

THE SOLUTION FOR
PRECISION MEDICINE

20
YEARS OF
INDIVUMED



Everything that makes Indivumed so unique today is based on a simple idea: to provide the international cancer research community with standardized tissue samples and clinical data to accelerate the development of new and better diagnostics and therapeutics. None of us founders, Prof. Dr. med. Carsten Zornig, Prof. Dr. Peter Layer, Frank W. Oertel, and myself, could have guessed in 2000 that four friends from Hamburg would revolutionize global precision oncology. But we firmly believed in it, developed a dedicated business plan with the support of Dr. Kerstin David and Dr. Heinz Joachim List, even found investors, and launched operations on April 5, 2002.

In the meantime, all major pharmaceutical companies and prestigious academic institutions have long been using our sample and laboratory resources for their research and development projects. Thus, Indivumed has grown and matured over the past 20 years. Step by step, we have evolved from a high-quality biobank and highly specialized laboratory service with an associated database for tissue samples and clinical data to a biotechnological pioneer in the identification and validation of targets. Along the way, some remarkable milestones have been put into practice. For example, “Liquid Biopsy,” a new diagnostic procedure developed in collaboration with Johns Hopkins University. For this, the American Association for Cancer Research

(AACR) presented us with the Team Award for Disruptive Diagnostics in 2005. In parallel, we have started to build a worldwide clinical network. Collaborating partner hospitals on four continents continuously provide us with tissue samples and patient data in a standardized format we developed and monitor.

Four years ago, we were then able to realize the decisive step: the conversion of tumor biological data stored in frozen tumor tissue into analyzable data. This step only became possible because affordable technologies are now available that can quantitatively measure everything that is present in the cells in terms of molecules. And now the necessary IT and AI technologies are also available to store and process these data sets and the associated bioinformatics analysis techniques and algorithms. We have now built the only cancer database, and the most comprehensive in terms of data depth, that can analyze tumor events in individual patients with incredible precision.

This makes it possible to find new potential therapeutic targets in a matter of days, a process that until recently took years. Indivumed is on its way to becoming a company, paving the way for developing the optimal and individual therapy for each patient.

We have come a long way, and this was only possible because so many people were convinced of our vision from the beginning and still are today – starting with our generous investors, to Indivumed’s incredibly dedicated team, our world-class scientific, academic and clinical partners, as well as the global pharmaceutical and biotechnology industry.

Thank you for making precision oncology possible.

A handwritten signature in blue ink, appearing to read 'Hartmut Juhl'.

Prof. Dr. Hartmut Juhl

Founder and CEO Indivumed Group

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In 2002, we were convinced that medicine must become more individualized, especially cancer therapy. After all, it's no coincidence that we decided on the name Indivumed. A large tissue biobank was to serve as our research base and only a few years later, the American Cancer Research Center NC said INDIVUMED, Hamburg is the 'golden standard in biobanking.' Along the way, we have become an important factor in cancer therapy and drug development.

Prof. Dr. Carsten Zornig

Co-founder and Shareholder Indivumed and former Director
Israelitisches Krankenhaus Hamburg

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Prof. Dr. Hartmut Juhl and Prof. Dr. Carsten Zornig at the official signing to begin operations in early 2002.

Indi... what?

Back in September 2001, Prof. Dr. Hartmut Juhl started Indivumed GmbH. Shortly afterwards, Prof. Dr. Carsten Zornig, Prof. Dr. Peter Layer, and Frank Oertel joined as co-founders. Despite – or perhaps because of – the name, which might be difficult to pronounce at first, investors were quickly found. With them and the first five employees, operations began on April 5, 2002.

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As an employee from the very beginning in the US, I have accompanied the company through all its ups and downs. What drives us is the firm belief that we are contributing something of value to the world. After all, cancer affects us all in some way, whether as individuals or as a society. Therefore, for most of us, working here feels more like a calling than a job.

