



THE GLOBAL LEADER

in use and application of

MOLECULAR HYDROGEN

Pioneer and Innovator in MedTech & HealthTech

WHO WE ARE

PIONEERS AND INNOVATORS



We are a global leader and innovator in hydrogen technologies across healthcare, spa, wellness, beauty, agriculture, and animal breeding. The group focuses on biotechnology, biochemistry, cosmetics, and food industry (nutrition). The company progressively shifts towards the medical sector (medical gases and devices) as well as biomedicine.

We focus on the research and development of breakthrough technologies and innovations that will change the ways of healthcare, improve diagnostics, medication and decrease costs significantly. Our projects include advancements in fields such as artificial intelligence, personalized medicine, telemedicine, and virtual reality.

CHALLENGES IN THE 21st CENTURY



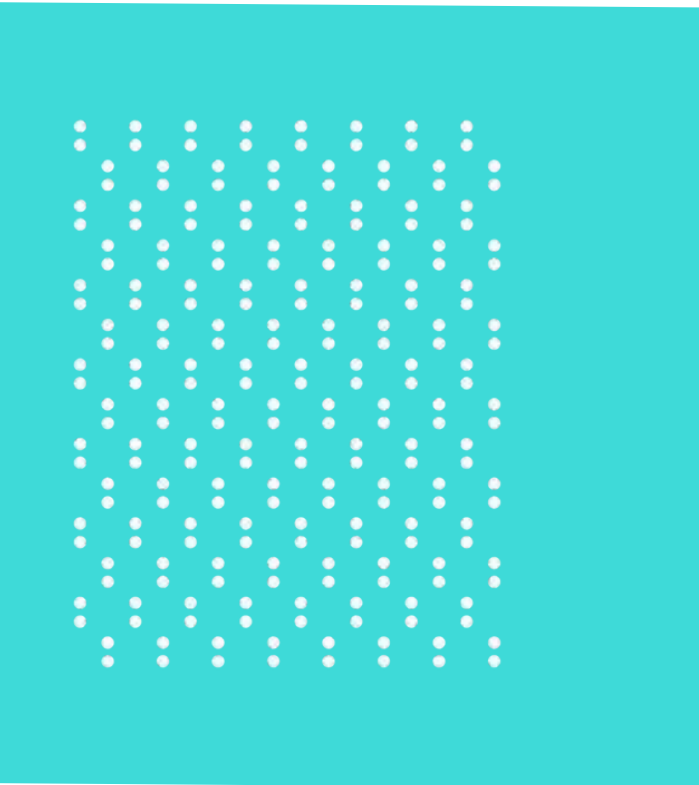
AGING POPULATION



GROWTH IN PHARMACEUTICALS CONSUMPTION
SIDE EFFECTS OF CURRENT MEDICATION



DISEASES OF CIVILIZATION AND
PREVENTION



AGING POPULATION FACTS

- The population aged 65 and over is projected to increase over the next 30 years:
- *2021-800 million worldwide
- 2050-1.8 billion worldwide

Increasing economic burden on healthcare.

- Health care will become more expensive and less accessible.
- Declining birth rate.
- Increase in contributions to the social system.

***UN Ageing 2023**

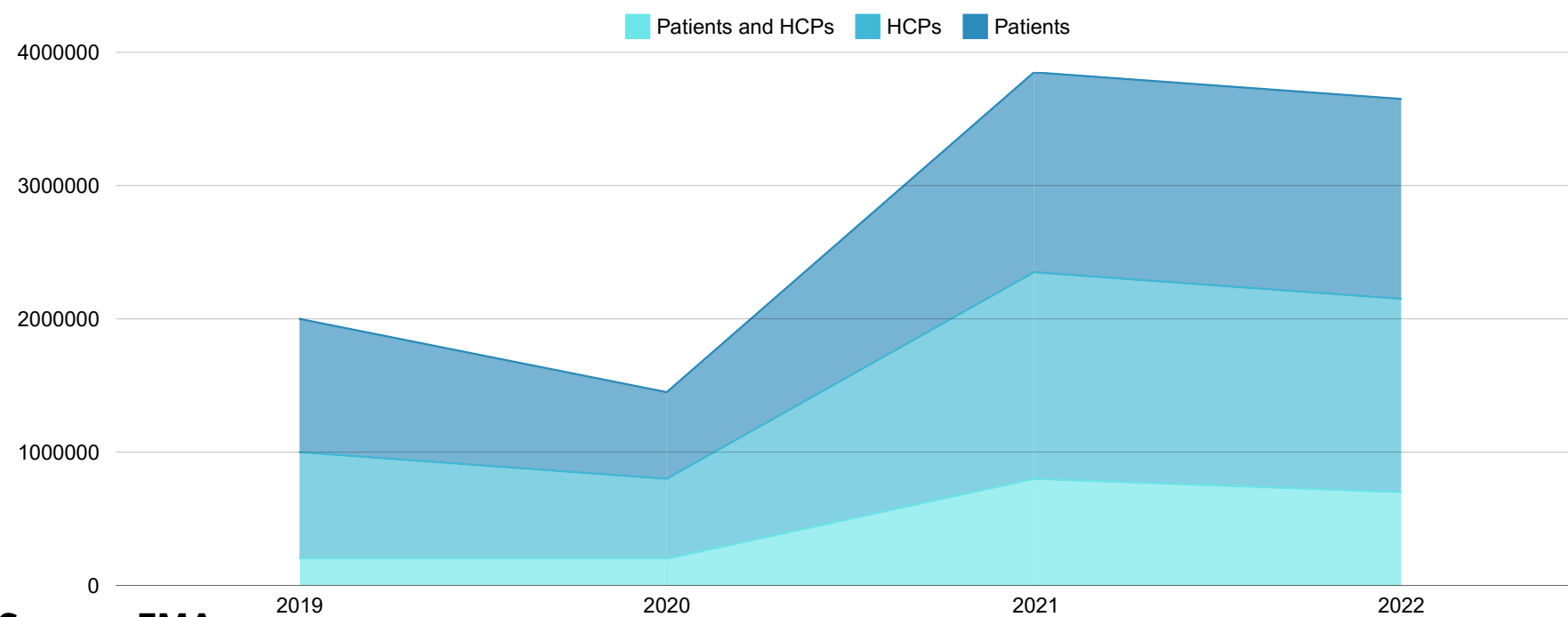


ADVERSE EFFECTS OF CURRENT MEDICATION

FACTS

- Their annual growth ratio in the medicinal products consumption varies on different factors worldwide, such as demographic changes, economic growth, availability of healthcare and innovations in the pharmaceutical field. In developed regions such as Europe, the annual growth ratio is between 2 to 4 %.
- *The European Medicines Agency (EMA) report for 2019-2022 states that the control body EudraVigilance received more than 1.5 million reports of suspected adverse drug reactions in 2021 (see chart below).
- The higher prevalence of infection in humans and reduced immunity lead to the overuse of antibiotics.

Figure 4. Individual case safety reporting to EudraVigilance (EEA)

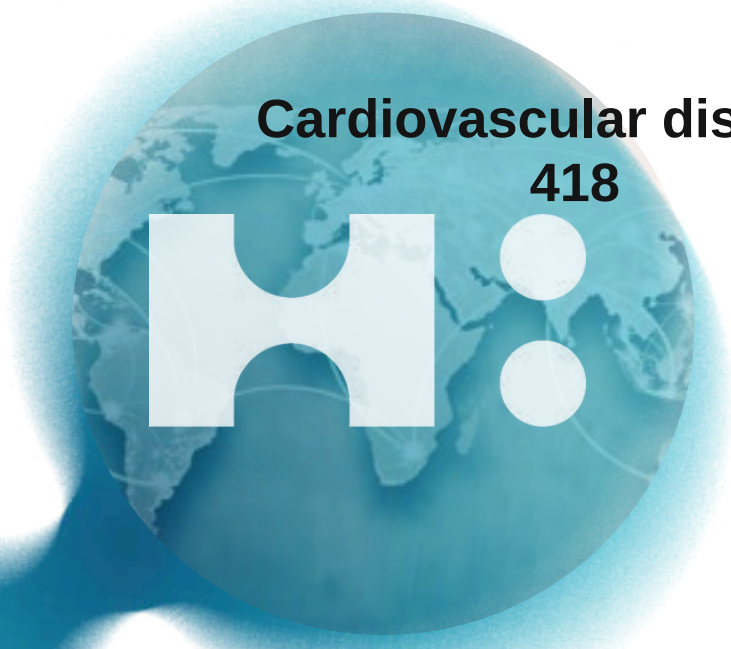
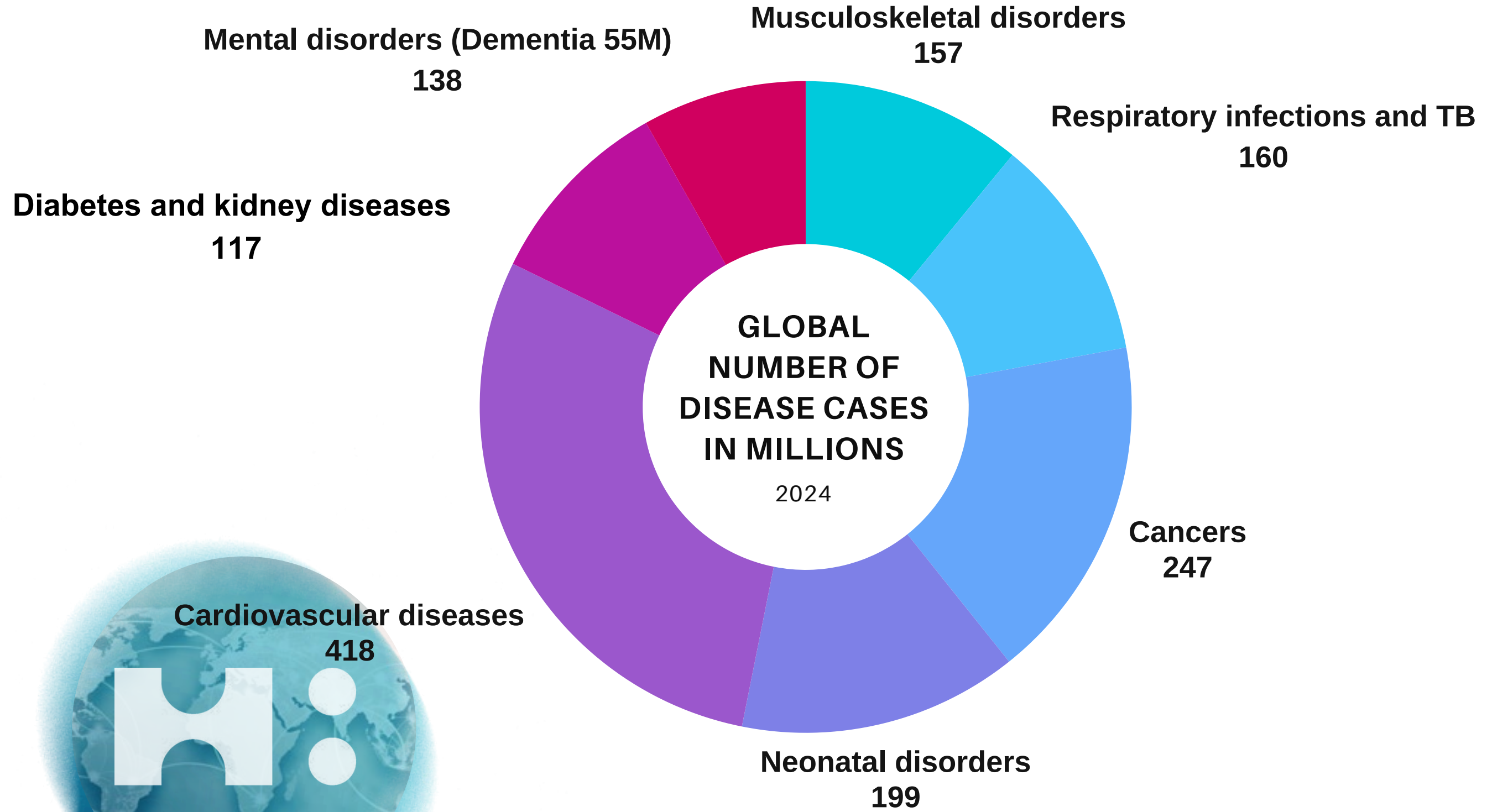


