



## Merchavia Holdings and Investments Ltd. Presentation for Investors - April 2019





# **A Forward-Looking Information**

This presentation was prepared for summary and convenience only and is not intended to replace the need to review the reports issued by the Company to the public.

Full and comprehensive information regarding the Company and its business can be found in the periodic and immediate reports published by the Company on the website of the Israel Securities Authority www.magna.isa.gov.il. In addition, the forecasts are based on data, information and assessments available to the Company at the time of preparing this presentation, and the Company does not undertake to update and/or revise such forecasts and/or assessments in order to reflect events and/or circumstances that will occur after the date of presentation.

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The presentation does not constitute an invitation or an offer to purchase securities of the Company.



# **Business card**

ERCHAVIA

# **Business card | Merchavia**

An investment company specializing in investing in life science companies. The company has a strategic partnership with the innovation arm of the leading medical center in US - Cleveland Clinic.

The company currently has 6 investments in companies targeted to markets which are estimated in billions of dollars, in various fields. The company regularly reviews dozens of projects annually.



# The bottom line

We believe that the life science market offers huge opportunities for the medium term and therefore that's the company's focus







Business strategy: Targeted investment in promising companies with significant market potential, which target huge markets with clear demand for products, while rational risk management through the company's management, a scientific advisory committee and the innovation arm of the Cleveland Clinic. Receiving Deal Flow from **Cleveland Clinic** - investment preference is given to investment in companies related to **Cleveland Clinic**, additional investments in the field according to the same strategy. Emphasis on investments with a horizon to value unlock in 18 months.

## **The Board of Directors**

### **Erez Alroy**

Has served as director of SHL Telemedicine since its establishment. Previously served as CEO of SHL Israel. Holds an MBA from the Hebrew University in Jerusalem.

#### **Ophir Shachaf**

Vice President – Business Development EHealth ventures. Formerly served as CEO of Hadasit Bio Holdings. Holds an MBA from the New York University.

## Merhavia management

#### **Ephraim Gerlitz**

Manages the Goldstein family's business dealings in Israel. Holds senior positions, primarily in the real estate business, for over 20 years.

## **Michal Aharon**

Has over 15 years of experience as chief financial officer and in other senior positions. Currently serves as VP of Regulatory Affairs at Tambour Hefer & Co, - Ecology.

#### Ilan Goldstein

Holder of a controlling interest in the company, certified lawyer (USA) with 40 years of experience in managing the Glodstein family's global real estate investment, plus about 15 years of experience in investment in high-tech and biotech companies.

#### **Yaron Kaiser**

Holds an LL.B.degree. Senior attorney at Glusman & Co. legal firm. Responsible for various aspects of commercial law.

## Eli Arad | CEO

Has vast experience with Israeli startups and served in many leading roles in Israeli biomed companies (Bio-Cell, Biomedix Incubator, D Medical, NasVax, Integra, etc.). Has extensive experience in all areas of financial management. Previously served for seven years as a senior supervisor at accounting firm PWC Israel.

## Rani Lifshitz | Chairman of the Board

Attorney and economist with experience of over 20 years in various senior management positions in the fields of capital markets, finance and energy in Israel and globally.



## **Members of the Scientific Advisory Committee**

#### **Eldad Yassur**

CEO of ARROW Israel. Arrow Electronics is a leading global distribution company that supplies electronic components and assemblies to high-tech and electronics companies in Israel and around the world, with a turnover of \$18 billion.

### Prof. Avital Fast | IL

Director of the Rehabilitation Department at Ichilov Medical Center. Served for 17 years as head of the Rehabilitation Department at the Montefiore Hospital in New York. Initiated several patents in the field of rehabilitation. Has an extensive network of contacts and entrepreneurial vision.

#### Dr. Arnon Chait | USA

Founder and CEO of Cleveland Diagnostics, Inc. Has over 25 years of experience in NASA. Founded and led biomed companies, research companies and companies engaged in optical electronics.

#### Kevin Mendelson | USA

Medtech and life sciences consultant to a diverse range of companies, including JUMPSTART, University of Pittsburgh, and more. Formerly served as VP of finance at CardioInsight which was sold to Medtronic in 2015.

