LYSOVETA™

AKER BIOMARINE

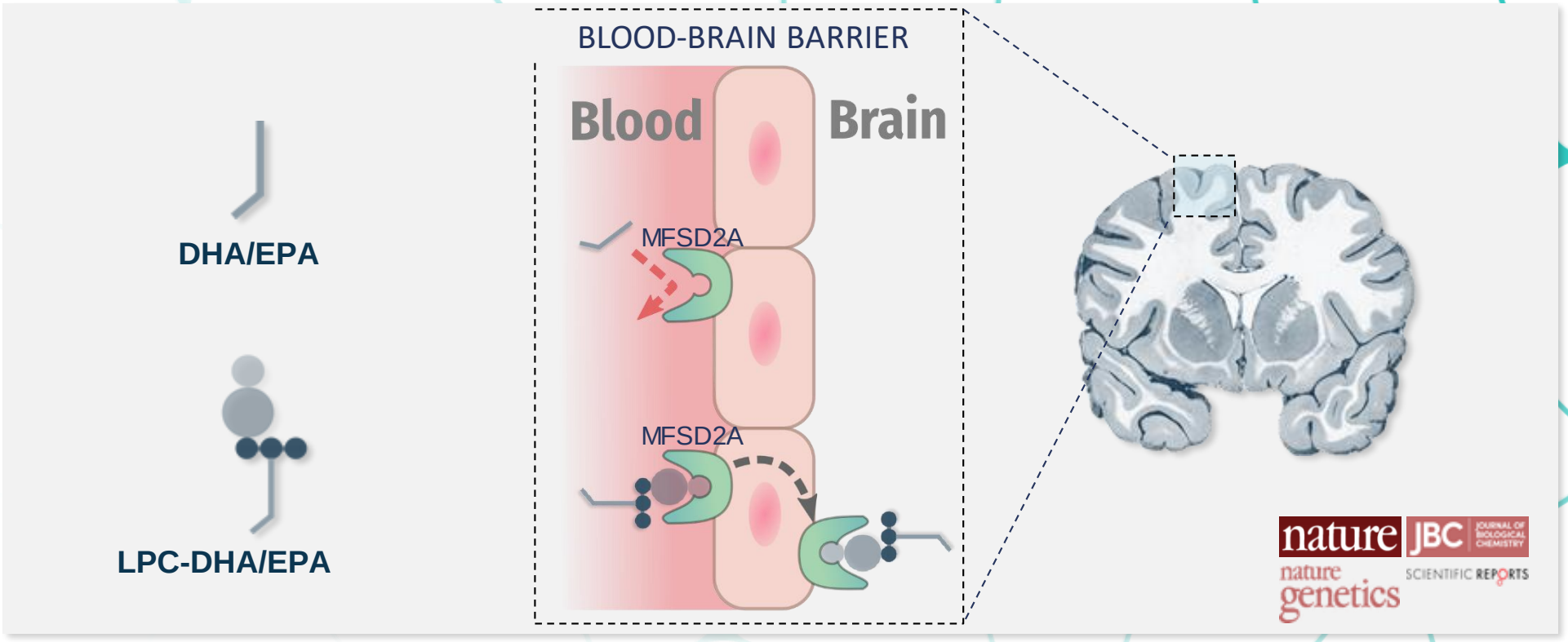
Aker BioMarine and Dr.Michael Davidson enter pharmaceutical collaboration for:

Development of pharmaceutical therapies with the use of LYSOVETA - LPC bound EPA/DHA

Matts Johansen, CEO Aker BioMarine
Michael Davidson, MD, Founder, Medical Food Solutions Research

LYSOVETA

LPC, Lysophosphatidylcholine, transports DHA/EPA through Mfsd2a across the selective Blood-BRAIN Barrier



- The brain is protected by the blood-brain barrier
- This barrier is selective and has tight control over which compounds that are allowed to enter into the brain
- Recent studies have established an understanding of how the transport of DHA/EPA into the brain is done in the form of LPC

Aker BioMarine has invested in research, development, IP-rights and commercialization strategies