Kevin Sullivan

Vice President of Sales and Business Development, Indivumed US

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New World

This American subsidiary was initially limited to sales and the development of Indivumed's US clinical network. Today, the company has long had its own laboratory operations for customers in the United States and across the world.

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With the simple idea that for the development of new drugs and diagnostics, cancer tissues and clinical data need to be collected in a highly standardized way, we have already achieved a lot today.

Prof. Dr. Hartmut Juhl
Founder and CEO Indivumed Group

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Prof. Dr. Hartmut Juhl at the event of the German Founder's Award 2005 on ZDF (German TV).



The Visionary

The jury of *Deutscher Gründerpreis* (German Founders Award) honors Prof. Dr. Hartmut Juhl with the award in the “Visionary” category. The prestigious award celebrates outstanding entrepreneurial achievements and recognizes personalities who turn visions into ventures.

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Integrating scientific, medical, and technological expertise and assets will transform our ability to analyze complex clinical data relating to specific diseases, employing a more comprehensive, system-level approach to how we treat patients. We're starting with cancer, and hope this kind of research will lead to better, more individually targeted treatments.

Howard J. Federoff

MD, PhD Executive Vice President for Health Sciences, GUMC

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Healy Hall, main building of Georgetown University in Washington, DC Hoyer 2009, wikipedia

Footprints in the US

The field of personalized cancer research and treatment was growing each day. In 2007, a new partnership with Washington's largest biomedical research organization was contributing to that growth. Indivumed marked the first valuable footprints in the US by collaborating with Georgetown University Medical Center. Building on this partnership, that has lasted until today, the following years further MedStar Health Research Institutes and Clinics followed the cooperation.

2007

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It has been a stellar experience as postdoctoral fellow in the Vogelstein Laboratory at the Johns Hopkins University and in collaboration with Indivumed to conduct some of the earliest research on analyzing free circulating tumor DNA. It makes me extremely proud that we could lay the foundation of the „Liquid Biopsy“ concept that opened up new approaches to detect and track cancers. This groundbreaking development lead to the establishment of Inostics, the first commercial liquid biopsy option on the market.

Dr. Frank Diehl
Founder and former CEO of Inostics

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Drawing Blood

Together with scientists led by Professor Bert Vogelstein from Johns Hopkins University, Indivumed founded Inostics GmbH to elaborate a new system of cancer gene diagnostics from blood. A few years later, the team was recognized by the AACR for its pioneering work in using cancer mutations as biomarkers in the context of liquid biopsies – a dramatic technological advancement in detecting cancer that defined a new field in oncology.

**2008**

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Combining the world's best quality biobank with scientific excellence will lift industry and precision oncology to the next level.

Prof. Dr. John L. Marshall
Chief, Division of Hematology/ Oncology
MedStar Georgetown University Hospital

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Widening the Scope

Awarded and funded by NCI as a research partner as well as by the newly founded Otto J. Ruesch Center, Indivumed creates valuable global alliances in oncology. This year marked the beginning of a fruitful collaboration with renowned and esteemed institutes overseas.



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Standardization is key to our work. Following the ISO SOPs worldwide enables Indivumed to offer the highest quality products and services for cancer research.

Prof. Dr. Hartmut Juhl
CEO and Founder Indivumed Group

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High Quality All the Way

2010

In 2010, Indivumed became certified according to ISO 9001:2008. The basis of Indivumed's work – the standardized biospecimen and data collection process – was defined in the Indivumed Standard Operating Procedures (SOPs) and certified according to ISO.

Since then the company has worked within these defined standards and kept the certification globally in all of its sites.

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IndivuTest identifies the targets for a personalized therapy and thus offers the treating oncologist an individual decision-making aid for further treatment.

Dr. Eike von Leitner
Former Deputy Director IndivuTest GmbH

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Founding IndivuTest

IndivuTest GmbH was founded as a wholly owned subsidiary of Indivumed to provide individualized diagnostics to oncologists and cancer patients as support when selecting the next beneficial therapy.

