

September 2025



AT THE HEART OF CANCER CARE

Dr Daniel Tillett – CEO
Prof Michael Kelso – VP of Research
Dr Pete Smith – Exec Chair

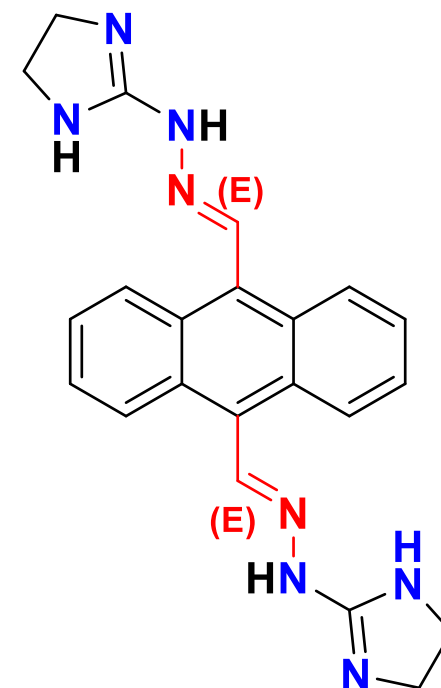
Isomer IP Webinar

ASX: RAC | RACE ONCOLOGY LIMITED | ABN 61 149 318 749

personal use only

Overview

- Bisantrene found to consist of three photoisomers with different biological and anticancer activities, which rapidly interconvert upon exposure to visible light.
- Race has created a range of manufacturing and physical processes to only infuse the pure active (E,E)-bisantrene isomer into patients.
- Three patent applications filed.
- Granting of a composition of matter patent would protect (E,E)-bisantrene for 20 years.
- **Composition of matter patents the most valuable IP in the pharma industry as they cover the chemical structure of the active drug in any formulation or dosage form.**

