFP for academic and industry clients since its inception in 2015.

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.

In breakthrough preclinical research, Race has also discovered that Zantrene protects from anthracycline-induced heart damage, while in tandem acting with anthracyclines and proteasome inhibitors to improve their ability to target cancer. Race is evaluating this discovery.

The Company also has compelling clinical data for Zantrene as a chemotherapeutic agent and is in clinical trial in Acute Myeloid Leukaemia (AML).

Race is pursuing outsized commercial returns for shareholders via its 'Three Pillar' strategy.

Learn more at www.raceoncology.com

Race encourages all investors to go paperless by registering their details with the Company's share registry, Automic Registry Services, at www.automicgroup.com.au

Release authorised by:

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of the Race Board of Directors

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