

bringing ideas to life

**Scottish Health
Innovations Ltd**

ANNUAL REPORT
2006

CONTENTS

2	CHAIRMAN'S STATEMENT
3	CHIEF EXECUTIVE'S MESSAGE
4	SHIL'S ADVISORY ROLE TO NHS SCOTLAND ON INTELLECTUAL PROPERTY
4	PATENTS
5	ATTENDANCE AT CONFERENCES AND SHOWCASE MEETINGS
6	COMMERCIALISATION STRATEGY
8	DEVELOPMENT PROJECTS
8	PRODUCTS LICENSED TO MARKETING PARTNERS
9	CO-DEVELOPMENT AGREEMENTS WITH DEVELOPMENT AND MARKETING PARTNERS
9	LICENSING AGREEMENTS WITH DEVELOPMENT & MARKETING PARTNERS
10	PRODUCTS WHICH WILL SOON BE AVAILABLE FOR OUT LICENSING
12	OTHER SHIL DEVELOPMENT PROJECTS
13	NEW COMPANY FORMATION
14	PUBLICITY
15	FINANCIAL COMMENTARY
16	INCOME
16	EXPENDITURE ON DEVELOPMENT



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CHAIRMAN'S STATEMENT

Scottish Health Innovations Ltd was set up three and a half years ago to raise awareness of research outcomes in the Health Service and to ensure that any intellectual property generated was developed for the benefit of the NHS. Some 400 new ideas have been examined over that period and some 64 have been selected for either commercial development through the creation of new companies or licensing to existing companies or for dissemination more widely within the NHS. It is very pleasing that this year the early fruits of our labours are being seen with the first, albeit small, income being received from licensing deals. It is also particularly satisfying that SHIL was asked to assist in the commercial aspects of the very important Translational Medicine Research Programme project. Full details of our progress is given in the Chief Executive's report.

During the past year, negotiations have taken place with our public sector sponsors - Scottish Enterprise, Highlands & Islands Enterprise and the Scottish Executive, and I am pleased to report that our funding from the Enterprise bodies has been renewed at an enhanced rate for a further five years. Since commencing operations, we have built a first class team of business executives and now with the additional funding having been secured, we plan further to strengthen the team.

I am also pleased to report that two new directors have joined the Board. Colin Morgan, who is Managing Director of Ethicon UK and Chairman of Johnson & Johnson Medical Ltd, has wide ranging experience in the medical technology field. Peter Shakeshaft, who has very broad senior business experience at top management level and more recently has been leading a major business angel syndicate, has important experience in assisting young companies and exploiting innovation. Both of these directors will bring valuable strength to the Board.

Sadly, David McBeath, the founder Director of SHIL who for the last three years has continued to support the company as a Non Executive Director, has decided to retire from the Board to concentrate on his other interests and we thank him most sincerely for the very significant role he played in the early years of the company.



A handwritten signature in blue ink that reads "Barry E Sealey". The signature is fluid and cursive, with a large initial 'B'.

Barry E Sealey, Chairman

CHIEF EXECUTIVE'S MESSAGE

In last year's Annual Report I said that the year ahead was going to mark a significant milestone in the Company's development with its first products licensed out to commercial partners.

It is therefore pleasing to report that we have more than succeeded in achieving this goal with five licensing deals having been completed. Four of these deals involve products which are immediately available for sale. In addition, we have secured co-development agreements with commercial partners on five other projects.

Discussions are also ongoing with potential licensees on a further five products in our development portfolio.

Our two spin out companies, Touch EMAS and B1 Medical, have also been very successful with both receiving significant new funding from private equity investors. Touch EMAS is also about to launch its first products in the USA.

As these first products move out from SHIL they are being replaced by another batch of excellent projects. Our workload therefore remains as heavy as ever with around 40 products under development at any one time. And our reach is increasing as we are now engaged in projects from all 11 of NHSScotland's mainland Health Boards as well as the Blood Transfusion Service, Occupational Health, the Scottish Ambulance Service and Health Facilities Scotland. It is our intention to visit the Western Isles and Orkney and Shetland Health Boards in the near future.

Most significantly we believe we have shown that our business model for developing early stage innovations for a large public sector organisation like the NHS is an effective way of creating new business opportunities across the healthcare sector. This is just as true for the 40 or so companies and other organisations, most of them based in Scotland, who we commission to undertake parts of our product development programme, as it is for those companies which are the end beneficiaries of the products we successfully develop.

A handwritten signature in black ink that reads "C Macdonald". The signature is cursive and stylized, with a large initial 'C'.