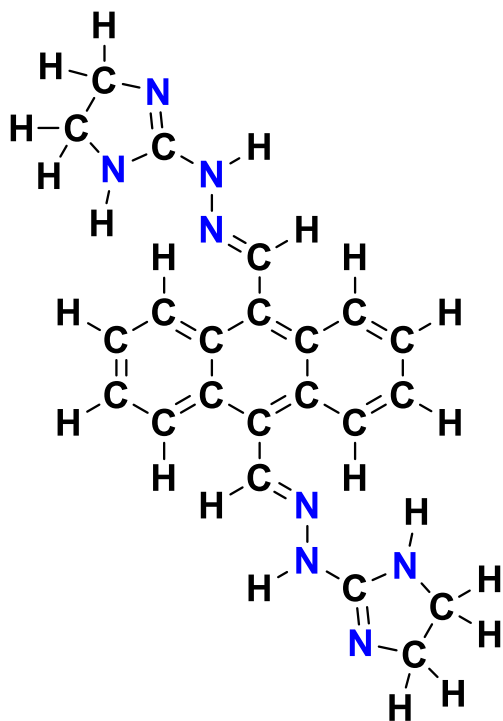


(E,E)-Bisantrene

personal use only

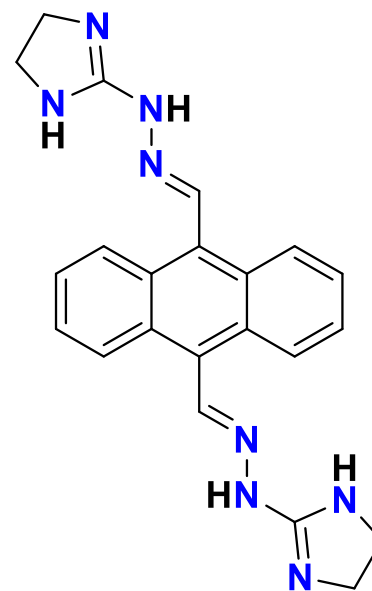
Chemistry & Discovery

Bisantrene – Chemical Structure



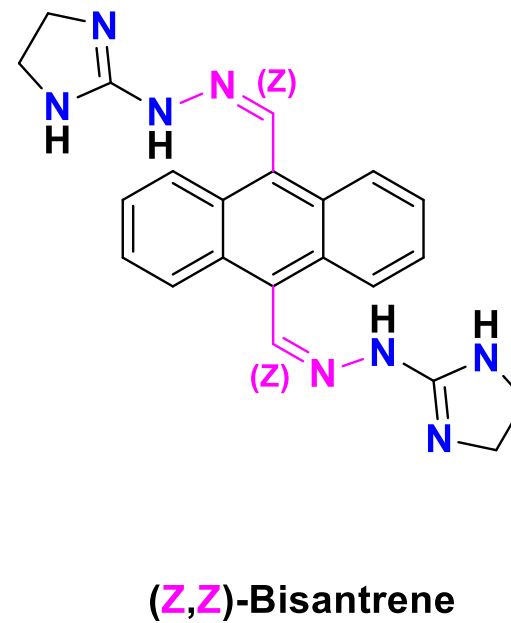
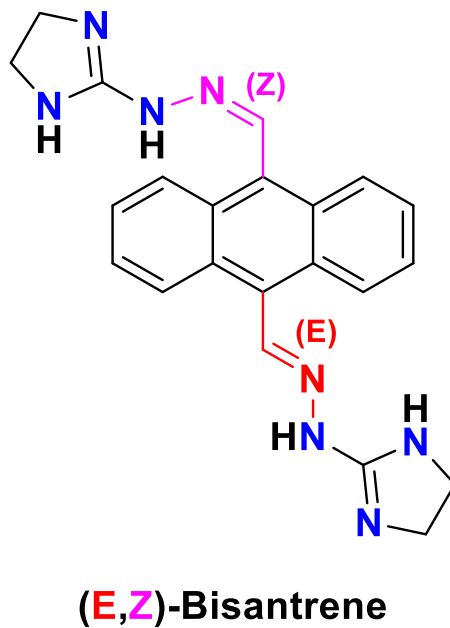
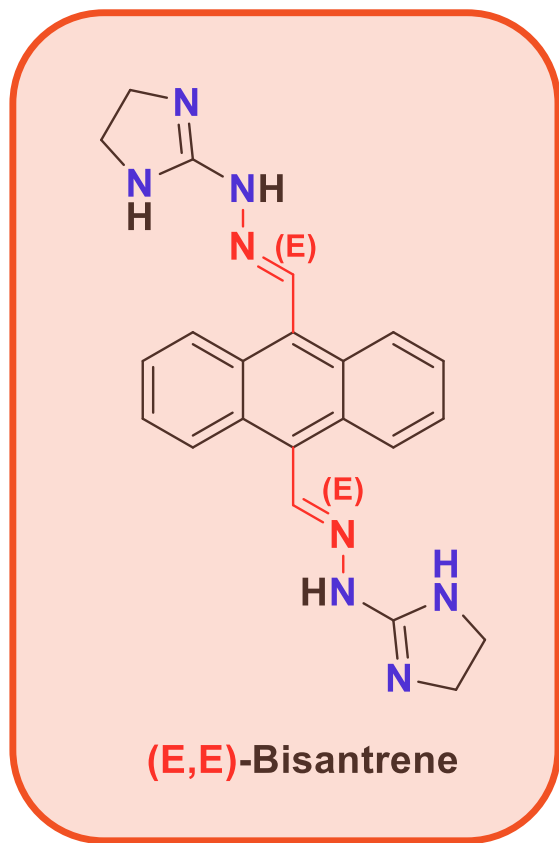
Bisantrene Chemical Structure

All atoms and bonds showing



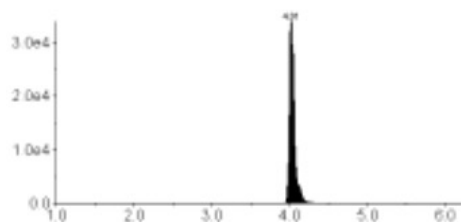
Chemist's Representation

Bisantrene – Possible Isomers

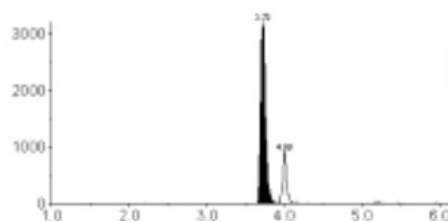


Bisantrene Isomerism – First observations

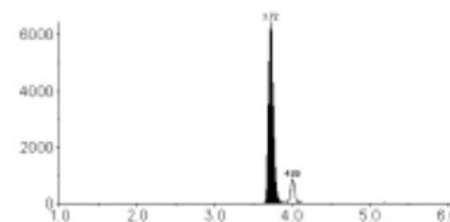
- Results from a toxicology study in animals
 - Measured bisantrene in the blood by liquid chromatography/mass spectrometry (LCMS)



Bisantrene = 1 peak
(expected)



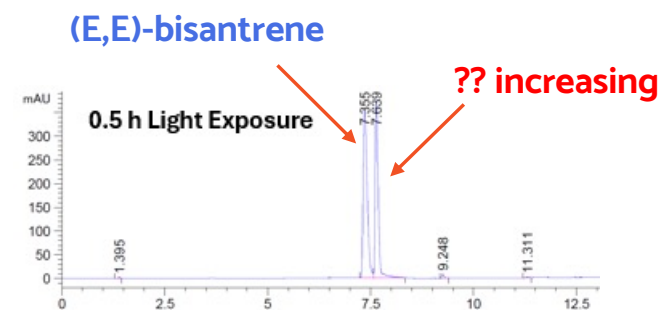
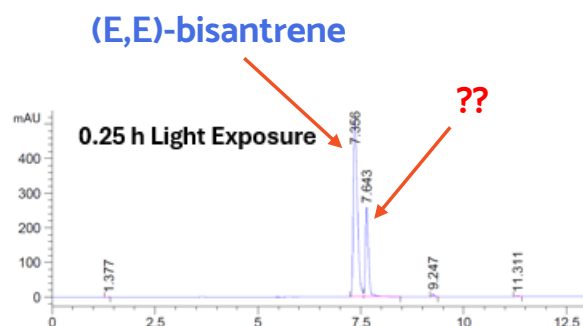
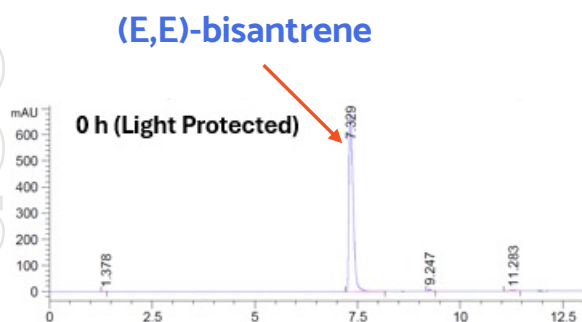
Variable appearance of a second peak with
same molecular weight as bisantrene (isomer?)



Hypothesis: Metabolism? No.
What about variable exposure to light?

