

# Oxford Technology Combined SEIS and EIS Fund

## Quarterly Report to 31 Dec 2012

### Summary

By 31 Dec 2012, OT(S)EIS had raised just over £1m, and with the agreement of all the investors at this time completed its first SEIS investment of £100,000 in Run 3D just before Christmas. Two further SEIS investments have been agreed and a fourth is close to agreement.

### Portfolio

Company Name	£ Invested	Date	SEIS/EIS	Net Cost	Fair Value	Multiple
Run 3D	£100,000	18/12/12	SEIS	£50,000	£100,000	2

### Note:

1. Advance SEIS approval received from HMRC. Full SEIS status obtained only after 70% of capital invested is spent.
2. Net Cost  
This shows the net cost to an investor in the fund who has UK income tax to pay. His/her income bill is reduced by 50% of the cost of the investment. For those investors with Capital Gains tax to pay, the cost is reduced still further.
3. Fair value  
This is the value of the investment as of today's date using BVCA guidelines.

### Future Investments

The following investments have been agreed and we expect to complete them soon:

#### 1. Improved Treatment of Ovarian Cancer

OT(S)EIS will invest £75,000 as part of a £150,000 SEIS investment in this new business which is a university spin-out. Solid cancer cells including ovarian

cancers overexpress a particular ligand on their surface. The scientists have developed a method of coercing these cancer cells to ingest a biodegradable bead coated with the receptor molecule to the ligand and loaded with a chemotherapy compound (one that is already used to treat ovarian cancer today). The overall result is that when injected into the patient, the beads bind preferentially to ovarian cancer cells, whereupon the bead enters the cell where, over a period of days the chemotherapy agent is slowly released, killing the cells. Other beads which have not bound to an ovarian cancer cell are excreted by normal processes without having released very much of the toxic chemotherapy agent. This approach can dramatically increase the efficacy of the standard clinical treatment whilst reducing side-effects at healthy tissues.

This is no longer an idea. Preclinical tests have shown remarkably good results, with 65-fold reductions in tumour burden, doubling of median survival and significant decreases in toxicity seen in an ovarian cancer animal model when the technology is applied compared with current clinical standard-of-care. The company has won a TSB Biomedical Catalyst grant to carry on the work, which indicates that the TSB rates this approach and the £150,000 SEIS investment is to provide matched funding for this grant.

The business plan is to develop the technology and to prepare for clinical trials, ideally to start in maybe one year's time. Further funding will be required for this, but the plan will be to obtain some of this from a pharma company, to whom the treatment will ultimately be licensed. It is also likely that further support will be forthcoming from the TSB and other grant sources. OT(S)EIS will be able to participate in this further funding.

## **2. Improved Antibiotic**

The issue of increasing antibiotic resistance of bacteria is well known, yet few of the large pharmaceutical companies have invested in the development of new antibiotics. The situation is so bad that the US government is putting in place incentives such as extension of patent life for antibiotics to encourage companies to work in the area.

Developing new antibiotics has proved very difficult in the past and combinatorial chemistry and high throughput screening in particular have not delivered the necessary results.

Led by a very experienced pharmaceutical chemist who has already delivered 3

successful drug developments to the market, the company is taking an existing antibiotic and modifying it to increase its potency, overcome the problems of antibiotic resistance and reduce the side effects of the drug.

OT(S)EIS will invest £75k in two tranches, the first following demonstration of increased potency and demonstrated efficacy against bacterial strains resistant against the parent antibiotic. The second tranche will be invested once in vivo efficacy has been demonstrated. The second investment will be used to demonstrate the bioavailability, pharmacokinetics and lack of toxicity of the modified compound. This package of work will be completed within one year and, if successful, the company will have a package, which it believes will be worth roughly £20m (looking at the comparative sale value of similar packages).

At that point the company and the investors will have a choice of continuing the development or selling the asset. Sale of the asset will be the default position at that stage.

