



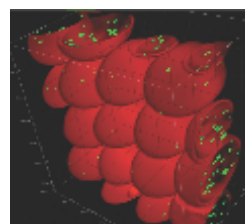
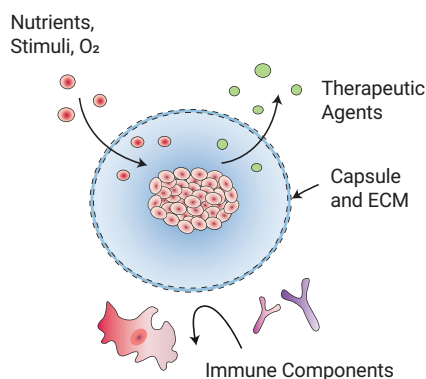
Allarta Life Science

Allarta Life Science Inc. is a pre-clinical life science platform company developing next generation biomaterials for immune privileged delivery and storage, of cells, stem cells and biologics. Allarta's technology is based on 25+ years of foundational research in polymer science and aims to enable scale up of global allogeneic cell-based therapies for chronic endocrine disorders such as Diabetes, Hemophilia and Lysosomal Storage Disorders.

Novel BioMaterial Technology

Unique, proprietary immuno-protective capsules and retrievable structures that enable cell-based therapies to treat diabetes, hemophilia, and lysosomal disorders (orphan diseases such as Batten's and Gaucher).

Stem-cell derived cell therapies for endocrine disorders hold the promise of curative treatments equivalent to organ transplants but without need for donors or systemic immune suppression. As these therapeutic cells move towards clinical trials, the needs for non-immunogenic yet robust capsules and or other retrievable forms are a key requirement.^{1,2,3}



Data & Clinical Development Path

- Tracking 9 months blood glucose correction using encapsulated rat islets in diabetic mice
- Tracking blood glucose corrections using encapsulated human islets in diabetic mice
- In vitro studies showing viability, function, and containment of h-iPSCs
- Large animal studies (Pigs, NHP) in process
- Targeting Q4 2023 Clinical Trials

Indications

- Diabetes, Hemophilia, Lysosomal Storage Disorders, Cancer

Relevant Companies (Device, Cells)

- Semma Therapeutics, Boston, MA
- Sigilon, Boston, MA
- ViaCyte, San Diego, CA

Company Details

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Allarta Team

Our team has deep expertise in polymer science, immunology, cell biology, paediatrics, oncology, biomedical engineering, surgery, preclinical research, and business.

IP

Exclusive in-licensed patents from McMaster University
Additional company patents
Pipeline of new technology company patents in process

Funding

Seed investors: Mark Krembil, Ian Delaney, McMaster University

Board of Directors



Ian Delaney (Chair)

Retired Chairman,
Sherritt International



Juliet Daniel, PhD

Professor,
McMaster University



Mark Krembil

President,
Krembil Foundation



Harald Stover, PhD

Founder, CEO



Maria Antonakos, MBA

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Former, Eli Lilly



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Polymers, UCSB, US



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Center (BIDMC)



Asimina Arvanitaki, PhD

Physics, Perimeter Institute

Appendix

Market size for cell encapsulation technology for endocrine disorders. Current global economic costs of major endocrine disorders are well above one trillion US dollars, with Diabetes (T1 + T2) alone accounting for \$700 billion annually. This is assumed to grow at 4% CAGR to about two trillion dollars by 2028.⁴ It includes encapsulation of therapeutic cells addressing a range of endocrine disorders including T1D + T2D, hemophilia, lysosomal disorders, and Parkinson's. The global annual market for therapies for these disorders' amounts, conservatively, to about \$100 billion, again expected to grow to \$200 billion by 2028. Cell-based therapies are proposed to capture 10% of this market, or \$20 billion annually by 2028. Cell encapsulation technology is proposed to account for 20% of the total cell-based therapy market or \$4 billion annually by 2028.

1. Scharp, D. W.; Marchetti, P. Encapsulated islets for diabetes therapy: history, current progress, and critical issues requiring solution. **Adv Drug Deliver Rev** 67-68, 35–73 (2014)
2. Dolgin, E. Diabetes: Encapsulating the problem. Cell Therapy could cure Type 1 Diabetes - if only the immune system didn't get in the way. **Nature** 540, S60–S62 (2016)
3. Farina, M., Alexander, J. F., Thekkedath, U., Ferrari, M. & Grattoni, A. Cell encapsulation: Overcoming barriers in cell transplantation in diabetes and beyond. **Adv Drug Deliver Rev** 1–24 (2018). doi: 10.1016/j.addr.2018.04.018
4. World Pharma Report 2018