Detective Work (Race Team)

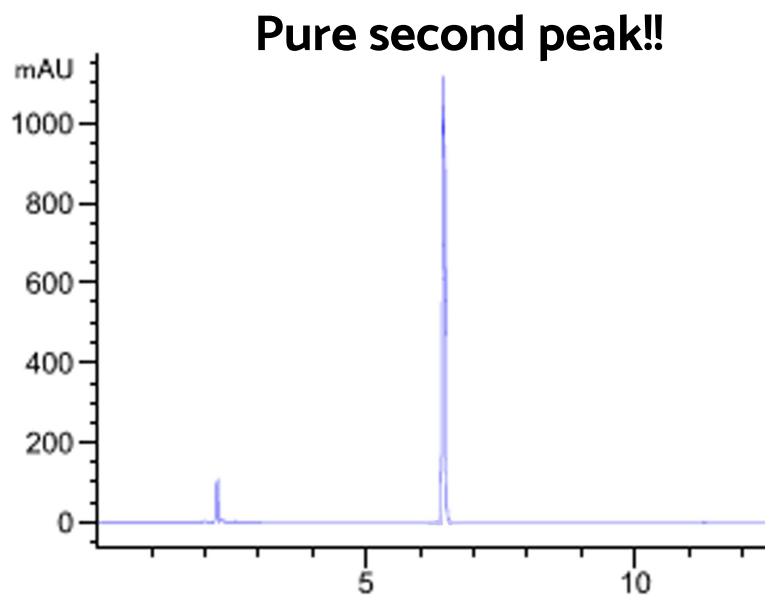
- Dissolve pure (E,E)-bisantrene in water, expose it to light and monitor by HPLC



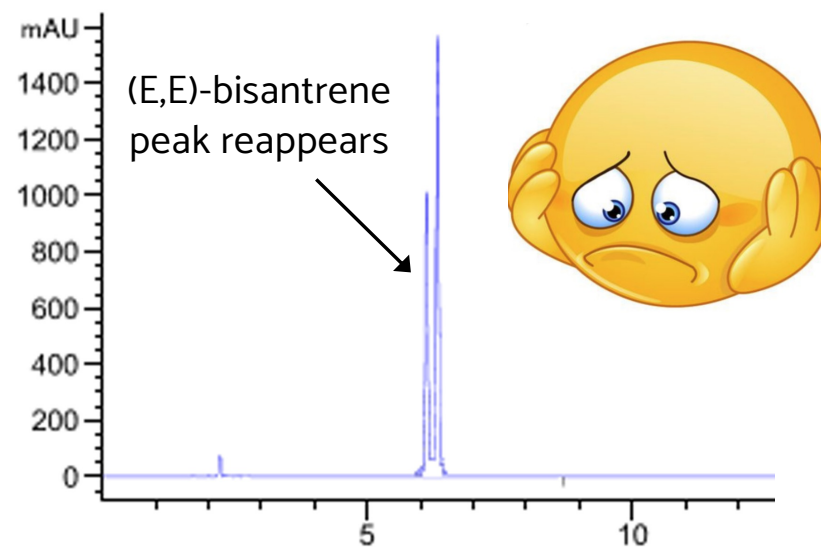
- Observation:** Visible ambient light triggers rapid formation of the ?? second peak.

Detective Work – What is the Second Peak?

