

## Editorial

### The technology of the future is being developed in TEMIS



2016 went out with some fine successes for TEMIS, and we are pleased to see a rise in investment in the technology park, with new projects that are initiated in the main by companies.

The year was marked by significant recognition through the admission of our innovative business support ecosystem into the Health Tech network. That is a great triumph for TEMIS, the microtechnology cluster, its companies and laboratories, which take part, through the innov'Health cluster, in the development of the medicine of the future.

We are also glad to see watchmaking companies come to Besançon, thus confirming the know-how of our region and, better still, preparing its development towards pioneering technologies that will enhance its global influence.

The new larger region of Burgundy-Franche-Comté is in that area a factor for success, as it allows the networking of the different forces of our areas of excellence, particularly in the fields of aviation and medical devices.

In 2017, that momentum will be maintained. As always, in order to reinforce the economic appeal of Besançon, we will organise a major economic event for the first time. It will be named Journées Granvelle and will be a place for meetings, exchange and business conventions for major players from the business world.

I would like to thank all those who are working hard to bring research and innovation to this level of excellence and encourage everybody to continue our action for economic development!

My best wishes to all for the new year!

Jean-Louis Fousseret,  
Mayor of Besançon  
President of Temis and Grand Besançon



**AMAROB: An innovative micro-robot for vocal cord surgery**



**AEROμTECH develops the industrial efficiency of businesses in Burgundy-Franche-Comté**

## PHENOMEN OR THE EMERGENCE OF AVANT-GARDE WATCHMAKING IN FRANCE

*Phenomen entered the France-Comté incubator in TEMIS in the spring of 2015, and set itself a challenge: creating luxury watches with a spectacular design in France. The start-up moved to the nursery last October and is making good progress for starting industrial operations. Interview with Alexandre Meyer, joint founder of this innovative company that is shaking up an industry that relies on tradition.*



Alexandre Meyer  
and Olivier Gamiette

### Could you tell us more about your project?

Our aim is to develop mechanical watches that make a break with the rules of conventional watchmaking through their design and their technicity. Thanks to the talent of Olivier Gamiette, we want to give our watches new visual strength and emotion. Our ambition also lies in the fact that we are proud of our bold French creativity, and are committed to the partners who are accompanying us.

### What did you find in Besançon?

We decided to work from Besançon not because we wanted to rest on its watchmaking laurels, but rather to benefit from the most dynamic ecosystem in France in the area of microtechnology. We are surrounded

by responsive, innovative and ambitious start-ups and SMEs, research centres with a European dimension, schools and institutions that all put together offer us the possibility to take on the challenges that await us.

### What do you need for progress?

We have the desire, the energy and the resolve, and all our partners share a vision... That is more than enough for progress. However, the path of starting a business is not without its difficulties and we will have to find reliable technical, financial and institutional supporters. Luckily for us, there is much interest in our project and we do not lack support. We have already been the proud winners of the I-LAB contest organised by BPIFrance, and have a French Tech grant. But to continue our development, we would need more investment. Once again, we found the most committed partners in the Burgundy-Franche-Comté region.

### You are taking risks by trying to enter the luxury goods market with an innovative product.

Certainly, but it is not as risky as with a standard product in a depressed market. We have decided to re-enchant the display of time, and we wish to give our modernity to our watches. That modernity of design will make us push back technical boundaries. These spectacular designs will make us explore new materials, invent new escapements, test new tools, etc. Our task is to offer demanding customers products that will not cease to surprise them.

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## MIRAVAS PRESENTS ITS LATEST DEVICE, THE VBOX HYBRID

**O**n the occasion of the **CACVS (Vascular Surgery Controversies and News) 2017** fair to be held in Paris from 19 to 21 January, the young start-up from Besançon, **Miravas**, will give a sneak preview of the **Vbox hybrid** to over 1200 physicians and surgeons.

The new device is the result of in-house developments and regional collaborations and will allow Miravas to reinforce its operations in the market for treating vein disorders in 2017, particularly in France, since the Vbox hybrid will be used for treatment that is covered by health insurance.

After the release of the first Vbox last year for treating varicose veins with the help of steam and the treatment of several dozens of patients across Europe, Miravas continues to develop its innovations.

