



Alzheimer's Dementia and Beyond: A Molecular Hydrogen-Based MedTech Platform Solution

Series A | \$25–35M

www.H2global.group

 *Hydrogen - the molecule of life that connects the world*

The Currently \$1.3 Trillion Per Year Dementia Crisis Has No Effective Solution



139M

Projected people living with dementia globally by 2050 (up from 55M in 2023).



< 1.5%

Of patients eligible for current biologics (e.g. lecanemab), which can cost up to **\$90,000/year (per patient)**.



\$2.8T

Projected global annual cost of dementia care by 2030.

- ⚠ **Serious Safety Risks:** ARIA side effects (brain swelling and bleeds) occur in **12–35%** of treated patients.
- ✘ **Regulatory Barriers:** UK NICE rejected lecanemab in January 2025 as not cost-effective for public health systems.
- 🚫 **No Clinically Meaningful Effect:** A Cochrane review (2026) of 17 clinical trials with 20,342 patients found that anti-amyloid drugs show no clinically meaningful positive effect on cognitive decline or dementia severity. (Source: Cochrane, 2026)

A scalable, non-invasive approach is urgently needed to address neurodegeneration.

Our Solution: Japanese Science Meets European Innovation



Scientific Foundation

- Built on **19 years** of rigorous research.
- Led by co-founder **Prof. Shigeo Ohta** (pioneering paper in *Nature Medicine*, 2007).
- Addresses root causes: oxidative stress and chronic neuroinflammation.



The H₂ Molecule

- The smallest, most bioavailable molecule—easily **crosses the blood-brain barrier**.
- **Selective antioxidant:** Neutralizes only harmful free radicals ($\cdot\text{OH}$, ONOO^-).
- Does not disrupt beneficial metabolic signaling.



Unmatched Safety

- Backed by **2,000+** scientific publications globally.
- Over **150 human studies** and 80+ clinical trials.
- **Zero reported serious adverse effects** across all studies to date.

Clinical Validation: Disease-Modifying Effect

Published Evidence

Ono/Ohta Pilot Study (2023) - Japan

H₂ inhalation for 6 months in Alzheimer's patients.

- Significant cognitive improvement (ADAS-Cog).
- Improvement persisted 6 months *after* treatment cessation.
- **Conclusion:** Demonstrates a **disease-modifying** effect, not just symptomatic relief.

Nishimaki RCT (2018) - Japan

H₂-rich water improved cognition in APOE4 carriers (the highest-risk genetic group for Alzheimer's).

Ongoing EU Clinical Trial

State Institute for Drug Control Approved Clinical Trial (2026) - Czech Republic

Currently underway at University Hospital Ostrava.

- **Principal Investigator:** Prof. David Školoudík
- **Cohort:** 30 patients (MCI to moderate dementia)
- **Protocol:** H₂ inhalation 1 hour/day, 5x/week
- **Duration:** 6 months (3 mo. intervention + 3 mo. follow-up)
- **Status:** Results are trending highly positive.

Proprietary IP and Regulatory Moat

🌟 Core Patent Portfolio

European Patent (EP3701956B1) for the prevention and treatment of Alzheimer's dementia.

- ✓ Patent expansion to the US market currently in progress.
- ✓ Strong defensive moat against competitors.

🔧 Specialized Applicators

Additional patents and utility models covering proprietary delivery mechanisms:

- ✓ Inhalation systems (H2-AIR BLEND)
- ✓ Dental, ocular, and auricular applicators
- ✓ Sleeve applicators for targeted local therapy

Path to Market: **World's First H₂ Medical Device**

● **2026**

Clinical Trial Completion

Finalize State Institute for Drug Control-approved trial at University Hospital Ostrava.

○ **2027**

EU Registration (CE Mark)

Official registration as a medical device in the European Union.

○ **2028**

FDA Registration

Regulatory approval and market entry in the United States.

○ **2029**

Asian Market Expansion

Regulatory registrations across key Asian markets.

Comprehensive IP Protection

Key Patents (Prof. Ohta & H2 Global Group)

EP 3701956 B1

Prophylactic/therapeutic agent for dementia. Clinically proven reduction of ADAS-cog score by 3+ points.

PCT/JP2023/028004 (EP 4563154 A1)

Disease-modifying drug

for Alzheimer's disease. Protects causal treatment with long-term effects (6–12 months post-treatment). Entering 22 national phases incl. USA, China, Canada.

EP 3485892 B1

Composition for prevention/treatment of MCI or dementia specifically in ApoE ε4 allele carriers.

US 9,050,278 B2

Reactive oxygen species scavenger in vivo. Protects the core mechanism of action against oxidative stress and aging.

Key Utility Models (Technical Solutions)

H2 + VR Integration (CZ 37523 U1)

Core platform synchronizing VR scenes with patient breathing frequencies for maximum H2 absorption.

Specialized Applicators

Proprietary targeted delivery mechanisms:

- **Ear Applicator (CZ 36651 U1):** Local therapy for hearing protection and cochlear regeneration.
- **Eye Mask (CZ 36700 U1):** Steam and H2 therapy for dry eye syndrome and screen fatigue.
- **Oral Care (CZ 37033 U1):** Targeted mouthpiece for periodontal disease and accelerated healing.
- **Transdermal Sleeve (CZ 36904 U1):** Pressurized gas sleeve for joint inflammation, skin conditions and tissue regeneration.