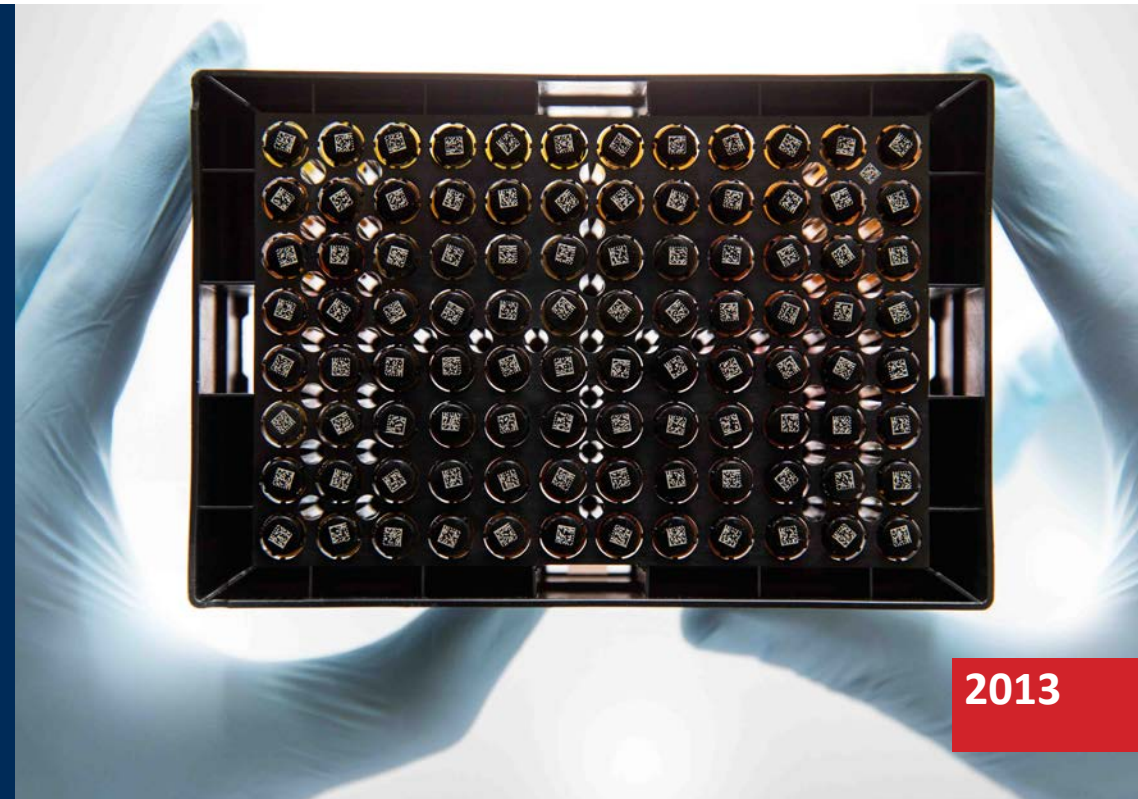


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Partnering with Dr. Vogelstein and his research group gave Indivumed the opportunity to help forge an entirely new field of science that is helping to unlock the molecular secrets of cancer one patient at a time.

Prof. Dr. Hartmut Juhl
CEO and Founder Indivumed Group

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2013

It's a Deal

In 2008, Indivumed partnered with Dr. Vogelstein's team to support the detection of mutations in circulating tumor DNA and founded Inostics GmbH in Hamburg, Germany. Inostics' core mission was to commercialize "BEAMing" technology, the groundbreaking platform developed by Vogelstein and his team to advance the field of Liquid Biopsy. In 2013, Indivumed successfully sold 100% of its shares in Inostics and its US-based subsidiary to Sysmex Corporation, headquartered in Kobe, Japan.

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Those who need medical services deserve more than just a diagnosis or treatment. Innovative programs and cutting-edge research are transforming health care to deliver better health for all.

Indivumed Team Geisinger Medical Center, Pennsylvania

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Partnering up Part I

Indivumed and Geisinger Health System, USA, partner for personalized medicine initiative in the US. Geisinger Medical Center (GMC) offers the most comprehensive health-care system in Central Pennsylvania, providing many services not available anywhere else locally.

