Knowledge Transfer Partnerships

Key Benefits
- Knowledge Transfer Partnerships are designed to benefit everyone involved
- Firms are solving strategic challenges and long-term problems by drawing on the expertise of the knowledge base
- KTP Associates will gain business-based experience and personal and professional development opportunities
- Universities, colleges or research organisations will bring their experience to enhance the business relevance of their research and teaching

Knowledge Transfer Partnerships
Accelerating business innovation:
an Innovate UK programme
http://ktp.innovateuk.org/

Boots UK Ltd
Linking UV light to skin damage

About this Case Study
Boots UK is the UK’s leading pharmacy-led health and beauty retailer. Alongside retail, Boots’ other core business activity is pharmaceutical wholesale and distribution. Boots worked with Newcastle University’s Institute of Cellular Medicine on this Knowledge Transfer Partnership (KTP). The aim of the KTP was to determine the link between mitochondrial DNA damage and skin cell function allowing the capability to screen a number of technology options.

About the Sponsor
KTP is primarily funded and managed by Innovate UK. It supports UK businesses wanting to improve their competitiveness, productivity and performance by accessing the knowledge and expertise available within UK Universities and Colleges. Its mission is to accelerate research into, and development and exploitation of, technology and innovation for the benefit of UK business - building economic growth and quality of life.

Fast Facts
- New capability to undergo rapid active screening will help the Company to develop leading edge products
- Access to new strategic global markets for the Company
- Substantial profit increase as a result of the KTP
- Continuing employment in industry for the Associate
- Ongoing research collaboration for the partnership

The Company

“The KTP has allowed us to develop a more ambitious strategy for active screening. We feel confident in achieving increased speed to market, faster screening of prototypes and increased generation of IP.”
Clare O’Connor, Innovation R&D Manager, Boots UK Ltd.

About the project
Boots has committed to a number of corporate strategies which are focussed on recognising and delivering social responsibilities. One such strategy is cancer prevention, which incorporates sun protection.

Boots researches and develops products across the healthcare and cosmetics industry. This KTP aimed to inform the Company’s development of improved sun protection products.

When developing new products, it is essential to have a fast and reliable screening process for evaluating new active ingredients.

Prior to the KTP, Boots did not have the means to accurately and comparitively assess which new formulations of products and which active ingredients provide the best protection against damage in the skin which might develop into visible ageing.

The partnership aimed to develop these skills and transfer them to a new facility to be established within Boots’ development laboratories.

This new capability would allow Boots to increase their market share and penetration in an increasingly competitive market, and also to improve UV protection and anti-ageing skin products.

Newcastle University’s Institute of Cellular Medicine were able to offer Boots expertise in assessing new ingredient performance using tissue culture techniques that employ cells found in skin.
By working closely with the Associate and Academics, Boots was able to develop screening assays that can be implemented into their own cell culture laboratory. This has allowed Boots to build a much greater capability in-house.

Boots are now able to screen active compounds for inclusion into intellectual property applications and end-consumer products not only with greater speed, but also using a greater number of prototypes prior to clinical testing. Their new capabilities will ultimately improve the customer satisfaction of products developed.

The project’s achievements have significant importance in the light of Boots’ increasing worldwide presence. One key component of developing the screening assays is to enable Boots to focus on different ethnicities to support moving into new markets. Being able to create highly effective products in UV protection and skin ageing that will suit different skin types and provide differentiation in a variety of new markets is strategically important to Boots.

The Associate gained valuable professional skills in team management, project management and public speaking.

The Associate has also gained academic experience of supervising other PhD researchers, undergraduate students and research technicians. The Associate gained experience of training colleagues, including in specialist techniques such as pyrosequencing and real-time PCR.

Following the KTP, the Associate gained employment in commercial molecular and cellular biology research.

“The Associate has not only gained greater commercial awareness, but also developed his own interpersonal and project management skills and developed as a scientist in the area of dermatology research.”

Professor Mark Birch-Machin, Institute of Cellular Medicine, Newcastle University

Results

- New capabilities support movement into new markets
- Substantial profit increase as a result of the KTP
- Scientific publications raise research credentials on a global scale
- Staff development and training
- Ongoing collaboration with the University

The Academic Partner

“This KTP has been a valuable addition to the research capacity of Newcastle University and has provided benefits to University staff, most notably those housed within the Dermatology Research Group.”

Professor Mark Birch-Machin, Institute of Cellular Medicine, Newcastle University

Benefits

The institution has benefited from the commercial awareness generated from this KTP.

This research engagement will be used to form the basis of an impact case study as an example of industry-academia partnerships for the Research Excellence Framework (REF).

This KTP has further strengthened the collaboration between Alliance Boots and Professor Birch-Machin, and the partnership are committed to future research collaboration to exploit the findings of the KTP.

Results

- Papers published in an international peer-reviewed scientific journal
- Potential impact case study for REF2020
- Research woven into the training of Dermatology Group research students
- Purchase of capital equipment
- Ongoing research collaboration

For more information about KTP, contact:
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