This investment is an unusual pharma investment as the amount of money required is well defined: there is one set of experiments only. Either the experiments will be successful or they will not, there is not an optimisation phase within the programme. We will only invest once the first phase of experimentation has been completed.

As we are looking at the modification of an existing drug we believe that the likelihood of failure of the drug in the second and third phase of testing is significantly lower than the uplift in value of the assets upon successful completion.

### **3. Improved Treatment for Bladder Cancer**

This business is already operating in Spain and the plan is that OT(S)EIS invests £75,000 as part of a £150,000 SEIS investment to start the business in the UK. The treatment involves heating a chemotherapy liquid and circulating this through the bladder. The current standard of care results in a 78% recurrence of tumors which then require increasingly drastic surgery. The company's treatment which still involves surgery but hopefully only once, results in a recurrence rate of less than 20%. It is also much less expensive, since the repeated surgery required to treat bladder cancer is extremely expensive. So the hope is that the

new treatment will in time become the standard treatment in the UK and Europe. If so then the company will become very profitable and valuable. The details of this investment are close to being agreed and we will hope to complete this investment in January.

## **Updates On Existing Investments**

### **Run 3D Ltd**

Date of initial investment	18 Dec 2012
SEIS/EIS	SEIS
Amount of investment	£100,000
Shareholding excluding options	40%
Shareholding after options	36%

### Description of business:

Run3D is the brainchild of Dr Jessica Leitch, 30, who is an International Runner herself (representing Wales) and who has a first class degree in Engineering from Oxford and also a D Phil from Oxford. In her academic career, she has specialised in the biomechanics of running. She has numerous blues and was the Oxford Sportswoman of the Year in 2008/09.

Runners have reflective balls attached to their various joints (hips, knees, ankles) and also at various other points on their legs and then run on a treadmill. Special cameras then capture the image of the balls at 250 frames/sec and this data is then fed into a computer programme, originally developed by an academic in Canada and to which Run3D has exclusive UK rights for an initial period of three years. The computer then outputs a complete gait analysis, giving every detail of the gait, the angle of heel-strike, the rotation and rate of rotation of each joint, etc. etc. The gait of the individual is also compared to a database of 3,000+ runners.

The operator, initially Jessica herself, but later, in other centres, a sports physiotherapist, is then able to indicate:

1. Where the runner's gait is furthest removed from the norm.
2. Where, if uncorrected, future injuries are likely to arise
3. How the runner should aim to modify their gait to avoid future injuries
4. What particular exercises should be undertaken to strengthen particular muscles in order to reduce the likelihood of future injury.

For much of the year immediately prior to the investment, Jessica has been operating this software and providing this service through the NHS. The equipment was set up in an NHS hospital where it is used primarily to analyse the gait of those with severe gait problems (eg those with cerebral palsy), but as part of the agreement Jessica was able to offer the service to runners in the evenings.

There are now 2m people who run every week in the UK and the statistics show that 1m of these will develop running related injuries in the course of the next 12 months. It takes 90 minutes to provide the complete service and Jessica has been charging £280 to runners for the full gait analysis service, a price which is agreed with the private medical insurance companies, where the analysis is given to runners who have already developed injuries but who wish to continue to run.

But it proved to be difficult to offer this service via the NHS. Access to the room was restricted to certain times, and there were many difficulties in practice. But the trial showed that runners are prepared to pay £280 for the service and that there is demand. This makes intuitive sense; bikers will spend £000s on their bikes and, in general athletes are prepared to spend substantial sums on items which enable them to perform better. So it is no surprise that some runners will spend £280 for a gait analysis which may help them to run better and possibly to avoid future injury.

Depending on how things go, the plan is to open many such clinics, maybe with each operating several vans, probably sharing the revenues with the operators in some way. The business model is deliberately left a bit vague at this stage. The plan will be to try different models, to listen very carefully to what the market wants and then to work out the details of the most profitable business model.

The first Run3D clinic is now being established at the Iffley Road running track in Oxford - where Roger Bannister became the first person to run a mile in under four minutes. It is hoped that the first gait analyses will be completed in early January.