# Briefing Factsheet

A high specificity onco-immunological therapy

Biosceptre

# promise beyond cancer

www.biosceptre.com

**Shares at a glance**

*Shares issued*
40 million (approx.)

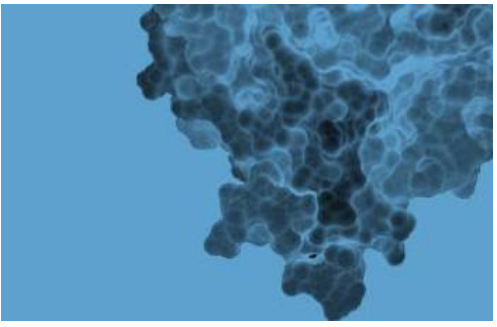
**Board**

*Peter Newton* – Non-Exec Chairman
*Gavin Currie* – CEO
*Andrew Walton-Green* – Non-Exec Director
*Michael Lovett* – Non-Exec Director
*Dr Ron Watts* – Non-Exec Director
*Jon Collins* – Non-Executive Director

**Scientific Advisory Board**

*Professor Sir Gregory Winter*
CBE, FRS, FMedSci, HonFRCP
Master of Trinity College, Cambridge

*Professor Terence Rabbitts*
FRS, FMedSci

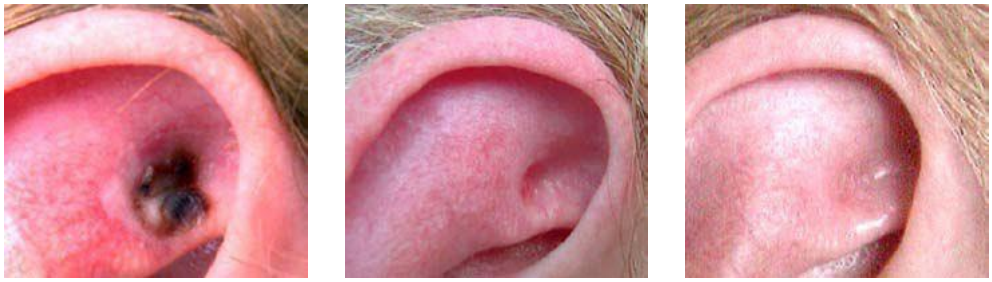


## The opportunity

Biosceptre has identified a novel cancer target, a non-functional variant of P2X7 (nfP2X7), present in a range of cancers including lung, breast, colorectal and prostate. Importantly this target is not found on healthy tissue, minimising potential for side effects. Biosceptre has demonstrated that drugs directed to this target have the potential to treat cancers in patients with high specificity and minimal side effects. As a consequence we are now looking to move into further pivotal clinical trials to deliver our innovative anti-cancer portfolio.

## Commercialization of our platform

Biosceptre is conducting a series of development programs, with the primary focus being an antibody product for systemic administration to treat both solid and hematological tumors along with an onco-antigen immunotherapy. The initial clinical observations in 'Special Access Patients' suggests utility in a range of cancer indications and is also indicative of the targets' unusually high specificity (no side effects). Biosceptre's most clinically progressed program and proof of concept is a topical formulation polyclonal antibody, to treat basal cell carcinoma and other skin cancers. A first-in-human FDA Phase 1 clinical trial has demonstrated safety with no adverse events related to the product. In addition, there was a good indication of efficacy with 85% of patients showing that the cancer stopped growing (20%) or was reduced in size (65%) over the 28 day period of the trial. The positive result of application of our topical therapeutic on a skin cancer is illustrated below.



Day 1 Day 6 Day 16

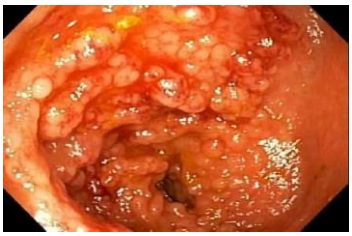
Papulonodular Basal Cell Carcinoma at day 1, 6, and 16 of topical treatment


Waterfall plot of percentage change in tumor diameter in a completed 28 day FDA Phase 1 study in BCC patients showing excellent safety profile. H&E showing many lesions with little tumor remaining.

