

Deep tech innovations towards clean seas

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STRATEGIC PARTNERS

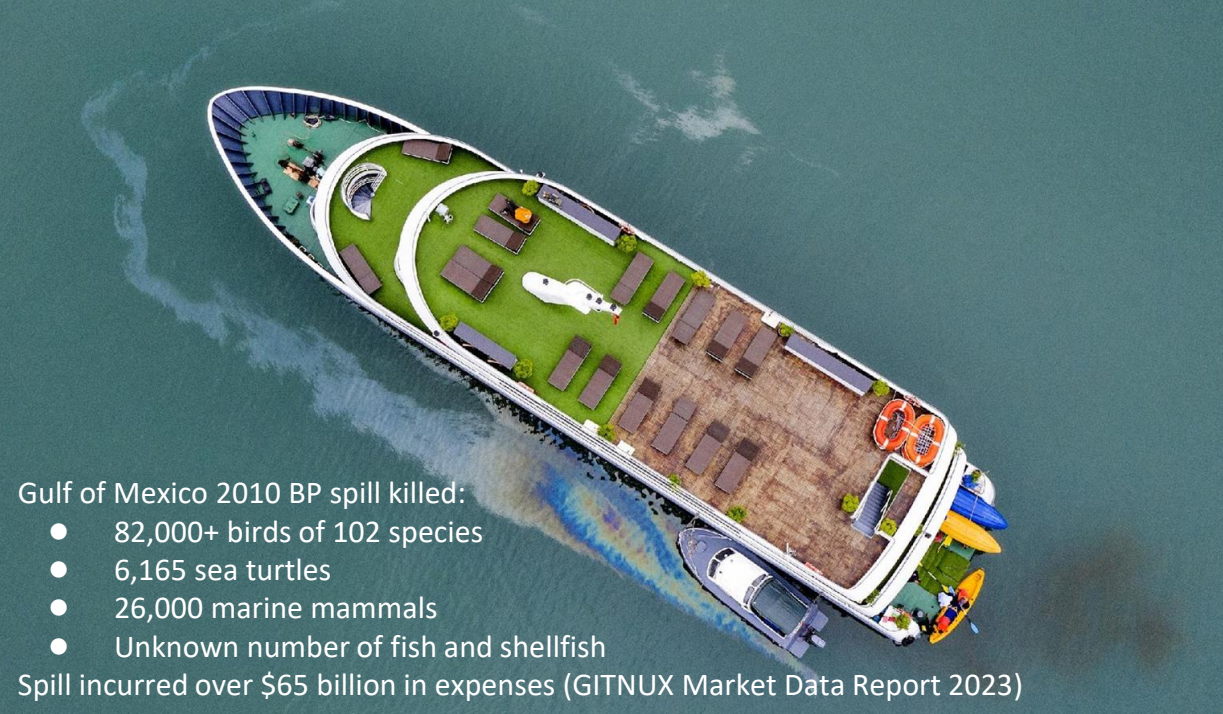


PORT OF
KLAIPĖDA



MEMBER OF





Gulf of Mexico 2010 BP spill killed:

- 82,000+ birds of 102 species
- 6,165 sea turtles
- 26,000 marine mammals
- Unknown number of fish and shellfish

Spill incurred over \$65 billion in expenses (GITNEX Market Data Report 2023)



PROBLEM AND LIMITS OF CURRENT SOLUTIONS

Oil is one of the most abundant pollutants in the oceans. About 3 million tons of oil contaminates the oceans annually.

Ships and machines are burning fuels, which may have leakages and cause small or big disasters.

There are a few solutions to collect fuel waste, but they all have significant drawbacks:

1. **Chemicals** that make fuel waste heavier, making it sink to the seabed. This merely hides the problem but does not solve it.
2. **Mechanical removal**, at its optimum, can effectively clean up to 40% of the targeted material (UNEP).
3. **Oil incineration** removes the oil from the water but pollutes the atmosphere and poses health risks.
4. **Biological methods** may involve microorganisms that degrade the oil, but are too slow (take up to one year) and may not be effective for all types of spills.



BLUE BIOTECHNOLOGY

A European patent „Method for Petroleum Hydrocarbon Bioremediation Using Fungi“ granted by the European Patent Office (No. EP20198290.7, November 15, 2023).

BUSINESS ADVISORS:



GRANTS:



Creating the
future of Lithuania

2014-2020 Operational
Programme for the
European Union Funds
Investments in Lithuania

European Social Fund Cohesion Fund
European Regional Development Fund

#WomenTechEU



European
Commission



Microorganisms extracted from
the Baltic Sea



Microorganisms testing and
cultivation



Integration into sorbents



Testing in dynamic conditions

FIELD TEST IN KLAIPEDA HARBOR, 2022

In cooperation with the Ministry of Environment of the Republic of Lithuania and Klaipeda State Seaport Authority (Lithuania) the blue biotechnology was **successfully tested in a real-life conditions** at Klaipeda harbor area.

