RACURA ONCOLOGY

ASX Announcement

Racura Presents Bisantrene MYC Data at FCS 2026 Conference

- **Racura presenting at the Frontiers in Cancer Science (FCS) 2026 Conference being held in Singapore from 11–13 November 2026**
- **Preclinical data presented show that (E,E)-bisantrene is the active isomer stabilising the MYC G-quadruplex (G4) structure, leading to reduced MYC gene expression and activity**
- **The findings support the use of RC220 in the EMILI, HARNESS and CPACS clinical programs**

12 November 2026

Racura Oncology Limited ("Racura" or the "Company") is pleased to announce that new preclinical data on the ability of (E,E)-bisantrene to inhibit MYC gene transcription are being presented as a poster at the Frontiers in Cancer Science (FCS) 2026 Conference in Singapore on 12 November 2026. The data show that (E,E)-bisantrene is the major isomer (molecular form) of bisantrene able to stabilise the MYC promoter G-quadruplex and inhibit MYC gene transcription and reduce MYC protein levels. In these preclinical studies, light exposure converted (E,E)-bisantrene into less active isomers, which resulted in significantly less MYC G-quadruplex stabilisation and inhibition of MYC gene expression and activity.

These findings build on the MYC gene expression inhibition data for (E,E)-bisantrene presented at the 2026 American Association for Cancer Research (AACR) Annual Meeting (ASX Announcement: 22 April 2026) and match the lower cancer cell killing activity observed from (E,E)-bisantrene after it is exposed to light. Racura continues to investigate this mechanism through its ongoing research collaboration with Purdue University (ASX Announcement: 26 March 2026).

A copy of the poster entitled *"Light-Induced Isomerization Attenuates (E,E)-Bisantrene G-Quadruplex Binding and MYC Silencing"* is attached to this announcement.

Racura CEO and MD, Dr Daniel Tillett, commented: *"These data show that (E,E)-bisantrene is the form that stabilises G-quadruplex structures and inhibits MYC gene expression. Bisantrene can exist as several isomers, and confirming that the (E,E)-isomer is the active form supports our development of RC220 as a proprietary formulation of (E,E)-bisantrene. While these are preclinical findings, they add to the growing body of evidence for the MYC-directed mechanism of action of RC220."*

-ENDS-

Light-Induced Isomerization Attenuates (E,E)-Bisantrene G-Quadruplex Binding & *MYC* Silencing

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BACKGROUND

G-quadruplexes (G4) are non-canonical secondary structures enriched within promoter regions of key oncogenes, such as *MYC*. G4s can regulate the expression of these oncogenes (**Fig 1**).

(E,E)-bisantrene contains two identical (E)-hydrazone groups that can potentially undergo isomerization.

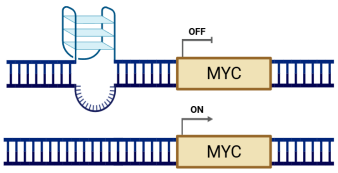


Fig 1: *MYC* gene expression is regulated by G-quadruplexes (G4) in the promoter region.

This study evaluated the impact of light-induced isomerization (photoisomerization) of (E,E)-bisantrene on *MYC* promoter region G4 binding, *MYC* gene and protein suppression and cancer cell viability.

METHODS

(E,E)-bisantrene was exposed to 440 nm (blue) LED light and the amount of (E,E)-bisantrene remaining was quantified by HPLC.

Molecular dynamics simulations (MM/GBSA method) predicted the binding sites and estimated affinity of (E,E)- and (E,Z)-bisantrene isomers for *MYC* G4.

Stabilization of *MYC* G4 (TGA**GGG**T**GGG**TA**GGG**T**GGG**TAA) by (E,E)-bisantrene was compared to an isomer mixture containing 62% (E,E)-bisantrene using circular dichroism (CD). Melting curves were monitored at 265 nm and melting temperatures determined.

MDA-MB-231 breast cancer cells were treated with (E,E)-bisantrene or isomer mixtures. *MYC* gene and protein expression was assessed by qPCR and western blotting. Cell viability was measured by ATPlite luminescence assay.