6 YEARS OF...

- PRODUCT AND PROCESS DEVELOPMENT
- RESEARCHING MECHANISMS AND EFFECTS
- IN-LICENSING IP
- BUILDING COMMERCIALIZATION STRATEGIES

LYSOVETA

LPC bound EPA/DHA

STRONG IP PROTECTION IN THE LPC SPACE

Broad IP-protection of production process, raw material and different LPC products, compositions and uses across geographies

LPC SPECIFIC IP

- 2 granted patents with 21 granted patent claims
- 18 pending applications with 761 patent claims

OTHER LPC RELEVANT KRILL IP

- 45 granted patents
- 16 pending applications

LICENCED IP

- UIC – Exclusive license on LPC related IP

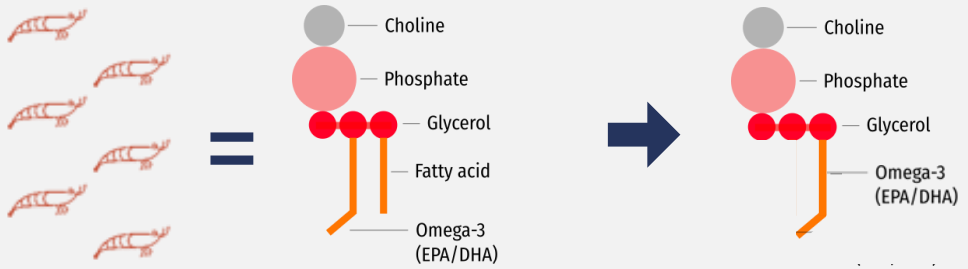
Fully integrated value chain from Antarctica to Final product ensuring a cost-efficient production process

FULLY INTEGRATED VALUE CHAIN

1. Offshore krill harvest and meal production
2. Lipid extraction
3. LPC DHA / EPA production
4. LPC DHA / EPA separation
5. Encapsulation & packaging

UNIQUELY SUITED RAW MATERIAL

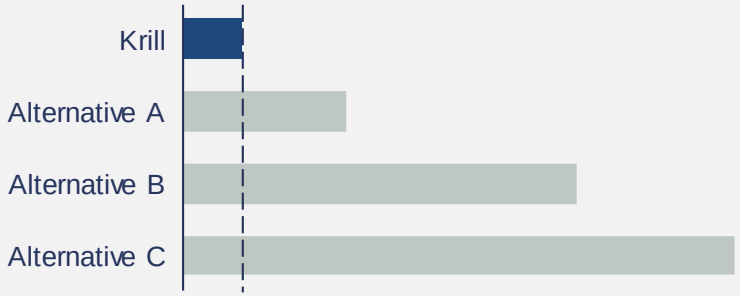
The krill phospholipid molecule has a close similarity to the LPC molecule