- To identify the second peak need to isolate a pure sample

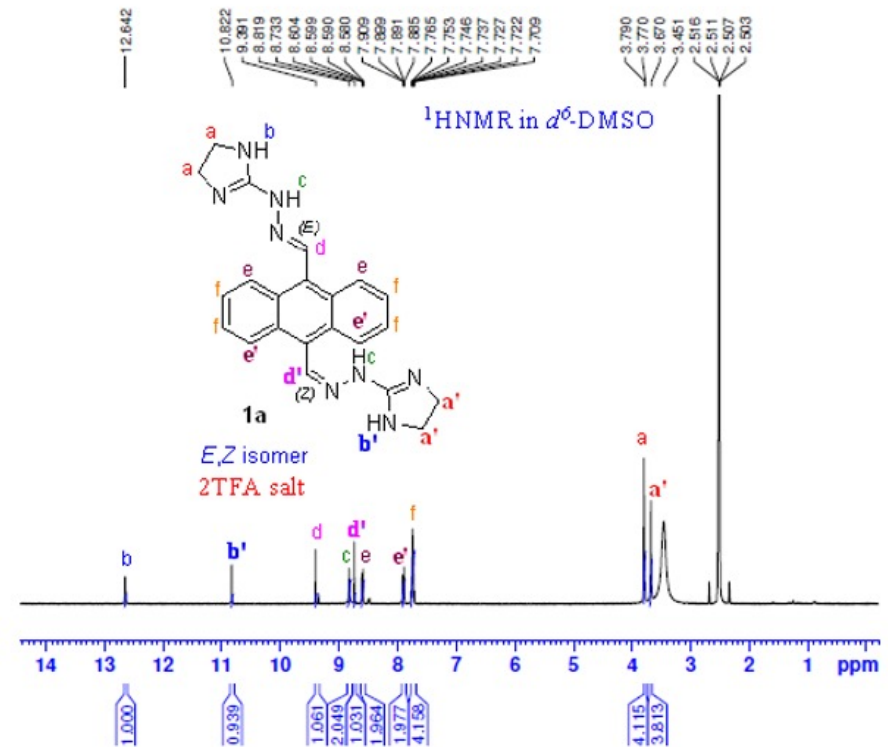


RAPID

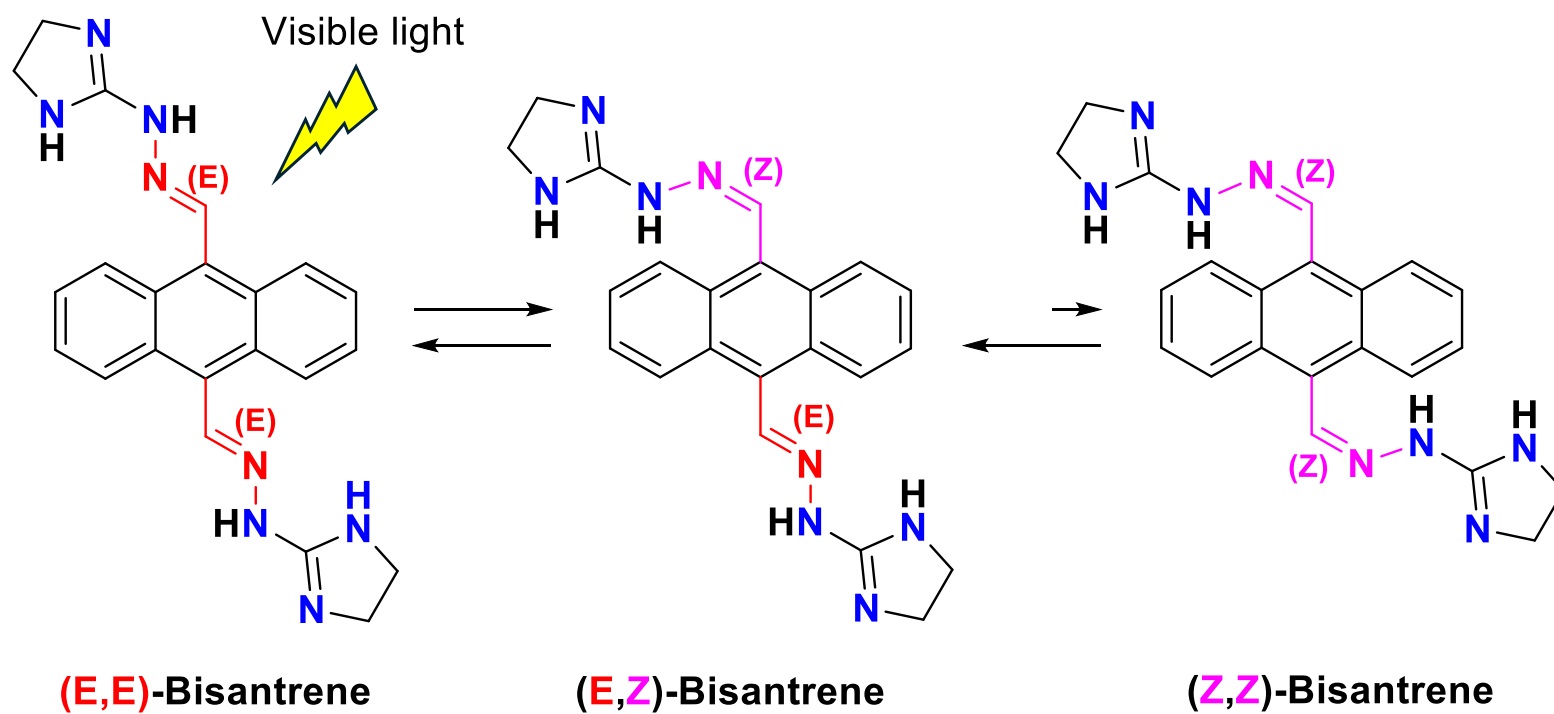


Detective Work – Voila! It's (E,Z)-bisantrene

¹H Nuclear Magnetic Resonance (NMR) analysis unambiguously proved the second peak is (E,Z)-bisantrene



Bisantrene – Photoisomerism

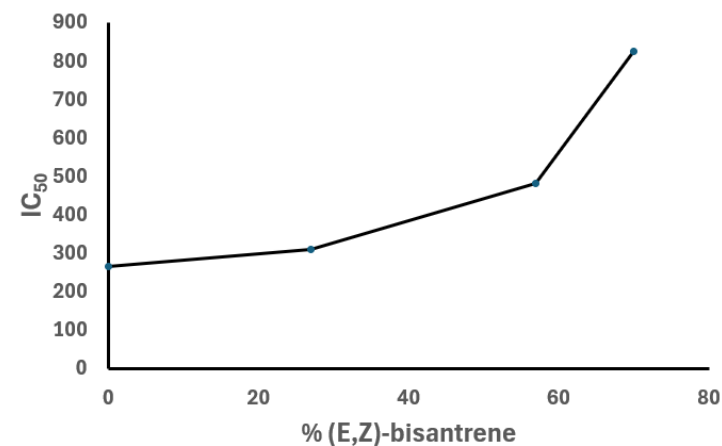
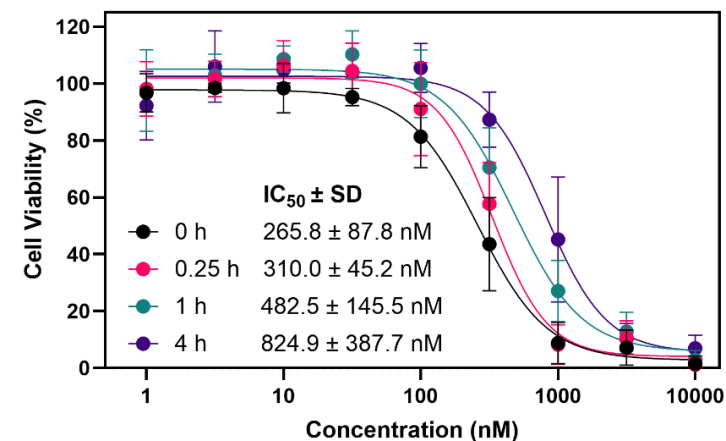