#### Elhanan Streit | IL

Active in investments for several decades, primarily at the international level. Served as Managing Director of the Weizmann Institute's Yeda Company and of Miles Laboratories (owned by Bayer Germany), Was involved in dozens of licensing agreements of developments in the life sciences.

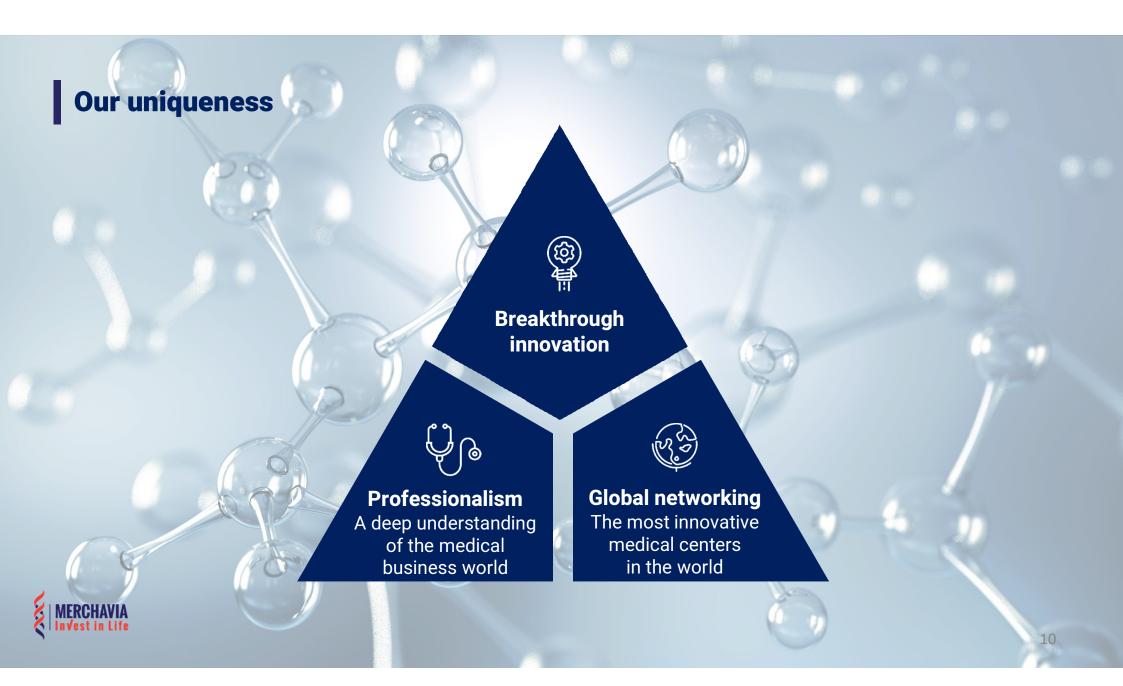


## **Our Vision**

# To make advanced medical technologies accessible

E MERCHAVIA

through a public investment arm in Israel for the world's leading medical technologies



## Strategic partner

# **Cleveland Clinic**

About 3,400 physicians and scientists	49,000 employees	Multidisciplinary academic hospital	
Centers in Florida, Nevada, Canada and Abu Dhabi	A non-profit corporation	A turnover of about \$7.2 billion	The second second

Merchavia has identified Cleveland Clinic as a business partner and gives priority to investment in companies associated with Cleveland Clinic

**Cleveland Clinic** 



## How the investment is carried out?

Finding a company or venture in Israel or globally

Discussion at the level of the Company's management

Initial due

diligence

Detailed due diligence performed by consultants and/or Cleveland Clinic

Convening of the Scientific Advisory Committee

Board of directors

MERCHAVIA









# **X** About the company

An innovative and proven diagnostic technology platform intended for the diagnosis of cancer in the early stages using blood tests.



