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Press Release

Theme Day Personalized Medicine Precision medicine to make diagnostics and therapy cheaper and more efficient

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Exciting discussions and high-profile lectures await visitors at the “Personalized Medicine” theme day on April 13, from 10:00 to 14:00 o’clock, at the analytica in Munich. Experts from biotech, pharmaceuticals and IT diagnostics companies, associations and clusters will present the latest findings on the current status and future orientation of Personalized Medicine. Dr. Friedrich von Bohlen and Halbach, Managing Director and co-founder of dievini Hopp BioTech holding GmbH & Co KG, will open the theme day with a keynote address.

In the following interview, he takes a look into the future of Personalized Medicine.

What role will Personalized Medicine play in the future?

Dr. Friedrich von Bohlen: “There will be no other medicine in the future than Personalized Medicine. The ability to read molecular patterns of human organisms, such as genomes, proteomes, metabolomes, etc., and to understand them ever better allows gaining deeper and deeper insights into medical conditions and their treatment options. This completely new class of information – the ‘molecular X-ray image’ – will complement the sources of information that are already available. Even today, it already permits giving tailor-made individual therapy recommendations based on the individual molecular patterns of a disease. This may be a standard therapy or a variety of differentiated combination therapies. Personalized Medicine is thus precision medicine, opening up completely new opportunities and perspectives for patients.”

“One in a million – your data will be king” is the title of a lecture at the “Personalized Medicine” theme day at analytica. What is the relationship between digital transformation and Personalized Medicine?

Dr. Friedrich von Bohlen: “The real-world data (RWD) referred to here are ‘king’ because they are of particular interest to all players in the health care system and are becoming increasingly important. For in contrast to so-called RCT data, RWD originate from the daily

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reality of often multimorbid and non-selected patients and are thus much better transferable to the everyday clinical situation. After all, one wants to know whether a drug and a treatment are effective in a real-world setting, and not only under strongly selected conditions. For example, these data will help the pharmaceutical industry to better develop drugs, and doctors will be able to treat patients even better.”

What does this development mean for the tasks of physicians?

Dr. Friedrich von Bohlen: “Through BIG DATA and modern analytics, we will see a transition from IT-supported to IT-centric medicine over the next few years. Physicians will learn to deal with rapidly growing amounts of molecular data. Digitization thus also changes the role of doctors and the relationship between doctors and patients. Since patients today can have a good understanding of their disease thanks to the extensive information availability on the Internet, the doctor will always remain the doctor, but increasingly also take over the role of a coach who discusses the various treatment options with their advantages and disadvantages, e.g. resulting from the individual molecular pattern, with the patient, explains them, and weighs them.”

Will personalized therapy increase individual therapy success?

Dr. Friedrich von Bohlen: “Yes, it will, because all medical conditions, not just cancer, have molecular components. Hence, an individual disease model of the patient with a clear molecular profiling can be created. This additional information makes it possible to understand which molecular communication channels are disturbed or out of balance. On this basis, a completely individual therapy with higher efficacy at lower risks can be selected.”

What technologies are needed for Personalized Medicine?

Dr. Friedrich von Bohlen: “First, all methods are important that are suitable for generating molecular profiles, apart from genome sequencing e.g. mass spectrometry for the profiling of proteomes. Furthermore, laboratory methods, which are also shown on the analytica, such as e.g. liquid biopsy, which allows determining without physical organ biopsy, using only the blood, whether cancer is present, and if so, which kind and how it presents on the molecular level. In order to be able to classify the large amounts of data and above all various types of data and bring them into a correct context for the treatment, the subject of BIG DATA analytics is particularly important. For the interpretation of these types of data in the context of clinical data plays a crucial role. This is presumably the future pinnacle of medicine, as data generation is becoming more and more of a commodity, so that data integration, processing and interpretation will become critical to the quality of diagnosis and treatment support.”



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How do pharmaceuticals and diagnostics work together for Personalized Medicine?

Dr. Friedrich von Bohlen: “Actually, the separation of pharmaceuticals and diagnostics is no longer expedient. In the future, there will no longer be a therapeutic agent that does not involve at least one diagnostic element. Test systems that measure e.g. biomarkers will therefore increasingly be offered by pharmaceutical companies in the future. Therapeutics and diagnostics are about to converge.”

