CYTO MATRIX

A Cancer immunotherapy company with proprietary delivery systems for in-body activation of the immune system to fight cancer.

Dr. Rodney Cusack
CEO

Investor Presentation

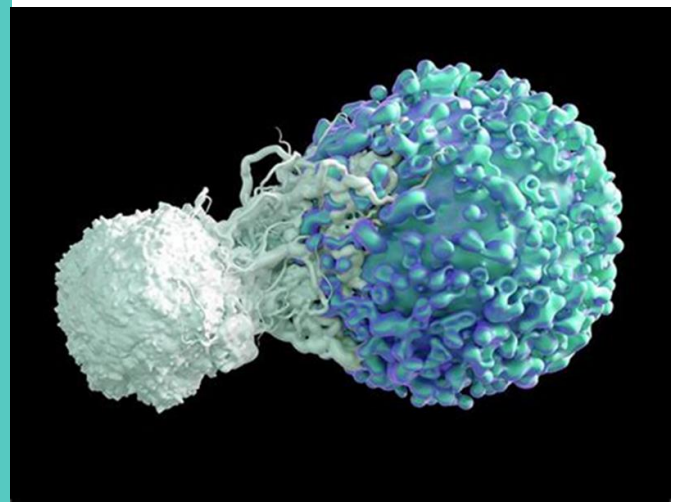
SUMMARY

- Cytomatrix Technology = **S**hort **P**olymer **F**ibres (SPFs)
- = Gentle process that preserves function of (bio)actives with controlled release
- Developed at **Deakin University** and **Cytomatrix** over 15 years
- Cytomatrix's lead product = sustained delivery anti-cancer vaccine:
  - Is personalised to work **WITH** a person's immune system
  - Works **WITH** complementary current therapies
  - Drives an **OVERPOWERING** immune attack when timed correctly
- Company goal = out-license to pharma company at **Phase II**

OUR APPROACH – SUSTAINED-RELEASE ANTICANCER VACCINE

Aim: Overcome cancer's tricks by dramatically increasing the number of killer T-cells

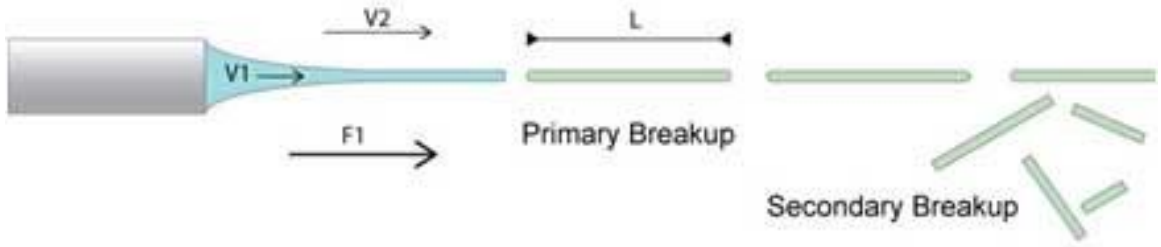
Means: Using **Short Polymer Fibres** (**SPFs**) to continuously release immune stimulating factors
+ Use in combination with immune checkpoint inhibitors and radiation at the right time!

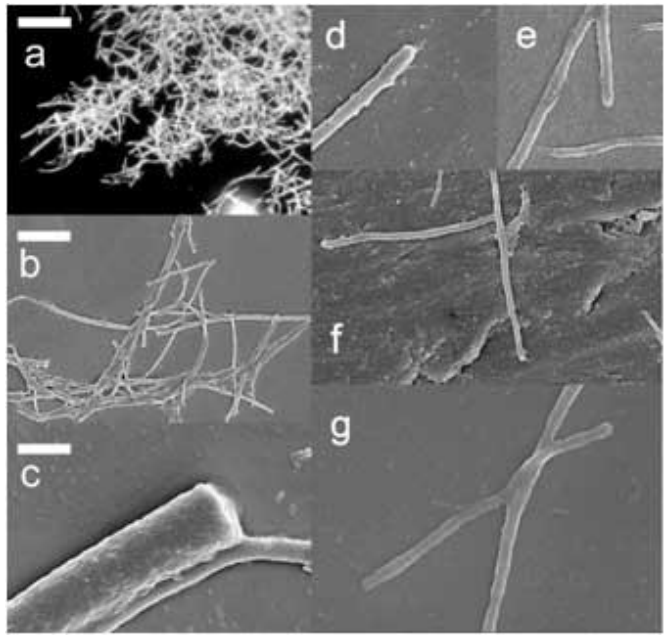


T-cell (white) killing a cancer cell (green-blue)

