

**NOVOGEN LIMITED (Company)**  
(ASX: NRT)



**ASX RELEASE**  
27 October 2014

## **NOVOGEN INVESTOR PRESENTATION AND WEBINAR**

**27 OCT 2014. SYDNEY:** Further to the announcement on 16<sup>th</sup> October regarding its capital raising, Novogen Limited (ASX:NRT, NASDAQ:NVGN) has released its Investor Roadshow Presentation. The presentation is attached to this announcement and is available on the Company's website as well.

Novogen will also conduct a webinar offering current investors and other interested parties an opportunity to hear from Novogen CEO, Dr Graham Kelly discuss the purpose of the capital raise, the use of funds and the plan to bring the Company's drugs into the clinic. Dr Graham Kelly and other senior executives from the Company will also participate in the Q&A session as part of the webinar.

### **Live Web Streaming Details**

Date: 29<sup>th</sup> October, 2014

Time: 12pm AEDT (NSW, VIC, TAS, ACT)

Registration Details: <https://www.media-server.com/m/go/Novogen-20141029>

OR Scan the QR code below to view on iPad/iPhone/Android Smart Devices.



### **About Novogen Limited**

Novogen is a public, Australian drug-development company whose shares trade on both the Australian Securities Exchange ('NRT') and NASDAQ ('NVGN'). The Novogen Group includes a New Haven, Connecticut-based joint venture company, CanTx Inc., with Yale University.

Novogen has two main drug technology platforms: super-benzopyrans (SBPs) and anti-tropomyosins (ATMs). SBP compounds have been created to kill the full range of cells within a tumor, but particularly the cancer stem cells. The ATM compounds target the microfilament component of the cancer cell and when used in conjunction with standard anti-microtubular drugs, result in comprehensive and fatal destruction of the cancer cell's cytoskeleton. Ovarian cancer, colorectal cancer, malignant ascites, prostate cancer, neural cancers (glioblastoma, neuroblastoma in children) and melanoma are the key clinical indications being pursued, with the ultimate objective of employing both technologies as a unified approach to first-line therapy.

Further information is available on our website [www.novogen.com](http://www.novogen.com)

For more information please contact:

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NOVOGEN



ASX: NRT  
NASDAQ: NVGN

# Investor Roadshow October 2014



# Forward-Looking Statements

This presentation is **confidential** and is **not an offer** or a **recommendation** or intended to influence you in any way in making an investment decision or take any other action.

In particular, Novogen:

- a. does not warrant the accuracy or completeness of the information including any forward looking statements, if any, in this presentation;
- b. does not accept responsibility for any interpretation or conclusion you may form as a result of this presentation;
- c. is not liable for any loss or damage arising from any error, inaccuracy, incompleteness in this presentation.

This is not financial product advice and any advice (if any) given in this Information is general advice only. You are expected to rely on your own advice and enquiries.



# Why invest in Novogen?

- ❑ Two proprietary drug technologies. Both with **blockbuster** potential
- ❑ Targeting significant unmet clinical needs capable of expediting approval via **Breakthrough Therapeutic** status
- ❑ One of only a handful of companies with drugs capable of killing cancer stem cells
- ❑ Unique approach globally in developing the next generation of cytotoxic chemotherapies
- ❑ Broad therapeutic potential across cancer, degenerative disorders, autoimmune disease and regenerative medicine
- ❑ Low-cost operation with virtual business model
- ❑ Experienced management team and Board
- ❑ Low entry cost for significant upside potential

# Offer Summary

|                        |   |
|------------------------|---|
| Offer structure        | <ul style="list-style-type: none"><li>• Shareholder approval to issue up to 80 M shares to raise up to \$10M.</li><li>• Offer open to <i>sophisticated investors</i> only.</li><li>• Minimum \$5,000 subscription.</li></ul>  |
| Pricing                | Up to maximum 20% discount of 5-day VWAP (Oct 27 <sup>th</sup> – 31 <sup>st</sup> )   |
| Options                | <ul style="list-style-type: none"><li>• One option per share</li><li>• Unlisted; can be traded in accordance with section 708 of the Corporations Act (for example to other sophisticated or institutional investors).</li><li>• 1-year term</li><li>• Exercise price will be 90% of the five-day VWAP immediately preceding the issue of the shares pursuant to the exercise of the option</li></ul> |
| ASX BookBuild          | Eligible investors may apply for securities under the code NRTXBB via any ASX broker  |
| Technical Lead Manager | CMC Markets   |
| Stamping fee           | ASX brokers will receive a 5% stamping fee on successful allocations  |
| Ranking                | All new securities issued under the Offer will rank pari passu with existing securities   |