With more than 2,000 medical professionals, GMC is the right choice for patients who need specialized, personalized care. More than 100 years ago, Abigail Geisinger recognized the need for advanced health care in her small town in central Pennsylvania.

“Make my hospital right; make it the best,” she said. Exactly the right spirit for partnering with Indivumed.

2014



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Collecting and properly preserving human tissue is critically important to cancer research, but it's difficult to fund and requires a specialized set of skills and expertise to build such a program. Our collaboration allows this to occur in an organized, coordinated way that will benefit all cancer researchers here at Wilmot and the URMC.

David C. Linehan, M.D.

Professor – Department of Surgery, Oncology (SMD);

Chair – Department of Surgery (SMD);

Seymour I. Schwartz Professorship in Surgery – Department of Surgery (SMD)

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Growing the Global Network

In 2016, Indivumed announced a partnership with the University of Rochester Medical Center in New York, USA, to establish a bank of human tissues and tumor samples that are expertly preserved and stored for use in cancer research.



2016

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It is a very important moment for the city of Białystok. Białystok is proud of the Medical University. Our future is connected with the development of universities and science. This collaboration is a big step towards finding a cure for cancer. (...) Together, we are stronger than each one separately.

Prof. Tadeusz Truskolaski

President of the Union of Polish Metropolises, Mayor of Białystok

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Partnering up Part II

In 2016, Indivumed began a research partnership with the Medical University of Białystok.

The University is one of two national research and clinical centers of excellence within Poland and is committed to transforming the diagnosis and treatment of cancer by utilizing world-class precision medicine tools, such as the Indivumed cancer database.

2016



The Rectorate in Branicki Palace of the Medical University of Białystok.

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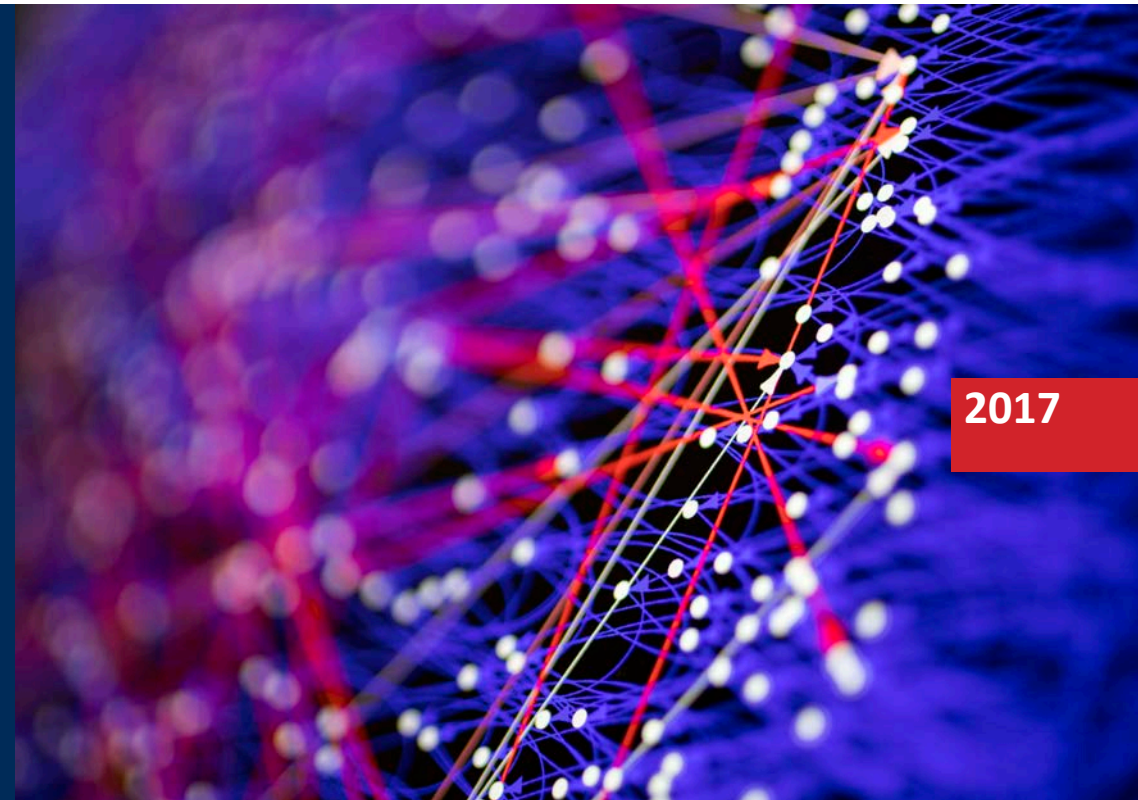
Indivumed is a world leader in tissue collection and preservation and will drive meaningful innovation within our health system.

