

PROJECTS

SPRING 2015

LAUSANNE

InstantCooper

By Laura Rio, scientific collaborator at UNIL

We propose at InstantCopper, copper sputtering (CS) for the creation of new highly antimicrobial surfaces (e.g. self-disinfectant door handles). They will be used as a first barrier against bacterial infections, whilst using a minimal amount of copper.

Team: Carloine Aymon BSc EHL, Marine Clogenson



Nematrix

By Matteo Cornaglia, Ph.D. at EPFL

Nematrix aims to introduce and to reinforce Caenorhabditis elegans model organism for the replacement of mammalian systems in the drug development process, by proposing innovative solutions for high-content drug discovery

Team: Enea Pianezzi MSc UNIL

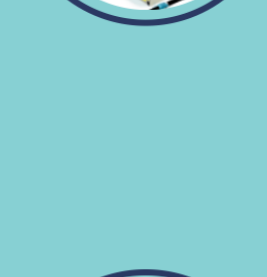


Rational design of Alzheimer's therapeutics

By Jean-René Alattia, scientific collaborator at EPFL

Our team will develop a new generation of Alzheimer's therapies based on rational drug engineering, using our knowledge about specific molecular targets.

Team: Aurélien Macé Ph.D. UNIL, Georgios Savoglidis Postdoc EPFL and Gildas Ratovomirija Ph.D. UNIL



iGMC

By Marco Pignati, Paolo Romano and Lorenzo Zanni, Ph.D. at EPFL

Distributed measurement devices connected to a central unit that takes decisions on grid management. Smart solution for problems caused by distributed energy resources.

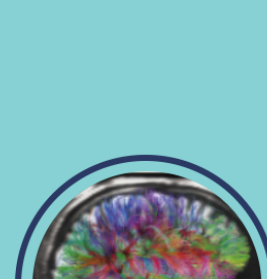


Kalote

By Charlotte Schaus and Charlotte Högberg, Bachelor at EHL

Kalote develops innovative, delicious food products for students and young professionals who have traveled the world and are bored of their everyday food, looking for new flavours, but still are concerned about getting their proteins, calcium, vitamins and other nutrients

Team: William Roussel BSc HES-SO GE and Luis Pablo Prieto Santos Postdoc EPFL



10K assembly

By Casba Laurenczy, Ph.D. at EPFL

10k assembly is a SME, whose main activity is the design and assembly of automatic high precision press-fit assembly machines for the micro mechanical parts sold to manufacturers and suppliers of the Swiss watchmaking industry

Team: Gedale Senato BSc EHL, Marie Käppeli MSc UNIL, Grégoire Heitz EPFL, Julia Percia David

Solution for Magnetic Resonance Imaging

By Olzem Ipek, Ph.D. at EPFL

As a company we plan on providing RF coils, the required software to employ them and customer service such as maintenance and updating software - a complicated process, which requires extensive training and is normally outsourced by clinics

Team: Mahesh Chandak Postdoc UNIL, Raphael Rothenberger MD UNIL, Flurina Schmid FORS, Mikhail Rogov MS UNIL



ActiStent

By Guillaume Petit-Pierre, Ph.D. at EPFL

ActiStent is an electrically active stent-like structure currently developed at the EPFL. It is aimed to be introduced acutely (non-permanent implant) within cerebral arteries using a dedicated micro-catheter. ActiStent is intended to dramatically decrease the mortality rate due to hemorrhagic strokes and improve the patients' quality of life after stroke

Team: Soumaya El Kadiri scientific collaborator EPFL, Sahar El Khoury Postdoc EPFL

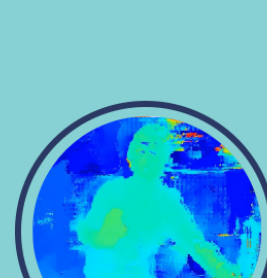


Solution for Magnetic Resonance Imaging

By Ioannis Lymperopoulos, Postdoc at EPFL

A technology that operates large aggregations of large buildings as providers of DSR to the Swiss Transmission Operator.