Cameron Macdonald, CEO

SHIL'S ADVISORY ROLE TO NHS SCOTLAND ON INTELLECTUAL PROPERTY PATENTS

Providing Health Boards with expert opinion and advice on their Intellectual Property (IP) remains a vitally important function of the company. Not only does it help increase the level of awareness in innovation and IP but it provides a point of contact for new inventors to bring forward their ideas. It is noticeable how attitudes to commercialisation have begun to change within the NHS as more and more staff begin to realise how important innovation is to the provision of better healthcare for patients and to a more effective Health Service.

To date we have received around 400 disclosures of innovations from staff working in NHS Scotland.

Although assessing the potential clinical benefit and commercial opportunity for these innovations remains a major part of our business support service to the NHS it is by no means the only way we fulfil our advisory role. A good example of our wider engagement was shown when CEO, Cameron Macdonald, was asked to act as business advisor to the four Health Boards involved in the setting up of the £50m translational medicine research collaboration with Wyeth Pharmaceuticals.

The decision to commercialise an innovation often starts with the filing of the first patent. To date we have filed 30 new patents on projects we have selected for development.

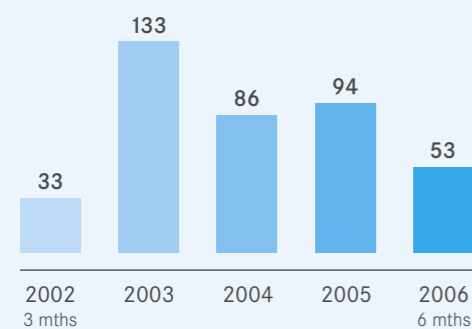
ATTENDANCE AT CONFERENCES AND SHOWCASE MEETINGS

In addition to the many regular meetings held with R&D management and inventors within the NHS staff we continue to promote the company and our services at as many conferences and events as possible.

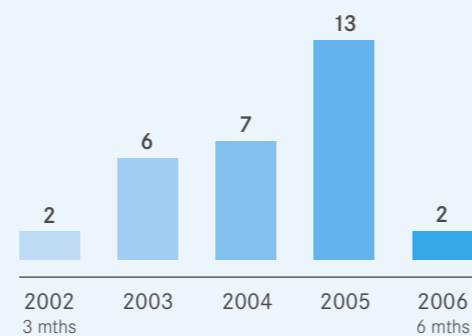
The following table lists those meetings where we either gave a presentation about our activities or showcased the products we are developing.

Ayrshire and Arran Clinical Effectiveness Symposium	May 2005
Grampian Health Board Showcase Meeting	May 2005
Tayside Health Board Showcase Meeting	June 2005
Presentation to Lothian Primary Care Members	July 2005
BIA Aberdeen Biologics Event	July 2005
Scottish Ambulance Service Clinical Workshop	Sep 2005
Property Environment Forum	Sep 2005
Commercialisation of Medical, Diagnostic and Other Devices	Sep 2005
Scottish Healthcare Conference	Sep 2005
Innovation Showcase For Healthcare Technologies	Oct 2005
Medica, Dusseldorf	Nov 2005
Tayside Innovation Conference	Dec 2005
Presentation to AAAHB Staff	Dec 2005
Heriot-Watt University Proton Exchange Conference	Feb 2006
BIA Annual/ ITI Members Bioscience Conference	Mar 2006
Corn Exchange – Electronic Showcase	Mar 2006
Scottish Renal Association in Inverness	Mar 2006
NHS Conference - Improving Performance Delivery through Change and Innovation	Mar 2006
Oral Health Meeting	Mar 2006