Source: EMA



DISEASES OF CIVILIZATION

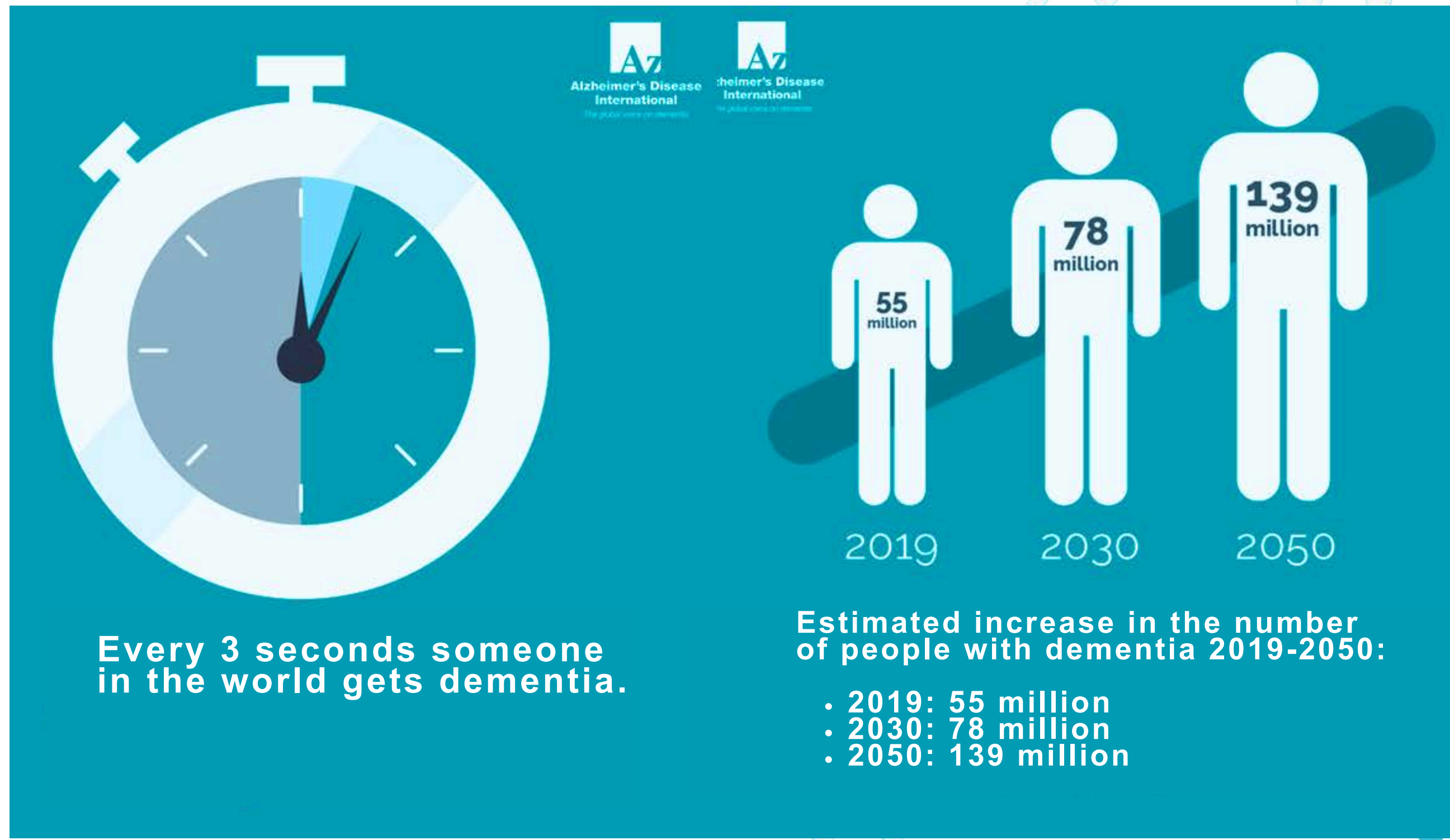
A WORLDWIDE PROBLEM



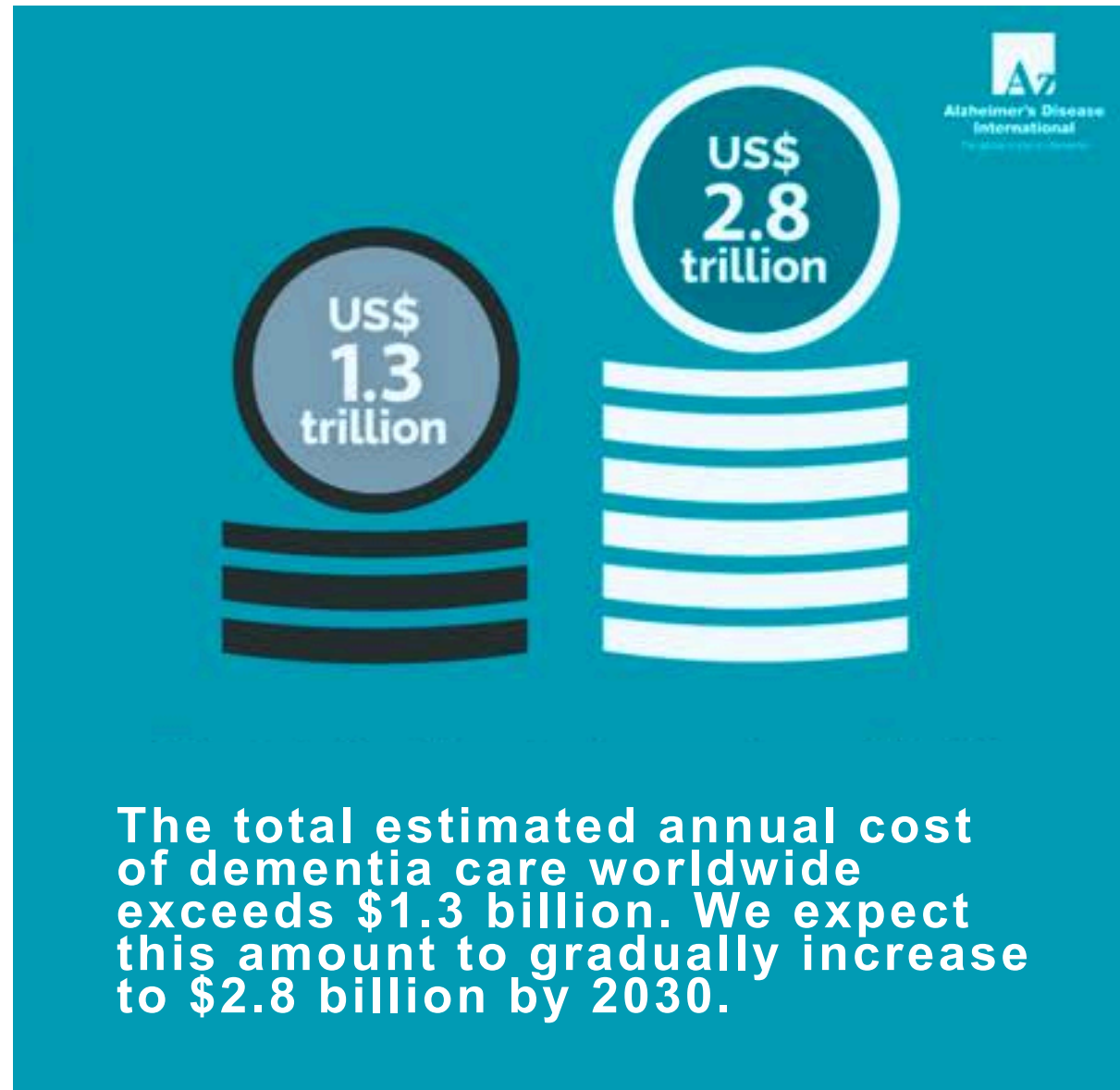
Source: IHME, Global Burden of Disease (2024)

DEMENTIA IN NUMBERS

A WORLDWIDE PROBLEM

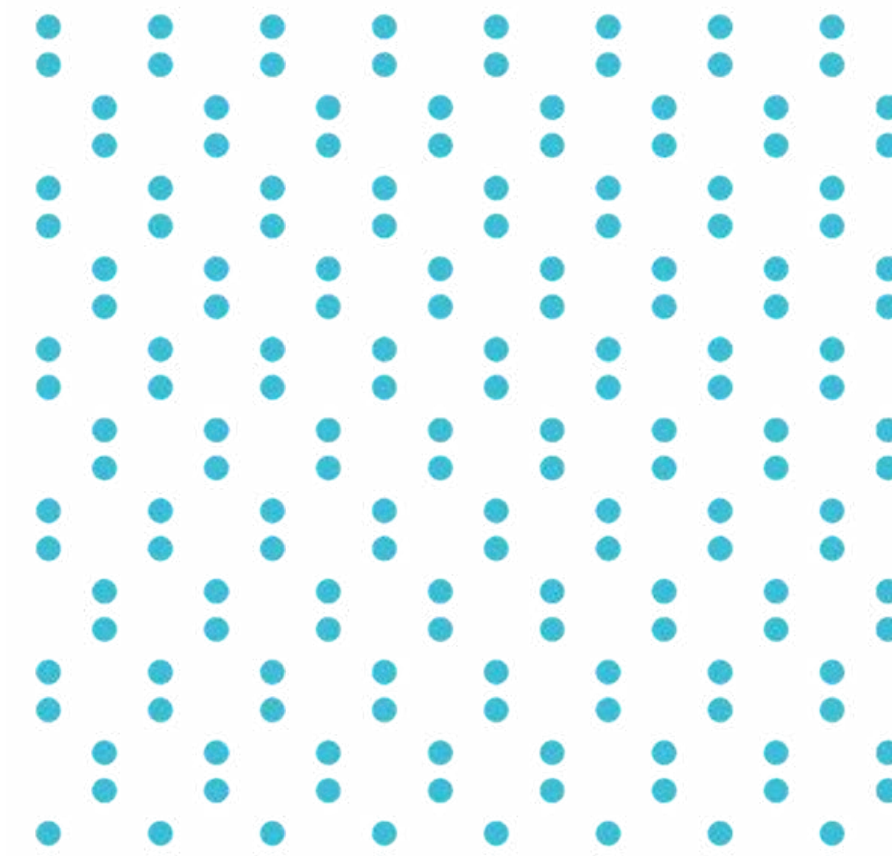


DEMENTIA IN NUMBERS: A WORLDWIDE PROBLEM



(Alzint.org)

GROWING COSTS OF DEMENTIA TREATMENT IN THE USA



● ● ALZHEIMER

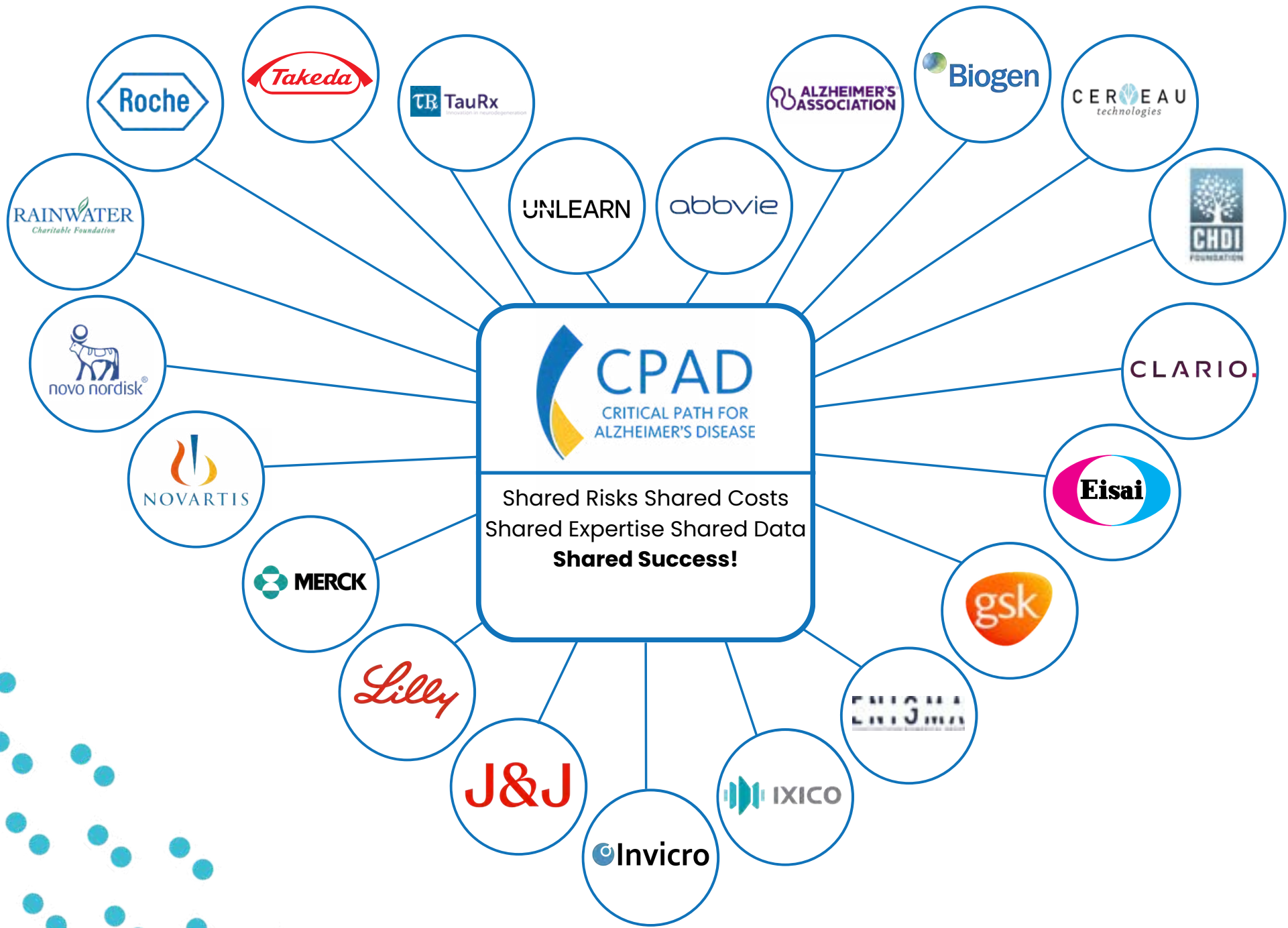
DISEASE OF THE 21ST CENTURY

- Alzheimer's is one of the most common forms of dementia (60-70 % of cases).
- Since 2008, an international consortium of pharmaceutical corporations has been looking for a solution.
- A causal treatment without side effects does not yet exist.

*Source: Alzint.org
*Source: C-path.org



ALZHEIMER'S DISEASE TREATMENT RESEARCH CONSORTIUM OF CORPORATIONS



Critical Path for Alzheimer Disease is an institution founded in 2008.

The research is focused on ADRD (Alzheimer's Disease and Related Dementia).