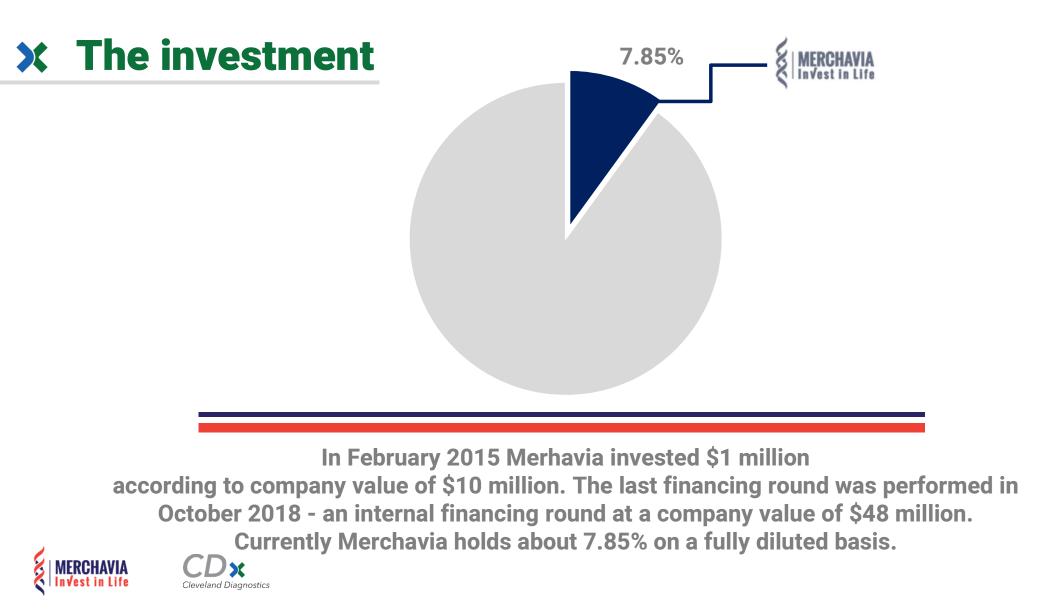
A breakthrough technology that detects a change in the structure of the protein linked to diseases (different type of cancers and neurodegenerative diseases)



Innovative blood test for prostate cancer







# X Clinical status

Multi-center clinical trial in the US, led by Dr. Eric Klein, head of the Glickman Urological & Kidney Institute at the Cleveland Clinic, medical center, who is considered a leading global expert in the field.

The trial itself and the extension trial, which included about 500 males, the IsoPSA test of CDx met both study objectives:

The test was able to reduce by approximately 45% the rates of unnecessary biopsies when diagnosing cancer patients at all grades of the disease

Cleveland Diagnostics



The trial proved that the IsoPSA test significantly better identifies patients with the potential for aggressive cancer needing treatment





Prevention and Treatment of Prostate Cancer: Prevention and Global Markets. BCC Research, Jan 2013 from data

# X Manufacturing costs

## The test production cost is very low (few dollars per unit)

The test is also a technological platform for breast cancer, ovarian cancer, Alzheimer's disease and more....

## A tremendous potential to change the structure of the market

The possibility of replace the existing test (PSA) and lead a market estimated at billions of dollars a year







# X Significant milestone

Developing the platform and cooperating with strategic players for marketing and distribution.

The company's strategy is to develop diagnostic products and cooperate with strategic players to market, commercialize and distribute the company's products.

The prostate cancer test is the company's first test. This test is ready for commercialization. The company is currently dealings with several strategic entities to commercialize the test.

At the same time, CD'X is working on the basis of its success in the clinical trials to promote the approval of tests for prostate cancer with the FDA. In addition, CD'X is working to begin the test marketing through one central laboratory across US (LDT CLIA certification).



## **X** The potential

CDx develops on the basis of this breakthrough technology additional tests for breast cancer, lung cancer and Alzheimer's disease diagnosis. Each of these markets is a multi-billion dollar market











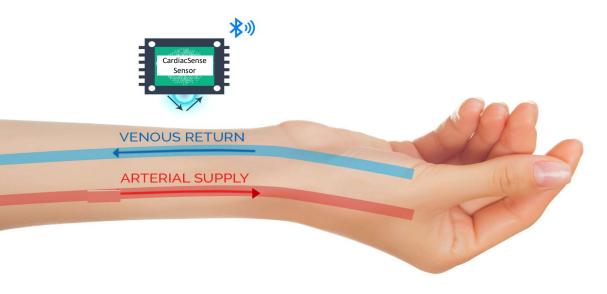


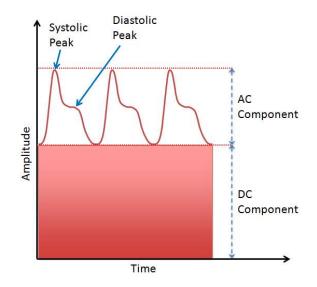
CardiacSense develops wearable equipment (watches, bracelets, patches, etc.) which includes a number of highly advanced sensors, based on the illumination the body, processing the returns, and analysis using a unique algorithm developed in the company