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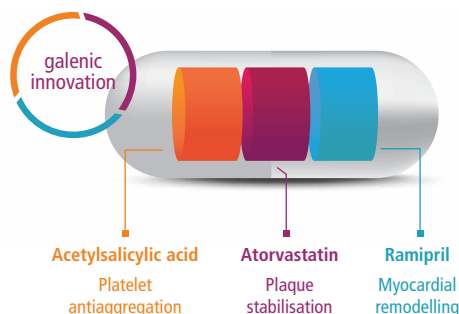




## ACUTE MYOCARDIAL INFARCT: A POLYPILL UNDER STUDY AT THE UNIVERSITY HOSPITAL OF BESANÇON

Incorporating into a single pill several active substances that are usually delivered separately is the aim of the SECURE (Secondary prEvention of Cardiovascular disease in the Elderly trial) project. Coordinated by the national centre for cardiovascular investigation in Madrid, this H2020 project brings together participants from 11 institutions in seven European countries. Prof. François Schiele, Head of the Cardiology Department of the University Hospital of Besançon, leads the French part. That randomised controlled trial relates to patients aged above 65 who have suffered from acute myocardial infarct. The aim is to confirm the hypothesis that the combination of several medicines in a single pill would improve patient compliance with treatment and therefore help reduce the number of cardiovascular events occurring after a first myocardial infarct. The overall budget allocated to the study is €5,998,786. The first patients were included at the end of August; in all, 3206 patients will take part in the study.

**Prof. Scheil and his team**  
From left to right: Gérald Sergent, Fiona Ecarnot, Stéphanie François, Prof. François Schiele, Marie-Line Perruche, Hélène Tauzin, Vinciane Dufour



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Sergio LESCANO – AMAROB project of the TEMIS incubator

## AMAROB: AN INNOVATIVE MICRO-ROBOT FOR VOCAL CORD SURGERY

**C** Initiated by Sergio Lescano of the AS2M laboratory of FEMTO-ST, the AMAROB project - which is developing in the TEMIS incubator - offers a solution for laser surgery to repair vocal cords. The principle relies on an endoscope with a micro-robot that directs the laser beam and thus removes cysts or incipient tumours from the vocal cords.

### Besançon, a standard-setter in micro-robotics

After leaving Peru, the land of his birth, for Paris in 2009, Sergio secured a master's degree in mechatronics, along with a master's in management, which is now standing him in good stead as he sets up his new company. Because he wanted to carry on his career in micro-robotics, one of his teachers at the University of Paris 6 recommended him to go to the FEMTO-ST laboratory in Besançon, where he began his research in 2012. His doctoral thesis under the supervision of Prof. Nicolas Andreff related to an innovative device for vocal cord surgery and was part of a European project that brought together three countries: Germany, Italy and France.

### Making and marketing the AMAROB micro-robot

After his thesis and following a stage of testing on cadavers, Sergio Lescano was ready to start his AMAROB business project in order to make and market this innovative micro-robot for mini-invasive routine or complex surgical procedures relating to the vocal cords.

Prize-winner at MEDTEC France 2015, the project is supported by a partnership with the CNRS and has received funds from the University of Franche-Comté, which made it possible to carry out a market study. Early commercial tests of the product are under way and Sergio is already working with his future customers in order to adapt the robot to their machines. The idea is to start with non-medical markets, particularly lidar (laser detection and ranging), in order to be able to finance the certifications that are indispensable for any application in the medical industry.

Among other concrete benefits of Sergio's robot are: Shorter operating times (one hour and not four) and shorter patient recovery times and much fewer lasting consequences.

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## ONCOTRANS 2017 2 AND 3 FEBRUARY 2017 IN BESANÇON

Under the aegis of the Cancéropôle du Grand-Est, the inter-regional seminar for translational research in oncology, ONCOTRANS 2017, will be held in Besançon on 2 and 3 February 2017.

"Evaluation of tumour heterogeneity: Implications for molecular oncology and immune therapy for cancer" is the theme of that 5<sup>th</sup> edition of ONCOTRANS.



The programme and other details can be found on the website of the conference:  
[www.oncotrans.fr](http://www.oncotrans.fr)

# in brief

## AEROMTECH develops the industrial efficiency of companies in Burgundy-Franche-Comté



Baptiste Avril at the Space awards ceremony at FPI

Aéromicrotech is the cluster for aerospace and defence and is managed by the Microtechnology competitiveness cluster. It is aimed at developing the activities in the area in Burgundy-Franche-Comté along with large customers such as Airbus, Thalès, Dassault, Zodiac and others).