PROJECT DISCLOSURES



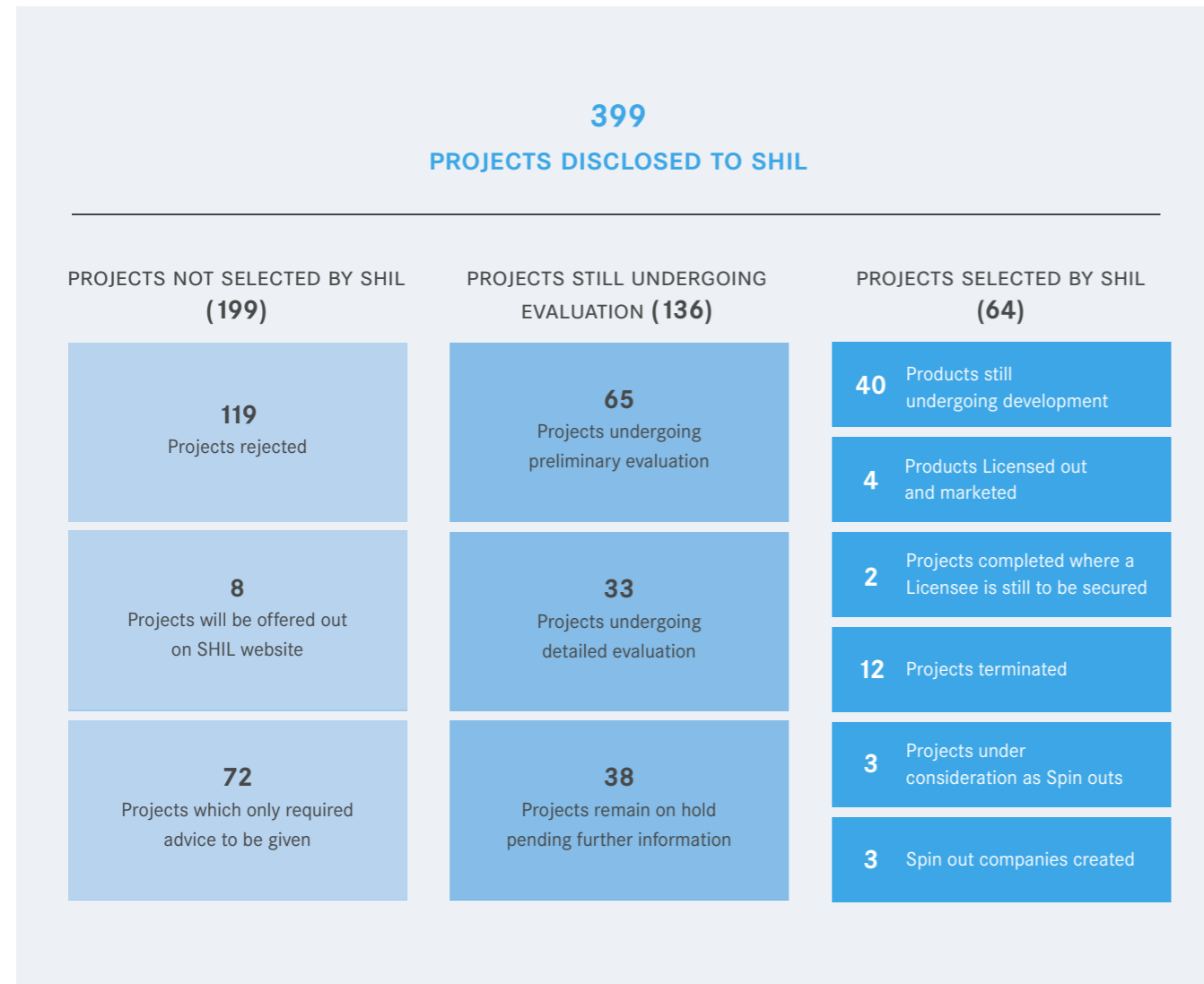
PATENT FILINGS



COMMERCIALISATION STRATEGY

We employ a two stage process to evaluate projects. All projects disclosed to us undergo an initial evaluation based on discussion with the inventor. Those which pass this initial examination are then subjected to a much more detailed evaluation. The criteria we use to select projects for commercialisation are based on our assessment of their novelty, clinical usefulness, the commercial opportunity they offer and the funding we will need to provide towards each product's development. We also need to satisfy ourselves that we have the resources available to manage the project.

The following chart summarises the status of those projects which the company has been asked to consider.