RESULTS

(E,E)-Bisantrene Photoisomerization

Exposure to 440 nm light photoisomerized (E,E)-bisantrene solutions to (E,Z)- and (Z,Z)-bisantrene (postulated) (**Fig 2**). Exposure for 0.25, 1 or 4 h reduced the (E,E)-bisantrene content to ~60%, ~40% and an unquantifiable level, respectively (broad unresolved hump peak at 4 h postulated as oligomerized (Z,Z)-isomer) (**Fig 3**).

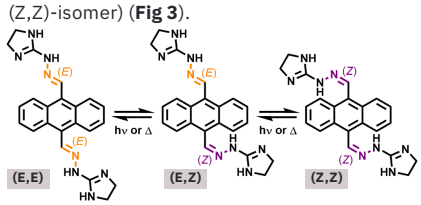


Fig 2: Interconversion of (E,E)-, (E,Z)- and (Z,Z)-bisantrene (postulated) in solution is triggered by light (hv) or thermal energy (Δ).

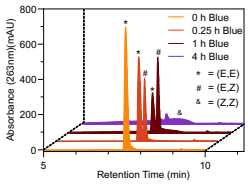


Fig 3: HPLC chromatograms of isomer mixtures (10 mM) generated by exposure to 440 nm LED light for 0, 0.25, 1 or 4 h.

Molecular Dynamics Simulations

Molecular dynamics simulations predicted a trend toward higher affinity for (E,E)-bisantrene over (E,Z)-bisantrene at the top G-tetrad binding site on *MYC* G4 (**Fig 4**).

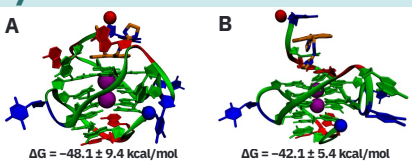


Fig 4: Representative poses of one molecule of **(A)** (E,E)-bisantrene or **(B)** (E,Z)-bisantrene (orange sticks) bound to *MYC* G4. 5′ and 3′ ends of the DNA chain are indicated by red and blue spheres, respectively. K^+ ions are indicated by purple spheres.

MYC G-Quadruplex Stabilization

CD spectroscopy confirmed (E,E)-bisantrene stabilizes *MYC* G4. Isomer mixtures containing 62% (E,E) stabilized *MYC* G4, but significantly less than 100% (E,E) (**Fig 5**).

Increasing the isomer mixture concentration to 16 μM (i.e. to create an equimolar amount of (E,E) (10 μM) as 100% (E,E)) restored stabilization to the original level (**Fig 5**).

This indicates (E,E)-bisantrene is the isomer that most strongly stabilizes *MYC* G4.

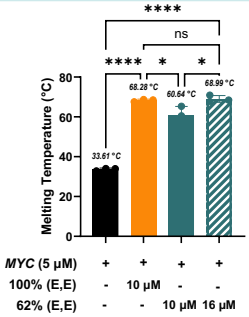


Fig 5: Melting temperature of *MYC* G4 (5 μM) ± 100% (E,E)-bisantrene (10 μM) or isomer mix containing 62% (E,E)-bisantrene at 10 μM or 16 μM (molar equivalent of 10 μM (E,E)).

MYC Gene and Protein Suppression

qPCR and western blotting confirmed (E,E)-bisantrene suppresses *MYC* gene and protein expression (**Figs 6 & 7**).

Suppression of *MYC* gene and protein expression was significantly reduced by decreasing the (E,E)-bisantrene content in isomeric mixtures (**Figs 6 & 7**).

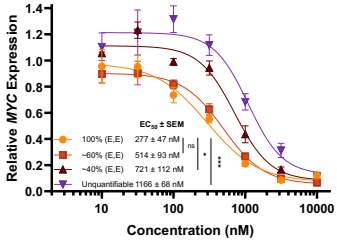


Fig 6: *MYC* expression in MDA-MB-231 breast cancer cells after treatment (2 h) with (E,E)-bisantrene and isomer mixtures (≤10,000 nM).

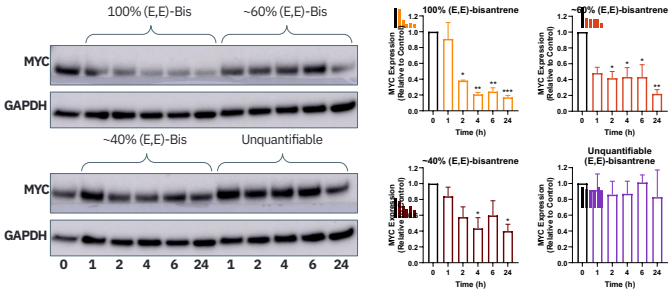


Fig 7: (A) Time course of MYC protein levels in MDA-MB-231 breast cancer cells after treatment with (E,E)-bisantrene or isomer mixtures (200 nM). **(B)** Densitometry of MYC protein, relative to control. Two-way ANOVA with Tukey's multiple comparisons.