A first programme for industrial efficiency was put in place from 2014 to

2016 by the French grouping of aerospace industries (GIFAS) in order to improve the efficiency of the *supply chain* in the aviation industry. The principle was to create clusters of companies around a big customer, with five to seven SMEs. Then an individual diagnosis was made for each SME in order to identify the priority areas of improvement and training needs. Customers also took part in the work, since their relations with suppliers were also analysed. An action plan was defined and managed by a dedicated consultant. Against that background, on 13 December 2016, six SMEs from Franche-Comté took part in the closing meeting of the first stage of the industrial efficiency program within the Zodiac Aerospace cluster. In addition to conclusive results in terms of industrial efficiency, the project also enabled the companies in the cluster to work closely with each other. The exchanges required for the collaborative work have already had favourable employment consequences. In only nine months, the programme allowed the creation of **three indefinite-term positions and two apprenticeships** within the participating companies. As an illustration of the collaboration, Baptiste AVRIL was employed as a continual improvement project manager at the end of his placement for graduation from ENSMM during which he took part in the implementation of the programme. The companies showed their abilities for synergy and innovation. FPI and Cryla jointly took on Baptiste to keep the work going. Drawing on the positive results of the first stage, a second one was initiated (2017-2019) with GIFAS, the Microtechnology cluster as the project sponsor and companies supported by the Burgundy-Franche-Comté region. It was highly anticipated by industry and started in the spring of 2017 to allow the French *supply chain*, including the companies in Bourgogne-Franche-Comté, to pursue their progress towards industrial excellence.

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## programme

**14-17 March**/Cannes

### MIPIM 2017

TEMIS, Grand Besançon and Grand Dijon will take part in the upcoming international fair of property professionals MIPIM 2017, which will be held in Cannes from 14 to 17 March 2017. An opportunity to showcase what the region has to offer to the most influential players in the business property market. Welcome to the booth: **Level -1, Booth E2.**

For more information: [www.mipim.com](http://www.mipim.com)

**19-21 March**/Besançon

### Journées Granvelle economic forum

"How industry and services can be reinvented using digital technology" will be the theme of the first Journées Granvelle Besançon, organised by Grand Besançon and the Chamber of Commerce and industry of Doubs from 19 to 21 March.

In partnership with the newspaper Les Echos and BigUp for Startup sponsored by the Post Office, these days will include a business convention, talks, workshops and master classes.

They will be targeted for professionals and students, but time will also be set aside for the general public, on the subject of art and digital technology.

Registration: [invest@grandbesancon.fr](mailto:invest@grandbesancon.fr)

Programme available on the website [www.investinbesancon.fr](http://www.investinbesancon.fr)

**4-6 April**/Stuttgart

### Medtec with the Microtechnology Cluster

From 4 to 6 April 2017, Stuttgart will host the MEDTEC fair devoted to medical technology.

The Microtechnology – Innov'Health cluster will support you for the event: preparation of the fair (watch, meetings, targeted language courses ahead of the event) and organisation of travelling for the group, for a two-day stay in the city.

Find out more: Contact Céline BOUAFIA - [c.bouafia@polemicrotechniques.fr](mailto:c.bouafia@polemicrotechniques.fr)

**13 April**/Besançon

### 6<sup>th</sup> Innovation day at the university hospital

Neuropsychiatry, assisted reproductive technology and support for clinical trials will be the promising themes that the university hospital of Besançon will offer at the 6<sup>th</sup> Innovation day, which will be held on 13 April 2017 from 1 pm to 6 pm.

That annual meeting is jointly organised by the hospital, CIC, FEMTO-ST and the Microtechnology – Innov'Health Cluster to bring together academic researchers, hospital carers and high-tech industries working for technological innovation.

Department tours, needs for innovation, technological know-how, clinical assessments and structural support are some of the themes and opportunities for fostering the emergence of innovative projects to work on the medicine of the future.

Some fifteen flash events will coordinate the exchanges and the networking time set aside at the end of the day will allow the different parties to have direct contact with each other.

Prof. Christophe Roux and Prof. Emmanuel Haffen will be the special contacts for exchange with researchers and industry in the field to develop innovations for their departments.

Find out more: Contact Fany Chedevergne

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