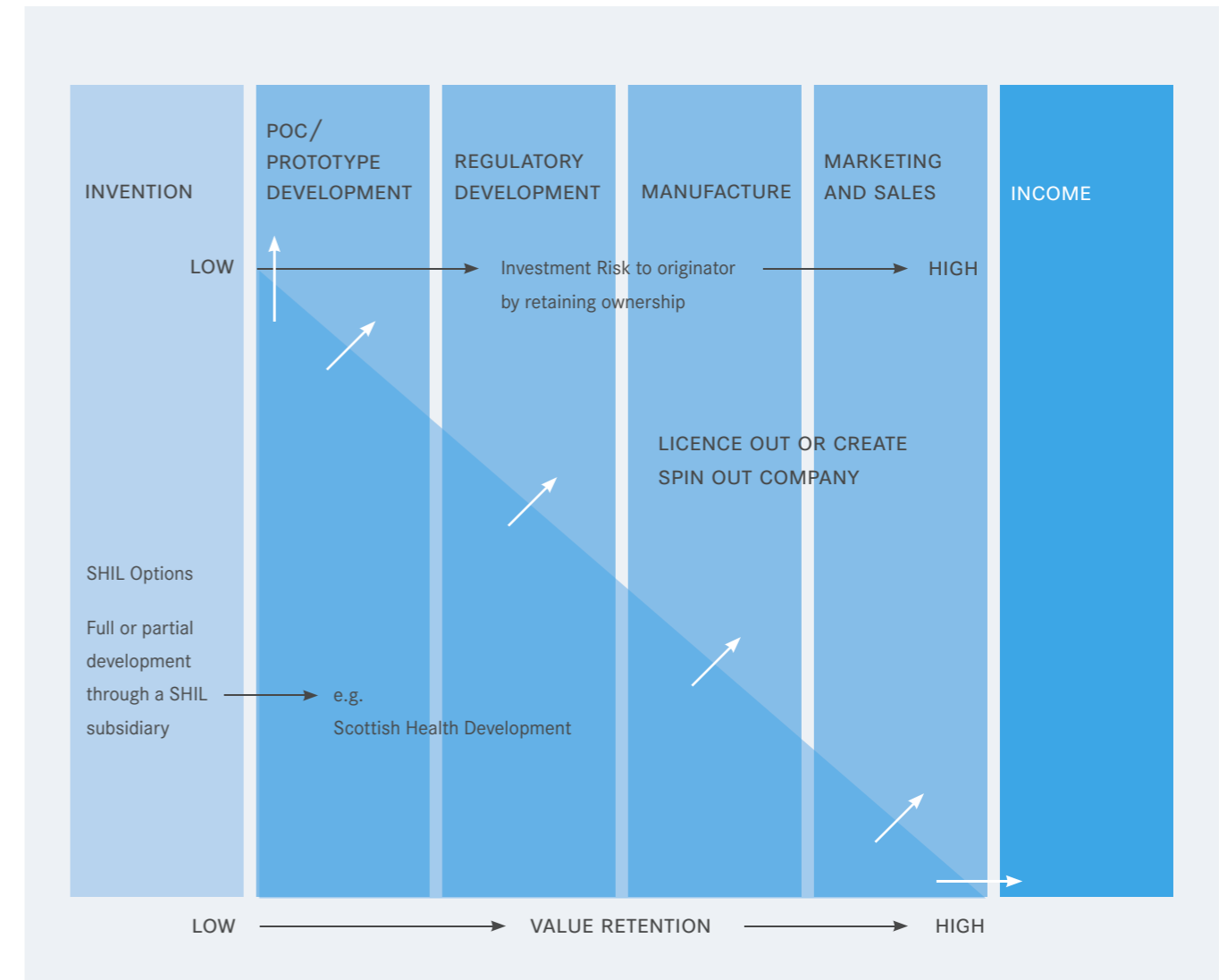


Around 1 out of every 8 to 10 projects disclosed to us are selected for commercialisation. Each project selected is assigned a priority rating.

Thereafter our commercialisation strategy is based on achieving a balance between our wish to maximise value by investing in a product's development and the business risk associated with retention of ownership.

It is very often the funding and development requirements which will dictate at which stage in a product's development that we will look to licence it to a commercial partner.

For example, where the funding requirement is likely to be high and/or the development programme lengthy as for example would be the case if regulatory studies were going to be required in the major markets, we would usually look to license out the product fairly early in its development to a company with a strong market presence in the field. Alternatively, if there was sufficient investor interest, a spin out company might be created to take the project forward. Projects with a lower risk profile, simpler regulatory requirements and a national rather than international market prospect can be taken much further by SHIL. Whatever the decision, our aim is always to add as much value as we can to a product before offering it to other parties.

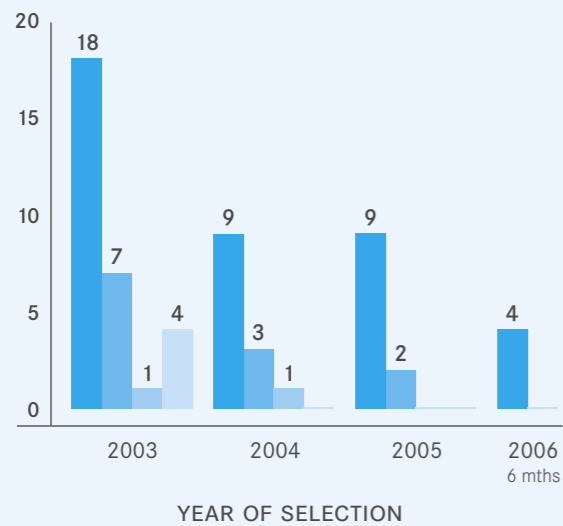


DEVELOPMENT PROJECTS

Since formation we have selected 58 projects for development through the company (This excludes the six projects where a spin out company has been formed or is being contemplated). Each project is reviewed regularly to assess progress and to decide whether it should be continued, deferred or terminated. Currently, 40 products remain in development whilst 12 projects have been terminated early. In most cases the decision to terminate was based on new market intelligence rather than technical issues. Six products have been fully developed with four of these licensed to marketing partners. A further five products of those still in development are the subject of either licensing or co-development agreements with companies interested in taking the products to the market.

