GENOMTEC

The right diagnosis, right away,
at the right price

1. **MISSION**

The right diagnosis, right away, at the right price

GENOMTEC

Genomtec S.A. is a medical technology company established in late 2016 in Wroclaw, Poland. The company develops Point-Of-Care testing (POCT) technology & rapid genetic laboratory kits. Genomtec's mission is to provide a rapid diagnostic solution for the healthcare professionals when patients' time-to-treatment and its precision are critical.

The Company is working on several mobile & laboratory molecular diagnostic solutions implementing Company's ground-breaking Streamline Nucleic Acid Amplification Technology (SNNAT®) paired with the passive reaction card and contactless-heating-enabled analyser.

Genomtec S.A. not only develops its product pipeline, but also provides research and diagnostic services to the corporate and individual clients, specifically in area of companion diagnostic tools and Isothermal Nucleic Acid Amplification Technology (INAAT), specifically LAMP.

>2 billion dollars

The estimated annual cost of treating the antibiotic-resistant infections in the USA

3,9 billion dollars

Predicted value of the POCT molecular diagnostics market in 2024.

CAGR>14%

Expected growth of the POCT molecular diagnostic segment by 2024

$~35k

Average price of a PCR system intended for POCT use

Opportunity & Marketplace

The COVID-19 pandemic considerably reinforced genetic testing as the gold standard in the molecular diagnosis of infectious diseases. In vitro diagnostics (IVDs) based on the PCR methodology has serious limitations hindering expansion of IVDs to the common market.

The global race for reliable, yet fast genetic diagnostics based on a point of care testing (POCT) has begun, with the modern isothermal amplification – at constant temperature, taking the lead here as fit-for-purpose molecular solution. Genomtec has roots in Loop-mediated Isothermal Nucleic Acid Amplification Technology, i.e. LAMP.

The novelty of the combined molecular components, the method of nucleic acid detection and the hardware technology allows for an extensive intellectual property protection utilised to safeguard the products innovative and business potential.

Genomtec leads the rapid-IVD genetic testing race with numerous filled patent applications, granted patents, and certified and market adopted laboratory diagnostic kits for ultra-fast pathogens detection (based on LAMP), with under development a lab-on-chip POCT genetic platform.

The problem

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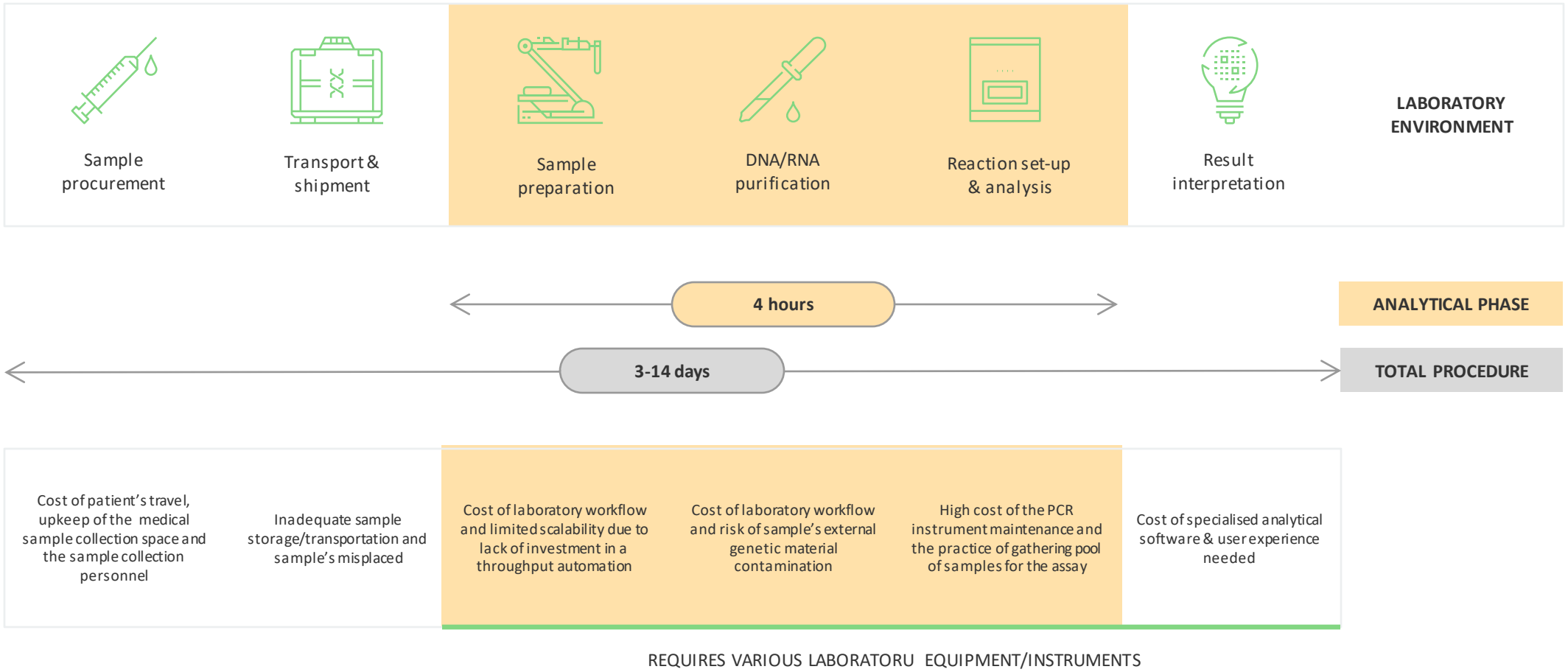
Currently practiced diagnostic protocol for genetic testing



