



Magmatic Bio GmbH i.Gr.

Vienna, Austria
+43 676 4901442
Oliver Siegel
os@magmatic.bio
www.magmatic.bio

Funding:

Bootstrapped

Seeking Seed Round: €4M

Use of Proceeds:

- Sponsored research agreement with Penn State University
- Recruitment of up to 15 FTEs
- Furnishing biochemistry

Revenue Forecast:

US\$ 337m (2033e)
based on target installed
capacity of 135'000 mT LCE

Competitive Advantage:

Patentable, highly selective protein
based metal separation

Best in class cash cost of Lithium
production

Best ecological footprint of Lithium
production

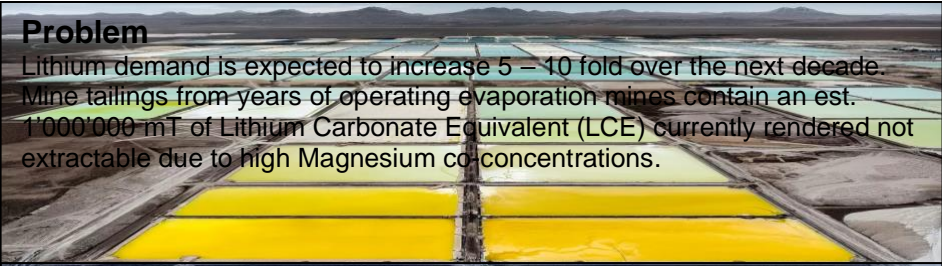
Co-production of other valuable metal
intermediated possible

Platform scalable to other complex
metal separation problems

Key Executives:

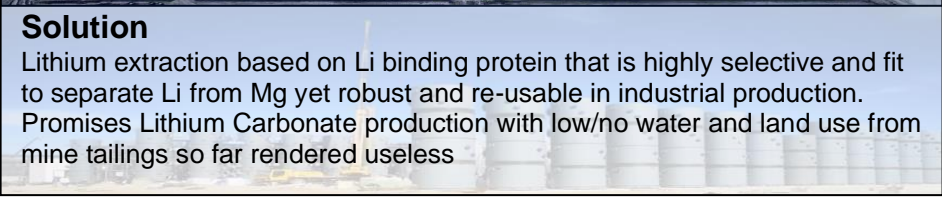
Oliver Siegel CEO
Dhaarsi Jaksch, PhD, Principal
Scientist
TBC, PhD, Principal Process Engineer

Problem



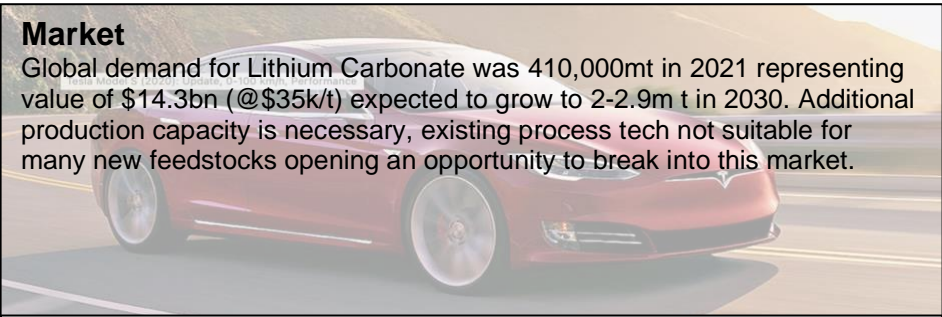
Lithium demand is expected to increase 5 – 10 fold over the next decade. Mine tailings from years of operating evaporation mines contain an est. 1'000'000 mT of Lithium Carbonate Equivalent (LCE) currently rendered not extractable due to high Magnesium concentrations.

Solution



Lithium extraction based on Li binding protein that is highly selective and fit to separate Li from Mg yet robust and re-usable in industrial production. Promises Lithium Carbonate production with low/no water and land use from mine tailings so far rendered useless

Market



Global demand for Lithium Carbonate was 410,000mt in 2021 representing value of \$14.3bn (@\$35k/t) expected to grow to 2-2.9m t in 2030. Additional production capacity is necessary, existing process tech not suitable for many new feedstocks opening an opportunity to break into this market.

Competitive Landscape

Approx 45 technology development projects for direct lithium extraction from brine, all based on low selectivity mineral sorbents or chemistry.

Magmatic has established unique knowhow and will generate patents on protein sequences and associated process technology for protein fixation and separation

Business Model

Product as a service (PaaS)

25 – 30% royalty income, milestone payments

Future customers:

SQM, YLB, Albemarle/Livent, CATL, BYD, Tesla

Team

Oliver Siegel, Founder, CEO
Biotech technology developer, **raised >€100m**, AFFiRiS, CEO: therapeutic vaccines in cardiometabolic, AMSilk, COO: spider silk protein for textile/automotive/medtech applications, r
Joey Cotruvo, PhD, Scientific Co-founder
recent **Nature** publication, inventor of protein-based metal separation
Tilmann Bürckstümmer: PhD, Co-founder, **CRISPR technologist**, serial biotech entrepreneur
Jörg Herwanger, PhD, Co-Founder, **Oil & Gas Geophysicist**, Ex- Schlumberger
Dhaarsi Jaksch, PhD, **Principal Scientist**: Max Perutz Laboratories with Prof. Javier Martinez

Traction to Date

Identified novel Lithium binding protein and engineered it to increase affinity from millimolar to micromolar
Established a lab scale metal extraction protocol based on proprietary LanM rare earth binding protein
BASF expressed interest in our technology for Lithium-ion blackmass refining