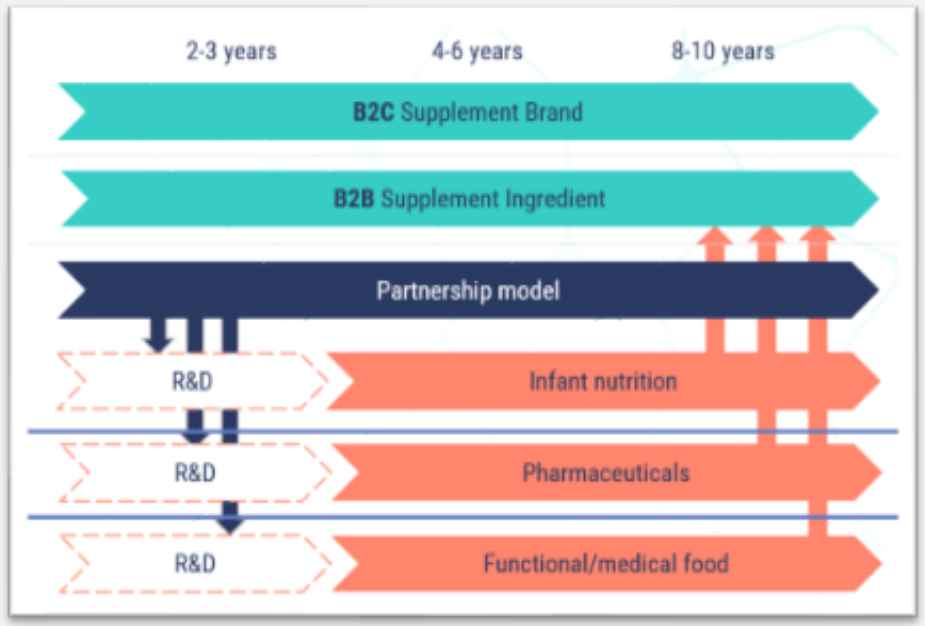
COST EFFICIENT PRODUCTION PROCESS

Our IP-protected production process gives a much lower cost compared to all other known production processes

UNIT COST BY PRODUCTION ALTERNATIVES



Developing the applications for LysovetA



Build the space across different segments trough collaboration and partnerships

COMMERCIAL PARTNERSHIPS

Partnership with Michael Davidson, targeting several indications across the space of Brain and Eye health

SUPPLEMENT PRODUCT

Commercialize LPC-DHA/EPA dietary supplement product by the end of 2022

RESEARCH & DEVELOPMENT

Collaboration and licence agreement with University Illinois Chicago

Key deal highlights

Indications covered by agreement

EYE HEALTH

- Dry Age-Related Macular Degeneration
- Dry eye syndrome
- Stargardt's juvenile blindness

BRAIN HEALTH

- ApoE4 related Alzheimer's
- Gestational diabetes and Zika infection related microcephaly

Set up

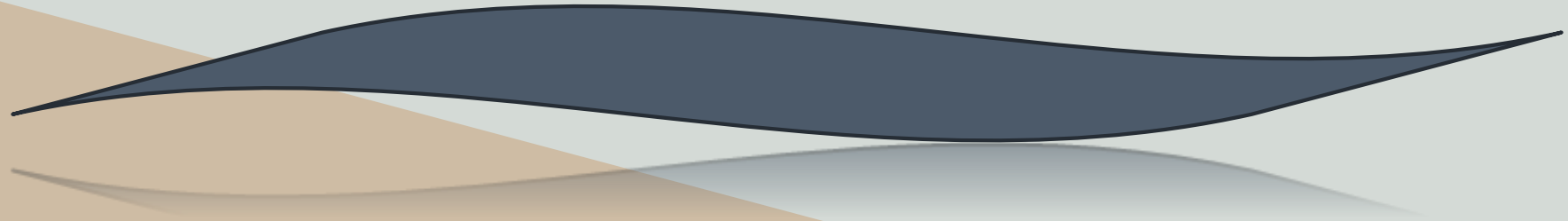
- Formation of a single purpose vehicle for the development of the therapies
- Raise approx. 30M USD to fund proof of concept clinical trials

Aker BioMarines contributions

- Exclusive license under Aker BioMarine's IP, limited to the fields of the distinct therapies
- Supply of LPC API (LYSOVETA)

Aker BioMarine's economics

- 50% equity prior to initial fundraising
- Milestones to fund Aker BioMarine's API manufacturing capabilities
- Double-digit royalties from commercial sales
- Payment of product supply



MD3 Solutions Investor Presentation

Novel Long-Chain Phospholipid Fatty Acids for Retinal and Brain Disorders

January 2021

MD3 Founder and Scientific Advisory Board

Management team

Michael Davidson, MD, FACC, FNLA

Industry

- Founding CEO, CMO of Corvidia
  - *Acquired by Novo Nordisk for $2.1B*
- Founder and CMO of Omthera
  - *Acquired by AZ for $443M in 2013*
- CEO of New Amsterdam Pharma

Academia

- Professor and Director of Preventive Cardiology at University of Chicago
- Coordinated >1,000 clinical trials in preventive cardiology
- Published >350 articles for leading medical journals
- Published three books on lipidology