PCR methods vs commercial INAAT solutions*

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The current technology state of in vitro genetic diagnostic

Real-Time PCR^
115 cm / 125 kg

GENOMTEC ID
~15 cm / <1 kg

Why the IVD industry is very cautious about isothermal solutions, sticking firmly to PCR?

- Significant resources have been invested in the intellectual protection of the reaction mixtures' components and technical systems of the PCR devices, such as optical elements or heating and cooling systems.
- Lack of specialized experts capable of developing the INAAT-empowered diagnostics, specifically in molecular genetics.
- Risk of negative financial impact due to reduced sales serving the demand for PCR diagnostic reagents and machines designed for stationary laboratories caused by other nucleic acid amplification solutions (own product line cannibalism).

INAAT – the next generation diagnostics

2000 - current → +2022

*INAAT – Isothermal Nucleic Acid Amplification Technology; group of nucleic acid amplification technologies that use one constant temperature for DNA synthesis
^The diagram above shows a typical diagnostic system used for high-throughput Real-Time PCR reaction preparation and a Real-Time PCR thermal cycler with a connection to a PC (with analytical software). The size and weight of the automated robots as well as the Real-Time PCR device itself may differ from that given in the diagram and do not have to be grouped as a whole, or they may be additional elements used for processing biological material.

Product pipeline

H1 2022	2020 ✓	2024+
		
GENOMTEC ID	RAPID LABORATORY TESTS	GENOMTEC TUMOR
ALL EMPOWERED BY SNAAT®		

Mobile POCT platform enabled by SNAAT®

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MINIATURISATION

Patented photonic contactless heating and detection system → Passive reaction card; Multiplexing; Lowered price of the card

Microfluidics (in cooperation with microfluidic ChipShop) → True POCT solution

PROPRIETARY PRIMERS & REACTION MIXES

The highest quality of enzymes and primers mixes → Short amplification time & low limit of detection; High accuracy of the results