# Sources and Uses of Funds

| Sources of Funds   |   |
|--|---|
| Funds from the Offer (before Offer costs)                      | A\$7.5 million  |
| R&D rebate (Dec 2014; projected)                               | A\$1.45 million   |
| Exercise of options  | (Assuming SP at 7 Nov 2015 of \$0.15 and 90% uptake)<br>A\$10.8 million |
| <b>Total cash available following Offer (less Offer costs)</b> | <b>A\$8.7 million</b>   |
| Uses of Funds  |   |
| General corporate costs  | \$250,000 per month (A\$3 million p.a.)                                 |
| IND/Phase 1 costs Cantrixil                                    | A\$3.0 million  |
| General R&D program costs                                      | A\$2.2 million  |
| <b>Total</b>   | <b>A\$8.2 million</b>   |

# Timetable

|                   |  |
|-------------------|--|
| Offer opens       | 3 November 2014  |
| 5-day VWAP        | 27 October – 31 October 2014   |
| Pricing announced | 3 November 2014 (9.00 am)  |
| Trading halt      | Novogen intends to seek a trading halt and voluntary suspension of up to 5 days commencing 3 November 2014 to allow for the orderly completion of the subscription process |
| Offer closes      | Novogen reserves the right to close the Offer at any time if fully subscribed.<br><br>Offer will close no later than 3 pm (AEST) on Friday, 7 November 2014                |
| Settlement        | T+4 days after the Offer Close via the Chess Primary Market Facility on a DVP basis  |



# How to Subscribe

There are 2 ways to subscribe

## 1. Via your broker and the ASX BookBuild

You will need to enter into a once-off ASX BookBuild Client Agreement with your broker. Your broker then will make an application on your behalf using the ticker symbol **NRTXBB**

## 2. Directly with Novogen

You can deal directly with Novogen.

Visit [www.novogen.com](http://www.novogen.com) to find the 4 simple steps involved in this process.

# Vision and Mission

## Vision

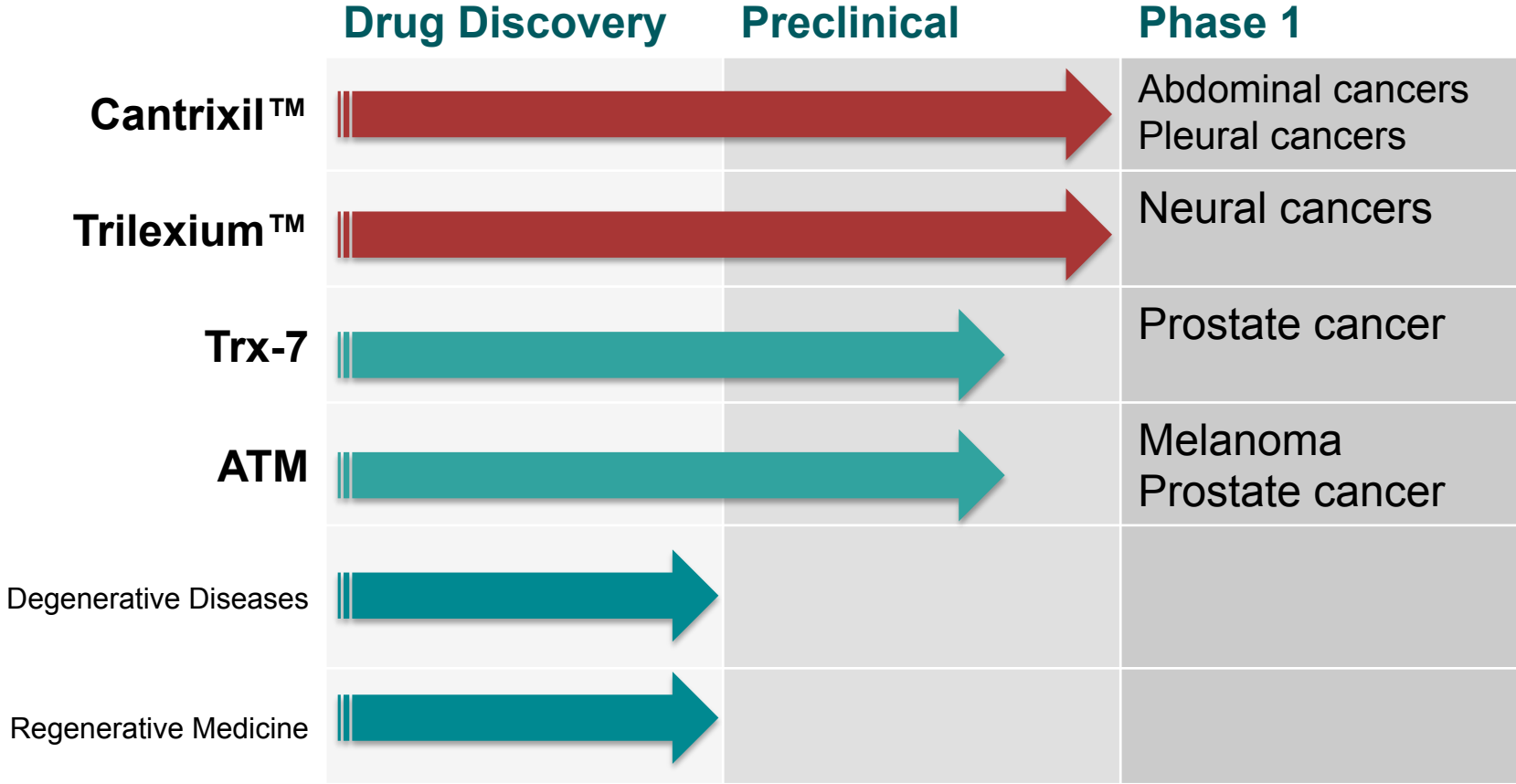
To become a major global biotechnology R&D company on the back of two first-in-class drug technology platforms across the fields of