A Unique Platform Solution Beyond Alzheimer's

Our H₂ platform addresses the root causes of cellular damage—**oxidative stress and inflammation**—making it highly scalable across medical and lifestyle sectors.

- Broad Applications:** Alzheimer's/dementia, Type 2 diabetes, ocular/auricular inflammatory conditions, and wound healing.
- Specialized Applicators:** Proprietary inhalation, dental, ocular, auricular, and sleeve applicators for targeted delivery.
- Military & First Responders:** Growing traction for physical regeneration and PTSD support.
- Synergistic Ecosystem:** With VR Vitalis for combined physical & cognitive neurorehabilitation.



VR Vitalis: Amplifying Our Platform



Synergy: H₂ addresses cellular damage while VR addresses psychological and cognitive rehabilitation.

- 🌟 **Certified Medical Device:** VR LIFE's VR Vitalis is an MDR-certified medical device for neurorehabilitation.
- 🏥 **Proven Deployment:** Active in **40+ European hospitals**, including a veteran hospital in Kremenchuk, Ukraine.
- 📦 **Comprehensive Care:** Covers 7 rehabilitation areas (upper/lower limbs, back/neck, breathing, cognition, fine motor, relaxation).
- 📈 **Clinical Results:** Demonstrates **24–50% pain reduction**, 60% higher patient motivation, and enables a 3:1 patient-to-therapist ratio.

Investment Validation:

Closed a **\$650K seed**; H2GG holds **18.26%** (~\$1.38M implied).

Proven Commercial Traction

📈 ~\$8M (179.5M CZK)

Cumulative revenues achieved between 2021 and 2025.

📍 **37+ Commercial Deployments**

Successfully operating across the Czech Republic and Slovakia.

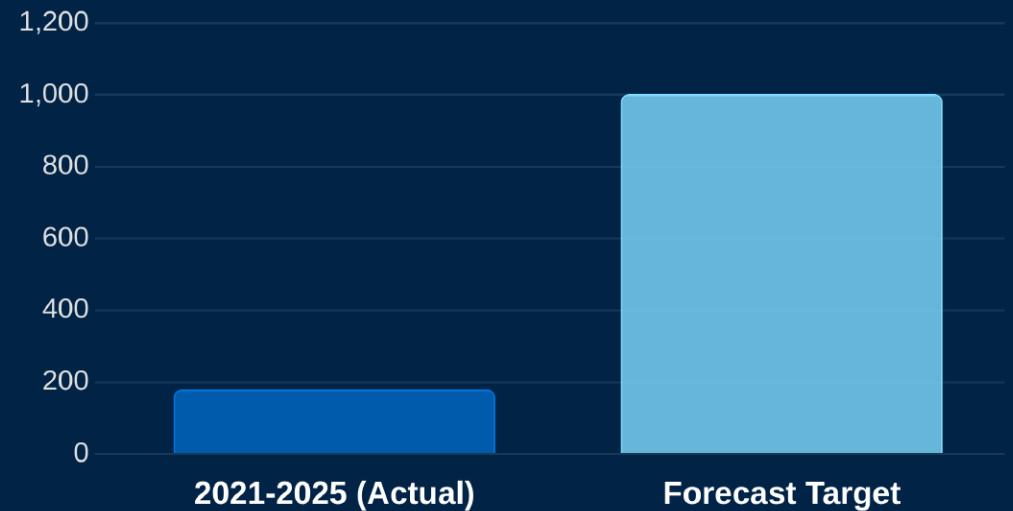
🏠 **H2 Longevity Centers**

A highly scalable, franchisable model combining clinical care with lifestyle wellness.

Key Operational Sectors:

Medical Spas	Sport & Physio
Alternative Care	Dental Clinics
Veterinary	Aesthetics

Commercial Revenue Forecast



Targeting **1,001.7M CZK (~\$44M)**
70% B2B | 30% B2C

Massive Market Opportunity



Global H₂ Products Market

\$5.0B

Projected by 2030

Growing from \$2.1B (2024)

CAGR: 15.7%



Global Alzheimer's Therapy Market

\$10.9B

Projected by 2034

Growing from \$5.1B (2024)

CAGR: 8.7%



Global Longevity Market Potential

\$1.87B

Projected by 2034

Driven by demand for scientifically validated, premium solutions.



Strategic Focus: The US market represents **46%** of the global medical device market. Our ongoing FDA registration pathway is critical to capturing this immense value.

Investment Opportunity: Series A

The Offering

Target Raise **\$25M – \$35M**

Pre-Money Valuation **~\$80M**

Investor Profile:

Tailored for institutional and strategic investors in MedTech/Longevity.

Strategic Execution

- ✓ Finish clinical trials & R&D.
- ✓ Obtain CE Mark and FDA approvals.
- ✓ Execute US market entry.
- ✓ Scale commercial ops and H2 Centers.
- ✓ Restructure and retire existing debt obligations to strengthen the balance sheet and position the company for accelerated growth.

Target Exit Valuation (within 3 years)

\$500M – \$1.5B



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