SHELF LIFE

Lyophilized reagents → Lower cost of shipping and storage

Innovation

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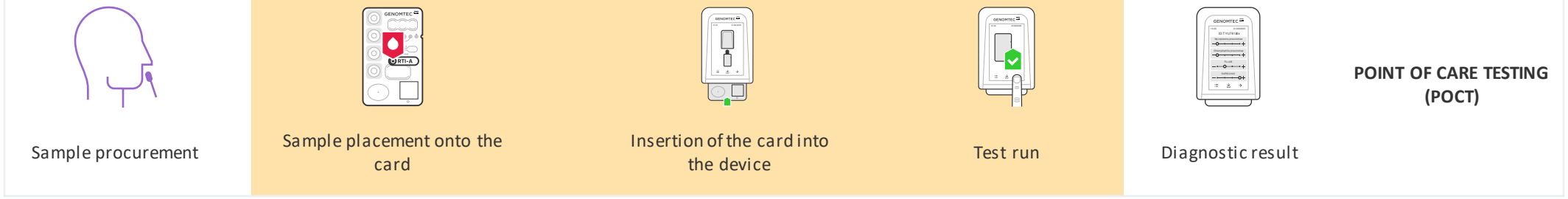
SNAAT® technology is groundbreaking. It allows for integration of the whole diagnostic process onto one platform, automating the most cost- and time-consuming analytical phase of the process.

SYSTEM SNAAT®

SPACE



ADVANTAGE

Sample obtained at the place of treatment decision, e.g. GP surgery, A&E DEPT.	Lack of or minimal (inside the building) sample transportation	It is enough to apply a liquid-phase sample onto the reaction card	Automated processing of the analytical phase, from genetic material purification, its concentration, to amplification and signal readout	Intuitive and simple result analysis without any additional software

ONE DIAGNOSTIC DEVICE (PLATFORM) FOR USE WITH VARIOUS DIAGNOSTIC PANELS

Planned diagnostic panels

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Simultaneous analysis of up to five genetic targets on one diagnostic panel

Atypical respiratory track infections (Atypical-RTI)

1. Mycoplasma pneumoniae
2. Chlamydophila pneumoniae
3. Flu A/B
4. SARS-CoV-2 / RSV

Respiratory track infections (RTI)

1. Streptococcus pneumoniae
2. Streptococcus pyogenes
3. Haemophilus influenzae
4. Flu A/B

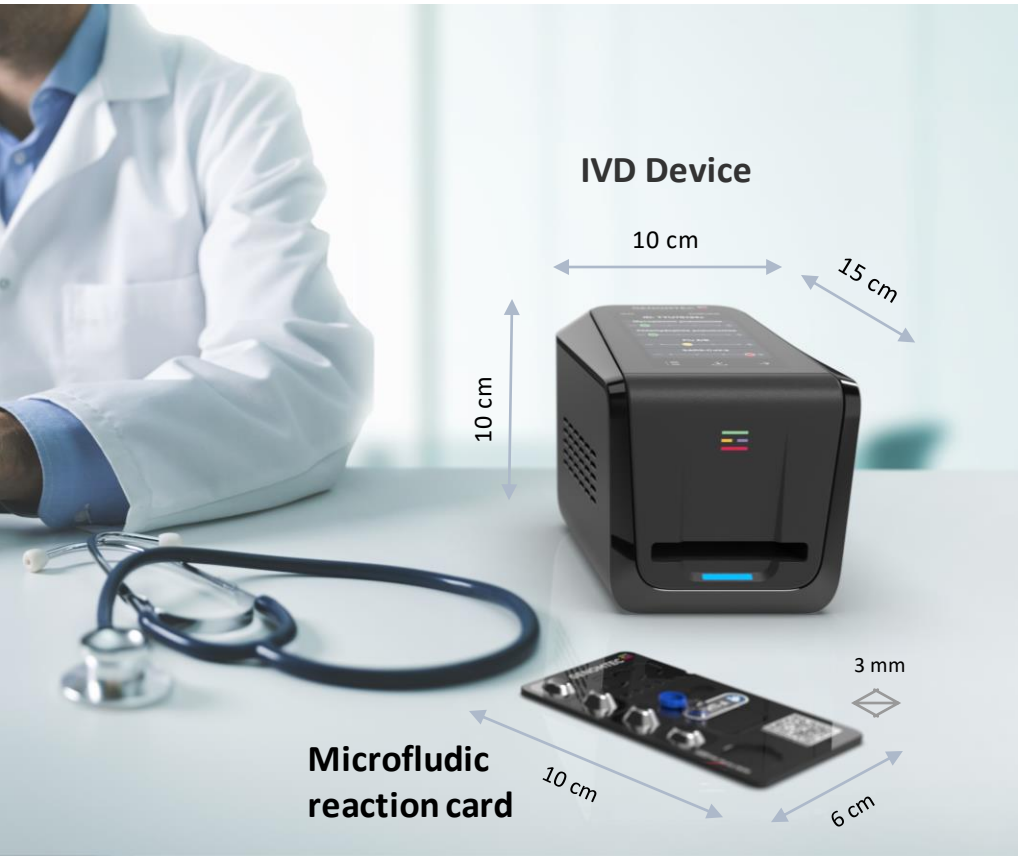
Sexually transmitted infections (STI)