By participating in the Indivumed global network, we'll be helping to build a critical mass of biological samples and clinical data for use in unique research and clinical trials for our community.

James Crawford, MD, PhD

Executive Director and Senior Vice President of laboratory services at Northwell Health and Chair of pathology and laboratory medicine at the Hofstra Northwell School of Medicine

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2017

US Network Expansion

In 2017, Indivumed announced a partnership with Northwell Health in New York, USA, to expand cancer biobanking activities with the health-care provider. As New York State's largest health-care provider, Northwell Health diagnoses and treats 19,000 new cancer patients each year. Additionally, further MedStar Clinics joined the network, creating an unsurpassable basis for Indivumed in the US.

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We are delighted to partner with a global leader in personalised medicine who has the expertise to generate and analyse big molecular and clinical data from patients, and importantly also has established robust and scientifically-sound SOPs for tissue and clinical information collection. This collaboration enables us to unlock the wealth of tissue samples to obtain reliable, comprehensive data for the benefit of clinicians and researchers in Singapore.

Prof. Soo Yong Tan

Leading Pathologist and Principal Investigator,
Cancer Library Initiative

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Networking

Indivumed's clinical network reached an important milestone in 2017: as the first partner in Asia, the Indian Institute of Technology in Madras joined our ever-growing global network, closely followed in 2018 by A*STAR's Institute of Molecular and Cell Biology (IMCB) in Singapore.

To date, the network consists of more than 100 permanent clinical partners, including leading hospitals, clinics, and biopharma institutes in Europe, North America, and Asia.

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Gene expression, metabolite, and protein modification are difficult – if not impossible – to compare if biospecimens have not been collected and corresponding data have not been documented in a consistent manner. Indivumed’s controlled and rapid tissue processing will help delineate important biological differences between patient tumors. Providing our researchers with this type of platinum research resource will have a transformational impact on our research and ultimately our understanding of cancer.

Reuben Shaw, PhD
Director of the Salk Cancer Center

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Partnering Continued

In 2018, the Salk Institute and Indivumed established a strategic partnership to advance research in precision oncology and personalized medicine by utilizing the highest quality molecular and clinical data in cancer. This partnership continues to deliver valuable results today.

2018



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Personalized medicine, any kind of medicine, and medicine particularly in this area requires quality and integrity. And that is everything that Indivumed has stood for from the beginning.

Carolyn Compton, M.D., PhD
Professor Life Sciences, Arizona State University

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Prof. Dr. Hartmut Juhl together with partners and members of the county council at the ceremonial opening of the US office.

Grand US Opening

With a symposium titled “Personalized Medicine Depends on Tissue Quality” and a grand opening ceremony in the presence of Benjamin Wu, Maryland Deputy Secretary of Commerce, Jan Gardner, Frederick County Executive, and members of the county council as well as 120 international guests, the new Indivumed Headquarters were officially opened.