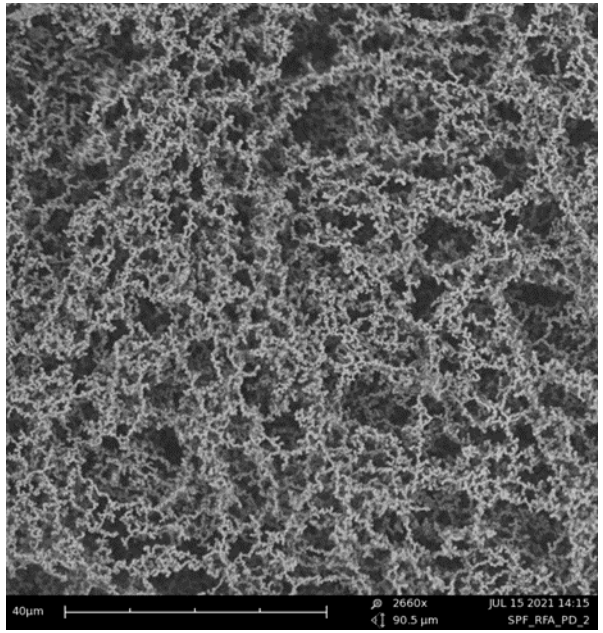
WHAT ARE SHORT POLYMER FIBRES (SPF)?

Injection of polymer solution into a coagulant bath under shear





Porous “Sponge”



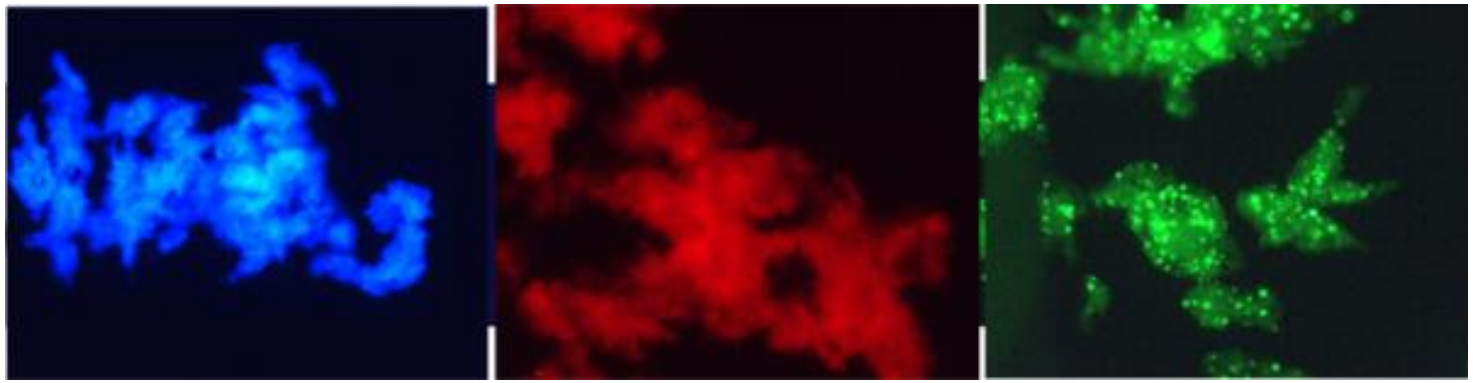
Tuneable dimensions in 30sec
FINEST DIAMETER: 15nm