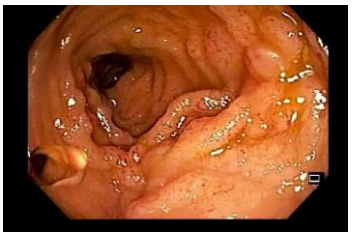
## Fighting cancers with nfP2X7 onco-antigen immunotherapy

Stimulating a patients own immune system to fight cancers can provide therapeutic approaches to treat cancers that are treated poorly by existing therapeutics. Biosceptre has a program that has shown this is an achievable possibility. A vaccine consisting of a peptide-protein fusion has been used already in special access patients. Below are two images from a patient with no standard treatment options available for his follicular lymphoma, who was inoculated using Biosceptres' peptide. These images, from the same region of his bowel were taken before and after treatment. Analysis by independent clinicians indicated a 70% overall reduction in tumor load demonstrating potential clinical use as an adjunct therapy as soon as patients are diagnosed. We have had similar results with a prostate cancer patient and a patient with acute myeloid leukemia both of whom are in remission.

**Before treatment**

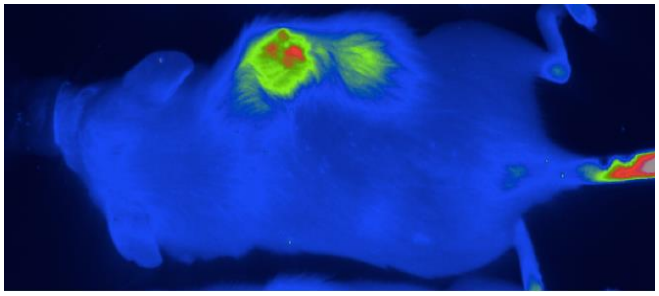


**After treatment**



## Detecting cancers early to improve treatment outcomes

Cancers could be detected early using specific antibodies designed to bind to nfP2X$_7$ which are labeled with a marker that can be detected using commercially available imaging equipment. One example of this is shown below in a mouse with pancreatic cancer. The site used to inject our imaging product into the tail is in visible (red) and the cancer is clearly and discretely visible as two red and green circular regions.



## Targeting nfP2X$_7$

Biosceptres' technology centers around P2X7, a membrane receptor, which is expressed on the surface of many cells and has roles in pain, apoptosis, and metastasis. On activation, the P2X7 ion channel opens, allowing rapid influx of ions, formation of a large pore, and can play a role in apoptosis.

Biosceptre has identified that a domain on the P2X7 receptor which is not accessible to antibody binding in the functional version, does become exposed in P2X7 structural variants found on a range of cancer cells - these variants are called non-functional P2X7 (nfP2X7). When nfP2X7 copy counts become large on a cells' surface, the cell viability is increased and proliferation is seen. As a result, cells expressing nfP2X7 can avoid death and proceed to form tumors.

Biosceptre has identified nfP2X7 to be present on the cells of a range of cancer indications including a number of the most common cancers. There is the potential that Biosceptres' antibodies that bind to nfP2X$_7$ may be effective in treating a range of cancers.

Biosceptre has a rigorous international patent portfolio that provides both broad protection of the target and specific protection of various antibody products and processes. The Company will continue to protect our new discoveries through international patents around nfP2X7 and use of this receptor in diagnostic, imaging and therapeutic applications.

Biosceptres' Scientific Advisory Board is comprised of Senior and World thought leaders in the field of immuno-oncology. The team has authored a significant number of publications and presentations.

Execution of the business plan will result in reaching a series of milestones over the next 18 months, each milestone representing a significant value inflexion point for the business.

## Next Steps

Biosceptre wishes to execute a Phase 1 FDA basket trial to further validate our key strategic program for our fully human monoclonal antibody for systemic use against a range of cancers, as well as an FDA Phase 1 for our onco-antigen immunotherapy program which offers hope for earlier stage cancer treatments.