Scientific advisory board

Alan Remaley, MD PhD

- Section Chief of Lipoprotein Metabolism, NHLBI
- Inventor of process to synthesize Very-long chain PUFAs

Papasani Subbaiah, PhD

- Professor of Medicine and Biochemistry, University of Illinois
- World expert on omega-3's and inventor of phospholipid-omega-3's structure for brain and retina uptake

Partnered with Aker BioMarine

Executive Summary

MD3 has partnered with Aker BioMarine to run a clinical program targeting retinal and brain disorders associated with low levels of long-chain omega-3 fatty acids

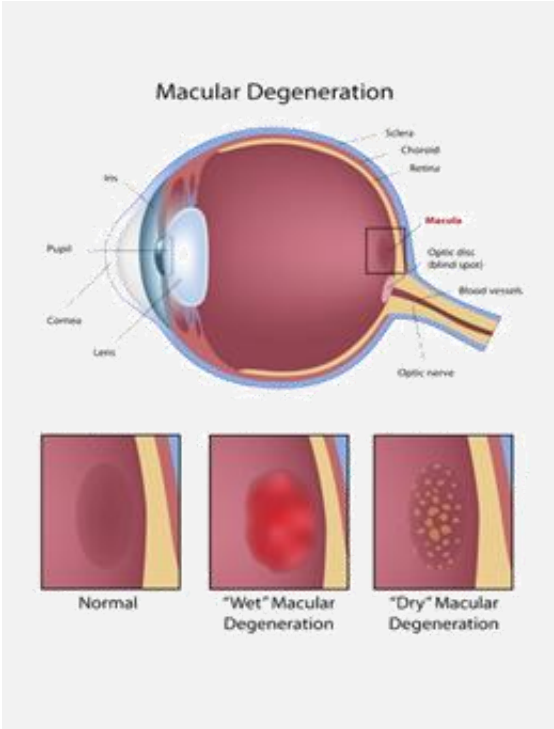
- The Company is founded around four new scientific discoveries – protected by IP – enabled by Aker BioMarine's lysophosphatidylcholine (LPC) delivery mechanism[1]
  - The omega-3 transports (Mfsd2a) across the blood-brain barrier and LPC-DHA is the preferred substrate
  - LPC-DHA is absorbed directly into the plasma and protected from digestion into free DHA
  - Elongase enzymes 2 and 4 are required to synthesize DHA and other very-long chain polyunsaturated fatty acids (VLC-PUFAs) in the retina and diminish with age resulting in lower tissue omega-3 levels
  - VLC-PUFAs are required for normal photoreceptor function and genetic deficiency (ELVOLV 4)
- MD3 is planning on launching four proof of concept clinical programs based on these discoveries:
  - Complex mixture of LPC EPA and DHA for 1) dry eye , 2) age-related macular degeneration (AMD) and 3) ApoE4 associated Alzheimer's Disease
  - Lower concentration LPC EPA / DHA based medical foods for 4) gestational diabetes or Zika infections to prevent Congenital Microcephaly
- Targeting a $30 MUSD Series A round towards select investors to set up IND and run Proof-of-Concept human trials

[1]Transporter has shown in preclinical studies to be 6.75x more efficient crossing the blood-brain/eye barrier than traditional molecule forms of EPA/DHA

Initial Target Opportunities

Potential to address significant unmet medical needs across a variety of indications