Continuous monitoring of arrhythmias (atrial fibrillation A-FIB), blood pressure, blood oxygen level, cardiac arrest, etc., is based on the illumination of light to the body and processing of the returning data



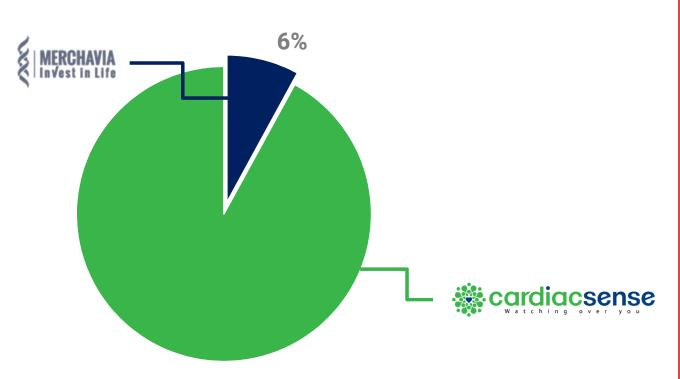












In June 2017 Merchavia invested \$0.5 million in the company according to company value of \$6 million. The last financing round was completed in April 2019 at a company value of \$20 million. Currently Merchavia holds approximately 6% on a fully diluted basis.



An initial clinical trial in patients suffering from atrial fibrillation was successfully completed at Ichilov Hospital in September 2016.

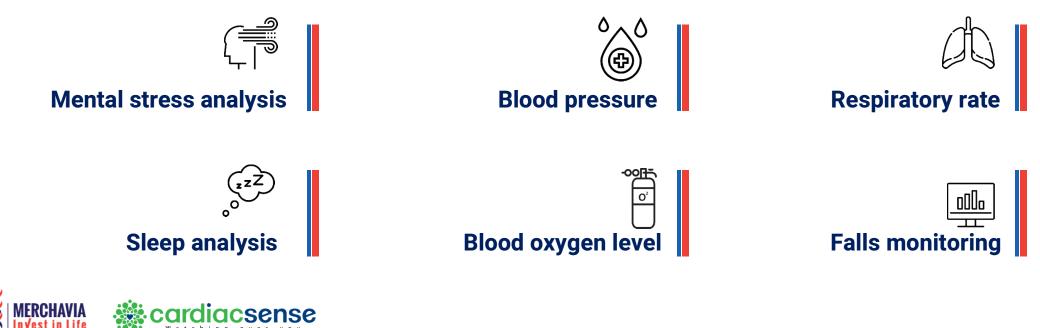
Sensitivity: Over 99% An initial clinical trial in patients with cardiac arrest was successfully completed at Ichilov Hospital in October 2016. **The results demonstrated a 100% detection of cardiac arrest and very few false alarms**  A preliminary clinical trial conducted in March 2019, which included 24 subjects, compared heart rate indices obtained using Holter monitor (a time-limited method of measuring heart rhythm disorders), and heart rate indices obtained using the CardiacSense watch. The trial objective was to achieve an accuracy of 96%, and the results demonstrated **an accuracy of 99%**.

Upon completion of this preliminary trial with 24 subjects, CardiacSense intends to launch in April 2019 an expanded trial at Ichilov Hospital, Rambam Medical Center, Tel Hashomer Medical Center, and the Cleveland Clinic, in accordance with FDA requirements, subject to obtainment of final approvals. The extended trial is expected to last about 5 months, and will include about 100 subjects.





- 1. Completion of a multicenter clinical trial in the field of A-FIB by the end of 2019.
- 2. Submission of application for medical device approval to CE in Europe by the end of 2019.
- 3. Submission of application for medical device approval to FDA in the US by the end of 2019.
- 4. Completion of a clinical trial in the field of continuous blood pressure monitoring by the end of 2019.