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Indivumed has the potential to positively contribute to not only accelerating the rate of novel drug development but also increasing the success rates of drugs in their journey to marketing authorisation. Our financing demonstrates EIB’s strong commitment to supporting the growth of European biotechs and medtechs with high policy and health impacts

Ambroise Fayolle

Vice-President of the European Investment Bank

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We Have a Type

Supported by the European Fund for Strategic Investments (EFSI), the European Investment Bank (EIB) provided Indivumed with a EUR 40 million loan. Thanks to this and additional private funding, just one year later the company was able to launch IndivuType, the world’s first real multi-omics knowledge and discovery solution.

2018



Signature event with EIB, financing expenditures in the oncology Research, Development, and Innovation programs for 2018–2021.



Access to IndivUType will allow us to identify targets that are matched to CRC subpopulations which have been categorized due to molecular phenotypes and are thus expected to deliver more effective and durable drugs.

Dr. Cord Dohrmann
Chief Scientific Officer of Evotec



The Start of Collaboration in Drug Discovery

In 2019, Evotec and Indivumed announced strategic drug discovery collaboration on precision medicine for colorectal cancer. Both parties would jointly invest in data analysis, target identification, validation, and drug discovery. Evotec would be responsible for subsequent partnering of the programs and/or the platform.

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The work we are doing is without precedent. No group in history has combined gold standard tissue collection techniques with the most extensive multi-omics analysis, with long-term clinical outcomes all analyzed using industry leading AI technologies with a global reach. It is only by connecting each of these elements that the next layer of cancer's secrets will be revealed.

Dr. John Marshall
Chairman of the Advisory Board Onco AI-Med

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Onco AI-Med

In 2020, Indivumed announced the launch of the Oncology Alliance for Individualized Medicine (Onco AI-Med), an international collaborative alliance to advance personalized medicine in cancer through Indivumed's multi-omics database, IndivuType.

Onco AI-Med
ALLIANCE FOR INDIVIDUALIZED MEDICINE

2020



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The foundation of IndivuType has been the creation of the world's most comprehensive multi-omics cancer database. With our nRavel® AI platform we are now ready to fully unleash the power of our data to discover completely new ways of understanding the biology of cancer and to drive new inventions in the treatment of these devastating diseases. At Indivumed, this is really what our mission is about.

Roald Forsberg, PhD

Former Chief Business Officer Indivumed and
Head of Business Unit IndivuType

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Unraveling

Indivumed's groundbreaking data analytics platform nRavel® is launched in 2020. Utilizing cutting-edge AI technology and the world's most comprehensive multi-omics cancer database, the platform helps to literally unravel the complexity of cancer.



The combination of Indivumed's discovery capabilities and the antibody development technology from Veraxa will result, within a short period of time, in new therapeutic tools against cancer and we are proud to participate in this groundbreaking achievement.

Oliver R. Baumann
CEO XLife Sciences



ixTherapeutics

Proceeding Drug Discovery Collaborations

In 2021, Indivumed launched IxTherapeutics GmbH – a joint venture with Xlife Sciences AG – marking Indivumed's next expansion into target discovery. The development of therapeutic antibodies against colorectal and lung cancer together with Veraxa is a critical next step in realizing our vision of individualizing the diagnosis and treatment of cancer and delivering truly personalized medicine to patients.

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It is truly rewarding to know that long-standing research on oncogenic signaling pathways can now be used to advance the development of cancer therapeutics for the benefit of previously unmet medical needs. The Indivuetype discovery solution offers tremendous promise in the effort to develop new therapeutic tools in the fight against cancer.

Prof. Krishnaraj Rajalingam
Founder and Managing Director KHR Biotec

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Partnering in Therapeutic Development

2021

University Medical Center Mainz, Professor Krishnaraj Rajalingam, and Indivumed joined the newly formed KHR Biotec GmbH in 2021 – a spin-off biopharma company from University Mainz. The new company combines Prof. Rajalingam’s research and scientific approach on RAS pathway mutations in colorectal cancer with Indivumed’s database and AI capabilities in order to bring new compounds targeting pertinent oncogenic signaling pathways into the clinical phase.