(E,Z)-Bisantrene has low anticancer activity

- Expose pure (E,E)-bisantrene solution to light for different amounts of time to make different isomer mixtures
- Test the different isomer mixtures for ability to kill MDA-MB-231 breast cancer cells

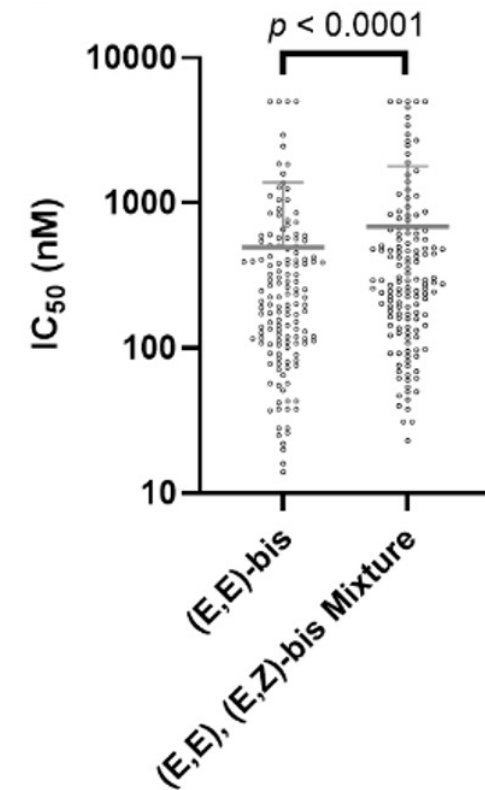
● 0 h	100% (E,E), 0% (E,Z)
● 0.25 h	73% (E,E), 27% (E,Z)
● 1 h	43% (E,E), 57% (E,Z)
● 4 h	~30% (E,E), ~70% (E,Z)

Cytotoxicity Testing



(E,Z)-bisantrene has low anticancer activity

- Measure how well an (E,E), (E,Z)-bisantrene mixture kills 143 individual cancer cell lines from 23 different tissue types compared to pure (E,E)-bisantrene

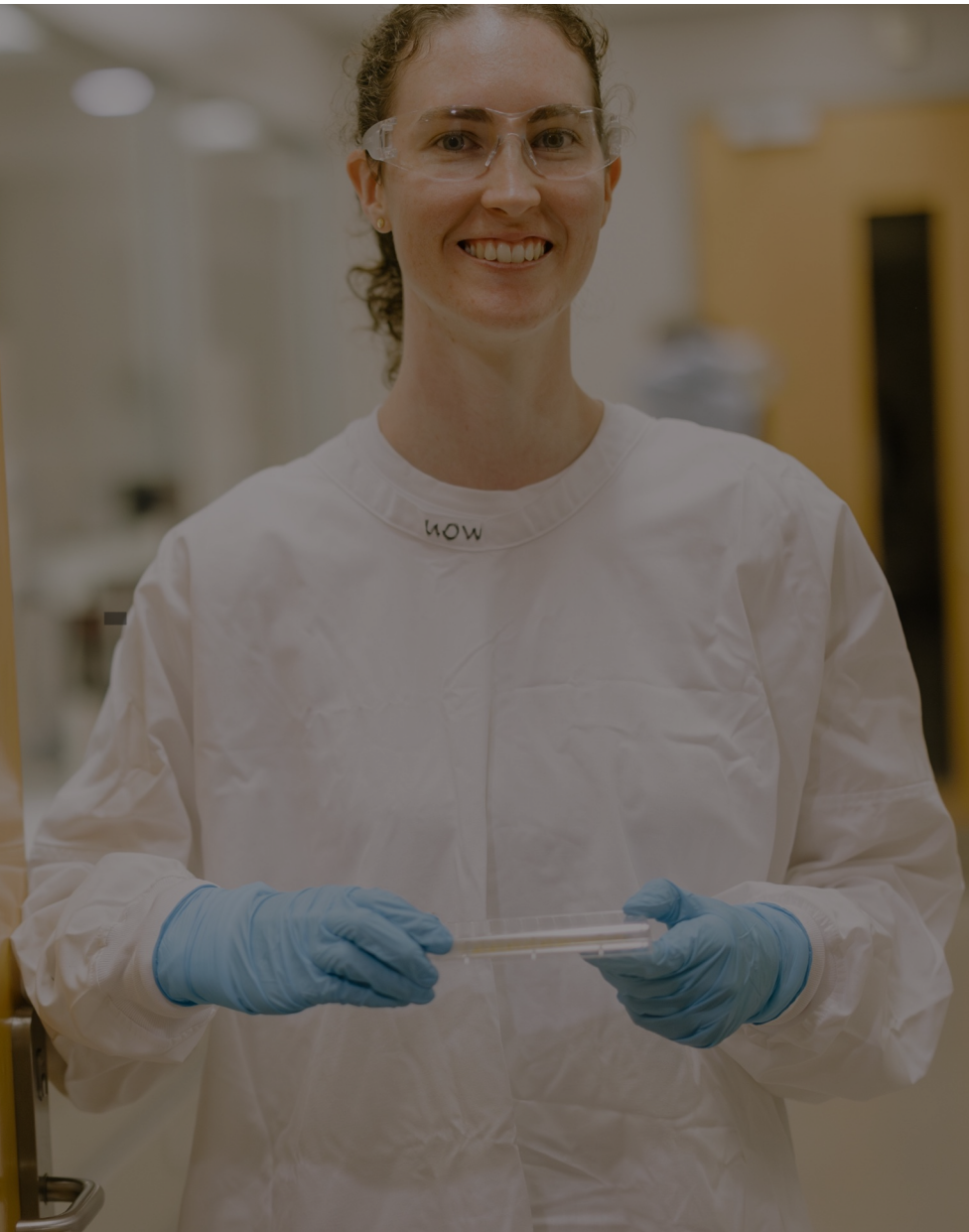


(E,E)-bisantrene: 100% (E,E), 0% (E,Z)