International Patent in place

Slide 18

SPF APPLICATIONS

Encapsulation of biological material

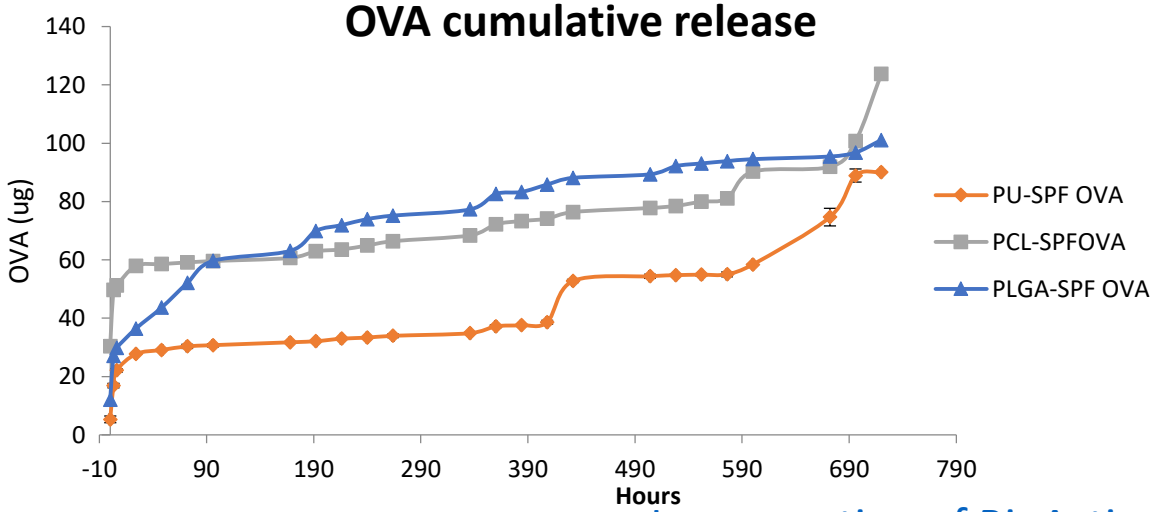


Peptides
- βAmyloid1-15

RNA/DNA
- CpG-ODN

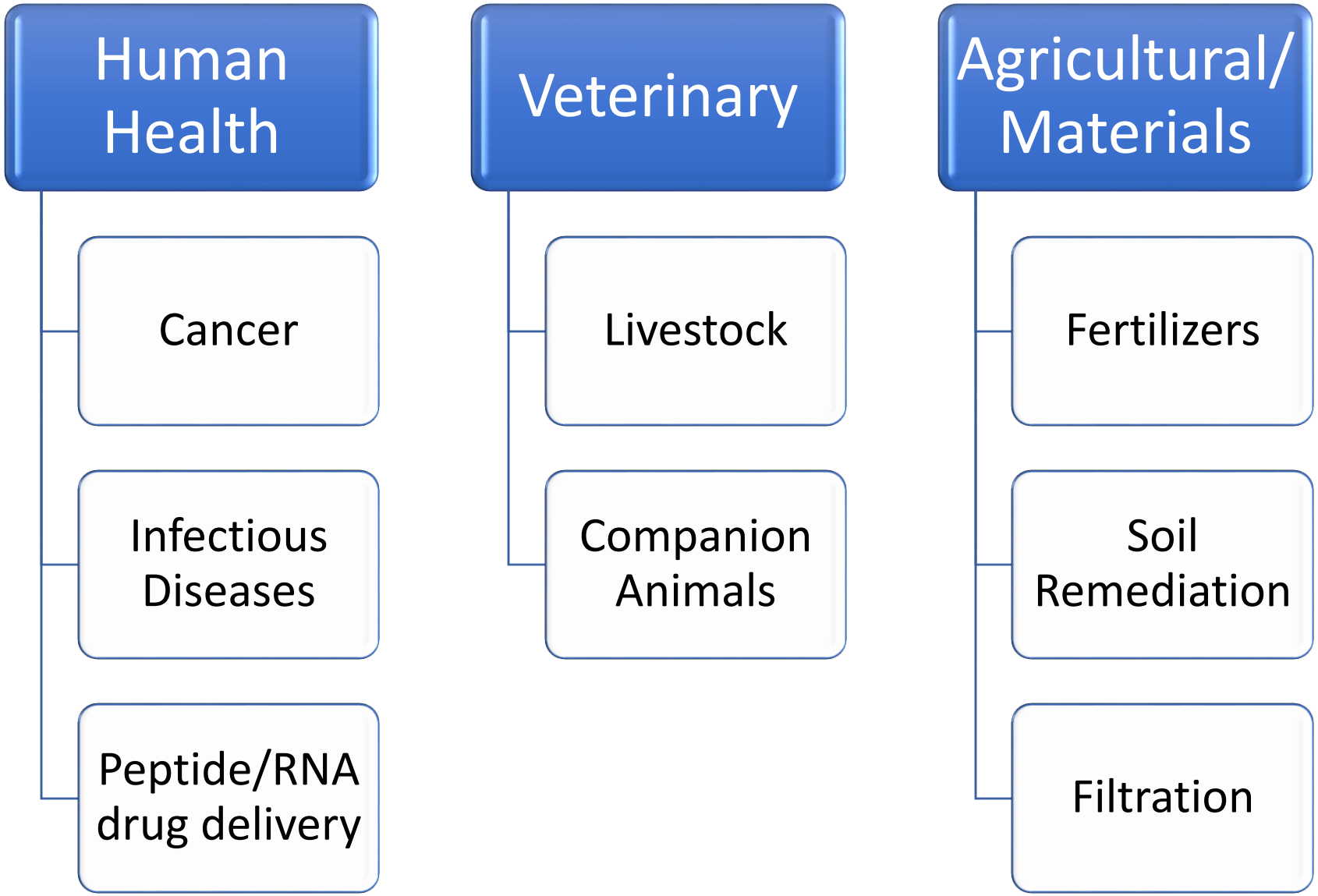
Proteins
- IgG

Control of Release Rates



Incorporation of BioActives into and on Fibres

POTENTIAL SPF APPLICATIONS



PLATFORM IP

WO2013056312A1	Granted	https://patents.google.com/patent/WO2013056312A1/en	All major jurisdictions worldwide. Invented by **Cytomatrix** and **Deakin University.**	A process for preparation of fibres, including discontinuous colloidal polymer fibres that employs a low viscosity dispersion medium
WO2014134668A1	Granted	https://patents.google.com/patent/WO2014134668A1/en	All major jurisdictions worldwide. Invented by **Cytomatrix** and **Deakin University.