Details on each of these agreements are included in the next sections of this report.

PRODUCT DEVELOPMENT STATUS



- Product still in development
- Project Terminated
- Project Completed Licensee sought
- Product Licensed out

MARKETED PRODUCTS

In the last year we have licensed out four products which were immediately ready for marketing by partnering companies. All of these were low cost, low development risk projects and whilst the income generated from these is likely to remain modest we believe it demonstrates the effectiveness of our business model and gives confidence that in time our pipeline of high value products will achieve returns sufficient to secure the long term viability of the company.

The **U-NET®**, a new type of groin wound dressing, was the first product to be licensed out by SHIL. Initiated by Dr Tim Saw, an anaesthetist at Ayr Hospital, the product was developed in association with the hospital's research and development office and Port Glasgow based KARE Orthopaedics which is now manufacturing and marketing the product.

The **U-NET®** supports and holds surgical dressings in place in the groin area. It is easy to apply, assists in the inspection of wound sites, is hygienic and more comfortable for the patient and comes with an adjustable waistband and detachable panels which enables a wide variation to the size range.

Our second marketed product, **DERIC**, is a software package for capturing and reporting data from endoscopic examinations. This has been licensed to Extramed Ltd of Grangemouth. DERIC captures diagnostic images whilst the doctor concentrates on the procedure and the patient. It also simplifies the administration and distribution of reports and reduces, from days to minutes, the time it takes to deliver results for vital early diagnosis of numerous illnesses. Originally requested and specified by consultant gastroenterologist John Plevris, it was developed by Derek Christie, at Edinburgh Royal Infirmary.

The **Journey Food Makes** is a training CD for children with bowel problems. Developed by Dr Peter Griffiths at NHS Forth Valley, the CD has been licensed to the charity Education and Resources for Improving Childhood Continence (ERIC) for sale through its marketing channels.

The fourth product is an **Ultratimer** for use as a rehabilitation device for monitoring mobility in the elderly which has been licensed to AMRAC Ltd.

CO-DEVELOPMENT AGREEMENTS

A co-development agreement has been secured with Active Ultrasonics of Switzerland to develop **'The Mosquito'**, a vibrating needle holder devised by Tayside-based consultant surgeon Peter Stonebridge. The Swiss Company will combine its in-house design and marketing expertise in the field of ultrasonic equipment with the clinical and technical experience from Stonebridge's team at Ninewells Hospital. The collaboration may extend to marketing, otherwise a third party with a global reach will be sought to market the product.

The Mosquito is expected to become the global industry standard used by surgeons when they tackle delicate and often lifesaving cardiovascular operations.

A Co-development agreement has also been signed with Lightweight Medical Ltd, Glasgow, on the development of a new type of **Dialysis Trolley**, and terms have been agreed with Midgibyte Creations Ltd, Glasgow, to produce an online, interactive education resource called **Physicoool/Lets Move**. This program aims to tackle the growing problem of childhood obesity by educating primary school children in health and well-being. In addition, children with a range of sensory motor difficulties such as coordination difficulties, dyspraxia, and attention, concentration or sensory dysfunction are catered for with a program specifically developed to help the child. The intention is that this will be marketed directly to local authorities, schools and other educational establishments.

We have retained the commercialisation rights to the dialysis trolley and will receive royalties on sales of the education package in addition to co-ownership of the IP in the final product.

The second phase of our development of a **Replacement Prosthetic Disc Nucleus** for the alleviation of back pain with Corin PLC continues to progress well. Corin retains an option to take on the further development and marketing of the finished product.

LICENSING AGREEMENTS WITH DEVELOPMENT & MARKETING PARTNERS

A worldwide licence to the technology for the **Ultrasound Treatment of Small Arterial Stroke in the Brain** using doppler insonation has been agreed with a major international company which now will take over the further development of the technology and will conduct those studies required for securing regulatory approval in key markets such as the USA, Canada, UK and Australia. Further details will be made available once a press release has been agreed. Developed by Dr Paul Syme at Borders General Hospital, it is believed the method of treatment may also have applications in a number of other clinical conditions associated with small arterial occlusion such as late onset diabetes (type 2), cardiac syndrome X, irritable bowel syndrome, essential hypertension, vascular dementia and multiple sclerosis.

