

Agathos Biologics

άγαθός



Wiktionary defines the Greek word agathos as "good, brave, noble, moral". Agathos appears 102 times in the New Testament and its usage means "good" or "of good constitution or nature". We chose this name as an aspirational goal for the company.

We strive to execute science that is useful and ethical; only by achieving both these goals can we best serve our clients, employees, and society.

Use of living cells to manufacture pharmaceuticals



Opportunities to make a difference

86%

Portion of large employers that are concerned about the impact of million-dollar treatments being approved by the FDA. Lack of scalability of existing cell lines, including HEK293, is "the main challenge". We must do better with better, ethically-developed cells and delivery technology.

Gene Therapy Drugs That Cost Millions Have Employers and Health Plans Worried (insurancejournal.com) AAV VECTOR MANUFACTURING - Challenges & Opportunities in the Manufacturing of AAV Vectors Used in the Delivery of Gene Therapy Treatments (drug-dev.com) BioInsights - Determining the optimal culture system for your scale up strategy

7,000

With potentially over 7000 conditions amenable for gene therapy-based intervention, the field is still lacking a robust manufacturing process to support its exponential growth. Nonetheless, the manufacturing improvements reached over the last few years are still not sufficient to satisfy the projected needs of the field and additional investments are required to deliver safe and affordable rAAV-based therapeutics to the patients.

https://linkinghub.elsevier.com/retrieve/pii/S2468451121000933



20% - 500%

Range of the increase in nonmedical vaccine exemption rates in the US. Ethically manufactured vaccines could reduce these numbers significantly. Nonmedical Exemptions From School Immunization Requirements: A Systematic Review (nih.gov) Tom Price's Views Could Feed The Anti-Vaccine Sentiment Brewing In Texas | HuffPost Life Nearly 9,000 N.J. school children skipped vaccinations on religious grounds last year - nj.com

\$109 million

Funds in 2019 from NIH for research projects involving fetal tissue. The NIH reversed restrictions on fetal tissue research and canceled ethics review of grant proposals. Use of aborted fetal tissue will remain controversial--the only solution is to create alternatives.

Living cells from aborted fetal tissue for manufacturing pharmaceuticals



Cell line	Product(s)	Indication
HEK293	Zolgensma	Spinal muscular atrophy
HEK293	Luxturna	Hereditary blindness
PER.C6	Ad26.COV2.S	COVID vaccine
HEK293	Vaxzevria™	COVID vaccine
WI-38	Various vaccines	Rubella, and others
MRC-5	Various vaccines	Hepatitis A, polio
WALVAX-5	Various vaccines	Rabies, hepatitis A, varicella

These cells are also used in the research and testing of thousands of products

Presents significant ethical issues, limits access and adoption

The Good Science Company



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Vaccines made from aborted fetus cells? Fargo firm aims to develop cell lines free of ethical concerns

Agathos Biologics, a biotechnology startup in Fargo, is working to develop cell lines to develop vaccines and other drugs that are not derived from sources that pose ethical dilemmas, such as cells from aborted fetuses.

Biotech Entrepreneurs Launch Agathos Biologics

Company Will Pursue Innovation in Biotechnology Manufacturing and Therapeutics Through Ethical Research and Development

April 21, 2021 (FARGO, N.D.) – Agathos Biologics, a biotechnology company developing transformational science in biomanufacturing, biologic payload delivery, and cell and gene therapy within a strong ethical and moral framework, today announced the launch of its research and development operations. The company has established its laboratories and offices in the growing biotechnology corridor of Fargo, North Dakota.

ENDPOINTS NEWS April 21, 2021 08:00 AM EDT Updated 08:43 AM Startups, Cell/Gene Tx



Jagadish Loganathan and James Brown are seen in the space that will house Agathos Biologics, a startup that is dedicated to deviate and the space of the space of the space that will house Agathos Biologics, a startup that is dedicated to deviate and the space of the space of

Aldevron founders back a biotech startup that's looking to end the moral debate over cell lines once and for all



John Carroll Editor & Founder

For millions of Catholics around the world, the development of new vaccines to combat Covid-19 has sparked a moral dilemma. All the approved vaccines in use relied in some fashion — on cell lines that were derived from aborted fetal tissue.

> Aldevron founders back a biotech startup that's looking to end the moral debate over cell lines once and for all – Endpoints News (endpts.com)

Strategic focus



Biomanufacturing



Cells from various ethical sources: existing or new



vaccine manufacturing with superior technology

Payload Delivery

New polymers

Bacteriophage

Engineered bacteria



Manufacture viral vectors for existing programs

Therapeutics, vaccines,

and diagnostics





Create therapeutics and diagnostics



000 Exosomes, capsomeres, other structures

Ethical viral vector and

Viral vector replacement with superior performance

Ethical products for unmet medical needs



Offer technical capabilities through products, services, and collaborations



Goal: improved products and options for research and biomanufacturing





Improved biological efficacy

North Dakota collaborations in development



NDSU NORTH DAKOTA STATE UNIVERSITY

- Exploring collaboration with NDSU to support Center of Biomedical Research (COBRE) pancreatic cancer program supported by NIH
- Bringing state of art technology to the region for collaborations with NDSU and UND

The capabilities Agathos is developing will allows us to further our research identifying potential therapies for pancreatic cancer.



Sanku Mallik, Ph.D. Professor of Pharmaceutical Sciences Director, Center for Diagnostic and Therapeutic Strategies in Pancreatic Cancer



The Intelligent Transformation of Neuronal Cell Therapy

- North Dakota biotech
- Stem cell enabled assays for precision medicine
- Agathos capabilities provided through contract research



Robert Konopacz CEO, BRAIN

North Dakota Bioscience Innovation Grant





"We are honored to receive this support from the State of North Dakota and thank the Commissioner and the Committee for their work on behalf of the citizens of the state," said James Brown, Chief Executive Officer of Agathos Biologics. "We founded the company in North Dakota because its business-friendly environment, skilled workforce, and growing biotechnology ecosystem make it an ideal place to expand the company and achieve our goal to develop genetic medicine products and services that positively impact human health and are ethically acceptable to all."

Facilities – March 2021 in North Dakota – PRACS











Expansion in PRACS

February 2022

November 2022