Will the future Personalized Medicine be accessible only to those who can afford it, or will there be “economic setscrews”?

Dr. Friedrich von Bohlen: “I am convinced that Personalized Medicine will be able to cut costs, particularly so for two reasons: First, the sequencing of genomes and all the other ‘-omes’ is becoming increasingly affordable thanks to ever more advanced technologies. Second, the costs that the pharmaceutical industry incurs by drug development will be able to be significantly reduced. Today, just over ten percent of all drug candidates pass the clinical trials, while nearly 90 percent fail. The development costs up to that point, however, need to be redeemed somehow. With the help of structured published data, RWD, RCT and their merging by BIG DATA analytics, in the future we will be able to demonstrate the efficacy, safety and usefulness of drug candidates in small, short-term studies comprising just a few well-defined patients with a high probability of success. This will significantly reduce the cost of drug development, which today exceeds 2 billion euros per new drug. Precision medicine will be a cost-cutting tool for clinical application as well as for drug development, and will thus benefit everyone in the healthcare system.”

Why is Personalized Medicine particularly important in cancer research?

Dr. Friedrich von Bohlen: “Cancer is a clearly genetically rooted, life-threatening condition. In addition, treatment costs in oncology are so high that the costs incurred by new genetic tests are low by comparison. Thus, oncology is predestined for the first application of these new technologies of Personalized Medicine. In the medium to long term, all other indications will benefit as well. In the first step, precision medicine can convert cancer, like AIDS, into a chronic disease. The molecular profile of the cancer can be established, and the treatment repeatedly adjusted, as the profile changes over time and under treatment. In addition, with liquid biopsy procedures we can tell from the blood whether the patient responds to our treatment or not. In the even further future, it may even be possible to cure diseases such as cancer by repairing the mutations underlying the cancer by using tools from molecular biology.”



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Are there already any specific examples of the success of Personalized Medicine?

Dr. Friedrich von Bohlen: “In Germany, there are already a few selective contracts between medical technology operators for tumor panels, university hospitals and health insurance providers, which make it possible to create a molecular profiling of patients having a specific neoplastic condition; such profiling is reimbursed in clinical application. Based on these panels, physicians can be given treatment recommendations that make the treatment more efficient and safer. In the US, so-called tumor panels are even being reimbursed nationwide already. Studies clearly show that treatments that use such individual marker panels are more efficient, have fewer side effects, and are thus better for the patients.”

How will Personalized Medicine change our healthcare system?

Dr. Friedrich von Bohlen: “The future is ‘outcomes-based medicine’. Today, performances are billed according to the service catalog. In the future, the success of a treatment or a drug, respectively, will be reflected in the reimbursement. Treatment successes can be measured ad hoc or subsequently. This ‘value-based reimbursement’ will go hand in hand with ‘outcomes-based medicine’. And I only see winners in this future – first and foremost the patient.”

For more information on the theme day Personalized Medicine, please go to:
<https://www.analytica.de/personalized-medicine>

Two shows one date – [ceramitec](#), the leading international trade fair of the ceramic industry, is taking place at Messe München at the same time as analytica. Joining ceramitec is free for analytica visitors.

About analytica

analytica is the international trade fair for laboratory technology, analysis and biotechnology and their users in research and industry. The trade fair is accompanied by the analytica conference, where the international scientific elite meets to discuss the latest topics that pertain to chemistry, biochemistry and laboratory medicine. A total of 35,002 visitors and 1,244 exhibitors took part in analytica in 2016. analytica has been held in Munich every two years since 1968. The next analytica takes place from April 10 to 13, 2018.



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analytica worldwide

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Messe München

Messe München is one of the leading exhibition organizers worldwide with more than 50 of its own trade shows for capital goods, consumer goods and new technologies. Every year, a total of over 50,000 exhibitors and around three million visitors take part in more than 200 events at the exhibition center in Munich, at the ICM – Internationales Congress Center München and the MOC Veranstaltungszentrum München as well as abroad. Together with its subsidiary companies, Messe München organizes trade shows in China, India, Brazil, Russia, Turkey, South Africa, Nigeria, Vietnam and Iran. With a network of associated companies in Europe, Asia, Africa and South America as well as around 70 representations abroad for over 100 countries, Messe München has a global presence.