KNOWLEDGE TRANSFER

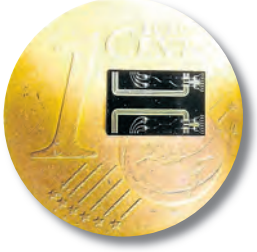
The rapid detection of resistance to antibiotics

BL-DetecTool makes it possible to detect the presence of drug-resistant bacteria in a laboratory sample within 15 minutes. Previous detection methods involved a process of exhaustive testing that took from 16 to 24 hours. This new approach is the result of a European project involving the participation of three hospitals, including Barcelona's Hospital Clinic (through ISGlobal), a business school and the company that is responsible for commercialising the final product. BL-DetecTool consists of a strip of absorbent material, rather like a pregnancy test device, which contains antibodies able to detect the presence of the proteins that confer resistance to a type of antibiotics. It has proven itself to be an accurate, sensitive and specific technique that reduces healthcare costs and has considerable commercial potential. **bldetectool.com**

Historical social networks

Can you imagine yourself consulting 19th century census documents on your smartphone to discover who once lived in your town or city? The Centre for Demographic Studies (CED) and the Document Analysis group of the Computer Vision research centre at the Autonomous University of Barcelona (UAB) have come together to develop an interdisciplinary project named XARXES, funded by the RecerCaixa programme, which integrates demographics, computer vision and citizen science. The result is an application that enables the construction of a historical network based on the municipal censuses of the inhabitants of the Baix Llobregat region from 1828 on. Its browser gives users access to textual information, including residents' names and surnames, and a digital version of the censuses. It also allows them to visualise population pyramids and onomastics and trace migratory movements. The digitalisation of these historical demographic records facilitates a better understanding of the past that fosters present and future innovation.

Cybersecurity in a chip



ICFO / D. Bartolomé

A spin-off from the ICFO photonics research institute, Quside is engaged in developing quantum technologies for the cybsersecurity and super-computation fields. Encryption technologies lie at the heart of the endeavour to maintain the privacy of our internet communications and it employs the random encoding of data to do so. The specialists at Quside have integrated light technology into a single semiconductor chip that generates true random numbers in a process based on quantum mechanics. After sending out the first prototypes to customers who have integrated the device into their data centres with the aim of improving their security, Quside is currently working to industrialise the technology and ensure its scalability. The company, which began as an ICFO research project, was founded in late 2017 and receives both public and private funding. Its staff value highly the environment in which the company is working in collaboration with ICFO - an expert ecosystem in this technological field that allows them to attract new talent. **www.quside.com**