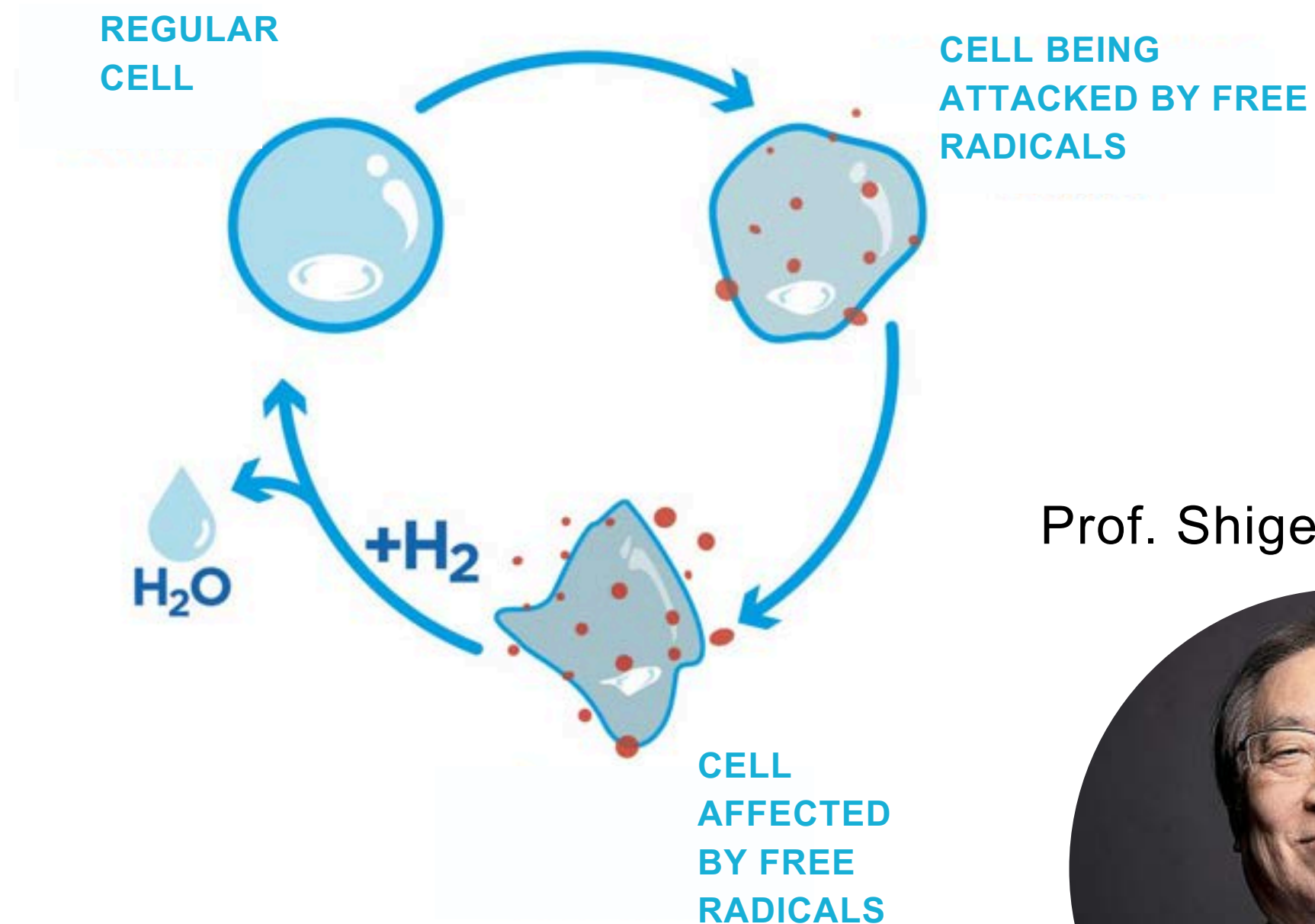


* Source: C-path.org

MOLECULAR HYDROGEN – TREATMENT AND PREVENTION

A PROMISING MOLECULE

- Molecular hydrogen is an effective selective antioxidant regenerating damaged cells – a potential therapeutic without side effects.
- The first groundbreaking study by Prof. Shigeo Ohta was published in 2007 in Nature Medicine
- Hydrogen can be supplied to the body through non-invasive methods such as inhalation, consumption of hydrogen-enriched water, and supplementation, ensuring a comfortable and convenient experience.



Prof. Shigeo Ohta, Ph.D.

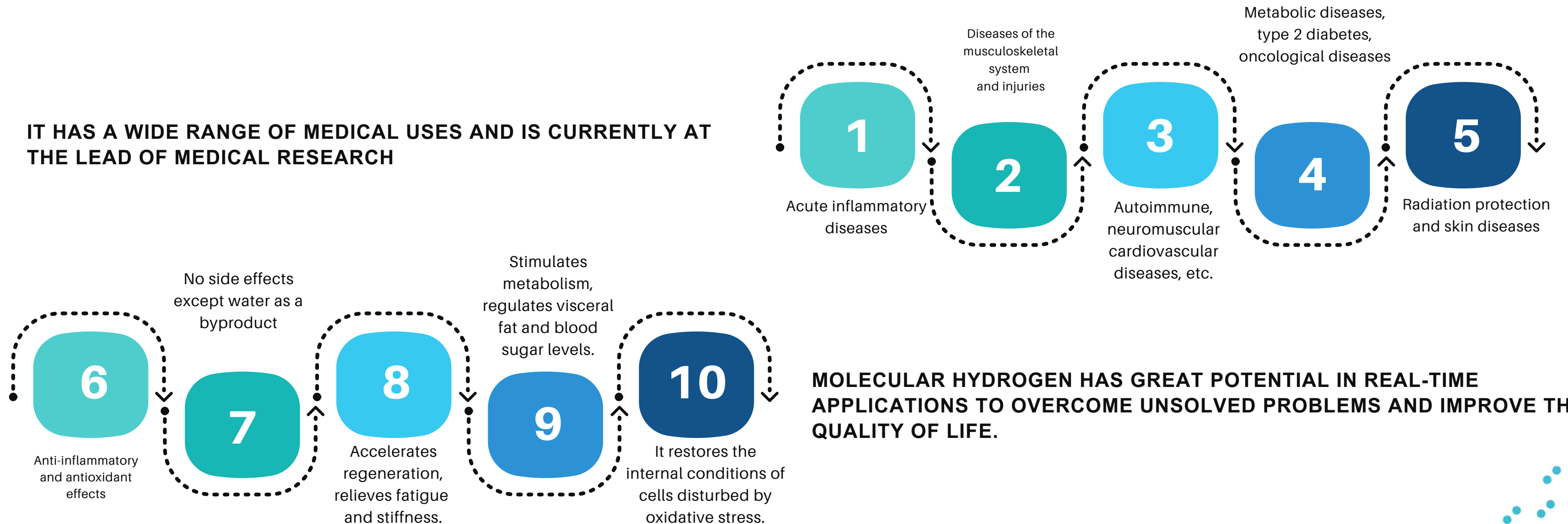


WHAT IS IT?

MOLECULAR HYDROGEN

The function of molecular hydrogen was defined in biomedicine in 2007 by Japanese professor Shigeo Ohta (from Nippon Medical School). Since then, it has been developed for use in a wide range of medical applications, as evidenced by more than 3,500 clinical studies and research papers worldwide.

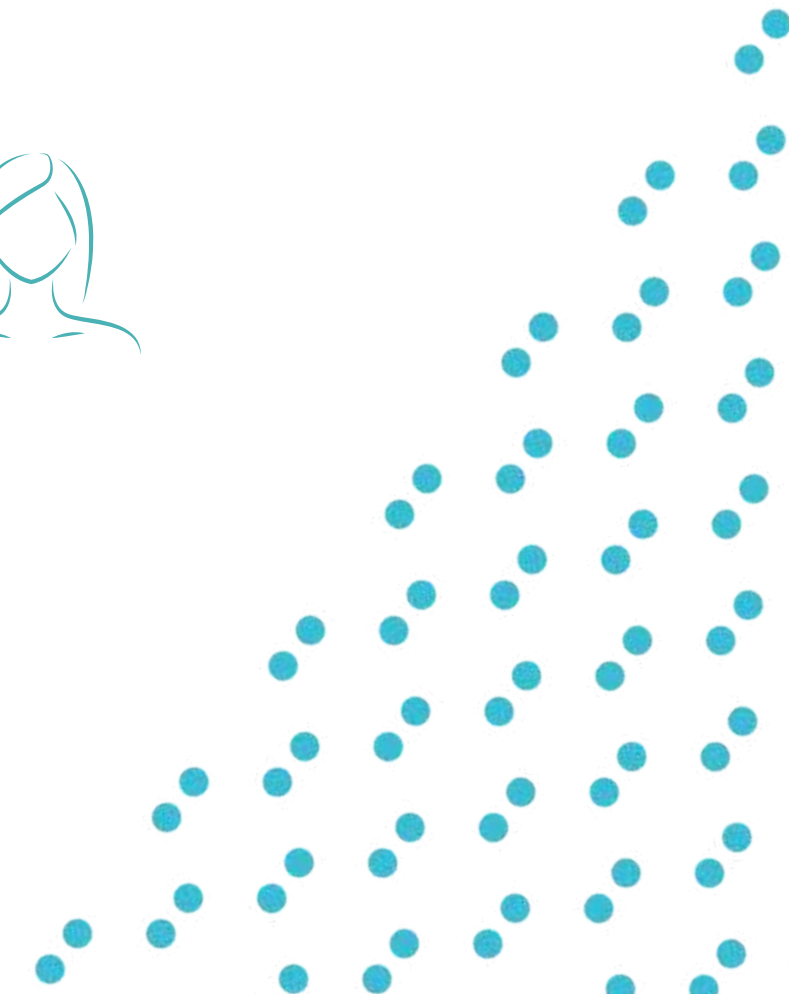
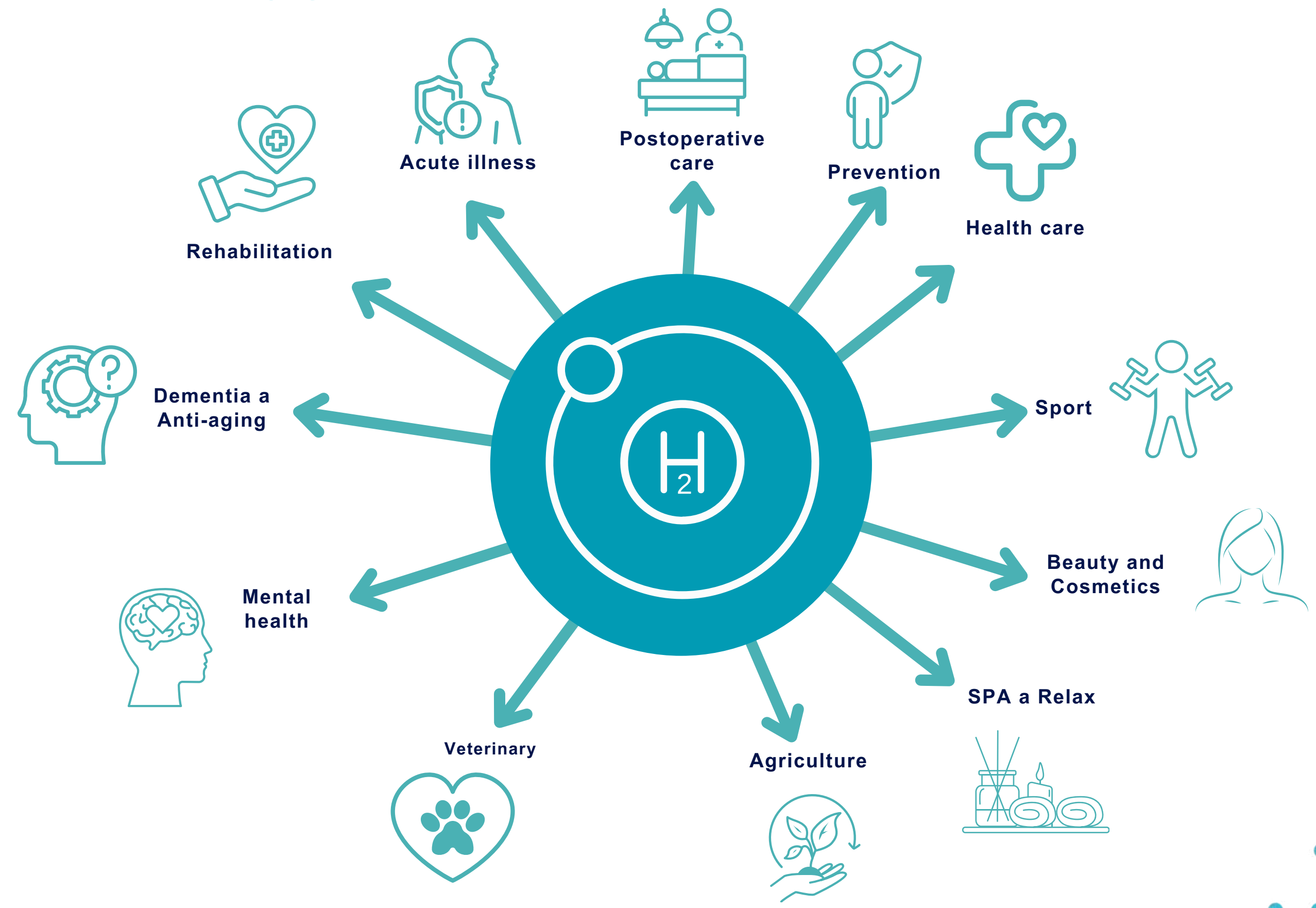
IT HAS A WIDE RANGE OF MEDICAL USES AND IS CURRENTLY AT THE LEAD OF MEDICAL RESEARCH



MOLECULAR HYDROGEN HAS GREAT POTENTIAL IN REAL-TIME APPLICATIONS TO OVERCOME UNSOLVED PROBLEMS AND IMPROVE THE QUALITY OF LIFE.

AREAS OF USE

MOLECULAR HYDROGEN



MECHANISMS OF EFFECTS

OF MOLECULAR HYDROGEN FROM CLINICAL STUDIES

1

Antioxidant effects

Molecular hydrogen specifically neutralizes harmful hydroxyl radicals ($\bullet\text{OH}$) and reduces oxidative stress, which contributes to the development of Alzheimer's disease. It is a selective antioxidant.

2

Anti-inflammatory effects

By neutralizing free radicals, improving mitochondrial functions, and influencing signaling pathways in cells, molecular hydrogen helps protect the brain and enhances cognitive functions.

3

Protection of mitochondria

Hydrogen improves the functioning of mitochondria, reduces the formation of harmful oxygen radicals (ROS) and improves the energy metabolism of cells.

4

Support of neurogenesis

Hydrogen promotes the formation of new nerve cells and improves the connection between them, which is important for maintaining cognitive abilities.