1. Chlamydia trachomatis
2. Neisseria gonorrhoeae
3. HPV 16
4. HPV 18

Life-threatening systemic infections (SEPSIS)

1. MRSA
2. Neisseria meningitidis
3. Lyme disease

Genomtec ID – planned for 1H 2022



Mobility

Thanks to pairing an isothermal nucleic acid amplification technology with a proprietary contactless optical heating system, the diagnostic process does not need cyclic heating and cooling that together with passive reaction card in turn enables the device miniaturization. The analyser fits in one hand.

Automation

Thanks to the use of lab-on-a-chip microfluidic technology, the entire process after loading the sample onto the reaction card is automated.

Unparalleled accuracy

SNAAT® provides equal or even superior diagnostic parameters when compared the PCR method, i.e. specificity, sensitivity and accuracy.

Extremely low Limit of Detection (LOD)

Even <5 gene copies per diagnostic reaction detected

Wide market access due to inexpensive price

Ability to achieve balanced price optimization for the platform due to implementation of the isothermal nucleic acid amplification. The Genomtec ID mobile IVD platform, apart from its technological features, will stand out with its competitive price.

Precision genetic diagnostics

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GNT technology is unique, combining the speed & simplicity of diagnosis provided directly by a doctor / nurse / pharmacist at the point of care allowing for patient's personalised treatment.

Unmatched diagnostic parameters

Allows to obtain an unprecedented diagnostic sensitivity and specificity, not achievable by the traditional PCR method, combined with a very low limit of detection of the targeted gene fragment.

Fast result at an affordable price

Provides significant savings in time and for the laboratory consumables, being characterised with a cost-effectiveness and rapid of time to result.

Versatility of testing

Permits use of different types of samples (such as swab, saliva, blood, urine, tissue, others) to identify a range of pathogens (viruses, bacteria, parasites, fungi) and mutations.

Size and functionality

Thanks to its mobility (small size) and platform-style provides capability for point of care testing in management of various diseases .

REVOLUTIONARY EASE OF USE

It is enough to apply biological material. Analytical process integrated onto the card.

MULTIPLEXING

Up to 5 diagnostic targets embedded onto one card.

GLOBAL DATABASE

Analysers provide anonymised data on the global outbreaks of suspected epidemic.

Competitors

Manufacturer	Price	Technology	CLIA-Waved	Market availability	Portability	Time-to-result [min]	Planned / available testy	Storage at room temperature
GENOMTEC	2 490$ (52$ duo test)	SNAAT / LAMP	Planned	-	+	15	Atypical-RTI, RTI, STD, Sepsis	+
cobas Liat	25 000$ (40-70$ test)	qPCR	+	+	- (4 kg)	20	Flu + RSV, Strept A, C. difficile	-
Abbott ID Now	7 000$ (70$ test)	NEAR	+	+	- (4 kg)	15	Flu, Strept A	+
QIAGEN QIAstat-DX	35 265$ (130$ test)	qPCR	Planned	+	- (21 kg)	60	Respiratory tract infections, gastrointestinal infections	+
vivalytic	44 200$ (120$ test)	qPCR	Planned	+	-	<150	RTI, STI, VRI	+
QuantumDX	n/a	qPCR	Planned	-	+/-	<20	TB, HPV, Ch. trachomatis + N. gonorrhoeae, malaria, warfarin susceptibility	-
Spartan	≈ 1 000$ (100-200$ test)	qPCR	-	- + (Spartan Rx)	+/- (4 kg Spartan Rx)	<45 <60 (Spartan Rx)	Legionella (Cube), CYP2C19 mutations (Spartan Rx)	-
binx	< 15 000$ (35$ test)	qPCR	-	+	-	<30	SARS-CoV-2 / STD	+
revogene	35 000$ (28$ test)	qPCR	-	+	- (10 kg)	70	GBS, C. difficile	+
visby medical	n/a	PCR	+	-	+	<30	SARS-CoV-2	+
LUCIRA HEALTH	≈ 50$	RT-LAMP	+	+	+	30	SARS-CoV-2	+
PCR|ONE	≈ 10 000 USD	qPCR	n/a (CLIA tests)	-	-	15	MRSA, C. difficile, SARS-CoV-2 in the works	n/a
mesabiotech	n/a	PCR	+	+	+/-	30	Flu, SARS-CoV-2	+