For this test, the oil-degrading microorganisms were integrated in a different material as a proof of concept: the agriculture residue – **straw**, which was chosen among different matrices.

The water quality has been successfully restored to its initial parameters, as confirmed by the report from an independent laboratory. This achievement marks a significant milestone in the development of our biotechnology.

The next step of our product development is to combine this blue biotechnology with our paper waste-based aerogel.



VALUE PROPOSITION

Composition: Paper waste-based sorbent

Sustainability: 100% sustainable and biodegradable

Efficiency: x2 lighter and x2 more effective than synthetic industrial sorbents

Reusability: Up to 5 times reuse, minimizing waste

Hydrophobic Nature: Repels water for enhanced oil absorption

Integrated Microorganisms: Contains oil-degrading microorganisms for accelerated cleanup

Environmental Impact: Microorganisms neutralize oil pollutants into CO₂ and water



ClimAccelerator

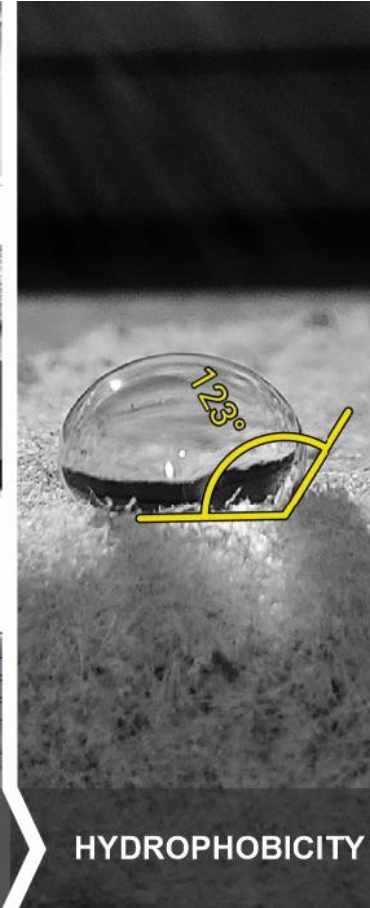
Baltics & Slovakia



Funded by the
European Union



Production Technology



InnoAerogel

Oil spill sorbent

saving the future...

> 1000
aerogel
samples

OUTSTANDING PRODUCT ON THE MARKET

- Fast activation
- Collect 20 times its own weight
- Scalable
- Biodegradable
- Reusable

Contribution to the UN's SDGs:



European Innovation Council and SMEs Executive Agency (EISMEA)

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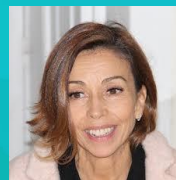
NEWS ARTICLE | 14 April 2023 | European Innovation Council and SMEs Executive Agency

Second edition of WomenTechEU supports 134 female-led deep-tech companies with an increased budget of 10 million euro

Today, the Commission announced the results of the second WomenTechEU call, targeting innovative European deep-tech companies founded by women. Almost three times as many companies have been selected this year compared to the pilot.

Another **134**
companies selected !

#WomenTechEU



Cristina Simoes

READINESS ASSISTANCE

APPLY NOW!
DEADLINE: 1 AUGUST 2024

BlueInvest Readiness Assistance is an exclusive coaching programme for high potential EU start-ups and SMEs with innovative and sustainable products and solutions for the Blue Economy.

OPPORTUNITIES START HERE



EIC Accelerator

Funding and investments through the EIC Fund for individual start-ups and small companies to develop and scale up game changing innovations

European
Innovation
Council



APPLICATION PROCESS FOR EIC ACCELERATOR

01

Short proposal
Results after 4 weeks

02

Full proposal
Results after 5-6 weeks

03

Face-to-face interview
Results after 2-3 weeks

04

Grant agreement negotiation
2-6 months process



Grant funding

Non-dilutive, up to **€ 2.5 million**, for innovation activities only (TRL 5-8), to be completed within 24 months.

- **Grant only** - for companies aiming to reach the TRL 8 at the end of the project and continue further development without the EIC support
- **Grant first** - for companies reaching TRL 8 at the end of the project and possibility to apply for dilutive equity to reach TRL 9



Direct investment

Dilutive, up to **€ 15 million**, for market deployment (TRL 9), «patient capital» principle with a 7-10 years perspective.

- **Blended finance:** a mix of non-dilutive grant for innovation activities (TRL 5-8) and dilutive equity for market deployment (TRL 9).
- **Investment only:** for mid caps companies and companies that have received a «grant only».