**	Apparatus for producing nanobodies via introduction of a body-forming fluid into a dispersion medium.
WO2020198798A1	Priority Date 4/02/2019	A composition for the delivery of biologically active agents and uses thereof	All major jurisdictions worldwide. Developed by Cytomatrix with **Deakin University.**	Composition for rapid and sustained delivery of one or more biologically active agents, and uses thereof.

CYTO MATRIX

The Global Challenge

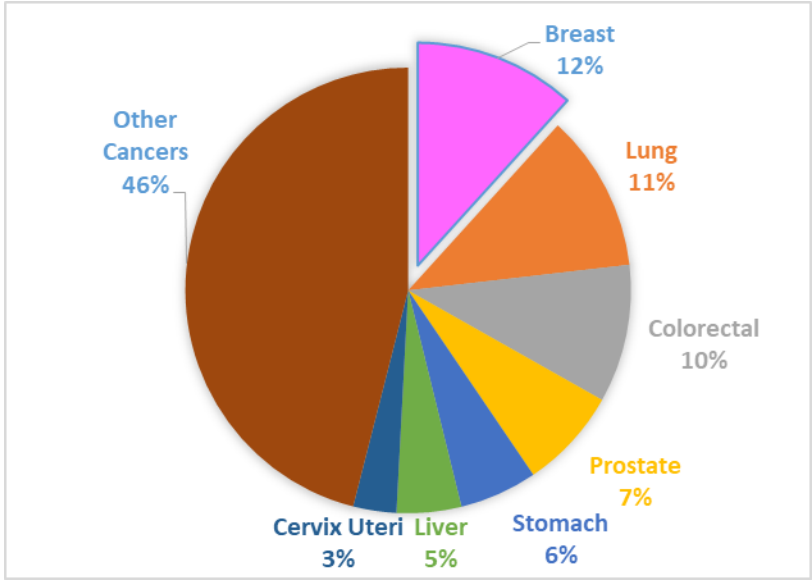
- Cancer continues to be second biggest killer in all societies.
- 19.3 million new cancers and 10 million deaths globally
- In 2020 US$160 Billion p.a. in USA, Europe > US$100B
- Per patient costs are increasing > treatments range from $10K per month to over a million $ p.a.