5

Inhibition of signaling pathways

Hydrogen blocks the NFAT pathway (the body's defense mechanism against inflammation in cells), which reduces the formation of amyloid plaques and protects neurons from damage.

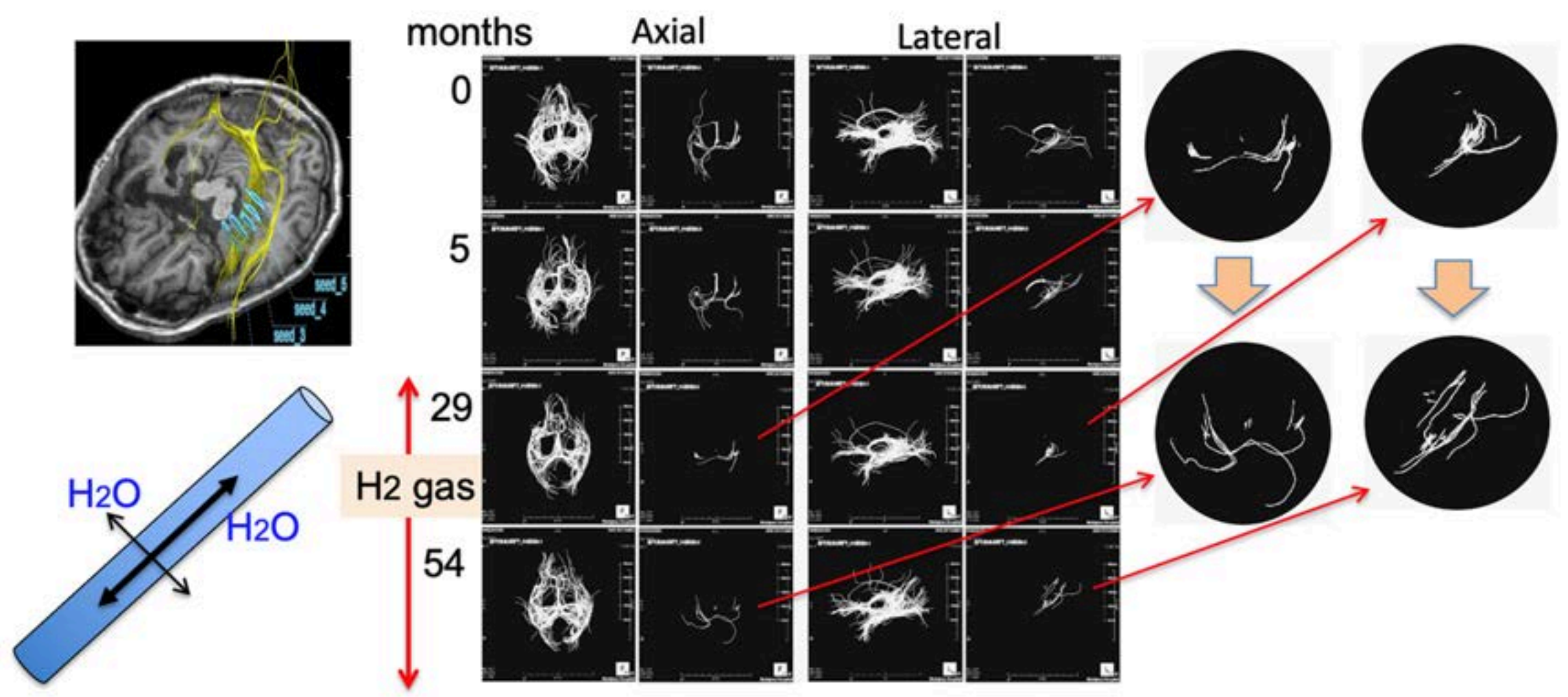
6

Repairing oxidized hemes

Hydrogen reacts directly with oxidized hemes and repairs them. This produces functional hemes. Hemes have many functions in the mitochondria such as catalase and peroxidase, hemoglobin in the blood or myoglobin in the muscles.

CLINICAL PROOF OF EFFECTS

MOLECULAR HYDROGEN



(Source: Ohta 2022)

✓ Randomised clinical trials have shown:
Safety and efficacy of molecular hydrogen inhalation.
Improvement in patients with mild cognitive impairment.
After only one year of using hydrogen water (Current Alzheimer Research).

✓ Diffusion Tensor Imaging (DTI):

- Studies have shown that inhaling hydrogen improves neurons' quality and connectivity.
- Advanced MRI techniques, namely Diffusion Tensor Imaging (MDPI), have demonstrated this.

CASE STUDIES

MOLECULAR HYDROGEN



PREVENTION OF DEMENTIA IN PRE-DEMENTION STATUS (OHTA, 2018)
Cognitive function and rate of decline: A study published in Current Alzheimer Research found the 1-year drinking of hydrogen water improved cognitive function and reduced the rate of cognitive decline in pre-dementia status in the subjects with a genetic risk.



FUNDAMENTAL IMPROVEMENT OF ALZHEIMER'S DISEASE (OHTA, 2022)
Improvement in a 79-year-old patient with advanced AD: A case study on a 79-year-old patient who inhaled hydrogen for 2 years showed improvements in neuronal quality and ability to manage incontinence.



IMPROVEMENT EVEN IN ADVANCED ALZHEIMER'S (OHTA, 2023)
Hydrogen inhalation in patients with Alzheimer's disease: A patient study with Alzheimer's disease showed that hydrogen inhalation for six months led to improvements in ADAS-cog scores, which were maintained for up to 1 year.

THESE STUDIES SHOW THE POTENTIAL OF MOLECULAR HYDROGEN AS A THERAPEUTIC AGENT TO IMPROVE COGNITIVE FUNCTIONS AND REDUCE THE PROGRESSION OF NEURODEGENERATED DISEASES.

RESULTS OF STUDIES WITH MOLECULAR HYDROGEN

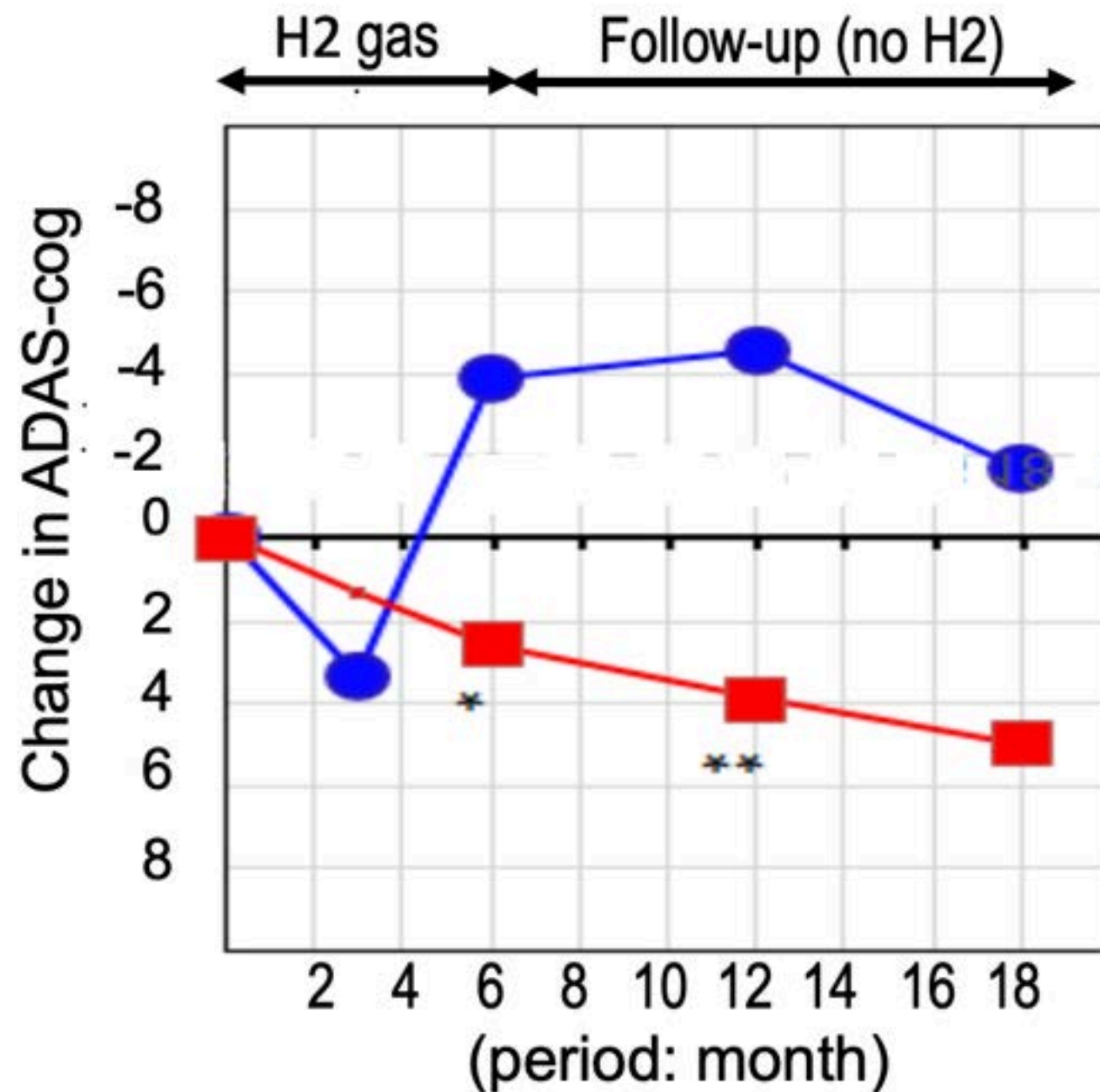
- ✓ **Safety:** Molecular hydrogen is safe for long-term use with no side effects.
- ✓ **Efficacy:** Significant improvement in ADAS-cog scores maintained six months to 1 year after treatment. Hydrogen inhalation improved cognitive function and reduced the rate of cognitive decline in AD patients.
- ✓ **Symptom management x disease modification:** Unlike traditional symptomatic treatments, hydrogen has the potential to support treatment, with effects lasting even after the end of active treatment.
- ✓ **Quality of life:** Improving the integrity of neurons in the hippocampus and the ability to control the bladder and bowels.
- ✓ **Support for treatment and prevention:** Hydrogen, as an effective selective antioxidant, improves the quality of life not only in neurodegenerative diseases thanks to its anti-inflammatory properties and the fight against oxidative stress.



RESULTS OF STUDIES

ADAS-COG GRAPH

The graph depicts the change in ADAS-Cog (with lower values indicating improvement and higher values worsening) from the initial inhalation of molecular hydrogen gas. Participants inhaled molecular hydrogen for 1 hour twice a day for six months. This period was followed by a year without inhalation. The ADAS-Cog was administered for the first six months (H₂ patients only) and every six months.



The differences between H₂ and control group are significant (* <0.05 and $::P<0.01$)

A research group from China and South Korea subsequently published papers showing that inhaling hydrogen gas improved Alzheimer's disease or markers.

PATENT

METHOD OF TREATMENT AND PREVENTION OF ALZHEIMER'S DISEASE

H2 Global Group has received patents for a promising method of treating Alzheimer's disease using molecular hydrogen. This innovative approach reduces oxidative stress, a critical factor in the pathogenesis of Alzheimer's disease. It offers long-term improvements in cognitive function and overall quality of life for patients.



MOLECULAR HYDROGEN IN MEDICINE

WHAT WE ARE WORKING ON



1



Clinical studies confirming pilot research



2



Registration of a medical device: hydrogen generator



3



Registration of application aids as medical devices - applicators for ears, eyes, teeth and sleeves for limbs