European
Innovation
Council



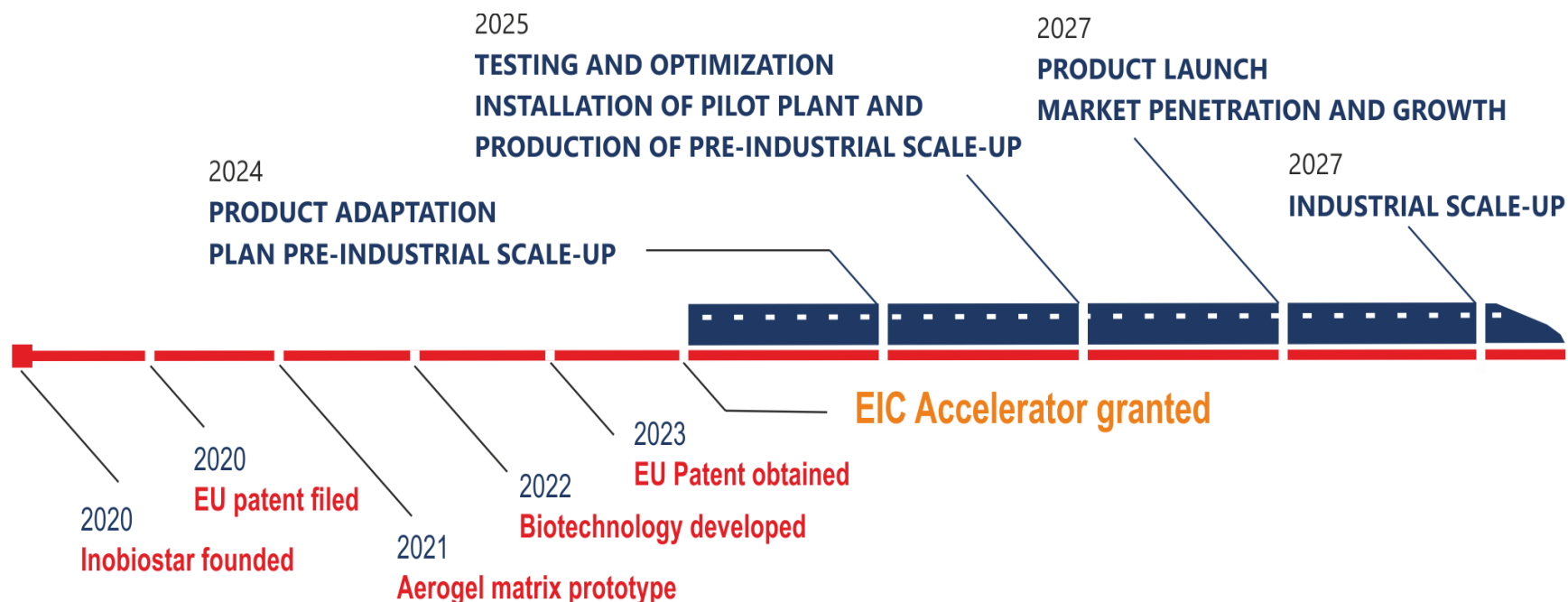
Co-funded by
the European Union



INNOAEROGEL PROJECT €2.3M GRANTED



ROADMAP: INOBIOSTAR IN FIVE YEARS





Dr. Tatjana Paulauskiene

Founder, CEO

Environmental and Chemical Engineering

13+ years of experience in sustainable oil spills clean-up



Viktorija Snioliene

Business Development Manager

MBA

15+ years of experience in project management and strategic planning



Dr. Marija Katarzyte

CTO

Microbiology

9+ years of experience in aquatic microbiology and molecular methods



Dr. Jochen Uebe

R&D

Chemistry

10+ years of experience in the professional solution of individual problems of industrial projects

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CLEANTECH
CLUSTER
LITHUANIA



KLAIPĖDOS
UOSTAS

PORT OF
KLAIPĖDA



Embassy of the Republic
of Lithuania to the
Kingdom of Norway



AAA
Law



WESTERN
SHIPREPAIR
BLRT GRUPP

Spartalogistics

WAVE

Novogene

Advancing Genomics, Improving Life



KLAIPĖDA SCIENCE
AND TECHNOLOGY PARK



Rüdiger Strempe
Executive Secretary,
HELCOM



Agne Vaitkeviciene
Vice President at
LithuaniaBIO



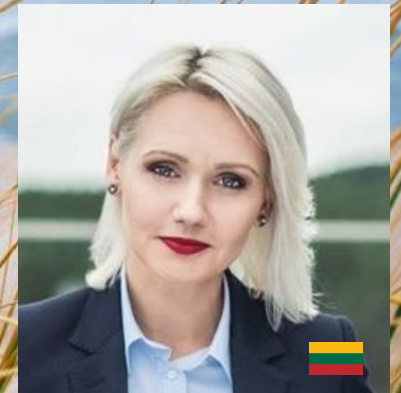
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Business Coach for
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