COMPAMED

Press Release No. 2 – COMPAMED 2012 Trend Report

COMPAMED 2012: The road to personalised medical care (and technology) is also advancing thanks to suppliers and their know-how

The health care industry sees medical technology as an especially innovative, promising growth "field". In no other area does the general population welcome the increase in technology more than in modern medical technology. More than 90 percent of the population see developments in preventive medicine, diagnosis and treatment as positive (according to a Forsa survey). At the same time, in light of their ever increasing share of medical expenses, they expect a high degree of therapy benefit and personalised treatment.

That the effort to provide "tailor-made" therapy is not limited to drugs but that personalisation is also gathering speed in medical technology will be impressively showcased by more than 4,500 exhibitors at the world's biggest medical trade fair MEDICA 2012 from 14 to 17 November in Düsseldorf and at the parallel fair COMPAMED 2012 (14 to 16 November), the leading international market platform for suppliers in the medical technology industry (over 600 exhibitors).

This globally unique combination of MEDICA and COMPAMED represents the entire process chain, displaying the complete range of medical products, devices and instruments and demonstrating how the close cooperation between suppliers (COMPAMED exhibitors) and "medtech" companies (MEDICA exhibitors) is furthering the development of new procedures, devices and products.

This includes personalised medicine, which has developed into a compelling leitmotif for medical research. "Prerequisite for personalised therapy are molecular genetic tests that show in advance whether and to what extent a drug will work with individual patients. The aim is to make drugs more effective and to reduce systemic side effects," explains Prof.

Messe Düsseldorf

Messe Düsseldorf GmbH
Postfach 10 10 06
40001 Düsseldorf
Messeplatz
40474 Düsseldorf
Germany

Telefon +49 (0) 2 11/45 60-01
InfoTel +49 (0) 2 11/45 60-9 00
Telefax +49 (0) 2 11/45 60-6 68
Internet www.messe-duesseldorf.de
E-Mail info@messe-duesseldorf.de

Geschäftsführung:
Werner M. Dornscheidt (Vorsitzender)
Joachim Schäfer
Bernhard Stempfle
Hans Werner Reinhard (Stv. GF)
Vorsitzender des Aufsichtsrates:
Dirk Elbers

Amtsgericht Düsseldorf HRB 63
USt-IdNr. DE 119 360 948
St.Nr. 105/5830/0663

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Dr. Thomas Schmitz-Rode, chair of the German Association for Biomedical Technology within the German Association for Electrical, Electronic and Information Technologies VDE. Hence the great importance of biomarkers today as well as in the future, as their characteristic biological structures or molecules can provide evidence of the function of biological and pathological processes in the body.

Biochips technology with great advances

In the meantime, the medical field differentiates between biomarkers in screening for the early detection of diseases, biomarkers for prognosis, for determining the course of a disease, predictive markers that indicate the response to a specific drug or its potential risk, as well as monitoring markers which can indicate the course of a disease under therapy. Basically, molecular biomarkers can be used in lab diagnostics as well as in diagnostic imaging. In recent years, the focal points of molecular biomarker research have shifted from proteins to nucleic acids. This is primarily due to the tremendous advances in nucleic acid analysis such as microarray technologies (so-called biochips) and next generation sequencing, which can be performed simply, quickly and economically. These technological prerequisites are often provided by companies exhibiting at COMPAMED Düsseldorf.

Promising: Combination of biotechnology and MEMS

For instance, iX-factory GmbH is focussing on the promising trend theme BioMEMS. These biological microelectromechanical systems were especially developed for applications in medical diagnostics and biotechnology. iX-factory specialises in BioMEMS as components in various lab-on-a-chip systems, in which the influencing of fluids can be carried out via predetermined channels, heating as well as cell and biomolecule recognition. This technology assists research and industry in effectively solving problems in such areas as molecular biology. Modern clean rooms and systems allow the custom development and production of MEMS components, and iX-factory provides even small quantities of the highest quality. "Even now iX-factory, as a technical service provider, is participating in numerous product development projects in the area of BioMEMS and we are always amazed at the possibilities presented by the

combination of biotechnology and MEMS. Our broad technology portfolio and well-founded know-how allows our team to consistently meet the challenges presented to us, supporting both industry as well as research," says Dominique Bouwes, CEO of iX-factory.

Printed electronics on the rise

Printed electronics, such as those already in use in RFID chips, are steadily gaining in importance in the health care sector. The radio transponders are becoming ever more essential in hospitals and in medical products because they provide a high degree of downsizing and automation potential in tracking, documentation, invoicing and reordering. At the same time, a complete record of case-related product consumption and costs per patient, operation, ward, etc. can be drawn up. RFID labels can, amongst other things, ensure that drugs are not tampered with and that they are being properly handled and administered. Printed electronics also allow the creation of sensors for biochemical applications, for bandages and packaging.