Dry AMD more than 10M in USA-no approved therapies > $20B potential



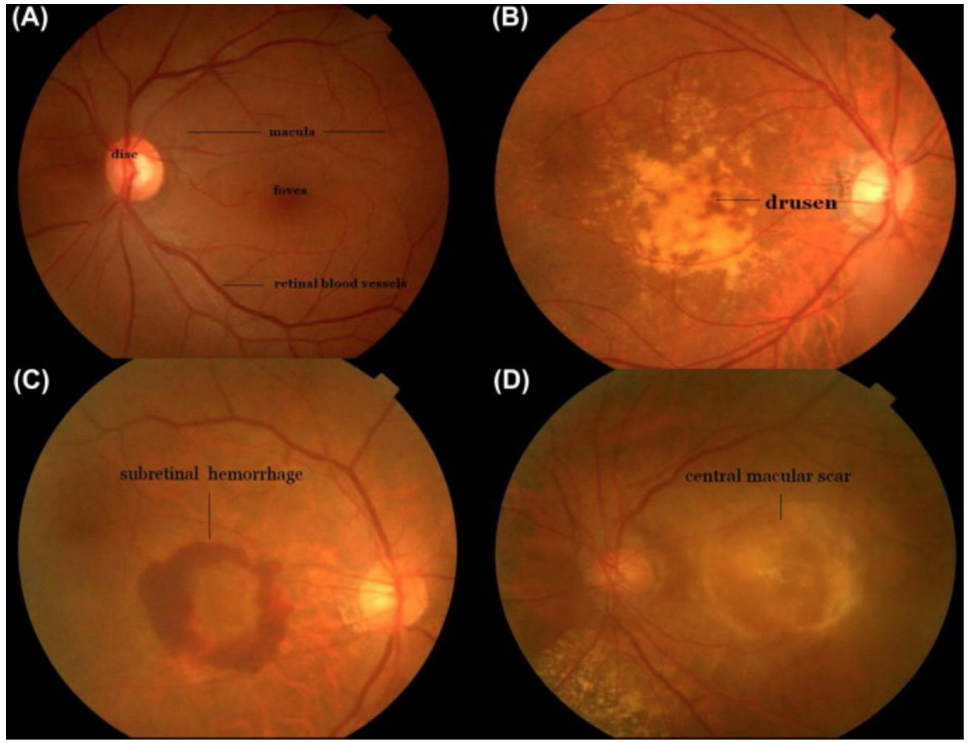
Dry Eye-The liquid drops are the largest segment of the dry eye medication market, accounting for $4B in 2019 sales- efficacy of present therapies is limited

35% of patients with Alzheimer's have apoE4-impaired blood barrier protection and DHA metabolism

Gestational Diabetes- Every year, 2% to 10% of pregnancies in the **United States** are affected by **gestational diabetes- resulting in lower DHA uptake in the fetus associated with congenital brain abnormalities**

Ophthalmic Indications for LPC OM3 include AMD (geographic atrophy) and dry eye

Docosahexaenoic acid (DHA)is a major lipid component of retinal photoreceptor outer segment membranes that has anti-inflammation and anti-angiogenesis properties that could protect against AMD. Low DHA levels correlate with progression of AMD