- Oncology
- Degenerative Diseases
- Autoimmune Diseases
- Regenerative Medicine

## Mission

To bring to market new generations of drugs that will offer meaningful clinical benefit to serious community diseases ranging from high-volume indications (eg. prostate cancer) down to low-volume indications (eg. motor neurone disease).

# Pipeline



# Pipeline

Priority Area for Focus

|                       | Drug Discovery | Preclinical | Phase 1                              |
|-----------------------|----------------|-------------|--------------------------------------|
| <b>Cantrixil™</b>     |                |             | Abdominal cancers<br>Pleural cancers |
| <b>Trilexium™</b>     |                |             | Neural cancers                       |
| <b>Trx-7</b>          |                |             | Prostate cancer                      |
| <b>ATM</b>            |                |             | Melanoma<br>Prostate cancer          |
| Degenerative Diseases |                |             |                                      |
| Regenerative Medicine |                |             |                                      |

Yale University

**CanTx Inc.** is a joint venture company between Novogen (85%) and Yale (15%). *The only Australian biotech to have entered into a partnership with a US Ivy League university*



Novogen has licensed **CanTx** to use **TRX-E-002-1**, the first drug with potent activity against both ovarian **cancer stem cells** and **regular ovarian cancer cells**.



**CanTx** has developed **TRX-E-002-1** into **Cantrixil**, an intracavity product intended as:

- first-line therapy for ovarian cancer
- salvage therapy for late-stage ovarian cancer
- salvage therapy for malignant ascites
- salvage therapy for malignant pleural effusion.

# Cantrixil

## *Designed as:*

An intra-cavity product for the treatment of

- intra-abdominal cancers
- intra-pleural cancers

## *Method of use:*

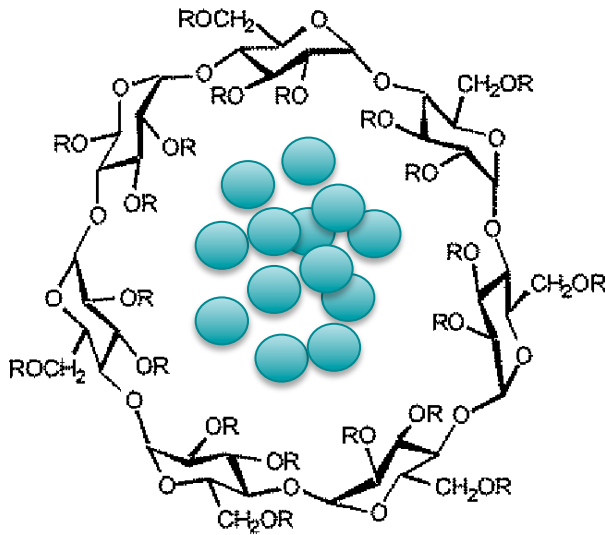
- Intra-cavity infusion
- In combination with cytotoxic chemotherapy