Team: Iignes C.C. de Carvalho Ph.D. UNIL and Swetha Rao Dhananka scientific collaborator at UNIL



The New Cantilever

By Jonathan Adam, Ph.D. at EPFL

The central component of AFM is the "cantilever", a consumable component that physically probes the specimen. Our cantilever technology permits up to 10x faster imaging speed, without change in user operating procedure, and is compatible with a wide range of microscope systems

Team: Klas Kronander Ph.D. EPFL, Engin Turetken Postdoc CSEM and Ksenia Em BSc EHL

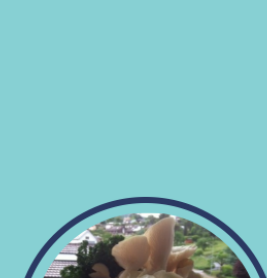


Spinal Dynamics

By Miroslav Caban, MSc EPFL

Our solution will provide patient-specific and clinically validated computational models able to guide the clinicians through the design and optimisation of the specific therapy in an easy-to-use user interface.

Team: Frederik Vandenberghe, Ph.D. UNIL



Digital Interactive billboard

By Abdulkadir Akin, EPFL

The prototyped technology realizes real-time and high-quality distance measurement and it benefits from the advantages of disparity estimation technique. The distance measurement device includes main innovative technology which is developed at EPFL

Team: Simona Repaite BSc EHL



G-Novativ

By Thierry Pantet, Bachelor at UNIL

En introduisant le premier dispositif pour deux-roues capable d'alerter automatiquement les secours en cas d'accident et compatible avec tout type de casque, G-Novativ désire prendre une part active dans le processus de modernisation des équipements de sécurité routière

Team: Luca Colasanto Postdoc EPFL



Stethoscope for Smartphone

By Nicolas Vachicouras, Ph.D. at EPFL

A digital stethoscope that can be connected wirelessly to any smartphone and an accompanying app. The app provides a live visual feedback of the sound such that the teacher can pinpoint, for example, to an adventitious sound characteristic of a certain condition, appearing as an extra peak in the visual representation

Team: Sébastien Eich, Nouria Hernandez professor UNIL

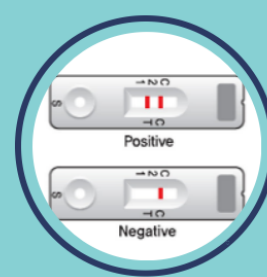


MyColumn grow kits

By Luis Santos Del Blanco, Postdoc at UNIL

MyColumn provides pottery and other structures suitable as containers for the growth of real decorative, edible and/or medicinal mushrooms. We also provide refills for the structures, with a wide choice of mushroom species

Team: Nagwa Shahk BSc HES-SO GE



Book Alfred

By Rubina Insam, Bachelor at EHL

The location-based Mobile App connecting people who need help with those who provide help.

Team: Edoardo Vittori BSc EPFL and Nicolas Freudiger BSc EHL

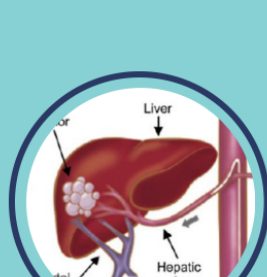


Open JukeBox

By Jonathan Aeschlimann and Tair Delia Littman, Bachelor at HES-SO

Open JukeBox aims at democratizing the music choice in public venues. We will provide an App with two interfaces - one for the venues called Create a JukeBox that runs on computers and mobile phones and one for users that wish to Join a JukeBox through their mobile phone

Team: Marco Palumbo MSc UNIL



GENEVA

Harmonic Nanoparticles

By Andrii Rogov, Ph.D. at UNIGE

A new nanotechnological approach based on inorganic nanocrystals -harmonic nanoparticles (HNPs) [1]. HNPs present very efficient optical response, and can be effectively imaged using second harmonic and third harmonic emission as contrast mechanism.

Team: Antonio Azzollini PhD UNIGE, Davide Righi PhD UNIGE and Saba Zareh MSc UNIGE



HepaQuick

By Elena Ivanova, Postdoc at UNIGE

HepaQuick point-of-care immunoassay test directly identifies HCV virus in blood samples. It's a rapid cheap easy-to-use diagnostic test for hepatitis C.

Team: Andrey Laktionov, Augustin Romaneschi MSc UNIFR, Evengelina Vartholonaoui PhD UNIGE and Luca Fazzone



FindMe

By Gianluca Boso, Postdoc at UNIGE

The FindMe is a pair of watch-like bracelets worn by the parent and the kid and that can measure in real-time the distance between them. The devices use the UWB technology to communicate their relative distances using a time-of-flight measurement.