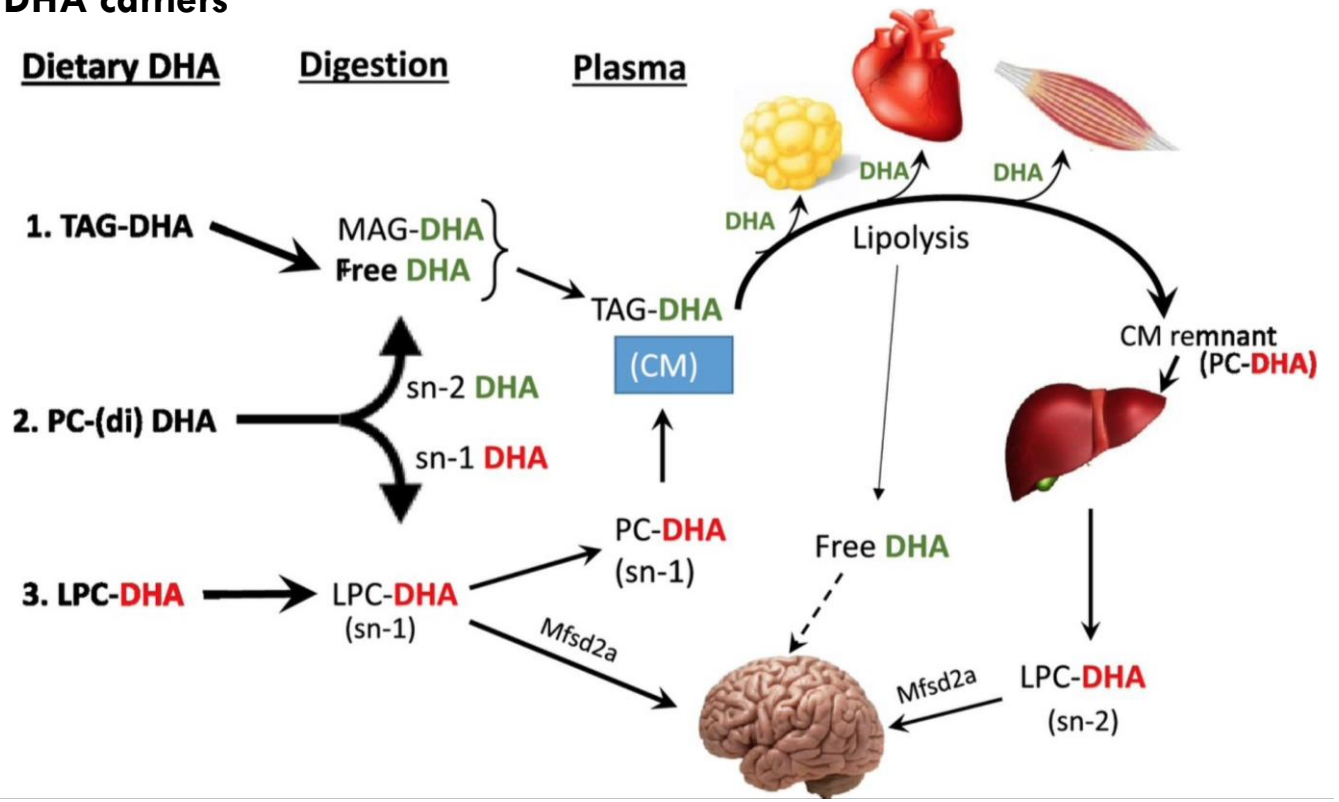
Topical administration with DHA accelerates the regeneration of corneal nerves after their damage during corneal surgery, promoting the return of sensitivity and reducing the signs of dry eye.

Unique Delivery Mechanism Opens the Playing Field

Novel discovery: the Mfsd2a transporter across the blood-brain barrier prefers LPC omega-3

LPC-DHA (and EPA) are preferentially transported by Mfsd2a compared to other omega-3's

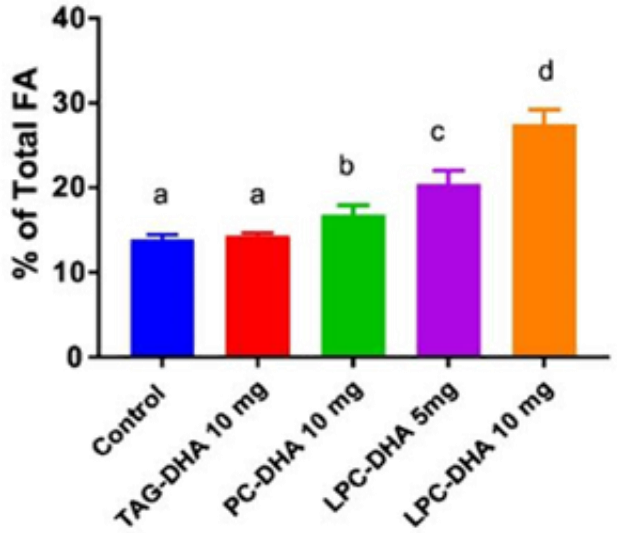
Metabolic fates of dietary DHA carriers



Brain Uptake: ~2 Times Higher Increase of EPA/DHA in the Brain When It Is Administered As LPC Compared to PC