One of the greatest challenges in medical technology is the miniaturisation of electronic products and assemblies whilst increasing the integration of functions. The core business of Elliptec Resonant Actuator AG is the development and production of customer-specific and standardised drive systems based on piezo technology, which are also available for medtech applications. The intelligent solutions range from handheld skin tightening devices to portable alcohol measuring devices all the way to professional laser instruments for dermatological pharmacotherapy. The product highlights at COMPAMED 2012 include the new hollow waveguide module HR2K based on piezo technology which Elliptic is presenting for the first time. These new components are, for instance, used in medical optics for turning filters in the case of polarity change, for prism rotation in changing the refraction of light as well as for adjusting neutral density filters in changing the quantity of light. "Our customers appreciate our development services. We support projects from the initial design all the way to the end product. This provides the customer with a one-stop solution and can significantly reduce the development time," explains Christoph Wolthaus, chief engineer at Elliptec.

Hands-free motion control enhances hygiene in the operating theatre

Hygiene remains a multi-facetted topic of great importance in surgery: Up to now, to view medical files physicians and nurses had to leave the sterile environment of the operating theatre and then go through the disinfection process again afterwards. This is a time-consuming, high-risk procedure – for the staff as well as for patients. This has now come to an end: Commissioned by the medical technology company Karl Storz (exhibitor at MEDICA), the Fraunhofer Heinrich Hertz Institute HHI has developed the iPoint technology for the medical technology sector. It forms the basis for the MI-Report information system. MI-Report allows surgeons to download patients' medical files and individual x-rays or ultrasound images to a screen in the operating theatre via touchless hand gesture control . iPoint technology registers the surgeon's hand movements with millimetre precision and in real-time via infrared cameras. A software program also developed by HHI scientists translates the hand gestures into computer commands, similar to a mouse. This allows physicians to scroll through, zoom in and highlight without touching the medical files or findings: Safe and sterile. "It is important that surgeons and nursing staff feel secure and can concentrate on their work in a quiet environment. Patients notice this and their perceived and actual sense of security increases," explains Bernadette von Wittern, marketing manager at Karl Storz GmbH. Siemens Healthcare (MEDICA exhibitor) and the French research institute INRIA (Institut National de Recherche en Informatique et en Automatique, Paris) are undertaking similar endeavours based on the Xbox technology, which was originally developed for gaming consoles.

COMPAMED forums on high tech trends

An important element of COMPAMED are the accompanying lecture events focussing on trends, developments and markets. For the first time under its new name COMPAMED HIGH-TECH FORUM, the fair's established, accompanying forum will give exhibitors the opportunity to present themselves to the international public. Concurrently, the German Industry Association for Microtechnology IVAM will present "High Tech for Medical Devices" to the product market (Hall 8a). In the last few years, the forum has established itself as an important international platform for high

tech solutions in the medical supply industry. In their lectures and podium discussions experts, scientists and companies offer new insights into medical technology and the health care business. COMPAMED exhibitors may participate free of charge to direct attention to products and innovations in their lecture. This year's focus will be on "Micro-precision, Manufacture and Processing", "Testing, Measuring, Ensuring Quality", "Electronic Manufacturing Services" and "Laser and Photonics Applications".

After a successful start last year, the 2nd COMPAMED SUPPLIERS FORUM by DeviceMed will take place again this year from 14 to 16 November 2012 in Hall 8b. The wide range of topics is intended to complement the COMPAMED HIGH-TECH FORUM and will cover all areas of manufacture. The lectures will address current topics across the entire value adding chain. These include design and usability, innovative materials, mechanical and electronic components, manufacturing processes and systems, the entire spectrum of customer-specific manufacturing, quality assurance, regulatory affairs and information on new markets.

Of the 134,500 trade visitors that attended both MEDICA and COMPAMED last year, more than 16,000 were specifically interested in the range of topics covered by COMPAMED.

Information on COMPAMED 2012, the exhibitors, the innovations and the program of forums is available online at: http://www.compamed.de

Online information about MEDICA 2012: http://www.medica.de

Messe Düsseldorf GmbH
COMPAMED + MEDICA 2012 Press and Public Relations
Martin-Ulf Koch/Larissa Browa
Tel. +49(0)2114560-444/-549
Fax: +49(0)211 4560-8548
e-mail: KochM@messe-duesseldorf.de
BrowaL@messe-duesseldorf.de

Düsseldorf, 5 September 2012