Team: Alexandre Flory Samartino MSc EPFL and Félix Bussièrès scientific collaborator UNIGE



Omnisomes: The power to deliver

By Omar Sakr, Ph.D. UNIGE

Omnisomes: a proprietary drug carrier technology with a patent under preparation, that can encapsulate these water insoluble drugs and make them stick to the embolic beads currently used in the market

Team: Sarah Kacem BSc HES-SO, Thibault Dutronc PhD UNIGE

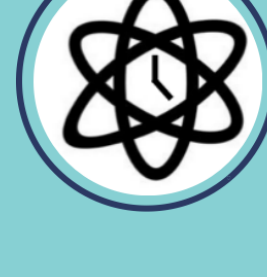


NuSCa

By Raphaël Reinert, scientific collaborator at HEDS

Nutrition Solution for Catering (NuSCa), une start-up proposant un service d'aide aux gérants et aux cuisiniers du milieu de la restauration collective pour développer et tendre vers une offre nutritionnelle améliorée.

Team: Moez Maamer, Eddy Farina, Rahel Fauser BSc HESGE



Pass Vita !

By Sophie Roulet, BSc UNIGE

Pass Vita veut mettre en lien les retraités avec des jeunes professionnels ayant des services ou des compétences pouvant intéresser cette tranche de la population et s'adresser spécifiquement à eux. Il s'agit d'offrir des prestations de qualité, originales et dynamiques issues du secteur privé, et si possible offertes par de jeunes professionnels pouvant modular leurs services pour cette tranche de la population

Team: Javier Bilbao PhD UNIGE, Damien Stricker PhD UNIGE, Tim Coutherez BSc HEPIA

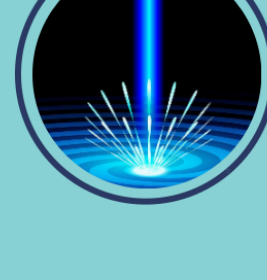


New Anti-ineffective drugs

By Valentin Trofimov, Ph.D. at UNIGE

We propose a drug screening system, that is capable in identify potentially new class of drugs that increase the efficiency of current anti-TB drugs and drug-candidates

Team: Harold Bouvard HEAD, Mohammad Soleymani UNIGE



NEUCHÂTEL

Gemstone finder

By Andreea Mihet, scientific collaborator at HE-ARC

The Gemstone Finder Mobile App aims at replacing the "search in books" part by its smart-phone upgraded version. The expert would insert the measurement data into the application and (s)he would then get the identify its unknown gemstone rapidly, directly on their smartphone

Team: An Dabirian EPFL and Jose Arias HEIG-VD



Atomic Wristwatch

By Sylvain Karlen, Ph.D. at UNINE

Dedicated to the production and selling of an atomic watch. The main advantage of this product as compared to other watches is that it would present a very high accuracy

Team: Jose Luis Geijo Lima, Luoming Zhang CSEM, Randy Streiff BSc HE-ARC



BioMe

By Daniel Schöni, Hospital de Berne

BioMe aims to streamline FMT therapy by developing standardized complex gut microbiome products (SMPs) using a proprietary process. SMPs will be used to treat patients suffering from disorders associated with alterations of the intestinal microbiome.

Team: Charlotte Tonini MSc UNINE and Jonathan Gretillat PhD UNINE

CoatX

By Andreas Hogg, Postdoc at HE-ARC

We suggest a hermetic and biocompatible thin film packaging based on alternating organic/inorganic coatings for further miniaturisation of smart implantable MEMS devices that can be applied for long-term implantation

Team: Valerie Wyssbrod PhD UNINE

New Welding Process

By Sébastien Brun, Scientific collaborator at HE-ARC

The product will be a machine providing lasting, hermetic bonding under low temperature for different materials. The underlying technology, which is a kind of "enhanced anodic bonding", addresses certain shortcomings of existing bonding technologies

Team: Dan Shi PhD EPFL and Muriel Blum MSc EPFL

Computation Acceleration for Nanotechnology

By Ali Nagavi, Postdoc at EPFL

We propose a method which can boost computation in different ways: 1) It is much faster than the present conventional methods intrinsically. 2) It needs less memory compared to many other methods. 3) It is very well adapted to optimization problems

Team: Ruslan Asfandiyarov UNIGE

WatchIT

By Séverine Cloix, PhD at UNIGE

WatchIT project aims at developing an augmented reality application on wearable products such as watches and jewels. By exploiting augmented reality, our product will allow a watch or jewel buyer to virtually try on a 3D model of a customized watch or jewel, and see the result, on their smartphone

Team: Ludia George HE-ARC, Thierry Chappuis HEAD and Tatiana Schuler