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Indivumed is a figurehead for Hamburg as a biotech hub. With its activities, which center on the development of personalized diagnostics and drugs, it sets standards for the future.

Michael Westhagemann

Senator of Economic Affairs and Innovation (BWI), Hamburg

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On our Mission

We remain firmly focused on our mission: to support precision oncology. In January, the IndivuType project received EUR 4.3 million in EU funding from the ERDF structural fund. It's another important boost for us to continue pursuing our goal beyond mere profit maximization.



Michael Westhagemann, Senator of Economics Hamburg, Prof. Dr. Hartmut Juhl, and Ralf Sommer, CEO of the Hamburg Investment and Development Bank at the official notification of funding on January 17, 2022.

20
YEARS



Dr. Peter Tschentscher

First Mayor of the Free and Hanseatic City of Hamburg
President of the Senate

Complimentary Words

As a port and trading city, Hamburg is Germany's gateway to the world, with self-confident merchants and very good international connections. Germany's largest seaport is of national importance for the economic strength and prosperity of our country.

But Hamburg has always been a city of progress too, a city of new ideas where innovative technologies are developed. The band-aid for home use, the piston-stroke pipette for laboratories, the first alcohol-based disinfectant – these were all invented in Hamburg.

Twenty years ago, Indivumed took up the idea of personalized cancer therapy and began systematically

collecting samples and data. Based on an increasingly comprehensive data- and biobank, Indivumed conducts sophisticated research in the field of personalized oncology. The company cooperates closely with our university hospital and is a partner of the Cancer Fighting Center Hamburg. Indivumed is an active member of the Life Science North cluster and an important player in Hamburg as a hub for science and biotechnology.

On behalf of the Senate, I thank you very much for your work and wish you continued success. Congratulations on the 20th anniversary of Indivumed!

20
YEARS



Prof. Dr. John L. Marshall

Chief, Division of Hematology/ Oncology
MedStar Georgetown University Hospital

Ask yourself if in the last two years you know somebody you loved who died of cancer. Take a pause to think.

While most of the medical world has focused on COVID, those of us in oncology knew we could not take our eye off our patients. Cancer is not elective; cancer did not stop.

To date, roughly 6 million people in the world have died of COVID. It's a terrible number. But did you know that 20 million have died of cancer in the same time frame? The work we are doing here at Indivumed has a potential impact that is greater than anything yet seen in healthcare.

Most of us either have our own personal cancer story, or know of someone close affected by this most serious of illnesses. As my wife and I learned the hard way, the moment you hear that you have cancer is a moment that you will never forget. My wife and I were lucky enough to spend the last couple of years writing and publishing a book about her experience which started when I was sent her pathology report by mistake, uncovered while we were talking on the phone. I hate giving people medical news and somehow, through a random mistake, I was the one who broke the news to us both at the same time, "you have cancer."

Complimentary Words at the anniversary party in May 2022

Why are we gathered here tonight? First, the Indivumed team is a collection of the best and brightest scientific minds, each of you innovators in your fields. You are really smart. You have dedicated your time, your brains, your energy, growing in knowledge about a set of diseases that is so complicated it will take more than a village to solve it; it will require global collaboration. We formed this global collaborative group to find cures. We have an urgency and one that is completely appropriate. As a practicing oncologist, I watch too many people die of cancer. My dream is that through our success, that one day, when I face a new cancer patient, and I look them in the eye, representing all of us here, that I have a message of good news, a therapy that will cure their cancer.

There is so much we don't know, and we've never seen the world so disrupted. But we must stay focused, we must continue our collaborative work, and we must find more cures for cancer. And through this, we know we will leave the world a better place than we found it.

Why now? Because we now have the tools to hand. The ability to obtain multi-omic data from a large number of patients, the ability to use incredible computing power to interpret and define novel patterns previously hidden in the molecular code of cancer cells, the ability to apply this

“ There is so much we don’t know, and we’ve never seen the world so disrupted. But we must stay focused, we must continue our collaborative work, and we must find more cures for cancer. And through this, we know we will leave the world a better place than we found it. ”

knowledge on a global scale are each a reality, and Indivumed has brought them all together with one focus in mind: to cure cancer.