● ● HYDROGEN MEDICINE

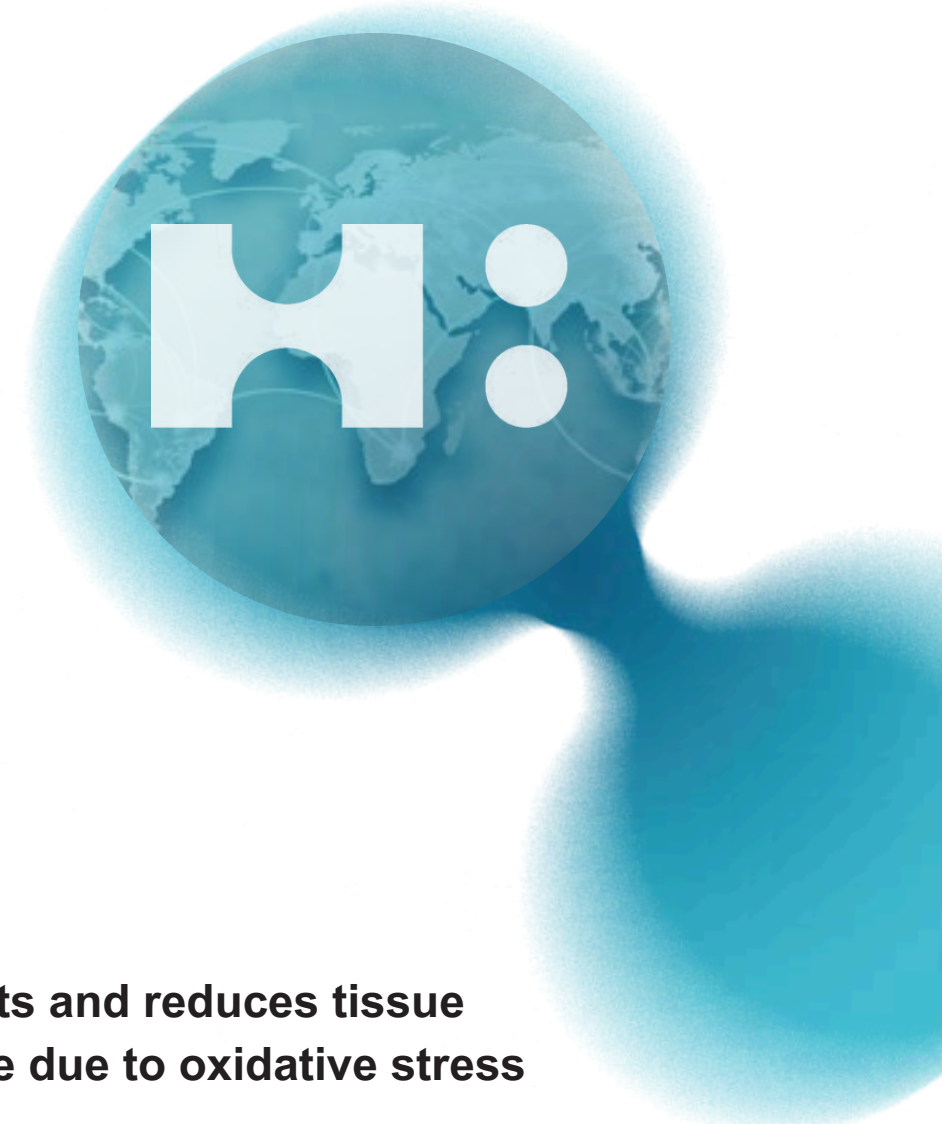
PRESENT AND FUTURE

1  PREVENTION

2  TREATMENT SUPPORT

3  THERAPY

4  REHABILITATION

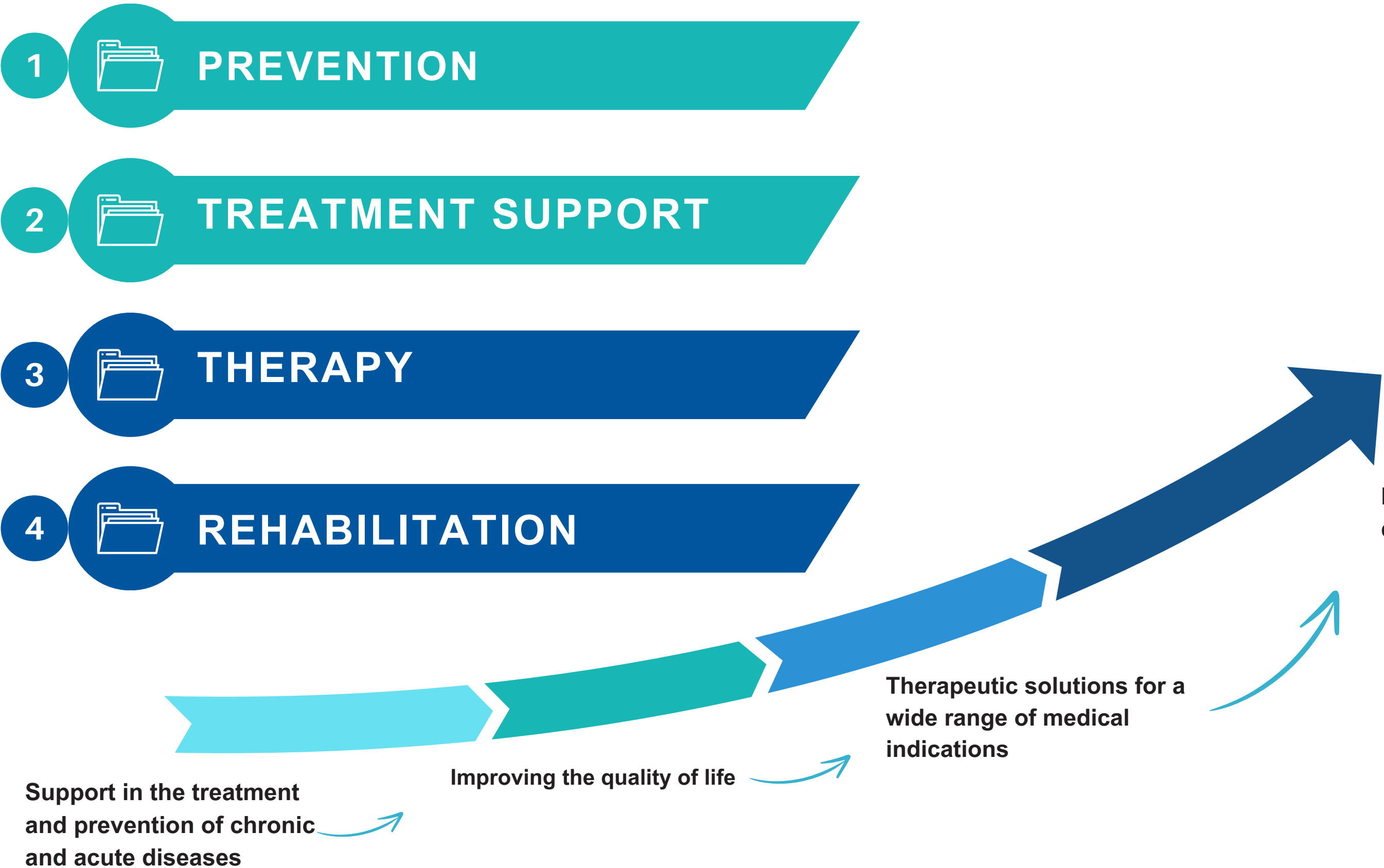


Prevents and reduces tissue damage due to oxidative stress

Therapeutic solutions for a wide range of medical indications

Improving the quality of life

Support in the treatment and prevention of chronic and acute diseases



● HYDROGEN MEDICINE

● PRESENT AND FUTURE



**Obesity &
Diabetes**



Arthritis



Oral Care



**Dementia
Alzheimer d.**

EXISTING METHODS OF USE

MOLECULAR HYDROGEN



**FOOD
SUPPLEMENTS**



**HYDROGEN
ENRICHED
WATER**



**HYDROGEN
COSMETICS**



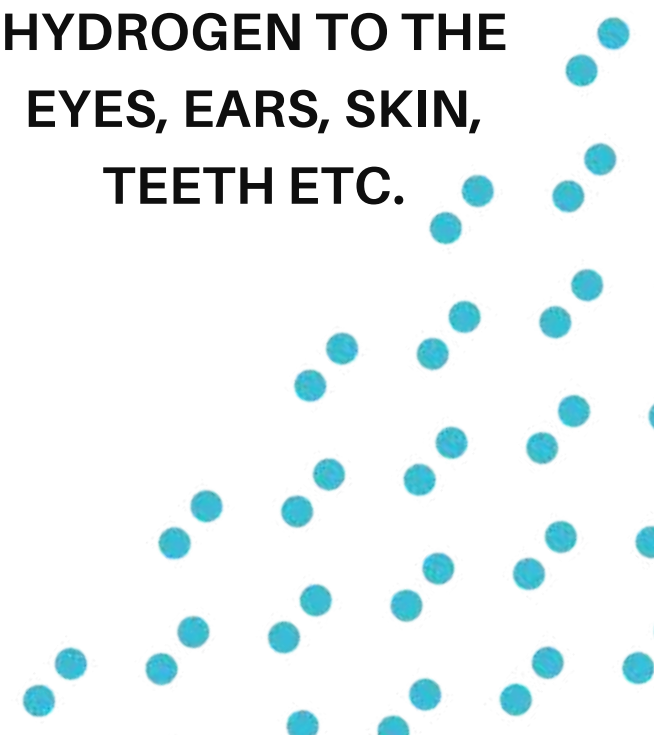
**HYDROGEN SPA
AND WELLNESS
PROCEDURES**



**HYDROGEN
INHALATION**



**APPLICATION OF
HYDROGEN TO THE
EYES, EARS, SKIN,
TEETH ETC.**



OUR UNIQUE SOLUTION WITH MOLECULAR HYDROGEN



TELEMEDICINE using AI

We diagnose and measure (data collection), work with feeling data, face recognition (apps), body screening (measuring devices), and doctors, and evaluate and propose solutions.



HYDROGEN ENRICHED WATER

We enrich water with molecular hydrogen with special technology. Local source of the best water in Czech plus the highest hydrogen saturation gives the customer our Premium brand benefits.



FOOD SUPPLEMENTS AND COSMETICS

Our food supplements and cosmetics support the natural production of molecular hydrogen in the body and on the skin's surface. We have our own research, development and production facility.



HYDROGEN GENERATORS

We are engaged in researching, developing, manufacturing, and worldwide distributing innovative molecular hydrogen devices and patented applications.



VIRTUAL REALITY IN REHABILITATION

VR Vitalis Pro is a certified medical device approved for the entire territory of the EU. It is used by several medical and rehabilitation facilities. It is a Patented technology of VR Life company, where we hold 20% share and the patent.



SERVICES AND EDUCATION

Partner organizations can be supported in operating services connected with hydrogen procedures through a unique and visually attractive education and business platforms, H2 SPA and H2 CITY, for a better understanding of molecular hydrogen.

AREAS OF USE

MOLECULAR HYDROGEN

SPA

MEDICAL SPA

WELLNESS

HOTELS, CRUISE SHIPS

DENTISTRY

DENTAL CLINICS, DENTAL HYGIENISTS, DENTAL SURGERY

SPORTS AND PHYSIOTHERAPY

SPORTS MEDICINE, PHYSIOTHERAPY PERSONAL TRAINING, MASSAGES, SPORTS PSYCHOLOGY, REHABILITATION

NEUROLOGY, PSYCHIATRY

NEUROLOGY, PSYCHOLOGY, PSYCHOTHERAPY, PSYCHIATRY

AESTHETIC MEDICINE

PRIVATE CLINIC, PLASTIC SURGERY

COSMETICS

BEAUTY SALONS, HAIRDRESSERS, BARBER SHOPS, HAIR STUDIO

HYDROGEN FOR COMPANIES

PROMOTION OF HEALTH, VITALITY, PERFORMANCE, SAFETY AND CORPORATE SOCIAL RESPONSIBILITY

VETERINARY

VETERINARY CLINICS, DOG HOTELS, ZOOLOGICAL GARDENS, COSMETIC SALONS

AGRICULTURE

EFFICIENT CROP GROWING, USE OF HYDROPONICS, INCREASE YIELD, CROP RESILIENCE

TARGET GROUPS OF MOLECULAR HYDROGEN

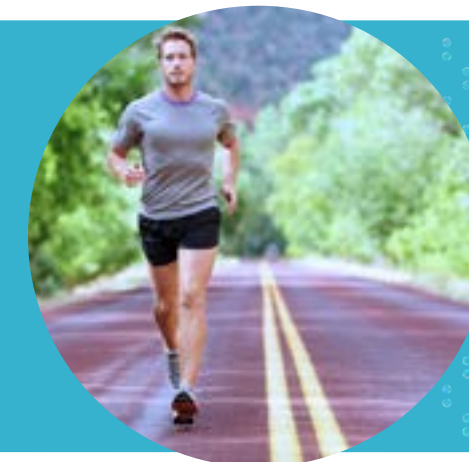
WOMEN

- Care for beauty, mental health and slim line
- Mothers caring for their families and themselves
- Active lifestyles with an emphasis on prevention and longevity



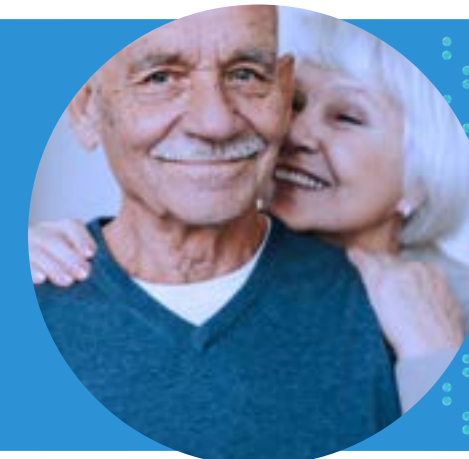
ATHLETES

- People professing an active lifestyle and prevention
- Active recreational athletes and professionals
- Emphasis on performance and mental health



PEOPLE IN THE MIDDLE AGE AND ELDERLY

- Focus on quality of life
- Aiming to maintain an active lifestyle
- Taking care of yourself, your mental health and your family
- Prevention and intergenerational responsibility



VETERINARY AND AGRICULTURE

PRACTICAL USE



VETERINARY
HYDRATION | PREVENTION | THERAPY

REGISTERED VETERINARY MEDICINE
PROVEN BY SCIENTIFIC STUDIES

AGRICULTURE
HIGHER QUALITY AND YIELD OF CROPS



BUSINESS MODEL

SALE AND RENT



B2C

TARGET GROUP

Men, women, children athletes, elderly, health prevention, support in illness

SELLING



B2B

TARGET GROUP

Medical spas, dental and eye clinics, companies, rehabilitation centers, wellness hotels, cosmetic and hair salons.

H2 VIBE STYLE

GO TO MARKET



H2 WORLD

FOCUSED ON 20% OF THE POPULATION OF THE CZECH REPUBLIC AGE 50+.

GROUP DEFINITION

- IT ALREADY SOLVES A HEALTH PROBLEM
- MISSED AT BIG PRICE DISCOUNTS
- RATHER ONE TIME GENERATOR PURCHASES



TARGET GROUP

MEN AND WOMEN (50+ YEARS)

- IS ALREADY DEALING WITH A HEALTH PROBLEM

LIMITED
PURCHASE
POTENTIAL

ONE-TIME
PURCHASE OF
GENERATORS



REBRANDING

CHANGING THE PERSPECTIVE ON HEALTH. FOCUS ON THE CURRENT TREND. EMBRACING HYDROGEN AS PART OF LIFESTYLE. CREATION OF A NEW LIFESTYLE BRAND

H2 VIBE STYLE

FOCUSED ON 80% OF THE POPULATION OF THE CZECH REPUBLIC AGE 25+.