## *Primary clinical indications:*

- Ovarian cancer
- Malignant ascites
- Malignant pleural effusion

## *Rationale:*

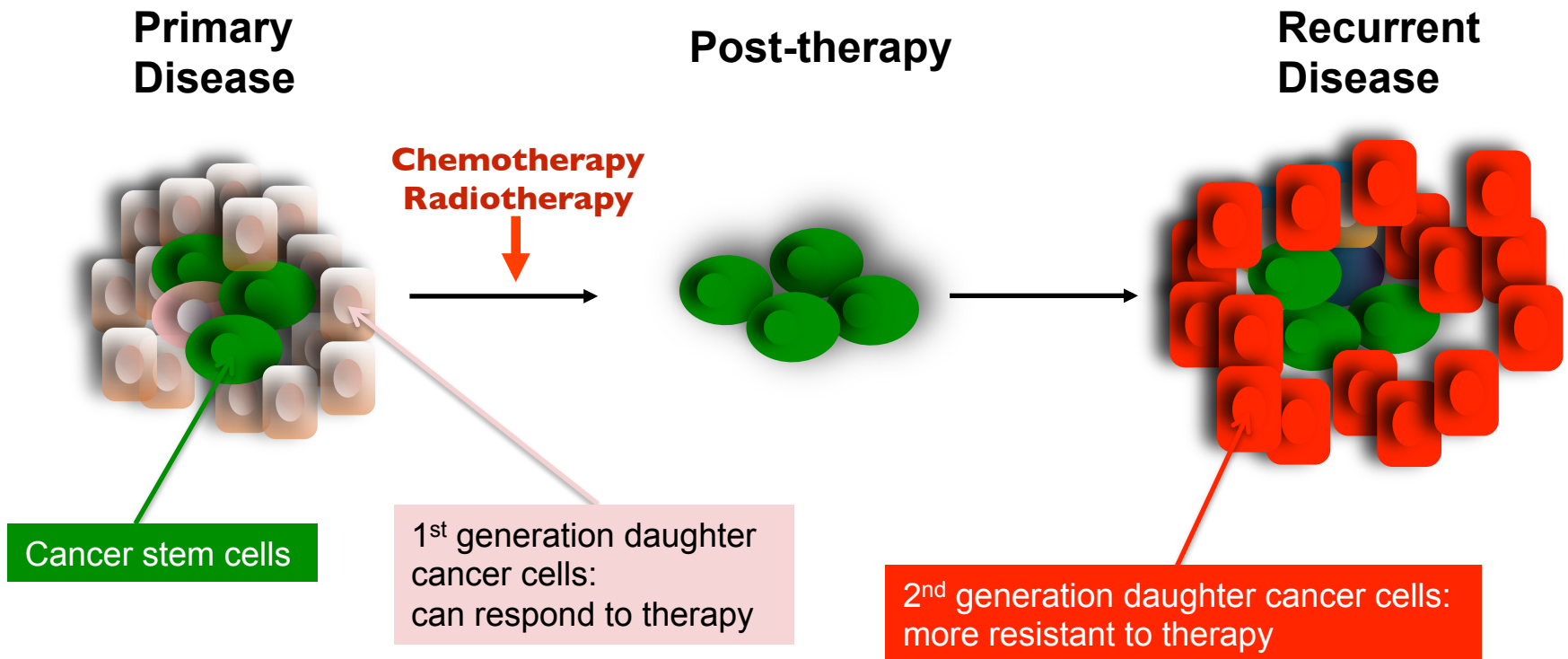
- to destroy the full hierarchy of cells within tumors
- to destroy the cancer stem cells, to prevent tumor recurrence