(E,E), (E,Z)-bisantrene mixture: 58% (E,E), 42% (E,Z)

personal use only

Patents & Value






Composition of Matter IP

- Composition of matter patent claims protect the chemical structure of the active drug
- Strongest IP possible in the pharmaceutical industry
- Composition of Matter IP drives significant value uplift for any drug. Why?
 - No generic competition until end of Composition of Matter patent
 - Possibility of additional 5-year patent extension
 - Can't be worked around by changing the formulation
- Patent life critical
 - Longer the better - increases net present value of drug



What is Required for a Patent?

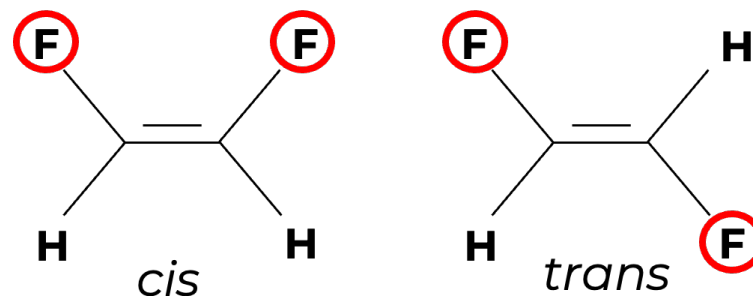
Novelty	Non-Obviousness	Utility
 Bisantrene photoisomerism not previously reported	 Only discovered through careful scientific observations and follow-up R&D	 Only (E,E)-isomer active

Race Oncology has filed three isomer patents:

- (i) Isomeric Forms of Bisantrene
- (ii) Pharmaceutical Compositions Suitable for Intravenous Administration
- (iii) Process for Manufacturing High Purity (E,E)-Bisantrene

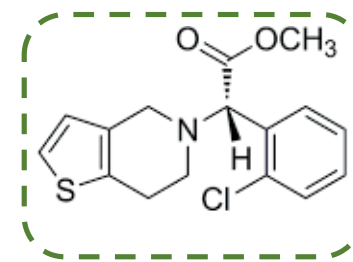
Isomer Mixture Drugs

- European Medicines Agency (EMA) no longer approving drugs consisting of isomer mixtures – none since 2016
- FDA demands you provide strong evidence for why your API is not a single isomer
- Why single-isomer drugs are better than mixtures?
 - Reduced dosing requirements
 - Reduced toxicity and side effects
 - Reduced drug-drug interactions
 - Simpler, better-defined pharmacodynamics and pharmacokinetics
- Examples



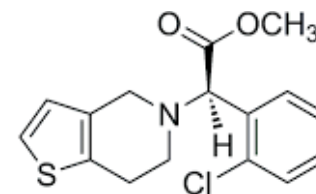
Plavix® (Clopidogrel)

- Antithrombotic and antiplatelet drug
- Original patent (1983) was an isomers mixture
- Later patent (1988) only claimed (S)-isomer
- Approved by FDA as a pure (S)-isomer
- Over its 1988 patent life, Plavix® generated US\$42.8B in revenue



(S)-Clopidogrel

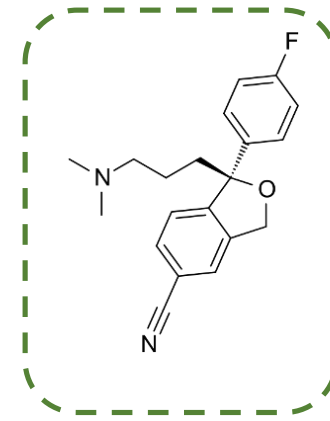
Pharmacologically
active isomer



(R)-Clopidogrel

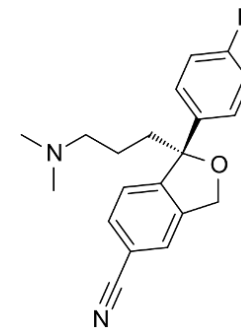
Lexapro[®] (Escitalopram)

- Used for the treatment of depression
- Citalopram was approved in 1998 as isomer mixture
- (S)-isomer later found to be 100 times more potent than the (R)-isomer and patented
- (S)-Citalopram (Escitalopram) was approved in 2002
- Over its patent life, Lexapro generated US\$13.8B in revenue



Potent Isomer

(S)-Citalopram



(R)-Citalopram

personal use only

**Commercial
significance**



RC220

- From a partnering point of view, composition of matter patent claims are very valuable
 - Ensure that no other formulation can enter the market even if clinical studies are conducted
 - Any other (E,E)-bisantrene containing formulation would infringe Race patents
 - Other bisantrene formulation would be unapprovable or be captured by our IP
- Provides a unique position of having a broadly active cancer drug with solid IP protection if granted
- Adds to the building safety data with RC220
 - Efficacy and cardioprotection data to follow from RAC-010 study