Early phase projects – Genomtec Tumor

Companion diagnostics (CDx) / immunogenetics

- Early stage designs exploring utilization of SNAAT® for CDx and other disease areas
- The potential application includes rapid identification of neoplastic mutations or mutations predisposing to cancer development
- In vitro companion diagnostics accelerate start of the personalised therapy as usually inform the course of treatment, and when combined with protein bio-markers, can be extremely effective in screening and a specific antigens identification in immunology

How do we help:
The speed of obtaining the diagnostic result for the patient and the key clinical information for the doctor to design personalised treatment

Safeguarded intellectual property

Genomtec technology is protected by several patents and patent applications in the area of diagnostic equipment and molecular biology.

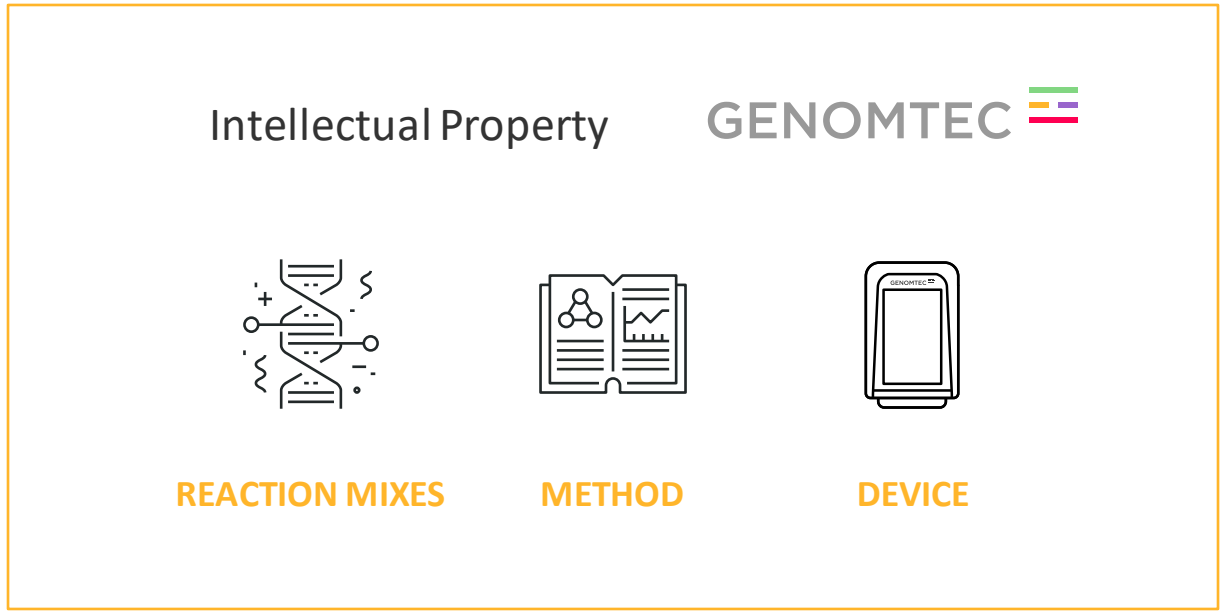
Three-tier patent cloud

Patent granted for the method and diagnostic system using contactless heating technology in **the USA and in Poland**, decision **pending** with the **EPO**, and the local patent offices in **China, Japan, Brazil, Canada.**

Polish patent granted for Lyme disease detection

Filed IP for a broad use contactless heating technique currently **under review** with **EPO, USPTO, URPL**, and local offices in **China/Hong Kong and Japan**

Over 20 patent applications for different areas of the hardware system as well as primers and mixtures' composition.