PRODUCTS WHICH WILL SOON BE AVAILABLE FOR OUT LICENSING

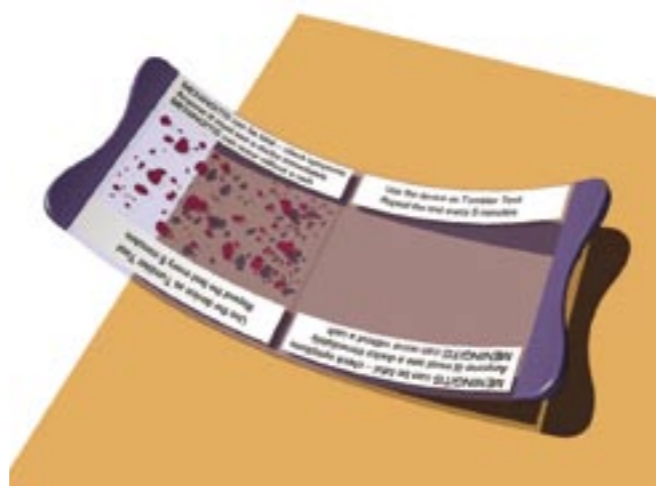
EPIDURAL PROBE OR SPLIT-ARRAY TRANSDUCER

The Epidural Probe or split-array transducer is a device which will enable anaesthetists to safely administer epidural anaesthesia to obese patients. It has been designed to resemble a computer mouse and to allow the clinician to obtain an ultrasound scan of the spine at an angle of 90° to the patient's back. The needle is then inserted into the spine through a guidance aperture in the middle of the transducer. The device is the inspiration of Dr Malcolm Watson, an anaesthetist at Glasgow Royal Infirmary. A forty patient clinical trial is currently in progress.



MENINGITIS SKIN TEST

Working with Dr Alan Hulme, a GP based in Renfrewshire, we have developed a simple device based on the 'tumbler test' to help identify skin lesions associated with meningitis. Our intention is to see this made available to the public through retail pharmacists and to have it distributed to health professionals perhaps by a pharmaceutical company offering it as a promotional aid through its sales force.



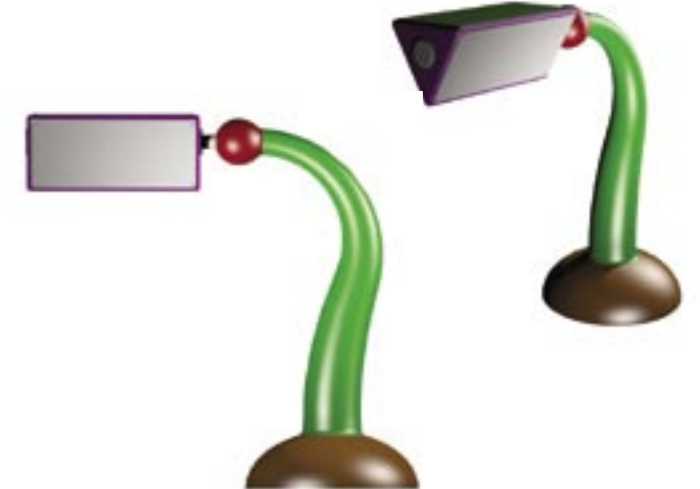
ORTHOPAEDIC SCREW FIXING DEVICE

We are currently following up on a number of inquiries about an orthopaedic screw fixing device and applicator which is being developed by Tayside Health Board as a means of supporting fragile bone (e.g. fractures to osteoporotic bone).



GAMEFRAME™

Developed at the Royal Hospital for Sick Children, Yorkhill, Glasgow, the GAMEFRAME™ is a workstation designed to fit over a hospital bed making it easier for patients who have to remain in a prone position to access paper, books, drawing material, toys or games. We are currently looking at the feasibility of marketing this directly through the company as well as pursuing 3rd party options.



COLORECTAL CANCER SCREEN

We hope to finalise a collaboration and option agreement with a potential partner on a molecular based screening assay for colon cancer. The evaluation on the assay will involve both the company and Tayside Health Board. Over 300 faecal samples with faecal blood results and colorectal cancer status confirmed by endoscopy will be analysed. The partner company will have an option to licence the technology in territories in which it has a proven market presence.

EARTH LEAKAGE DETECTION MULTI-WAY PLUG EXTENSION

Following due diligence, market analysis and obtaining quotes for manufacturing we are negotiating an assignment of the technology and associated patent application to Sheppard Worldwide Corporation, a company having an office in Tayside.