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# About the company

RMDY is a company that developed a platform which provides a cloud solution enabling medical companies and organizations to quickly and easily transfer their management, treatment and contact with their patients to a digital communication via smartphones.

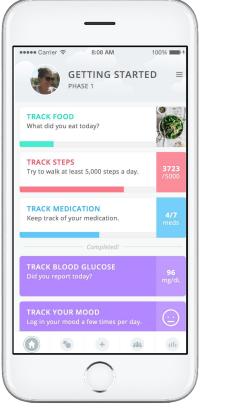
Its list of clients includes world's largest medical companies as well as leading medical institutions around the world

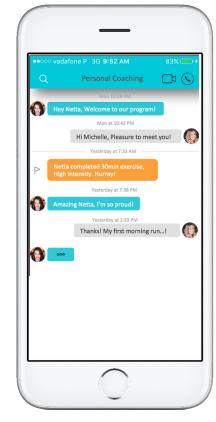




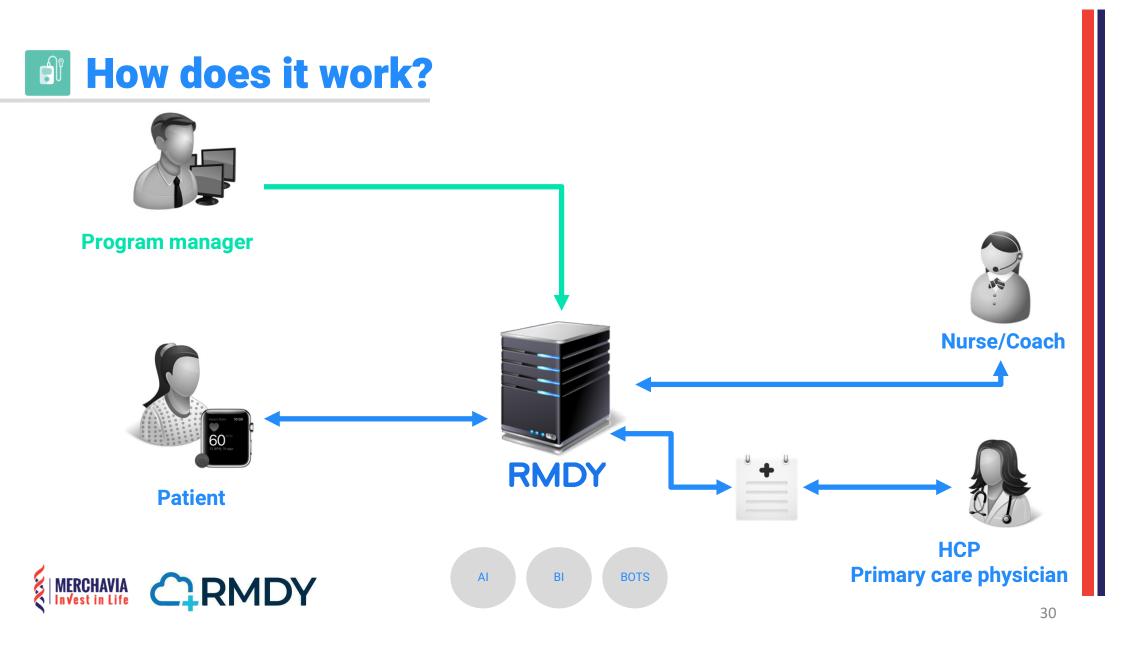
# **Technological solution**

RMDY has made the complexity of management simple and easy with friendly and efficient software. In light of fierce competition and fast transition in which companies and medical organizations are required to convert their traditional services into fast, competitive, economic and digital, RMDY has many business opportunities that it has already begun to realize.