**It is a construct  
of TRX-E-002-1  
in Captisol**

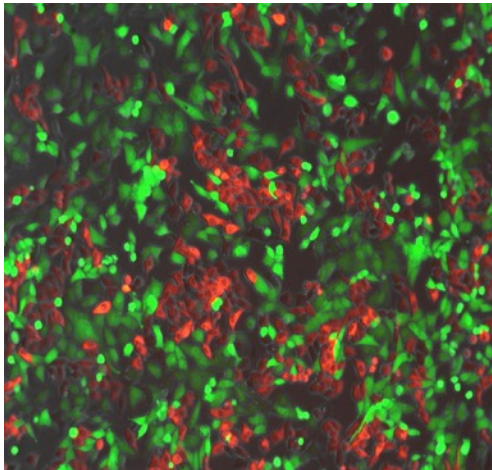
# Cantrixil

Malignant cancer is largely incurable because the cancer stem cells resist therapy and produce recurrent disease

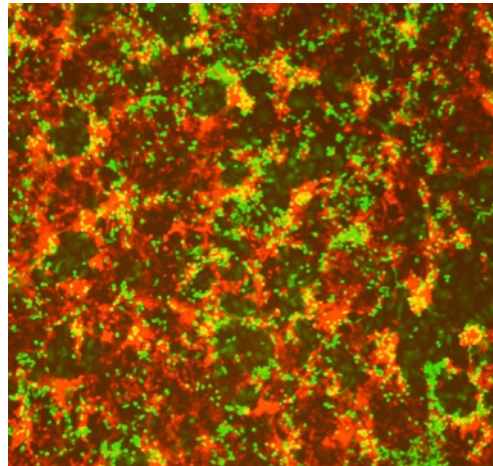


# Cantrixil

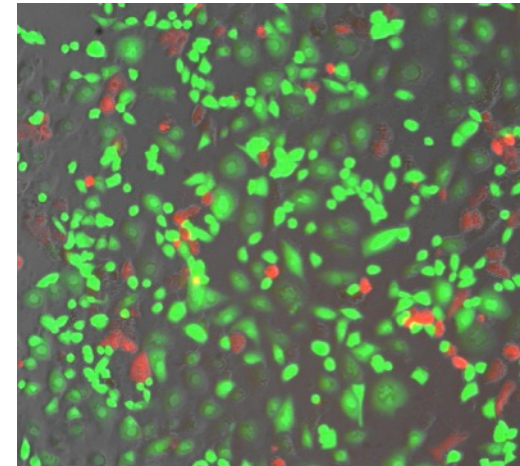
Cancer stem cells are slow-growing and resistant to drugs. Their daughter cells are fast-growing and sensitive to drugs such as Taxol.



Ovarian cancer tumors are composed of slow-dividing cancer stem cells (**GREEN**) and fast-dividing daughter cells (**RED**)



**72-hour culture untreated**  
After 3 days, the **RED** cells dominate due to their more rapid cell division. This mimics the situation in a cancer patient.



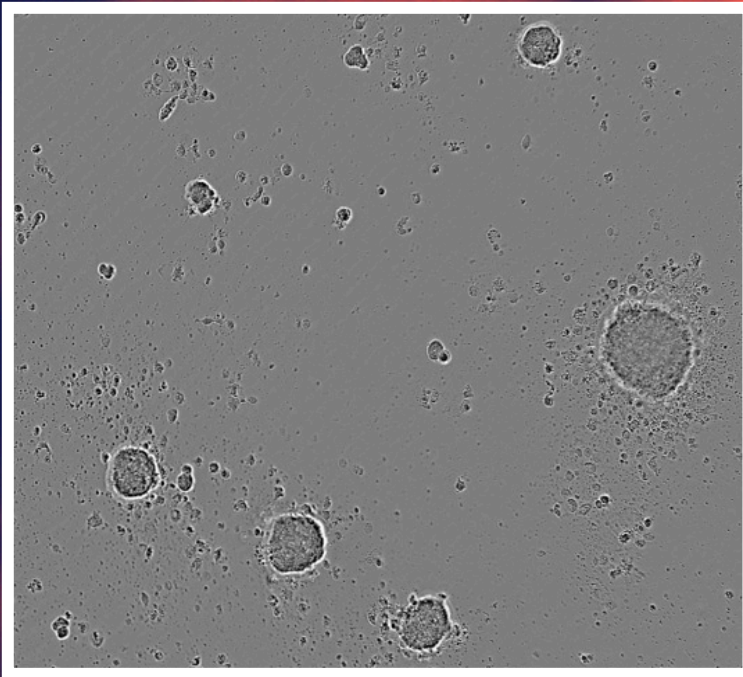
**72-hour culture treated with Taxol**  
Adding Taxol to the culture kills the **RED** cells, but leaves the **GREEN** cancer stem cells unaffected. This also mimics what happens in the patient with ovarian cancer.