OTHER SHIL DEVELOPMENT PROJECTS

PROJECT	DESCRIPTION	HEALTH BOARD
Enhanced Services Software	Program to help GPs with their enhanced service claims	Highland
Corporate Green Code	Environmental management	Health Facilities Scotland
Debris Capture Bag	Chiropody disposal system	Lanarkshire
Supra Mucosal Fixation System	Jaw fracture fixation device	Greater Glasgow
Snack Pack	Educational pack for carers of patients with eating disorders	Forth Valley
Multifocal ERG	System to obtain information on the function/structure of the eye	Greater Glasgow
Photophysiology	Device for functional Imaging of the retina	Greater Glasgow
Improved Needle	Epidural needle	Greater Glasgow
Tell a Story	Psychometric test for children	Greater Glasgow
Ultrasound Prism	Device for imaging injection sites in the spine and other joints	Greater Glasgow
Posture Management Block	Prevention of pelvic displacement	Greater Glasgow
Vibrating Timer	Pain management device	Fife
Multiway Plug Extension	Safety device	Tayside
Bandage Tension Assessor	Training device for applying pressure bandages	Tayside
Barratt's Oesophagus Screen	Diagnostic test for early detection of oesophageal cancer	Tayside
Fistula Needle System	Needle guidance device for use with patients on dialysis	Grampian
Phantom Limb Pain Device	Device for treatment of phantom limb pain	Tayside
Physiotherapy Doughnut	Physiotherapy aid	Greater Glasgow
Reciprocal Gate	Frame to help paraplegic patients to walk	Greater Glasgow
Heart Valve Securing Device	Replacement of aortic heart valves	Greater Glasgow
Naso Gastric Tube	Improved method for administration of enteral nutrition	Ayrshire and Arran
Wound Seal	Treatment of tension pneumothorax	Ambulance Service
Heel Stab Squeeze	Training device	Greater Glasgow
Nasal Clip	Device for stemming nose bleeds	Ayrshire and Arran
Spica Table and Seat	Treatment of hip dislocation in children	Greater Glasgow
Portable Epilepsy Alarm	Warning system for tonic-clonic epileptic seizures	Greater Glasgow

NEW COMPANY FORMATION

Our first spin out company, **Touch EMAS Ltd**, which now operates under the name **Touch Bionics Ltd** and specialises in Upper Limb Prosthetics, announced a further £500,000 investment from its existing shareholders. This funding is being used to support the Company's plans for the manufacture and supply of its first product, the i-LIMBTM Hand, into its initial target markets – the United States, Canada, Sweden and the UK.

The i-LIMBTM Hand has been developed to provide lighter weight functionality for patients. In addition, the modular approach to developing the system components makes it possible to develop components for all types of patient at a low cost. In June the company received its first orders for Prodigits (artificial fingers) which will be used to construct partial hands.

We recently also saw the completion of a £1.3 million private equity investment in our second spin out company, **B1 Medical Ltd**. The company which was formed as a three way joint venture between SHIL (acting as commercialisation partner for Grampian Health Board), Aberdeen University and Robert Gordon University will develop a portfolio of orthopaedic products licensed in from the founding institutions.

Alba Bioscience Ltd, which was incorporated by SHIL in 2005 to commercialise products developed within the Scottish National Blood Transfusion Service is not yet operational.



PUBLICITY

We were delighted to sponsor a new award at the recent Scottish Life Sciences Annual Dinner, held at the Edinburgh International Conference Centre.

The award for the best NHS Innovation of the Year was won by Dr Malcolm Watson, an anaesthetist from Greater Glasgow Health Board, for his pivotal role in the creation of an ultrasound device for safer administration of epidural anaesthesia during labour (see Epidural Probe above). The other nominees for the prize were Mr Douglas Wardlaw from Grampian Health Board for his Replacement Prosthetic Disc Nucleus and Dr Paul Syme from Borders Health Board for his Ultrasound Treatment of Small Arterial Stroke.



(Photo – L to R Cameron Macdonald, CEO, Dr Malcolm Watson, Ruth Patterson, Business Development Manager and Barry Sealey, SHIL Chairman)

News of our recent deals has attracted some attention in the press and whilst such recognition of our achievements is always welcome, the wider coverage that goes with it also helps us to raise awareness on the benefits of innovation as well as acting as a shop window to companies looking for products to add to their portfolio.

Articles in which the company was featured over the last year include

- **Sunday Herald, April 2005** – Company article
- **Financial Times, April 2005** – Company article
- **Sharecast, June 2005**
 - Agreement with Corin PLC on Disc Nucleus
- **Evening Times, 22nd June 2005** – Hospital Playzone
- **The Herald, 28th June** – Artificial gel disc to cure back pain
- **Clinica (World Medical technology News), June 2005**
 - Corin slips into spinal disc nucleus market
- **Sunday Herald, 31st July 2005**
 - Deal for first NHS-inspired invention to hit marketplace
- **Evening News, 4th October 2005**
 - Where there's a SHIL there's a way for healthy ideas
- **The Scotsman, 13th February 2006**
 - Software firm's tool set to become clinical standard
- **Sunday Herald, 26th February 2006**
 - Universities and NHS join forces to sell big ideas
- **Insider Life Sciences Special Report, March 2006**
 - Award winner at Annual Dinner
- **Nexus, June 2006**
 - Dr Malcolm Watson and the Split Array Transducer
- **Scotland on Sunday, 25th June 2006**
 - 'Mosquito' surgical aid is a life-saver for SHIL.
- **The Courier, 28th June 2006**
 - Surgeon's Mosquito device will help save lives
- **BBC Web News, 27th June 2006**
 - Invention aims to improve surgery

FINANCIAL COMMENTARY

This section of the report summarises the Company's Financial Year, April 2005 to March 2006.