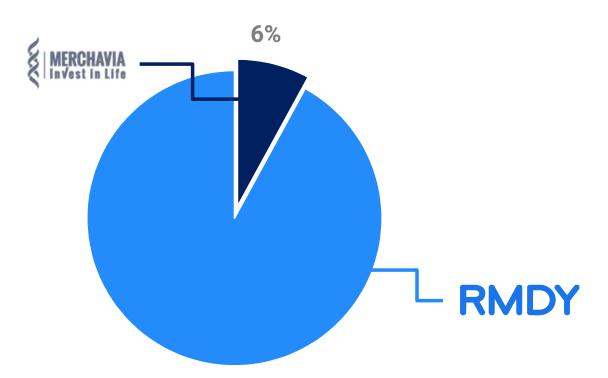












In March 2018 Merchavia invested \$500K dollars against the allotment of preferred shares. Currently Merchavia holds about 6% on a fully diluted basis.



# **Significant milestone**

A striking example of the company's success are the clinical results of a Diabetic patients trial conducted with the company's systems by medical equipment giant Medtronic in collaboration with IBM:

Among 83% of the participants, a significant reduction of 2 points in HbA1c was achieved, which indicates a dramatic improvement in the health parameters of these patients. The company's systems currently support tens of thousands of patients in fields such as diabetes, Heart health, AIDS, remote management of medication, rehabilitation of employee health, and weight loss.





Currently RMDY is developing significantly, both in terms of technology and in terms of recruiting strategic customers in the US. During the next 12 months, RMDY plans to raise a substantial amount of private funding that could constitute a preliminary funding for the initial public offering of its shares, and increase its revenues.



# **GAMES 4 PAIN**



# **About the company**

Games for Pain develops an interactive and adaptive system for the treatment of chronic pain through gaming.

The medical technological approach is based on a perception known in the literature, according to which the nervous system is particularly sensitive in chronic pain patients, and by training the system, pain levels can be reduced.

At the first stage the company plans to focus on patients with fibromyalgia, a disease that affects 3-6% of the population.

According to marketwatch, the chronic pain treatment market is expected to grow to about \$83 billion by 2024.

The company was established in the eHealth Ventures incubator in which the Cleveland Clinic, the Maccabi Health Fund and the Amgen pharmaceutical are partners.



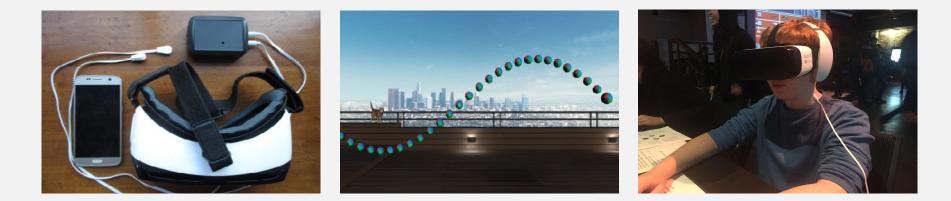


# **The Technology**

The system consists of an adaptive stimulator and mobile-based application that will offer specific games for patients to reduce pain levels.

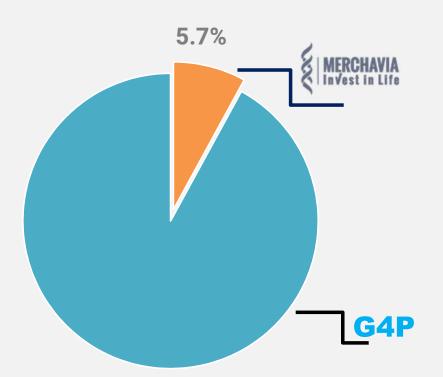
The therapeutic approach is based on several well-known studies published in the literature from 2001.

The uniqueness of the technology is an active algorithm that learns the individual patient for optimal results over time.





#### The investment



In October 2018 Merchavia signed an investment agreement in the amount of NIS 600,000 to be made in three installments, with immediate payment of NIS 200,000 and two payments in accordance with milestones. Currently Merchavia holds about 5.7% on a fully diluted basis.



#### **Milestones**

The Company's work plan for the next two years during the incubator period includes, inter alia:

- 1. Design of the product and start of initial production of the device
- 2. Updating and improving the artificial intelligence algorithm.
- 3. Conducting a pilot clinical trial in about 30 patients.
- 4. A feasibility study in about 30 patients.







#### About the company

EFA develops a device that is used as a portable diagnostic laboratory to perform CBC and other blood tests.