GROUP DEFINITION

- FOCUSED ON PREVENTION
- HEALTH FOCUSED LIFESTYLE
- REPEAT PURCHASES



TARGET GROUP

WOMEN MOTHERS (30-50 YEARS OLD)

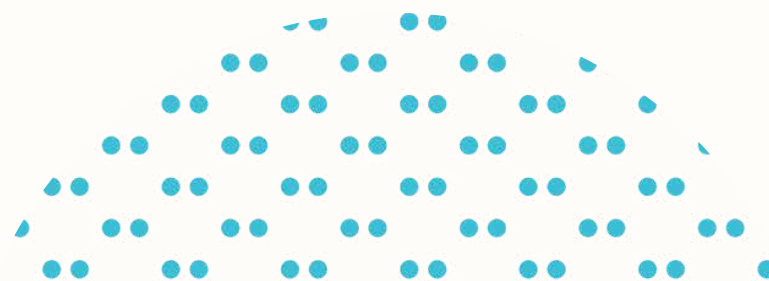
- ACTIVE WOMEN WHO ARE THE DECISION-MAKING LINK OF THE WHOLE FAMILY
- THEY HAVE SMALLER CHILDREN
- THEY ARE INTERESTED IN THE HEALTH OF THEMSELVES AND THE WHOLE FAMILY

ATHLETES

- ACTIVE YOUNG AND MIDDLE-AGED MEN AND WOMEN WHO PLAY SPORTS PROFESSIONALLY OR SEMI-PROFESSIONALLY

GREAT
PURCHASE
POTENTIAL

REPEATED
PURCHASES OF A
COMPREHENSIVE
SOLUTION



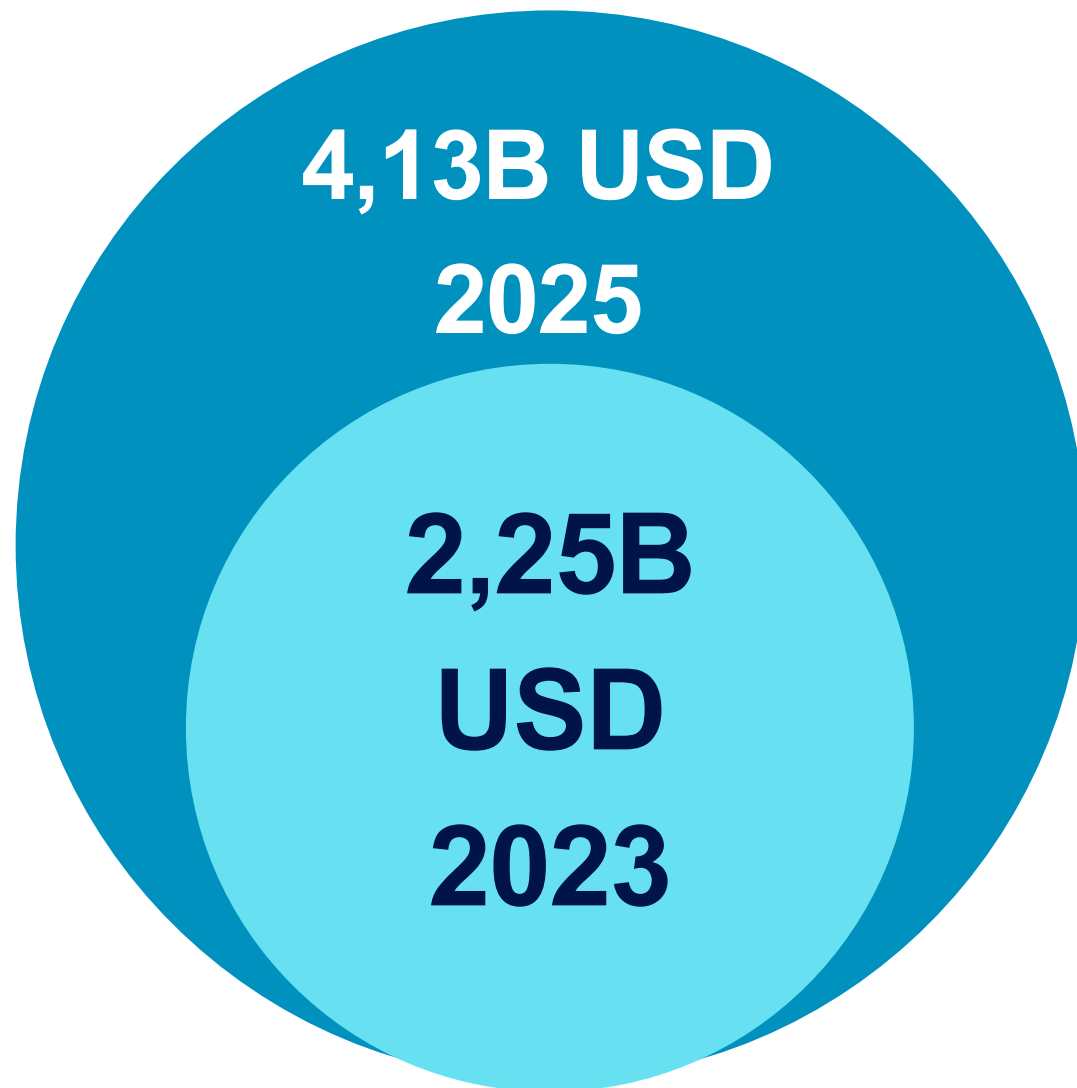
HYDROGEN WATER - SALE

MARKET INFORMATION



North America and Europe will dominate the hydrogen-rich water market from 2022 to 2030.

(Vantage Market Research)



HYDROGEN GENERATORS - SALE

MARKET INFORMATION

✓ The global hydrogen inhaler market is expected to reach USD 2.5 billion by 2031, growing at a CAGR of +8.3% from 2024 to 2031.

This market is driven by the growing demand for non-pharmacological respiratory therapies and wellness products. (MWR)

2,5B
USD
2031



FOOD SUPPLEMENTS - SALE

MARKET INFORMATION



The Dietary Supplements market size is estimated at USD 139.38 billion in 2024 and is expected to reach USD 173.69 billion by 2029, growing at a CAGR of 4.5% during the forecast period (2024-2029). (MordorIntelligence)

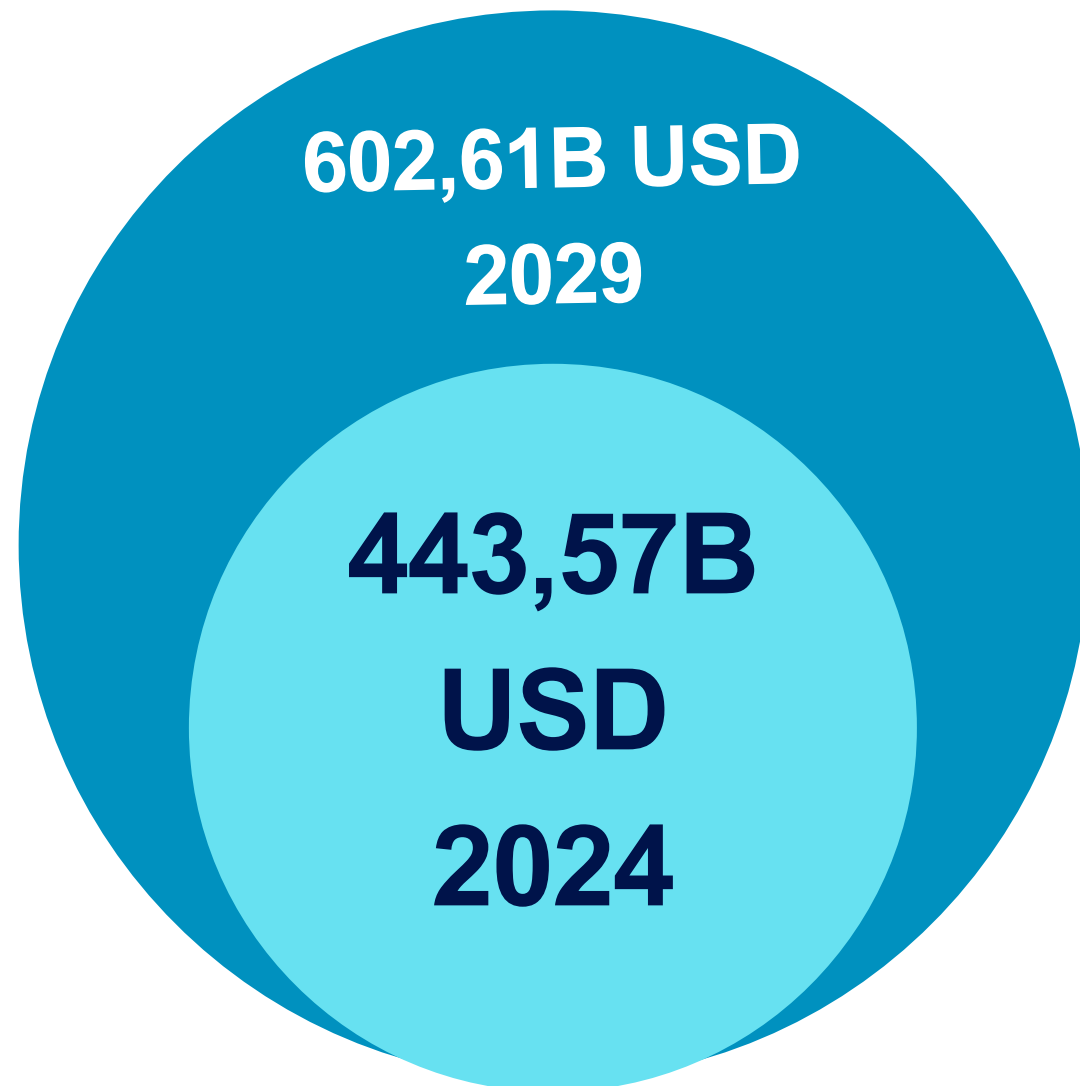


COSMETICS - SALE

MARKET INFORMATION



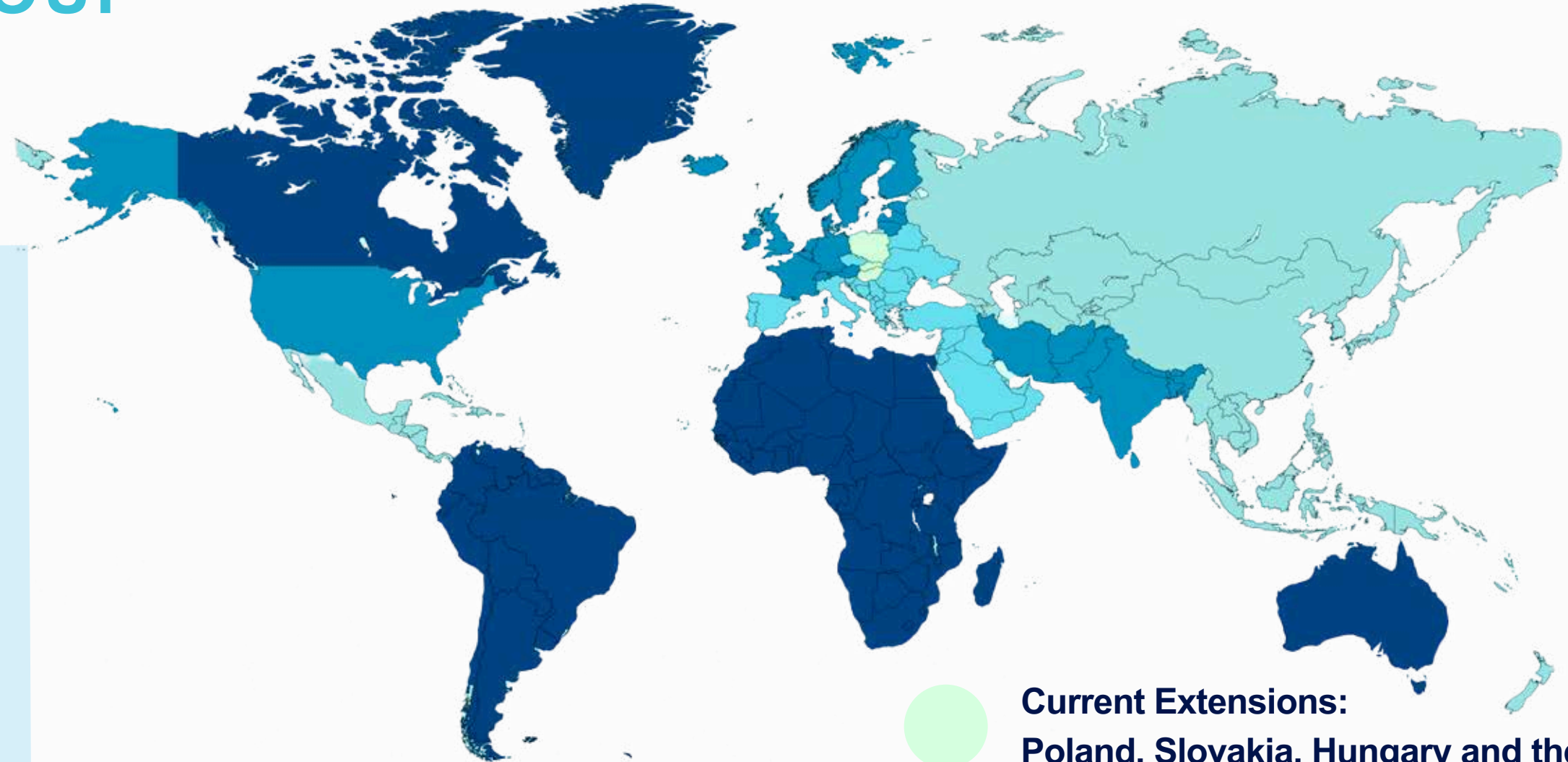
The size of the global cosmetics market was valued at USD 417.2 billion in 2023. The global market is expected to reach USD 602.61 billion by 2029 from USD 443.57 billion in 2024, growing at a CAGR of 6.32% from 2024 to 2029.(Market Data Forecast)



TARGET MARKETS

GROUPS H2 GLOBAL GROUP

- B2B segments – Medical spas, dental and eye clinics, companies, rehabilitation centres, wellness hotels, cosmetic and hair salons.
- B2C - H2VIBE.COM.
- Ongoing foreign business activities with Korea, USA, Poland, UAE, Qatar, India, Spain and Hong Kong.
- Expanding markets worldwide, including the EU and the Western world.