Company's trademarks **Opticycler®**, **SNAAT®** and also **Genomtec® logotype** are protected in the European Union and/or the USA

Competitive advantage

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Available in Q2 2022

POCT infectious diseases diagnostics

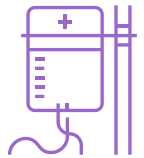
- significant reduction of diagnostic time
- decreased costs of genetic diagnosis
- lower costs related to drug reimbursement and hospitalization
- reduced risk of developing antibiotic resistance
- shorter recovery time thanks to effective targeted therapy
- genetic screening becomes more accessible

Available now

Rapid laboratory IVD tests /SARS-CoV-2

- more sensitive and specific diagnosis of COVID-19
- reduces sample preparation time to 5 minutes form usual 30-60 minutes.
- increases the laboratory throughput (number of samples processed) without investment in any additional equipment and personnel
- lowers the cost of sample analysis due to limited need for false results re-analysis as kits are of unparalleled molecular quality

Available in 2024+



Companion and personalised cancer diagnostics / immunogenetics

- faster cancer treatment start-date and reduction in treatment cost
- fewer occurrence of severe chronic diseases and side effects
- increased survival rate due to quick diagnostic confirmation and treatment implementation
- new possibilities of drug reimbursement
- more sensitive and specific diagnostics of protein markers
- shortening cancer & chronic diseases diagnostic backlog

One Isothermal Nucleic Acid Amplification Technology (INAAT), many correctly implemented therapeutic procedures

8.

LABORATORY AVAILABLE NOW

The rapid COVID-19 test – Genomtec's competence confirmed in best product

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The newest product in Genomtec's portfolio – SARS-CoV-2 genetic assay for viral detection directly form saliva. Approved for in vitro diagnostics (CE-IVD) in EU in May 2021

Genomtec® SARS-CoV-2 EvaGreen® Direct-RT-LAMP CE-IVD Duo Kit

- Easier sample procurement and analysis – **direct saliva protocol** - **reduction** of diagnostic protocol **time**
- **Sensitive and specific** diagnosis due to use of RT-LAMP primers
- **Increased diagnostic capacity** of the laboratory **without investment** in additional equipment and personnel
- **Reduced cost** of sample analysis – inherent technology accuracy prevents unresolved sample analysis repetitions
- System **without thermal-cycling** requirement **utilizes standard Real-Time PCR instruments**

Fast RNA extraction and amplification

LOD of 2 viral copies / reaction

Increased revenue

Quality reduced errors

The same machine & workflow

Incomparable speed and reliability

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Genomtec® SARS-CoV-2 EvaGreen DIRECT
KIT DESCRIPTION:

- Direct saliva and swab analysis.
- Double-well, dual target assay covering highly conserved region within N and S genes.
- Superb diagnostic performance provided by five LAMP primers recognising seven conservative fragments of SARS-CoV-2 N gene and six LAMP primers detecting eight fragments of S gene.
- More Robust, rapid and inhibitor-tolerant amplification system without thermal-cycling requirement.
- Clinical sensitivity & specificity confirmed when compared to Real-Time RT-PCR nasopharyngeal test.

Thanks to utilization of the best enzymes and individual compositions we can offer a rapid yet of unmatched diagnostic parameters genetic test that can be swiftly implemented the laboratory workflow, enhancing its throughput and reliability (false negative samples occurrence limited due to use of the LAMP primers).

PROTOCOL

1 Saliva — 5 min

Collect saliva sample in a tube or special collection device

2 Collected specimen — 24 hs

Collected specimen (saliva or dry-swab) is transferred to the diagnostic laboratory within 24 hs

3 Sample prep — 5 min

Add LysBuffer to saliva or dry-swab and heat for 5 minuts at 95°C

4 RT-LAMP amplification — 30 min

RNA is simultaneously reverse transcribed to cDNA and amplified in LAMP technology

5 Test result

Positive clinical samples can be detected in as little as 20 minutes – when fluorescence exceeds threshold

Executive team

Miron Tokarski
CEO & Co-founder

Responsible for the development of diagnostic platforms and the company's innovation and long-term development strategy. A graduate of the Faculty of Pharmacy at the Wroclaw Medical University, currently also a doctoral student at the Institute of Molecular techniques, Wroclaw Medical University.