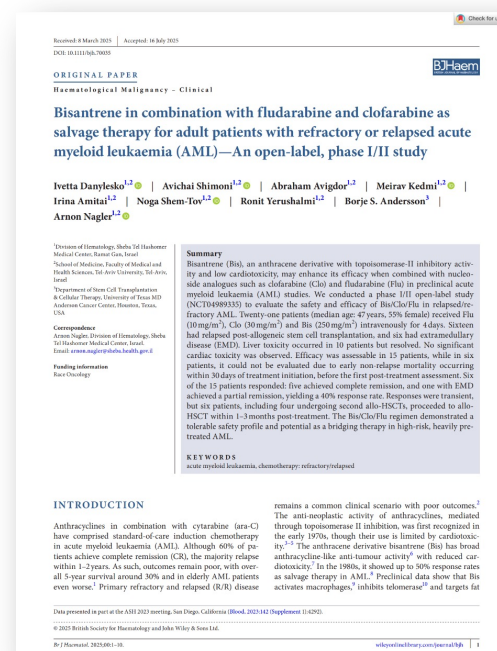


RC110 in acute myeloid leukemia (r/rAML)

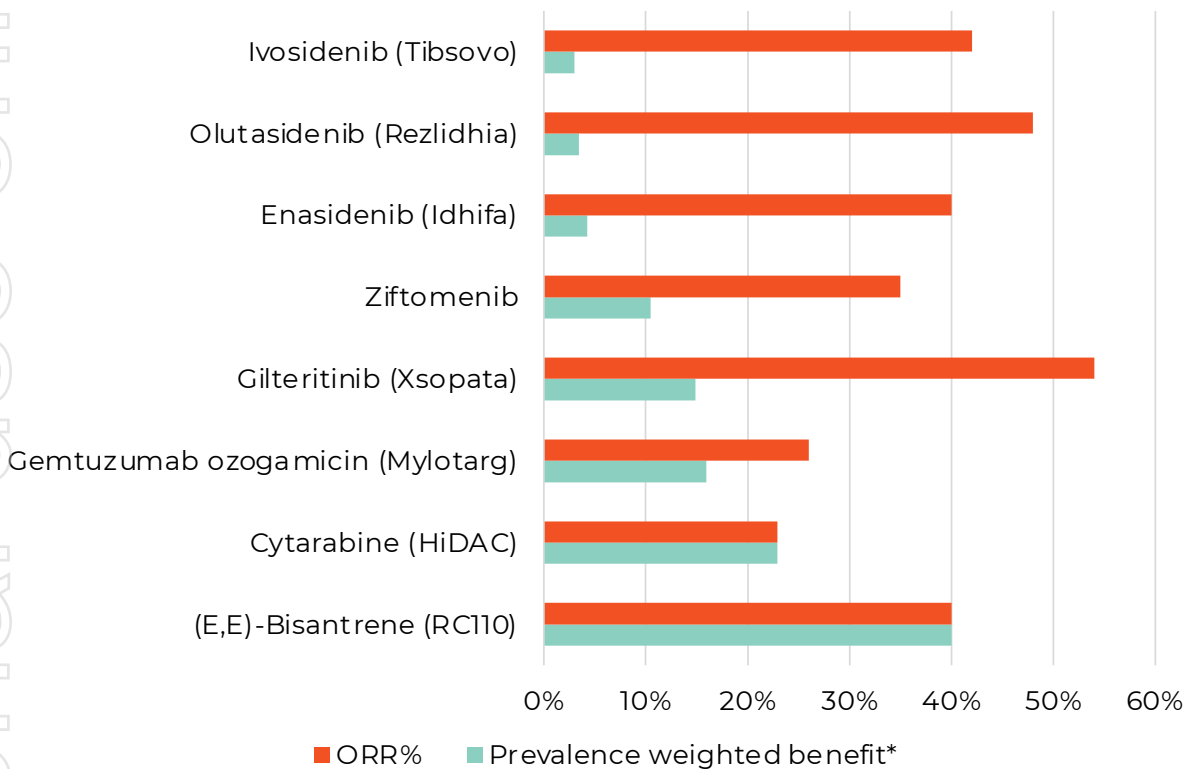
Phase II trials of (E,E)-bisantrene RC110 in r/r AML

- RC110 as a mono agent: **40% overall response rate.**¹
 - RC110 in combination with purine nucleoside antimetabolites: **40% overall response rate.**²
 - RC110 is an effective salvage agent in late-stage, very heavily pre-treated r/r AML patients.
1. Canaani J, Danylesko I, Shemtov N, et al. *Eur J Haematol.* 2021;106(2):260-266
 2. Danylesko I, Shimoni A, Avigdor A, et al. *Br J Haematol.* 2025;00:1-10

Composition of matter patent would provide strong IP protection of the RC110 formulation



Performance of Second Line Mono Agents in AML



RC110 offers the highest prevalence weighted benefit as a mono agent therapy for r/r AML patients

RC110 could readily enter a registrational Phase 3 trial in r/r AML[†]

References on file.

ORR, overall response rate. * Prevalence weighted benefit for ORR accounts for patient eligibility based on the prevalence of targeted gene mutations/rearrangements (eg, *IDH1*, *IDH2*, *FLT3*, *NPM1*, *KMT2Ar*) or overexpressed proteins (eg, CD33+) in r/r AML.

† The cost of such a trial exceeds current resources and would likely require financial support from a pharma partner.