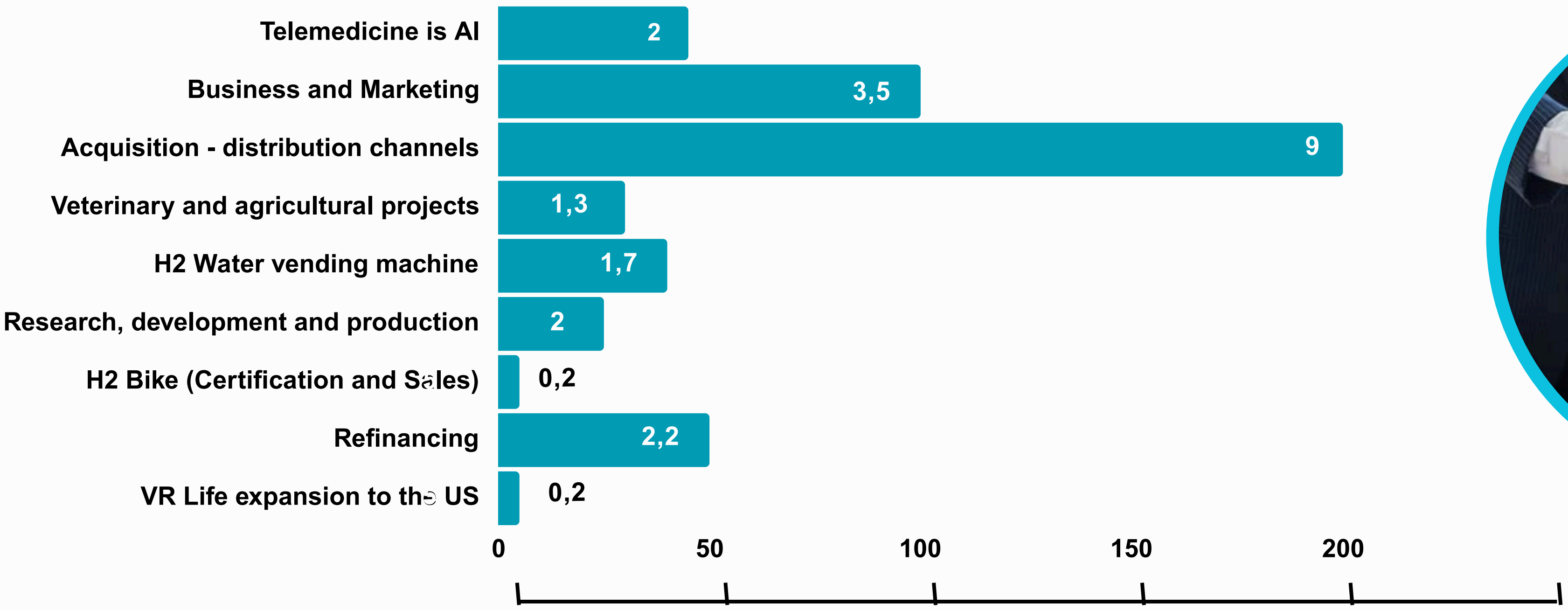
- **Current Extensions:**
Poland, Slovakia, Hungary and the Balkan countries
- **In the short term:**
East and South of the EU
- **In the medium term:**
West and North EU, USA
- **In the long run:**
North and South America, Australia



INVESTMENT PLAN

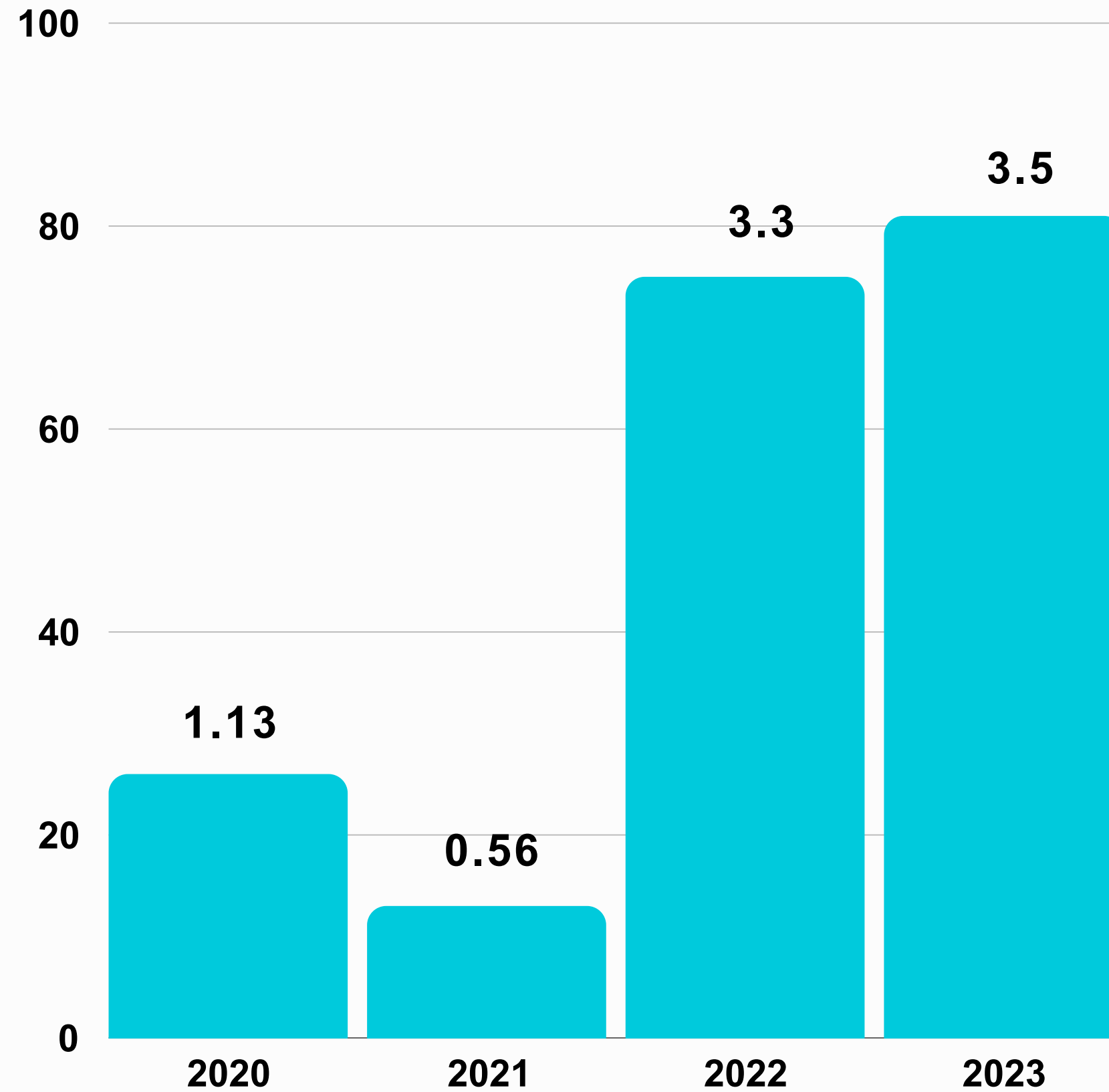
PROJECT BUDGET IN MILLION USD

Investment Needs 2024-2025: 22,5M USD



Currently raised over 15M USD

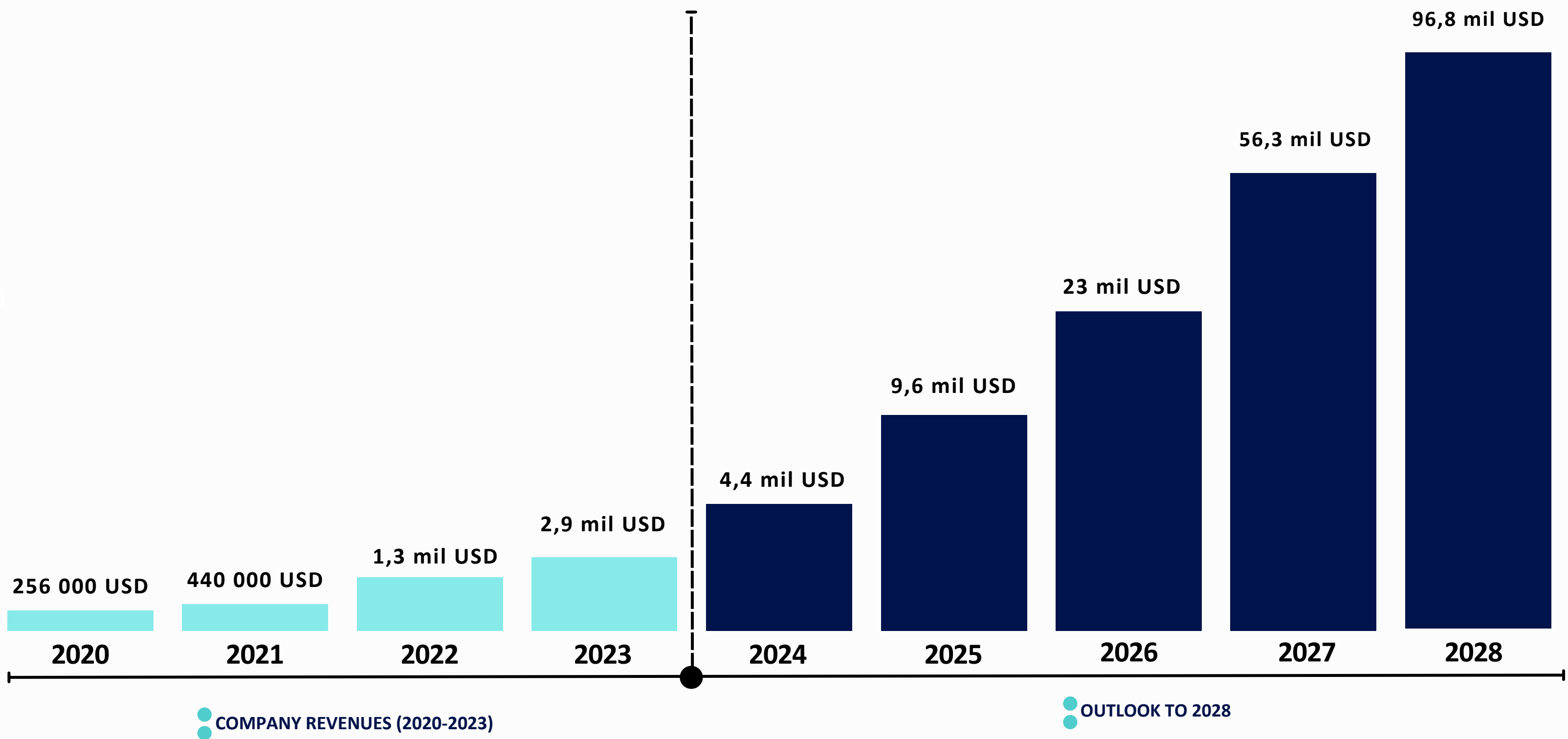
Successful funding history since 2020



SALES

HISTORY 2020-2023 OVER 5M USD

FORECAST 2024-2028 OVER 100M USD



REVENUE OVERVIEW

(USD)

	2025	2026	2027	2028	Total 2025-2028
Europe	4 800 000	10 330 435	29 217 391	48 000 000	92 347 826
America	4 450 000	11 200 000	24 250 000	43 000 000	82 900 000
Australia	358 696	1 500 000	2 869 565	5 869 565	10 597 826
					185 845 652

Estimated revenue refers to hydrogen market potential in selected markets.

Total revenue 2025-2028	185 845 652
Total Gross profit (25%)	46 461 413



WE ARE HYDROGEN

COMPANY STRUCTURE

H2 WORLD
HEALTH & BEAUTY

H2 PHARM
R&D

H2 MEDICAL
TECHNOLOGIES

H2 FARMING
TECHNOLOGIES

H2 CITY
LIFE

H2 MOBILITY
TECHNOLOGIES

H2 ENERGY
TECHNOLOGIES

H2 INVESTMENT
GROUP



H2 Global Group was founded in 2021. We are a pioneer in providing hydrogen-based technology solutions in healthcare, spa, wellness and beauty, agriculture and veterinary.

MISSION

We aim to use molecular hydrogen to improve health and quality of life. We are committed to sustainability, innovation, responsibility across generations and education about the benefits of molecular hydrogen.

VISION

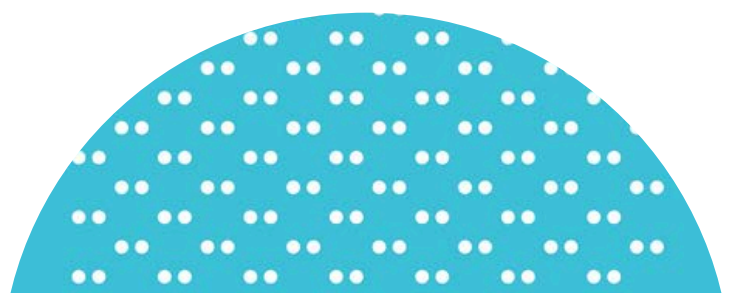
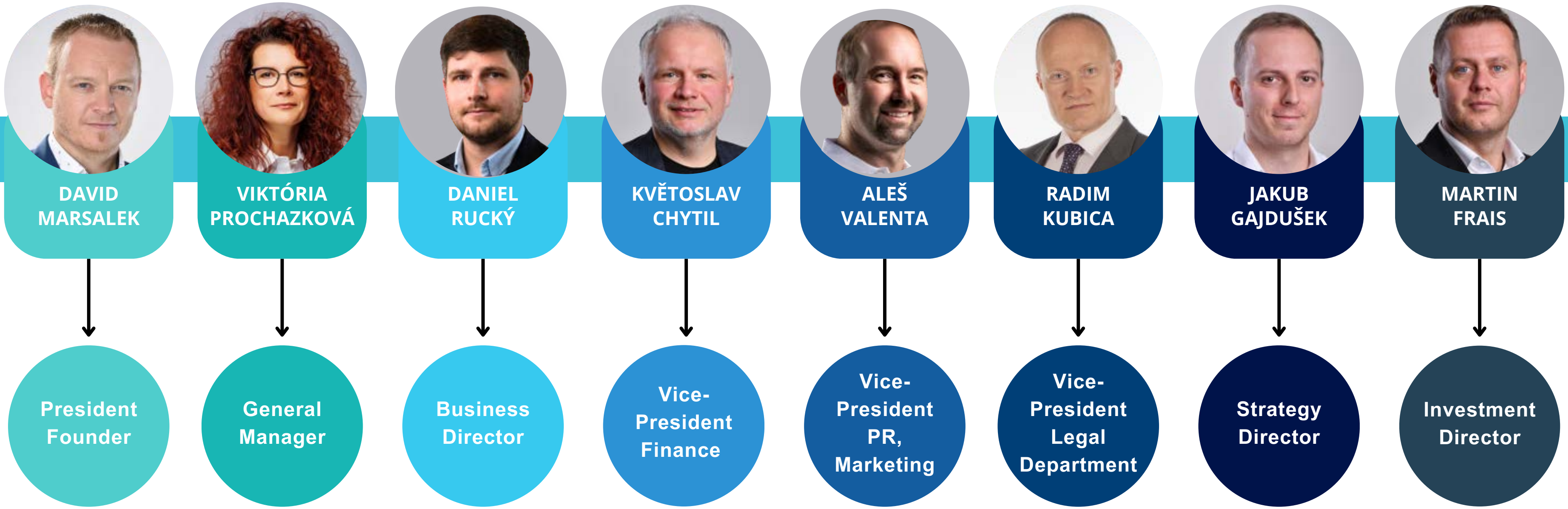
Our vision is a world full of vitality, where the properties of molecular hydrogen are part of the everyday lives of people, animals, and plants. It is an innovative, sustainable world where health and quality of life are of the highest value.