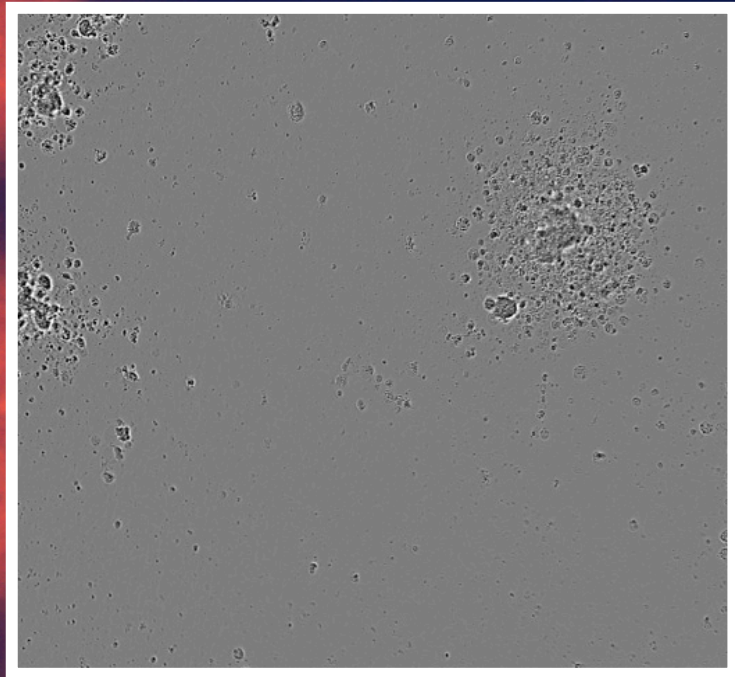
# Cantrixil kills cancer stem cells

3-dimensional spheroids of ovarian cancer stem cells are the structures found in the peritoneal cavity of women with ovarian cancer. These are the means by which the cancer spreads throughout the abdomen. Cantrixil efficiently destroys these spheroids.

## Control

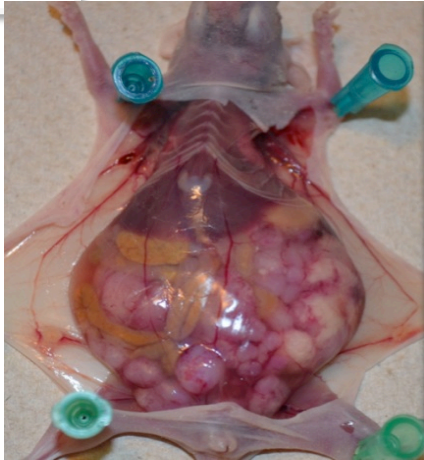


## Cantrixil



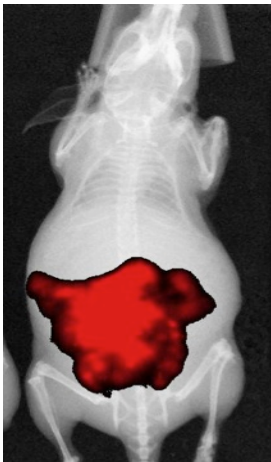
*Human ovarian cancer stem cell spheroids*

# Cantrixil

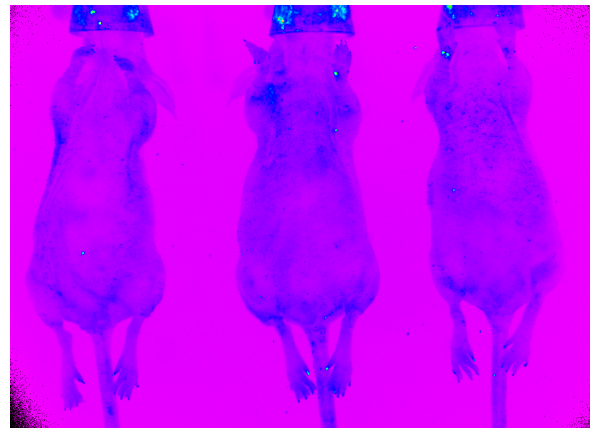


Autopsy of mouse injected with human ovarian cancer stem cell spheroids into the peritoneal cavity showing multiple tumors throughout the abdomen. The tumors in this mouse grew despite treatment with Taxol.