Targeting an attractive 85 billion USD cancer immunotherapy market (2020), expected to grow to est. 277 billion USD by 2030 CAGR of 14.1%*

**Precedence Research*

Market Analysis

TRIPLE NEGATIVE BREAST CANCER (TNBC) – UNMET NEED



- Breast cancers ~ 12% of global diagnosed cancers
- ~ 15 - 20% are TNBC
- Only 40% respond to chemotherapy
- Relapse is common (~40%).
- Poor survival when late stage (**11%** 5-year survival)
- TNBC market ~ US$780m in 2022
- We will grow market to >US2 billion by 2034
- Success here in humans will validate the technology and allow additional indications to be added

WHY OUR APPROACH WILL WORK?

OUR VACCINE

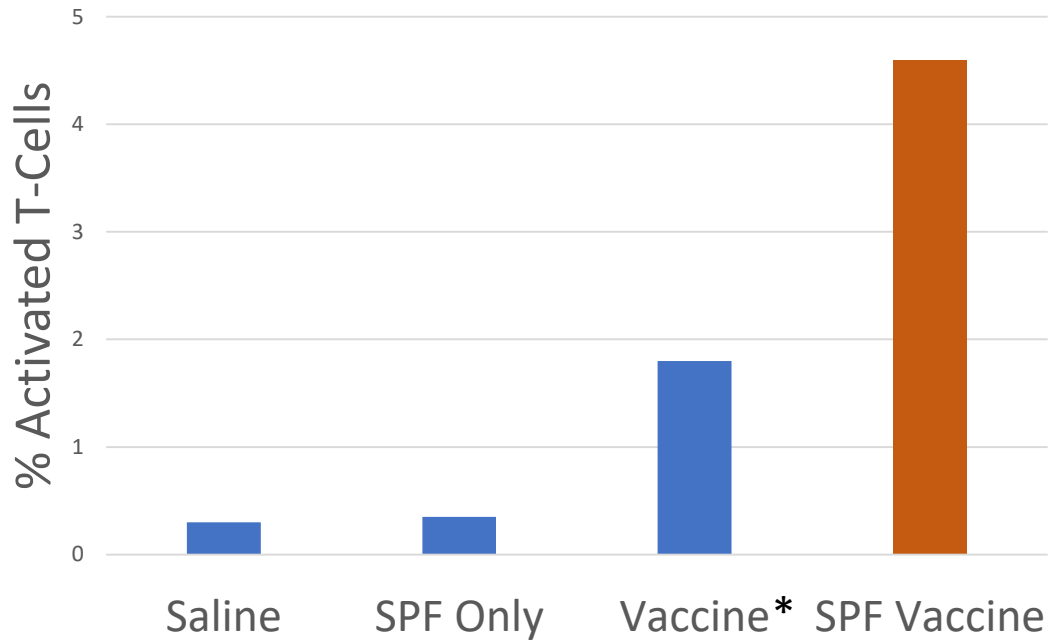
= Sustained-release of dendritic cell factors and antigens drives a far stronger immune response!

Combined with:

+IMMUNE CHECKPOINT INHIBITORS

+RADIATION (XRT)