WHAT INSPIRED US?

Successful Japanese model for the use of molecular hydrogen in healthcare, spa, wellness and with a positive impact on population health

OUR EXPERTISE

Medicine (medical gases, devices and software), Biomedicine, Biotechnology, Biochemistry, Cosmetics, Pharmacy, Food (nutrition)



PROFESSIONAL TEAM

R&D TEAM

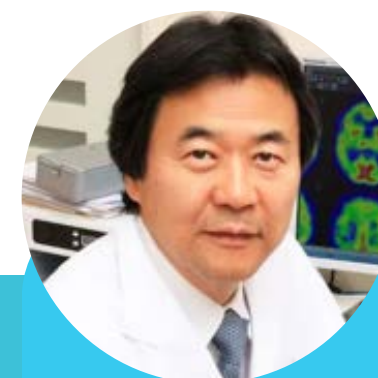
science and research



Prof. Shigeo
Ohta, Ph.D.



Dr. Yoji
Nishijima



Prof.
Takashi
Asada



Dr. Hirohisa
Ono



doc. PhDr.
Michal
Botek, Ph.D.

development and production



PharmDr.
Milan
Krajicek



PharmDr.
Kateřina
Svrčinová



Ing. Pavel
Vasek



Ing. Gabriela
Maršálková

expert advisors



MUDr.
Gabriela
Hanslianová



MUDr. Pavel
Malovič, PhD.,
MPH



MD
Lubomír
Beran

COMPANY MILESTONES

H2 GLOBAL GROUP

2021

- First public prospectus registered by the Czech National Bank
- Launch of new products on the market and their distribution abroad
- Founding of H2 Medical Technologies
- Research and development of new devices
- and applicators

2023

- Arrival of new associate Prof. Shigeo Ohta
- Introduction of new applications in H2 Medical and SPA
- Move to new office space
- Expansion of the team from 7 to 30+ full-time employees
- Entering the rehabilitation segment with Virtual Reality and acquiring a 20% stake in VR Vitalis

2020

- Appointment of the first key partners
- Input of private capital
- Registration of first patents and utility models
- Purchase of key domains
- Appointment of Milan Krajíček, PharmD, as Director of Research, Development and Manufacturing of new products.
- Establishment of Molecular HydroGEN Investment Group

2022

- Raising additional private capital
- Expansion with new projects and establishment of new entities and products (H2 Bike)
- Formation of H2 Times News
- Research, development and production of new products especially in the field of dietary supplements

2024

- Second investment prospectus registered
- with the Czech National Bank
- Launch of the commercial brand H2 VIBE
- Introduction of new hydrogen projects for veterinary and agri-culture
- First hydrogen device registered for veterinary use in the EU
- Research, development and production of new equipment and products
- Entry into the Telemedicine and AI segment



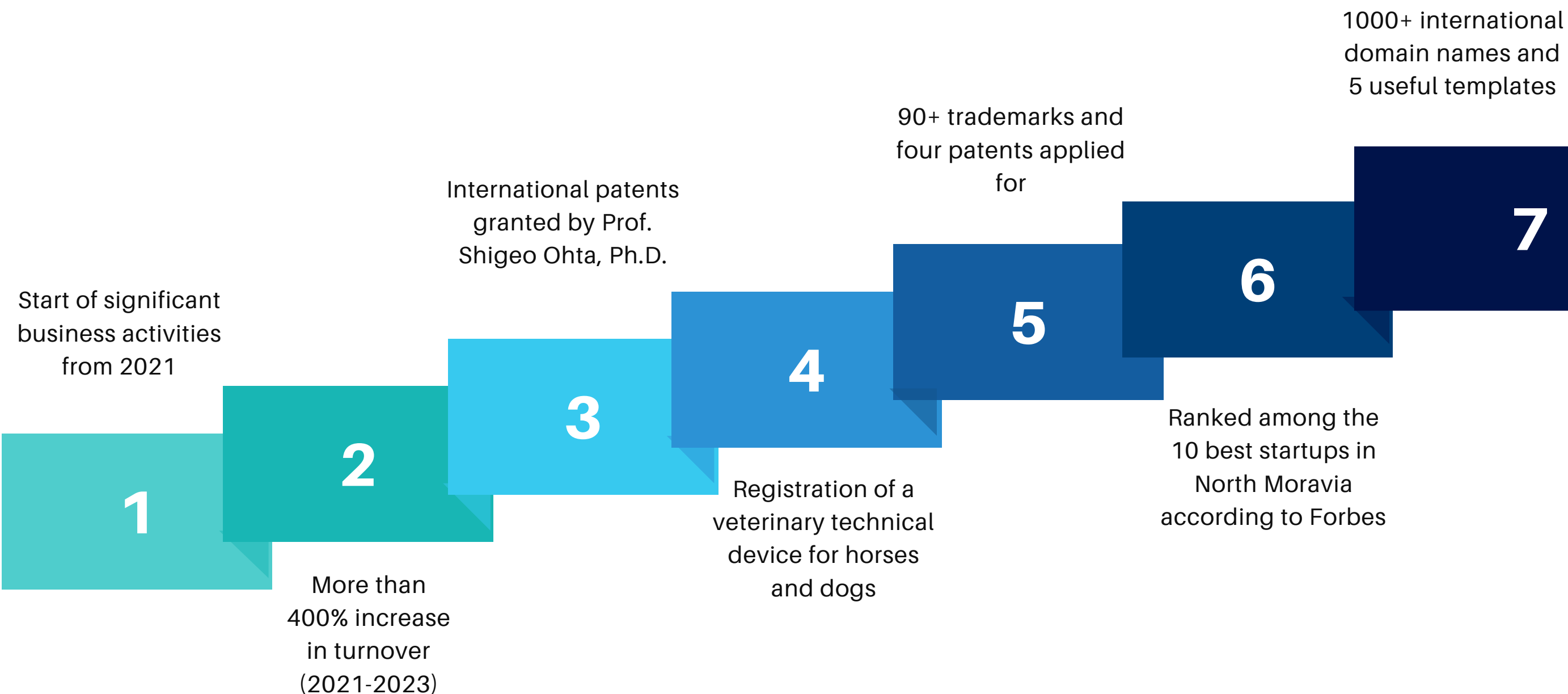
SUCCESSSES OF THE COMPANY

H2 GLOBAL GROUP

REFERENCE CLIENTS

Rehabilitation with VR in state and private hospitals

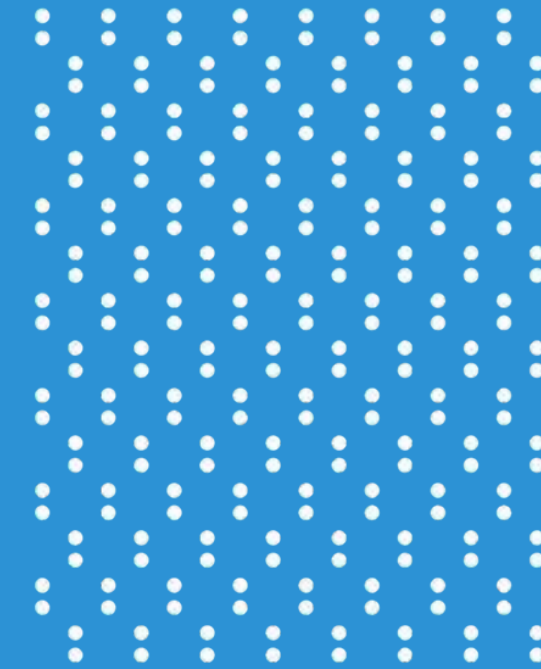
- medical spas
- dental clinics
- wellness hotels
- esthetics clinics



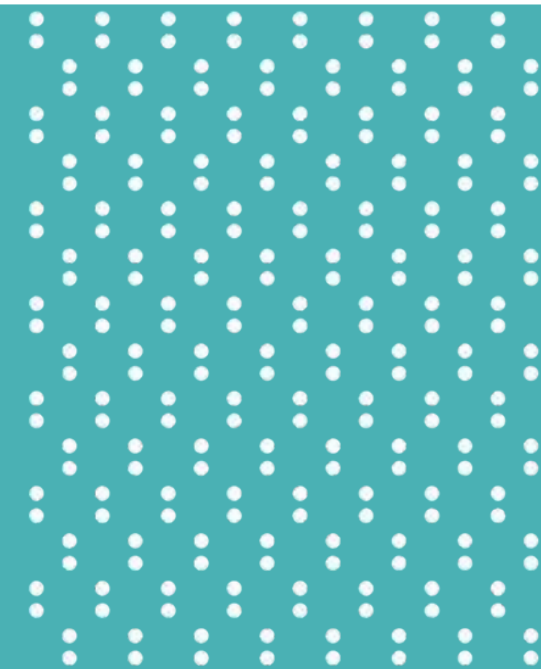
BOHDANEČ SPA
VELICHOVKA SPA
SPA SLATINICE
PAWLIK – AQUAFORUM
JANSK SPA
SPA SANATORIUM PETAS
SPA TEPLICE NAD BEČVA
LIBVERDA SPA
KONSTANTIN'S SPA
HOTEL PRESIDENT K. VARY



**PATENT FOR THERAPY
AND PREVENTION OF
DEMENTIA (Alzheimer's
disease)**



**PATENT FOR ISCHEMIC
REPERFUSION INJURY (STROKE
AND HEART INFARCTION)**



KNOW-HOW

PATENTS AND UTILITY DESIGNS



Devices for
topical or
transdermal gas
therapy, mainly
molecular
hydrogen



Equipment for
treatment and
regeneration of
the ear



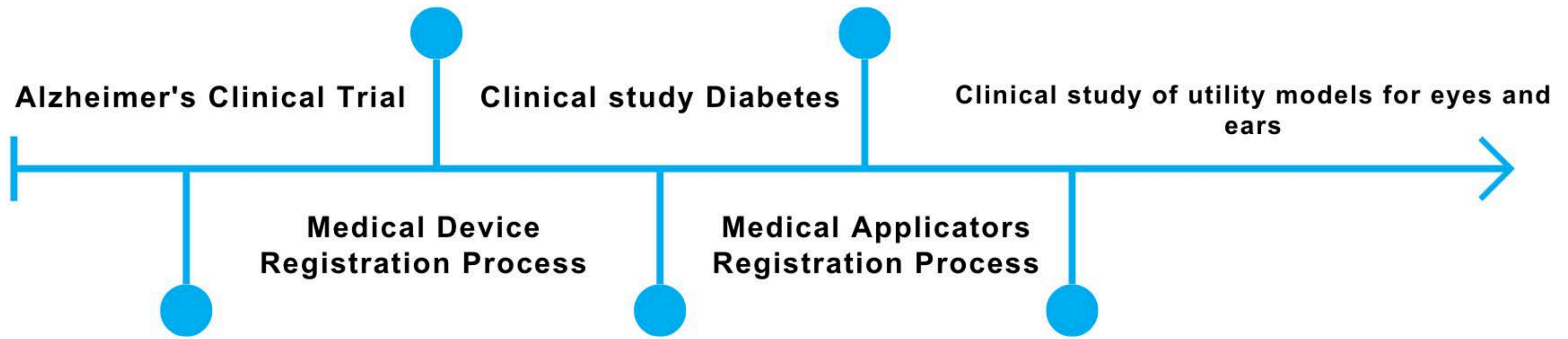
Equipment for
eye treatment
and
regeneration



Equipment for
the treatment
and
regeneration of
the oral cavity

PLANS FOR THE FUTURE

H2 GLOBAL GROUP



UNIQUE KNOW-HOW

WHAT WE ARE EXCEPTIONAL AT



Own research, development,
production - patented technology



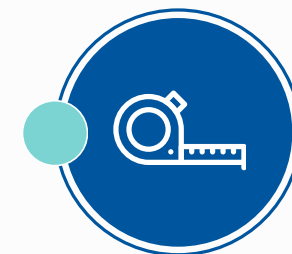
13 years of experience and experience as the
founder of a molecular hydrogen company



30 years of research by a Japanese team
led by Prof. Shigeo Ohta



Our own unique solution: measurement,
evaluation, individual analysis,
recommendations and services



We offer B2B and B2C customers a unique
solution based on molecular hydrogen,
including service packages





INVEST WITH US

SMART AND RESPONSIBLY



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H2 Global Group s.r.o.

ID: 11651091

Technologická 376/5, 708 00 Ostrava-Pustkovec,
Czech Republic

www.H2Global.group

