

SUCCESS STORY

DIRAC/Rapid Screening and Identification of Illegal Drugs by IR Absorption Spectroscopy and Gas Chromatography

Research area: FP7 – Cooperation/SECURITY – Drug precursors –

Advanced forensic toolbox

Number of partners: 11 among which the University of Lausanne (UNIL)

Start date – End date: 2010-06-01 to 2013-11-30

Duration: 42 months

Funding: € 2 987 717/UNIL: € 432 000

Type of contract: Collaborative project (CP)



PIERRE ESSEIVA



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“This grant hallmarks the excellent reputation of the world’s oldest School of Forensic Science in Lausanne.”

A TOOL TO DETECT NARCOTICS

Associate Professor at the School of Forensic Science, Pierre Esseiva is in charge of the School of Criminal Sciences’ Narcotics Analysis Unit. In 2010, he and two of his colleagues, Professor Olivier Delémont and Dr Francesco Romolo, received a grant from the European Union for the project named DIRAC, a tool capable of rapidly detecting the presence of illegal narcotics.

What is, in your opinion, the overall objective of scientific research?

As I see it, the researcher should not remain locked in his ivory tower, but stay in permanent contact with people out in the field – in my case, policemen and magistrates. Of course, basic research is indispensable, but one should never lose sight of its practical application.

In concrete terms, what is the DIRAC project’s purpose?

It is a sensor system that could resemble a small black plastic briefcase, very robust-looking. This tool would be capable of rapidly detecting synthetic narcotics and precursors that are concealed for example in cargo shipments, in ports, airports, train stations or at borders. However, its manufacturing is still far off. We must first determine its functionalities and build a prototype that will need to be tested.

How is the network project organised together with your European partners?

DIRAC includes two research strands. The first is strategic in nature and falls within the competences of forensic science

specialists, that is the School of Forensic Science, the Finnish National Bureau of Investigation and the Belgian police’s Federal Laboratory. Their role is to define which products and their derivatives are liable to circulate on the drugs market. It is also up to them to be aware of the realities faced by people in the field, such as border guards, customs officers and policemen, so that we can provide them with an effective tool that meets their needs. We must establish the detector’s specifications, so to speak. The project’s second challenge hinges on the technical level, since the detector’s manufacturing itself requires leading-edge technology. This mission is allotted to researchers such as those from the Institute for Microelectronics and Microsystems in Bologna, in particular.



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ABOUT THE PROJECT

The DIRAC project (SECURITY strand from the FP7’s Cooperation programme) includes ten partners from the whole continent, coordinated by the Italian consortium CREO (Centro Ricerche Elettro-Ottiche), a company that specialises in aeronautics and is used to managing projects of that scope.

The project’s total budget amounts to € 2 990 000, 432 000 of which are granted to the University of Lausanne.

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