+TIMING

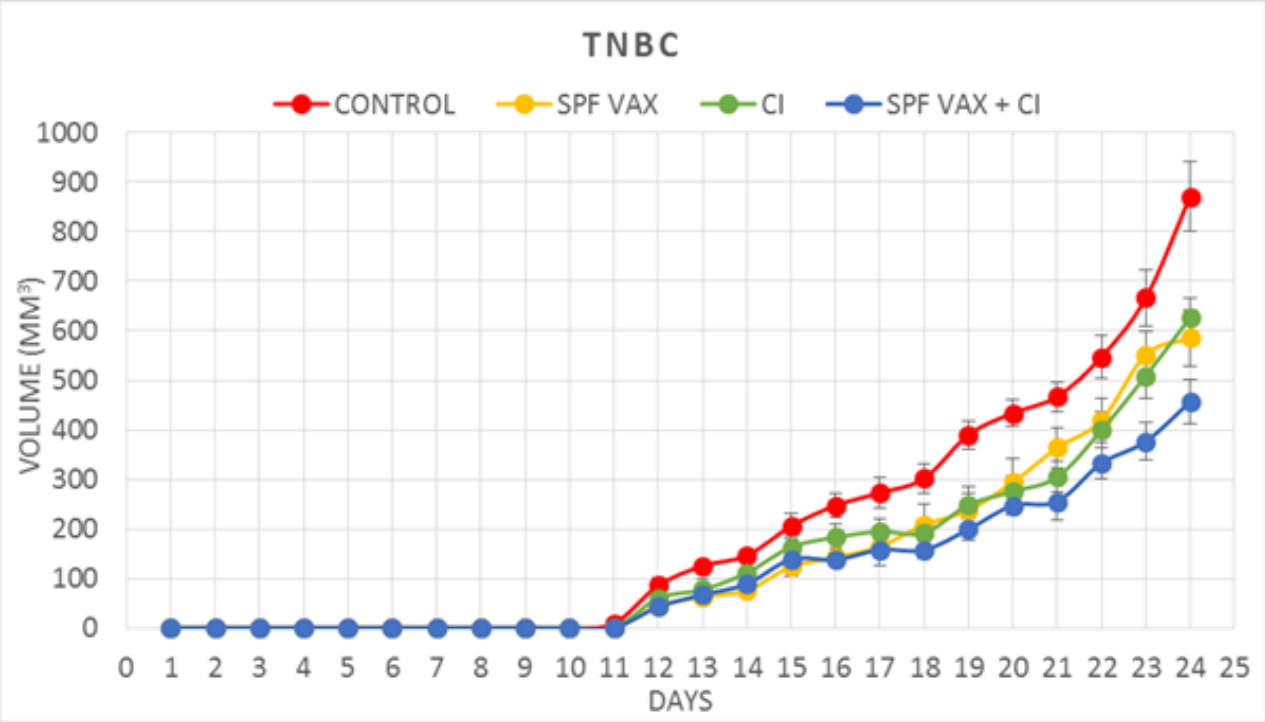


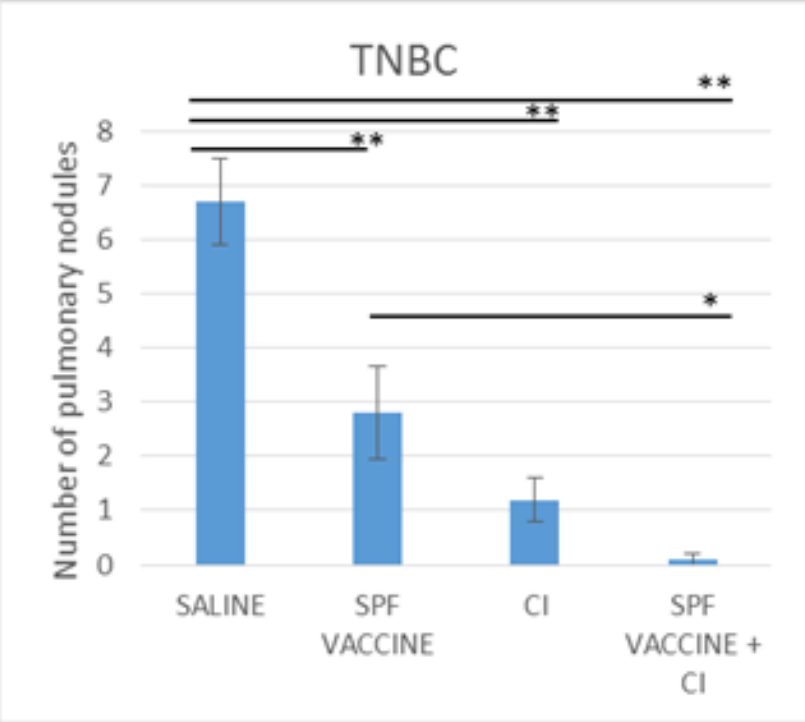
➡ **Superior anticancer activity!**

*Ingredients without SPF

CompAring Results with Reported Literature SBRT-PATHY Immune system timing

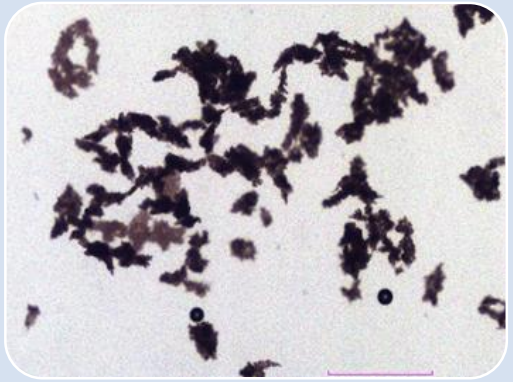
DATA – SYNGENEIC MOUSE TNBC (4T1)