Incremental science builds the foundation of our knowledge. Step by step, year by year we gain in knowledge. But most of the major breakthroughs that we have achieved have not come from small, incremental steps. Those leaps we refer to as breakthroughs have come from innovative thinking and Indivumed is all about innovation. It’s about seeing where we need to be and figuring out how to get there, sometimes needing to leap, taking risks, to achieve the breakthrough.

The Indivumed strategy started with a biobank that totally rewrote the rules on how we collect tissue. Next, understanding that we must broaden our scope of understanding beyond genetics, to proteomics and even metabolomics. And then, with incredible data sets on each patient, computing power and AI interprets the big data to unlock the code of answers. We start with frozen pieces of our patients’ tissue and translate them into terabytes of data to integrate and compare.

Quality is critical, a fundamental thing in healthcare for all of us, but something we don’t really follow as much as we should. Indivumed places the highest emphasis on quality,

correctly understanding the principle of “garbage in and garbage out.” There is no point in doing this if we cut corners on the quality.

Our greatest need is to define new molecular targets. Every time I open the result of one of my patients’ molecular profiles, I’m hoping that I will find a key, a target that will make me smarter, more efficient, and will provide better outcomes. A gene or protein or some abnormality in that patient’s cancer, which will lead me to a therapy that is going to transform that patient’s life. This does not happen often enough; we need to find more of those. How do we find those? Through big data, through high quality, through comprehensiveness. And through collaboration.

Is everybody’s cancer the same? Are cancers the same in Hamburg as they are in Washington? How about in Tokyo? How about in Brazil? The more we look, the more we see they are not. They’re different because the cells are being influenced by all sorts of environmental things and so if we are truly going to solve this cancer problem, we have to collaborate, and collaborate on a global scale. And that is not easy or inexpensive, but we have to do it. It took the vision of Hartmut and the team to actually get us there.

So what do I really want? For all of us I want us all to work together. Can you imagine just how proud we will be? When some clinic day in the future, I go in and see a patient. And they have, I don’t know, let’s give them pancreatic cancer. And I say to that patient: “Pancreatic cancer? Don’t worry about that. We can cure that.”

Happy birthday, Indivumed! And happy birthday to all of those people within the company who can and should celebrate what we have done collaboratively over the last 20 years. It’s unique.



May 20, 2022 – Fischauktionshalle Hamburg





May 20, 2022 – Fischauktionshalle Hamburg



Prof. Dr. Hartmut Juhl



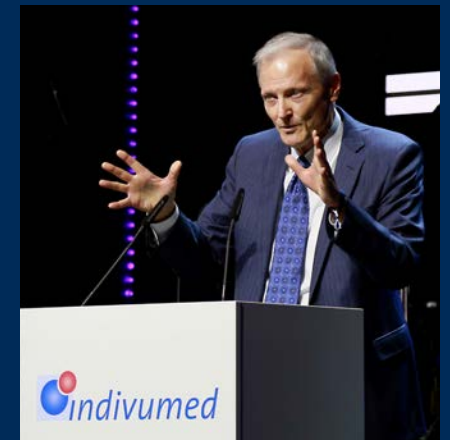
Dr. Peter Tschentscher



Dr. Harald Eifert



Prof. Dr. med. Frank Ulrich Montgomery



Prof. Dr. John L. Marshall



May 20, 2022 – Fischauktionshalle Hamburg





May 20, 2022 – Fischauktionshalle Hamburg





May 20, 2022 – Fischauktionshalle Hamburg





May 20, 2022 – Fischauktionshalle Hamburg





May 20, 2022 – Fischauktionshalle Hamburg



20
YEARS

For our 20th anniversary, we came up with a motto that perfectly sums up the journey, the goal, and our shared spirit, getting us all ready for the next revolutionary steps in oncology:

Today. Tomorrow. Together.

 *Indivumed*