Potential to Partner RC110

- RC110 has been very effective in recent studies in AML
- Bisantrene was not protected by strong intellectual property
 - Only orphan drug designation - 7 years of exclusivity
 - Once orphan protection period expired generic RC110 competing with RC220
 - Limited the interest in future development of this formulation
- Composition of Matter IP covering (E,E)-bisantrene would provide strong protection of RC110
- Provides a potential path to a Phase 3 trial in AML
 - Both RC110 and RC220 can be marketed via careful positioning
 - Beyond the resources of Race and larger opportunity with RC220 (cardioprotection)
- RC110 may now be of interest to potential pharma partners with a focus in hematology or orphan diseases





Conclusion

- Bisantrene can exist in three isomeric forms - (E,E), (E,Z) and (Z,Z)
 - Photoisomerisation not known prior to Race's discovery
- Only (E,E)-bisantrene (RCDS1) shown to have potent anticancer activity
- Race is using pure (E,E)-bisantrene in its RC110 and RC220 formulations
 - RAC-010 protocol includes protecting the drug from light
- Three patent applications filed on isomers, including one with composition of matter (CoM) claims
- Patent counsel advice is these patents meet the three requirements for allowance
 - Non-obviousness
 - Novelty
 - Utility
- Expedited review process for rapid assessment
- CoM claims are the strongest IP protection and if granted will add significantly to value any future licensing or partnering transactions

Questions

Race Oncology

personal use only



Important Notice and Disclaimer

The material in this presentation has been prepared by Race Oncology Limited (ACN 149 318 749) (Company).

THIS IS NOT A PROSPECTUS

This presentation is not a prospectus, product disclosure statement or disclosure document for the purposes of the Corporations Act 2001 (Cth) (Corporations Act). It has not been lodged with the Australian Securities and Investments Commission, or otherwise.

Statements in this presentation are made only as of the date of this presentation unless otherwise stated and the information in this presentation remains subject to change without notice. No representation or warranty, express or implied, is made as to the fairness, accuracy or completeness of the information, opinions and conclusions contained in this presentation or any other information the Company or any other person otherwise provides to you.

This presentation does not constitute an offer to sell, or a solicitation of an offer to buy, securities in the United States. Any securities described in this presentation have not been, and will not be, registered under the US Securities Act of 1933, as amended (Securities Act) or the securities laws of any state or other jurisdiction of the United States and may not be offered or sold in the United States except in transactions exempt from, or not subject to, registration under the Securities Act and applicable US state securities laws. This presentation may not be released to US wire services or distributed in the United States. The distribution of this presentation in other jurisdictions outside Australia may also be restricted by law and any such restrictions should be observed.

NOT FINANCIAL PRODUCT ADVICE

No attempt has been made to independently verify the information contained in this presentation. The information in this presentation is of a general nature and does not constitute financial product advice, investment advice or any recommendation. Nothing in this presentation constitutes legal, financial, tax or other advice. The information in this presentation does not take into account your particular investment objectives, financial situation or needs, or those of any other person. You should make your own assessment of an investment in the Company and should not rely on this presentation. In all cases, you should conduct your own investigations and analysis of the financial condition, assets and liabilities, financial position and performance, profits and losses, prospects and business affairs of the Company and its business, and the contents of this presentation. You should seek legal, financial, tax and other advice appropriate to your jurisdiction.

THIS PRESENTATION DOES NOT CONSTITUTE AN OFFER OR ADVERTISEMENT

This presentation does not constitute an invitation, offer or recommendation to apply for or purchase Shares and does not contain any application form for Shares. This presentation does not constitute an advertisement for an offer or proposed offer of Shares.

NO LIABILITY

The Company has prepared this presentation based on information available to it at the time of preparation, from sources believed to be reliable and subject to the qualifications in this presentation. No representation or warranty, express or implied, is made as to the fairness, accuracy, completeness or correctness of the information, opinions and conclusions contained in this presentation. To the maximum extent permitted by law, none of the Company or its subsidiaries or affiliates or the directors, employees, agents, representatives or advisers of any such party, nor any other person accepts any liability for any loss arising from the use of this presentation or its contents or otherwise arising in connection with it, including without limitation, any liability arising from fault or negligence on the part of the Company or its subsidiaries or affiliates or the directors, employees, agents, representatives or advisers of any such party.


FORWARD-LOOKING STATEMENTS

This presentation may contain forward-looking statements that are subject to risk factors associated with an oncology company. Forward looking statements can be identified by the use of forward-looking terminology, including, without limitation, the terms "believes", "estimates", "anticipates", "expects", "predicts", "intends", "plans", "goals", "targets", "aims", "outlook", "guidance", "forecasts", "may", "will", "would", "could" or "should" or, in each case, their negative or other variations or comparable terminology. These forward-looking statements include all matters that are not historical facts. By their nature, forward-looking statements involve known and unknown risks, uncertainties and other factors because they relate to events and depend on circumstances that may or may not occur in the future and may be beyond the Company's ability to control or predict which may cause the actual results or performance of the Company to be materially different from the results or performance expressed or implied by such forward-looking statements. Forward looking statements are based on assumptions and are not guarantees or predictions of future performance. No representation is made that any of these statements or projections will come to pass or that any forecast result will be achieved, nor as to their accuracy, completeness or correctness. Similarly, no representation is given that the assumptions upon which forward looking statements may be based are reasonable.

Contact

PETE SMITH

Executive Chair

 +61 2 8051 3043

 peter.smith@raceoncology.com

 www.raceoncology.com

JANE LOWE

Investor & Media Relations

 +61 411 117 774

 jane.lowe@irdepartment.com.au

Authorised for release by the Board