Charudutt Shah
CBO

Previously, he was associated with Spartan Bioscience, based in Ottawa, Ontario, where, as Business Development Director he was responsible for sales, marketing and product distribution strategies internationally. In the years 2010 – 2014 he was a Global Marketing Manager at Luminex Corporation based in Toronto, Ontario where he managed the industry's first multiplex PCR Respiratory Viral panel including a portfolio of other infectious disease panels.

Michał Wachowski
CFO

Michał Wachowski has over 10 years of experience in the area of enterprise financing and investment management. Before joining the team, he was the investment director of the VC fund. Previously, he was a member of the Management Board of a medium-sized production company in the energy sector and vice president for finance in a start-up in the chemical industry. Previously, he held operational positions in ARP, TFS, Deloitte, Polimex-Mostostal and Central Europe Trust.

Jason Reece
CTO

Responsible for the development and management of the engineering team as well as for the implementation of quality management and production control systems. A graduate of Medical Device Electronics at the Faculty of Engineering of the University of Kent in Canterbury, UK. A certified member of the IET & IEEE Organization. Jason has been in charge of several IVD systems e.g. in Novartis and Perkin Elmer

Bolesław Winiarski, PhD
CPO

Responsible for the development of the commercialization strategy, product registration activities on international markets and management of investor relations. A graduate of the Faculty of Biology and Biotechnology at the University of Katowice with a PhD in medical sciences obtained from the Medical Academy of Exeter University, UK.

R&D team

Business model

Genomtec commercializes technology by choosing the best suited model to a specific application field

If you are interested in becoming our Partner contact us at office@genomtec.com

Strategic Partnership

- the company develops diagnostic solution to a dedicated therapy
- the company concludes a contract where partner covers the costs of R&D
- commercialisation by the partner
- the company generates profit form the equipment and test sale margin or as a result of the complete technology purchase by the partner

Out-licencing / Merger & Acquisition

- the company develops technological solutions dedicate to POCT diagnostics up to the commercialization stage
- when products are ready to enter the market, they may be out-licensed or an operational takeover may occur
- the company's revenue in this case is: one-time license fees and recurring royalties based on the sale of tests and devices
- in the case of a partner's purchase of a separate part of the business, a dividend of at least 50% of the value of the transaction will be paid to shareholders

Marketing and sales to B2B and B2G

- the company is concluding distribution agreements for laboratory tests and Genomtec ID platform
- it is planned to further extend the territorial outreach of distribution agreements
- most of the revenue generated will come from the sale of reaction cards for Genomtec ID, topped-up by rapid diagnostic laboratory kits

Mergers and acquisitions

STAT Dx
Closer to Care

Acquired by Qiagen
for:

191 M $

QuantuMDx

Estimated company value:
over 100 M $

Overall financing:

26,3 M $

Cepheid

Acquired by Danaher
For:

4 B $

BIOFIRE

Acquired by bioMérieux
for:

485 M $

cue

Overall financing :

168 M $

Alere™ i
Molecular. In minutes.™

Acquired by Abbot
for::

5,8 B $

cobas Liat
Lab in a tube

Acquired by Roche
for::

450 M $

GenePOC™

Acquired by Meridian Bioscience
for:

120 M $

The flagship platform development stage – GNT ID

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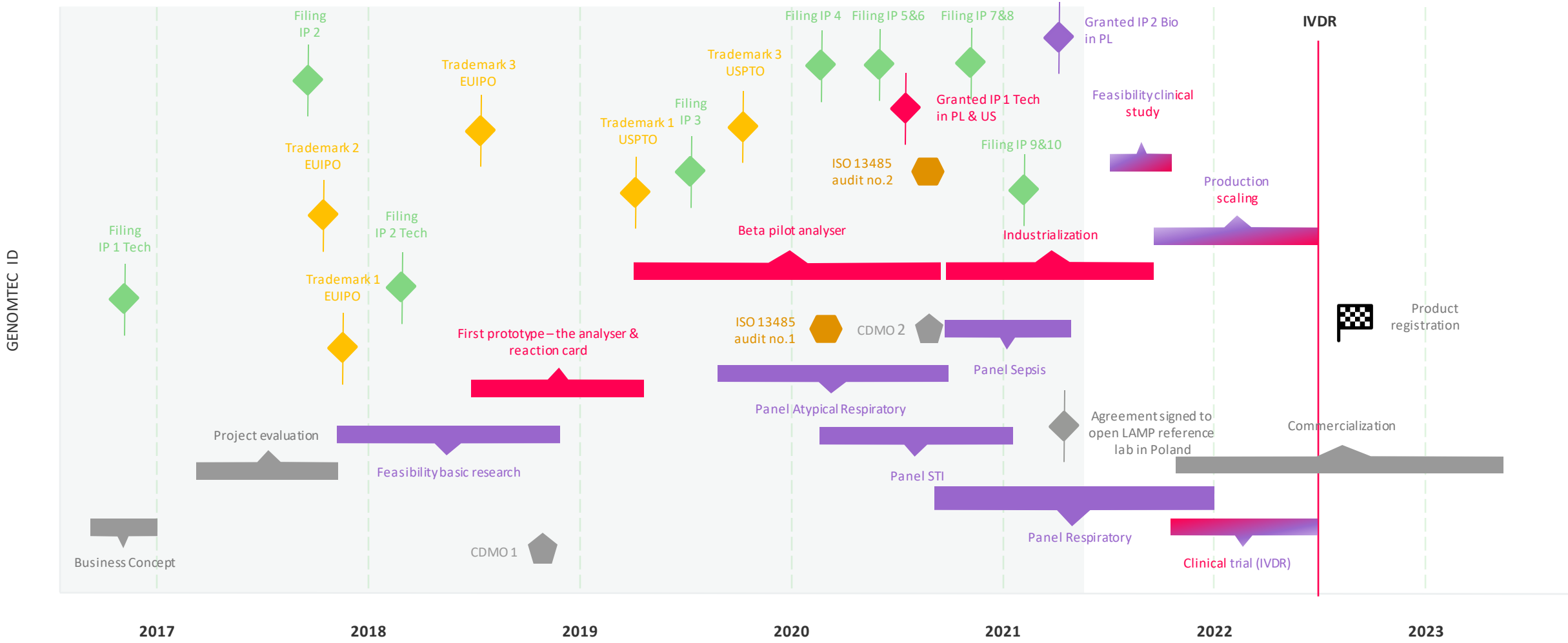

Audit ISO 13485:2016 was conducted by TÜV Rheinland, which is expected to become the Notified Body for Genomtec IVDR registration

GENOMTEC

TAKE HOME MESSAGE:

UNIQUE DEVICE - GENOMTEC ID

Genomtec ID, Company's proprietary solution, is an innovative mobile molecular analyser based on isothermal methods that has the potential to revolutionize POCT[1] diagnostics.

IN IPO PROCESS – EARLY 2021 SHARES STOCK DEBUT

The company has registered almost 8 times the value of funding asked, raising ~$2.2M , with current valuation set at $21.8M. We are debuting on NewConnect market at Warsaw Stock Exchange.

STRONG PUBLIC FUNDING GRANTED

Genomtec has already raised about 4,25 mln EUR from grants and investors' capital.

NICHE & HOT MARKET

The global predicted value of POCT molecular diagnostics market will reach almost 4 mld USD in 2024.

SECURED INTELLECTUAL PROPERTIES

Protecting our own know-how is crucial for med. technology companies like Genomtec. The company holds 2 patents as well as eighteen patent applications.

INVESTORS TRUST

Among the company's shareholders are reputable Venture Capital firms, well-known entrepreneurs and individual investors.

INTERDISCIPLINARY TEAM

Genomtec has an international team of managers, engineers and scientists supported by the academia.

COHESIVE GROWTH STRATEGY

The Company focuses both on developing technology and building relationships with main IVD players, which can eventually become partners or takeover the Company's technology.

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