The diagnostic system addresses the global need to minimize the overuse of antibiotics, and combines several advantages of ease of use and advanced technology, including a simple operation that does not require special training, and a connective and fully portable device. All this allows guick obtainment of the results and provision of a correct and appropriate treatment solution.

The device developed by EFA, which serves as a mobile laboratory, will be a significant complement to the diagnostic market, since it is significantly cheaper to use or set up than expensive laboratory-based testing system.

The company was established in the eHealth Ventures incubator in which the Cleveland Clinic, the Maccabi Health Fund and the Amgen pharmaceutical are partners.



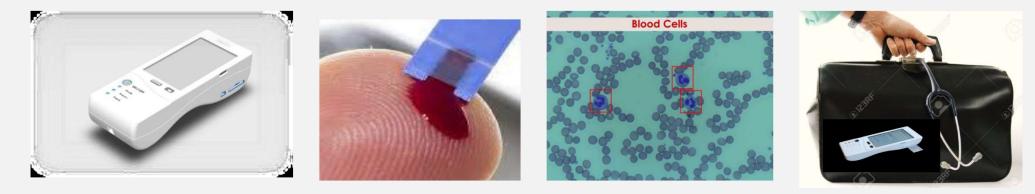




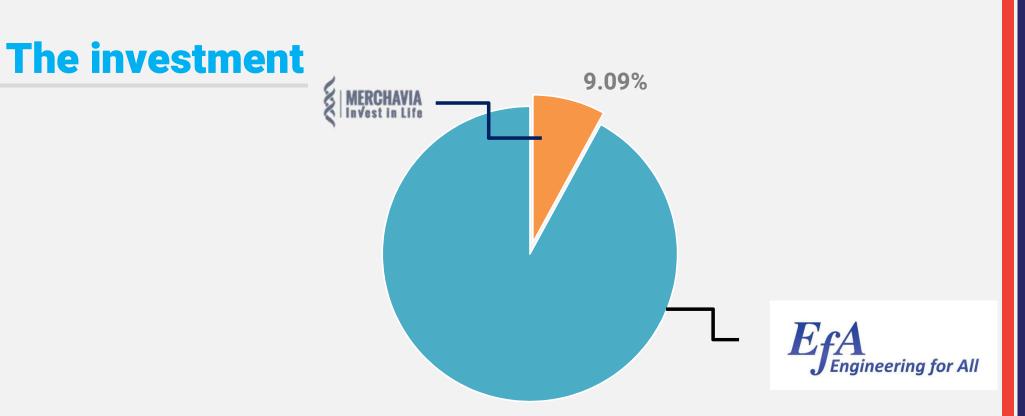
#### **The Technology**

The developed system is a combination of several technological elements:

- 1. A disposable chip that can prepare the blood sample as required by laboratory microscopy tests.
- 2. A portable electro-optical device with a built-in microscope that can perform automatic microscopy and produce a high-resolution image of the blood sample, as in standard "human" microscopic analysis.
- 3. Image processing using AI based software, analysis and diagnosis of blood sampling, specific diagnosis on the spot.
- 4. The modularity of the system and the fact that it creates a standard blood sample for microscopy tests will enable the company to offer a variety of tests and applications in the future.







In March 2019 Merchavia signed an investment agreement in the amount of 1 million NIS to be made in four installments, with immediate payment of 300,000 NIS and 3 payments in accordance with milestones. Currently Merchavia holds 9.09% on a fully diluted basis.



#### **Milestones**

The Company's work plan for the next two years during the incubator period includes, inter alia:

- 1. Development of a single-use chip that can prepare the blood sample as required by laboratory microscopy tests.
- 2. Completion of the development of a portable electro-optical device with a built-in microscope.
- 3. Completion of algorithm development and image processing software.
- 4. Clinical pilot trial to prove feasibility.



## **Medical cannabis**

In October 2018, the board of directors of Merchavia decided to expand Merchavia's investment activity to investments in companies that engage in research and development in the field of medical cannabis.



#### Signing of an investment agreement with Veoli

At the deal closing date, Merchavia will invest a total of \$400,000 for approximately 20% of issued and paid up share capital of Veoli. Veoli was established in Sanara Ventures technological incubator, in which the Teva Industries and Philips are partners.