Cell Viability

Cell viability assays showed MDA-MB-231 breast cancer cells were sensitive to 100% (E,E)-bisantrene (IC_{50} 266 nM, **Fig 8**).

Decreasing the (E,E)-bisantrene content in isomeric mixtures raised the IC_{50} to 310–825 nM, indicating reduced antiproliferative activity (**Fig 8**).

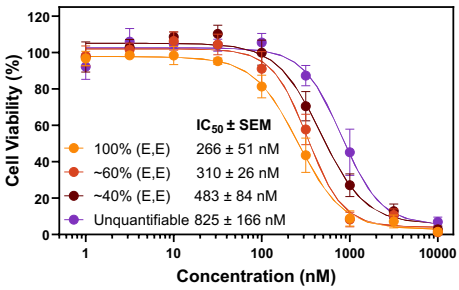


Fig 8: Cell viability of MDA-MB-231 breast cancer cells after 72 h treatment with (E,E)-bisantrene or isomer mixtures (≤10,000 nM).

CONCLUSION

(E,E)-bisantrene undergoes photoisomerization in solution to give mixtures of (E,E)-, (E,Z)- and (Z,Z)-bisantrene (postulated). Pure (E,Z)- and (Z,Z)-isomers cannot be isolated, so activity was compared using HPLC-characterized isomer mixtures. (E,E)-bisantrene is the most active isomer. Mixtures with less (E,E)-bisantrene showed decreased *MYC* G4 stabilization, reduced ability to suppress *MYC* gene and protein expression and weaker reduction of cancer cell viability. Preventing (E,E)-bisantrene photoisomerization is therefore critical in clinical studies (CPACS: Phase 1 RC220 with doxorubicin in advanced solid tumors [ClinicalTrials.gov ID: NCT06815575]; HARNESS-1: Phase 1 RC220 with osimertinib in EGFR-mutant non-small cell lung cancer [ANZCTR ID: ACTRN12626000325303]; and EMILI: Phase 2b/3 RC220 monotherapy in relapsed/refractory acute myeloid leukemia [registration pending]).

This study was funded by Racura Oncology • www.racuraoncology.com • Contact: Emily Ryan (emily.ryan@racuraoncology.com) • ER, PC, CP, SS, DT and MJK are employees of Racura Oncology.

About Racura Oncology

Racura Oncology (ASX: RAC) is a late-stage clinical biopharmaceutical company with a mission to silence cancer.

Racura's lead asset, (E,E)-bisantrene, is a clinically derisked small-molecule anticancer agent that primarily acts by stabilising G4-DNA and RNA structures, driving potent inhibition of c-MYC gene expression, a key cancer gene dysregulated in up to 70% of all cancers. Bisantrene has shown therapeutic activity in cancer patients and has a well-characterised safety profile. Racura's discoveries have supported composition-of-matter IP filings that, if granted, could provide up to 20 years of patent protection for (E,E)-bisantrene.

Racura is advancing RC220, its proprietary formulation of (E,E)-bisantrene, to address significant unmet need across multiple MYC-driven oncology indications. The Company's clinical programs include the EMILI Phase 2b/3 trial in acute myeloid leukaemia, the HARNESS Phase 1 trial in combination with osimertinib for EGFRm NSCLC, and the CPACS Phase 1 trial in combination with doxorubicin, where Racura aims to deliver both anthracycline cardioprotection and enhanced anticancer activity.

Racura has collaborated with Astex, Emory University, Purdue University, MD Anderson Cancer Center, Sheba Medical Center, University of North Carolina School of Medicine, University of Wollongong, and University of Newcastle. Racura is actively exploring partnerships, licence agreements, and potential commercial merger and acquisition opportunities to accelerate global patient access to RC220. Learn more at www.racuraoncology.com.

If you have any questions on this announcement, or any past Racura Oncology announcements, please visit the Company's Interactive Announcements page.

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

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