October 2005 marked an important milestone for the Company when the original three year funding programme from two of its sponsors, Scottish Enterprise (SE) and Highland and Island Enterprise (HIE), was due to come to an end. However, following an independent review of the Company's performance, both Enterprise bodies agreed to extend and increase their support to the Company through to October 2010. The total value of this new funding is £1,415,000, with SE contributing £1,175,000 and HIE £240,000.

We are naturally delighted to receive this continuing commitment from our sponsors.

The funding from our two other sponsors, the Scottish Executive through its Chief Scientist Office, and the DTI through the Public Sector Research Exploitation scheme, is due to run through to September 2007. It is our intention to start discussions with both of these parties over the next year on extending their support to the Company.

We have also been able to extend the time period for drawing funds down from ERDF to the end of June 2008.

It is of course hoped that in time income from licenses will start to reduce the burden on funding from our sponsors. However, it has to be recognised that it takes time to not only develop products but also to see them achieve significant sales once marketed. It is therefore likely to be several years before we see revenues from royalties making a significant contribution to the overall running costs of the company. It is nevertheless reassuring to see the first albeit modest revenues generated from products we have licensed out over this last year and we are confident that this will increase year on year as more products are licensed out. Nor should we forget the potential capital return we may at some point receive from the sale of shares we hold in our spin out companies, Touch EMAS and B1 Medical.

INCOME

Income from Grants from the Company's sponsors totalling £397,689 was considerably down on the previous year's contribution at £673,697 due to the expiry and delay in renewal of Grants from SE and HIE. This deficit was offset by drawing on the Company's cash reserves which had been accrued due to advance payments of Grants in the first two years of the Company's operations. Thus the Company's cash reserve at the end of March had fallen to £306,805 from £599,712 for the previous year. This reserve however includes £153,806 of the DTi's PSRE award, the terms of which restrict the rate of its availability to us.

A further £253,750 was drawn down from ERDF towards those project costs which are allowable under the scheme (compared to previous year's figure of £114,455).

As income from royalties remains negligible they have not been included at this time.

EXPENDITURE

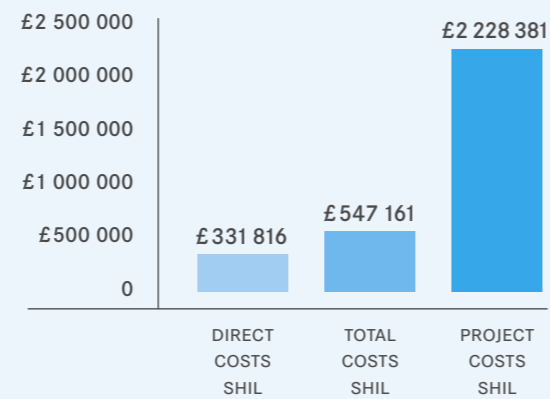
The overall operating cost of the company was £723,178 of which £508,350 was attributable to infrastructure costs.

EXPENDITURE ON PRODUCT DEVELOPMENT

The total direct expenditure on projects for the year to March 2006 was £214,828. This represented an increase of 180% over the previous year's figure. This is entirely consistent with the extra costs associated with the later stages of product development as well as the selection of higher value projects. As in previous years the greatest contributors to this were patent fees (£60,406), professional fees associated with product design and regulatory advice (£54,453), legal fees (£37,050) and market research (£28,001).

As of June 2006, the total expenditure we have therefore incurred directly as a result of developing products since our formation is £547,161 of which £331,816 was due to direct costs (i.e. invoiced costs) and £215,345 as project management time costs. Although it is difficult to be precise on the contribution by external contributors or from contributions in kind made by NHS staff, we estimate that we have been able to access a further £1,681,220 in product development support from other sources. On average, therefore, we have been able to leverage an additional £3 of support for every £1 invested by the company on product development.

PROJECT EXPENDITURE



Scottish Health Innovations Limited

Suite 405, Baltic Chambers,
50 Wellington Street Glasgow, G2 6HJ

TELEPHONE 0141 248 7334

FAX 0141 248 6454

EMAIL info@shil.co.uk

www.shil.co.uk