Veoli develops a unique inhaler that will allow patients to consume cannabis oil in an accurate dosage without the need for heating, evaporation or burning. Veoli's main technology is based on a device (developed within the incubator for inhaled medicines) that allows turning liquid (in this case, cannabis oil) into micron sized droplets, which can be inhaled and thus absorbed in the lungs.

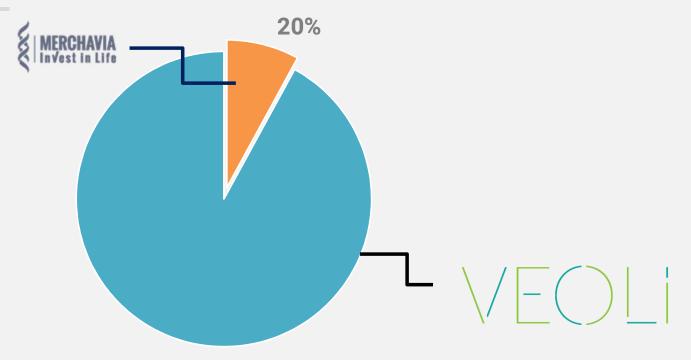
Since there is no heating in the process, there is no change in the properties of cannabis and no production of byproducts that usually occur during heating or burning. Connection to a smartphone will enable remote control of the quantities consumed and control of a medical team.

According to marketwatch, the medical cannabis market is expected to grow up to \$55 billion by 2024. Sales of cannabis concentrates to the cannabis market are expected to exceed \$3 billion in 2018.



https://www.marketwatch.com/press-release/at-36-cagr-medical-marijuana-market-will-bypass-55-bn-by-2024-2018-09-21 https://www.forbes.com/sites/julieweed/2018/09/20/vaping-propels-cannabis-concentrates-market-to-3-billion/#4624ad5c78a7

#### The investment



In March 2019 Merchavia signed an investment agreement in the amount of \$400,000. On the deal closing date Merchavia is expected to hold 20% on a fully diluted basis.



#### **Milestones**

The company is planning to launch the product for marketing within 18 months

- 1. Adaptation of the existing drug delivery system to cannabis oil.
- 2. Closing the production file and moving to production.
- 3. Conducting clinical trials to prove pharmacokinetics (effect of the substance on the body) and efficiency.



# Upcoming events in the companies over the next 18 months

### VEOLI

**1.** Adaptation of the existing drug delivery system to cannabis oil.

2. Conducting clinical trials to prove pharmacokinetics and efficiency.

- **3.** Start of marketing.
- Effective for All
  1. Completion of single-use chip development.
  2. Completion of the development of a portable electro-optical device with a built-in microscope
- microscope. **3.** Clinical pilot trial to prove feasibility.

#### 

- Establishment and consolidation of the Company's overall sales system.
- Completing subsequent capital raising as a pre-IPO.

#### G4P

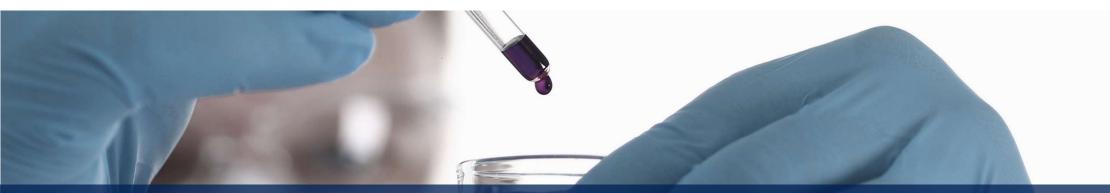
- Completion of prototype design and initial production for clinical trials.
- Completion of feasibility study in about 30 patients.

- **1.** Completion of a commercialization agreement for prostate cancer test and initiation of marketing.
- **2.** FDA approval for prostate cancer.
- Progress in the development of another test based on this unique technology (breast cancer, ovarian cancer,
   Alzheimer's disease).

#### 

- 1. Completion of clinical trials.
- **2.** Obtain CE.
- 3. Obtain FDA.
- **4.** Signing strategic cooperation agreements for technology marketing.







**Merchavia Holdings and Investments Ltd.** Presentation for Investors

# Thank you