Addition of fluorescent dye to cancer cells allows the growth of the tumors to be monitored by fluoroscopy in living animals



Tumor development shown by fluoroscopy after treatment with Taxol



Cantrixil.  
No tumor development

# Cantrixil

## Projected clinical uses

### **Ultimately:**

Ovarian cancer - **first-line therapy** with carboplatin following diagnosis and surgical debulking.

**Aim: by eradicating the cancer stem cells, to provide durable cancer-free survival.**

### **Now:**

Ovarian cancer – **salvage therapy** in late-stage disease refractory to standard therapy.

**Aim: to destroy the full hierarchy of cells within tumors, thereby recovering patients and providing long-term remission**



### **Phase 1 study:**

- Yale Cancer Center
- Select hospitals in New York/Boston region
- UK hospitals

# Cantrixil

## Projected clinical uses

***Ultimately and now:***

Patients with advanced malignant disease of the abdomen (carcinomatosis) associated with malignant ascites.

**Aim: to offer an anti-cancer effect in patients where no standard of care exists and where survival prospects are 3-6 months**



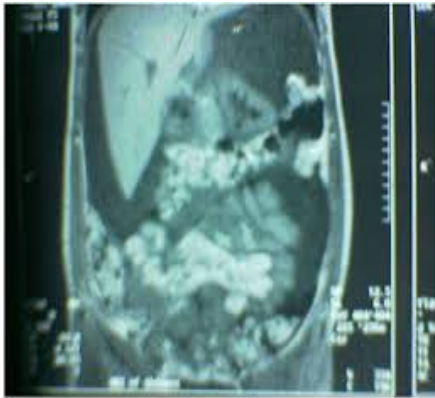
***Phase 1 study:***

- *Australian hospitals*

# Cantrixil

## Malignant ascites

- 15-50% of all cancer patients develop malignant ascites.
- No standard of care; currently palliative treatment only.
- 2-6 month median survival time.



- Ovarian cancer
- Gastric cancer
- Colorectal cancer
- Pancreatic cancer
- Breast cancer

## Clinical development strategy & timeline

| <u>Phase</u> | <u>Status</u> | <u>Indication</u>            | <u>Sites</u> | <u>Start</u> | <u>Finish</u> |
|--------------|---------------|------------------------------|--------------|--------------|---------------|
| IND          | current       |                              | US           | Aug14        | May15         |
| Phase 1      | 3Q15          | late-stage<br>ovarian cancer | US/UK        | Aug15        | Aug16         |
| Pilot study  | 3Q15          | malignant<br>ascites         | AUST         | Aug15        | March16       |

# Super-Benzopyran Drug Technology

## *Value-drivers*



| Feature   | Benefit   |
|---|---|
| First molecules to be potently cytotoxic to cancer stem cells and their daughter cells                      | Potential to prevent tumor recurrence               |
| Acceptable therapeutic index  | Delivering benefit with tolerable toxicity          |
| Unaffected by multi-drug resistance mechanisms<br>Cytotoxic to platinum- and taxane-refractory cancer cells | Clinically applicable to late-stage cancer patients |
| Strong patent position on basis of composition of matter and use  | Unique position in market                           |
| Pan anti-cancer activity  | Potential utility across most forms of cancer       |



# Summary

- **Novogen has two first-in-class drug technologies**
  - One technology offering first drugs to **kill cancer stem cells AND their daughter cells** in order to prevent cancer relapse
  - Second technology hitting entirely **new cancer cell target**
- **Two first-in-man trials within 12 months; 4x within 18 months**
- **Proprietary IP**
- **Lean, low-cost operation**
- **Experienced CEO and senior executive team**





# Contact details

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## **Information about ASX Bookbuild**

Information on the ASX Bookbuild Facility can be found on the ASX website on the links below.

### ***For brokers:***

<http://www.asx.com.au/documents/professionals/bookbuild-trading-participant-information-sheet.pdf>

### ***For investors:***

<http://www.asx.com.au/documents/professionals/bookbuild-investor-information-sheet.pdf>



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