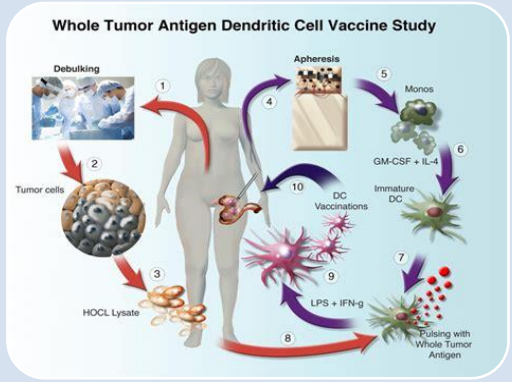




Response in TNBC mouse model. Vaccine (SPF) injected on days -42 and -21 prior to tumour inoculation (Day 1). Checkpoint inhibitors (CI) injected on Days 6, 9 and 12. Lung metastases were nearly completely prevented with the combination.

COMPETITIVE EDGE





SPF

Injectable

Cheaper & Faster

Strong efficacy

GEL

Implantable (Surgery)

Strong efficacy

EX-VIVO

Labour intensive

Expensive

Poor cell survival

Weak effects

[Cancer immunotherapy — treatments that harness and enhan...]

CYTOMATRIX PIPELINE OF DISCOVERY AND APPLICATION

Cytomatrix Product and technology Pipeline

		Discovery	Proof of Concept	Validation	Pre-Clinical	Phase 2a	Phase 2b
Target Development							
Oncology*	Melanoma	→	→	→	→		
	Triple Negative Breast Cancer	→	→	→	→		
	Ovarian	→	→				
	Prostrate	→	→				
New Approaches to target specfication							
	Cancer Secretome	→					
	DC1 Specific Vaccine**	→	→	→			
	Exosome	→					
Platform Development							
Polymer Development							
	Controlled Delivery and Release	→	→	→			
	New Class of Polymers	→	→				
Polymer Production							
	New Techniques ***	→	→	→			

*New patent
** New PCT
*** New PCT → Working with assistance of **CSIRO**

THE CYTOMATRIX TEAM

Cytomatrix Board

Executive Chairman: Prof. Andrew Parratt

Andrew has been managing director or chairman of several technology companies. From 2005-2014 he held various research leadership roles at Deakin University including founding Executive Director of the Institute for Biotechnology and the multi-disciplinary Institutes for Technology and Innovation. Prior to his role at Deakin Andrew was managing director of Apollo Life Sciences, a previously ASX listed reagents and cell biology company spun out of University of NSW.

Non-Executive Director: Darren Scotti

Darren is an experienced Director and Company Secretary Darren currently sits on several boards. He also acts as a finance professional for start-up companies in Australia and the USA.

Non- Executive Director: Simon Marriot

Simon is highly experienced senior executive with more than 25 years' experience in advanced manufacturing, technology development and R&D. also been a CEO, COO and CTO with a number of technology start-ups including: Amaero Engineering, Cetus Energy, Observant. In 2017 he played a significant role in the listing of Titomic (TTT) that licensed CSIRO AM platform to Cold Spray Titanium. Simon has been actively involved in promoting and assisting several technology companies achieve Seed, Series A and B funding.

CEO: Dr. Rodney Cusack

Rodney has over two decades of experience in the Australian biotech and science sector. He has been responsible for the preclinical and clinical programmes at Xenome Pty Ltd, Bionomics Ltd and QBiotics Ltd, with a focus on CNS and oncology.

Science and Technology Team and Collaborators

Molecular and Immunology

Deakin University

- Assoc. Professor Julie Sharp
- Dr. Ashalyn Watts
- Dr. Guy Moeneclaey (consultant)

Queensland University of Technology, Translation Research Institute

- Professor Rik Thompson

Polymer, Kinetics and Physical Chemistry

Biora Pty Ltd

- Dr. Mike O'Shea
- Dr Riley O'Shea

CSIRO

- Dr Ben Muir
- Dr Shaun Howard

Deakin University

- Professor Sally McArthur and Professor Colin Barrow

Formulation, Prototyping and Characterisation

Medicines Manufacturing Innovations Centre (Monash University)

- Dr. Paul Wynne
- Dr. Kahlil Desai