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 gain business-based experience and personal and professional development opportunities
• Universities, colleges or research organisations 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/

Croda Europe Limited
The full spectrum of skin protection

About this Case Study

Croda is a raw materials manufacturer that serves three core market sectors. The aim of the KTP with Newcastle University’s Institute of Cellular Medicine was to improve sun care products, sold to the Personal Care market. The research focused on the impact of Infrared Radiation (IR) on skin with a view to developing products to protect against any negative effects.

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

• Profit anticipated to increase by £1.8m in the three years following the KTP
• The project was graded “outstanding” by the KTP Grading Panel
• KTP led to the relaunch of an existing product leading to significant impact on sales
• Wider embedding of knowledge will be used to improve other Croda technology
• Outcomes of the KTP are significantly greater than originally anticipated
• Results validated Croda’s decision to develop a long term vision for innovative research

The Company

“The KTP exceeded our expectations and has transformed the way the business thinks about long term innovative research with Universities, industrial collaborators and across departments within Croda.”

Bhaven Chavan, Applications Team Leader, Personal Care Europe, Croda Europe Ltd

About the project

Croda produce and sell speciality chemicals for use in a diverse range of products that are sold to various markets. This project focused on products developed as part of the Company’s Sun Care business.

Croda’s existing range of sun care products protect skin against the impact of UV, while the potentially damaging effects of other regions of the electromagnetic spectrum remained unknown. In an attempt to address this, fundamental testing was undertaken to establish an in depth understanding of the role infrared radiation (IR) plays in skin damage. The findings were used to inform the screening of protection benefits Croda products already offered against IR. Results also reiterated the significant damage caused by UV and highlighted the interplay between all other regions of the electromagnetic spectrum on the skin.

In the lab: Professor Mark Birch-Machin and colleagues from his research group. To his right is the KTP Associate, Laura Hudson.
### The Company

**Benefits**
The project was successful in developing an in-depth understanding of the role played by IR in skin damage. Presentations delivered at industry relevant conferences have also raised Croda’s profile, further increasing their exposure to customers and competitors. The data generated by the project offered a new entry point for conversation with customers about how best to work with them on their sun care products. Croda are now able to differentiate their product offering from competition within the market as a direct result of outputs delivered by the KTP. Overall, the KTP provided the Company with a platform for greater engagement with customers. The Associate helped develop knowledge of the biological and biochemical effects of sun exposure to the skin and associated cell based methodologies.

### The Associate

“Initially, Laura’s departure with three months remaining presented us with a challenge. However, her replacement, Catherine, produced outstanding work and the KTP was completed with exceptional results.”

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

**Benefits**
The Associate, Laura Hudson, left the project with three months remaining. She was replaced by Catherine Bonn. Catherine successfully completed the KTP and has since continued the collaborative work between Newcastle University and Croda on a BBSRC funded Case award.

In her role as Associate, Laura gained commercial awareness and developed her interpersonal and project management skills. The role also gave her exposure to, and experience of, the media skills required for roles in this industry.

**Results**
- Attendance at courses and conferences
- Event management and planning skills
- Presented findings to Croda colleagues
- Supervised staff and students
- Provided training sessions to Croda staff

### The Academic Partner

“The project was not only a success in its own right, it developed the foundation for continued, long term collaboration with Croda, which will benefit the University’s research and teaching immeasurably.”

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

**Benefits**
Professor Mark Birch-Machin has worked on several KTPs with various company partners. Well versed in KTP and its potential outcomes, this project exceeded his expectations in terms of its contribution to the institution. Not only has he continued to work with Croda himself, collaborations with the Company are now in place with academic staff across a range of disciplines throughout the University.

The project has raised the profile of collaborative research with industry in the Institute of Cellular Medicine, leading to increased interest in KTP. The project has also encouraged interest in working with industry more generally. Work has been disseminated widely within the University and other organisations, including the LEP, via workshops and oral presentations.

**Results**
- Continued collaboration with Croda
- Two conference presentations
- Two publications in peer reviewed journals
- Enhanced teaching materials
- Six student projects established
- Impact Case Study for REF 2021

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