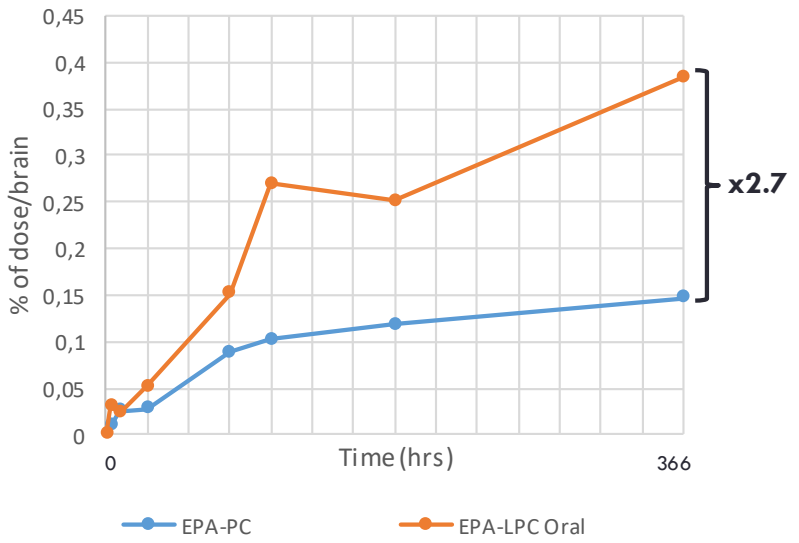
DHA

22:6 Hippocampus



EXTERNAL

EPA



INTERNAL

DHAuptake from LPC significantly higher than from PC, which is again significantly higher than TG

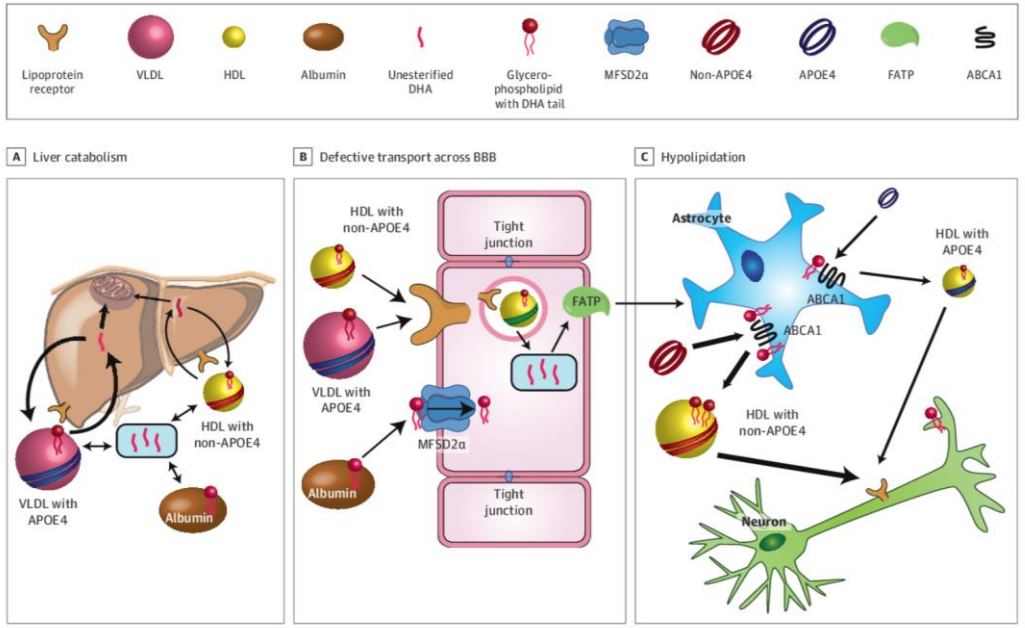
EPA uptake from oral admin of LPC-EPA ~2.7X higher than from oral admin of PC-EPA

Source: Dhavamani Sugasini, Poorna C.R. Yalagala, Alexis Goggin, LeonM. Tai, Papasani V. Subbaiah Enrichment of brain docosahexaenoic acid (DHA) is highly dependent upon the molecular carrier of dietary DHA:Lysophosphatidylcholine is more efficient than either phosphatidylcholine or triacylglycerol, Jour Nutr Biochem, 2019; AKBM Pharmaron and Sintef studies

Opportunities Across a Breadth of Indications (cont'd)

ApoE4 genotype associated with impaired DHA transport across the blood-brain barrier

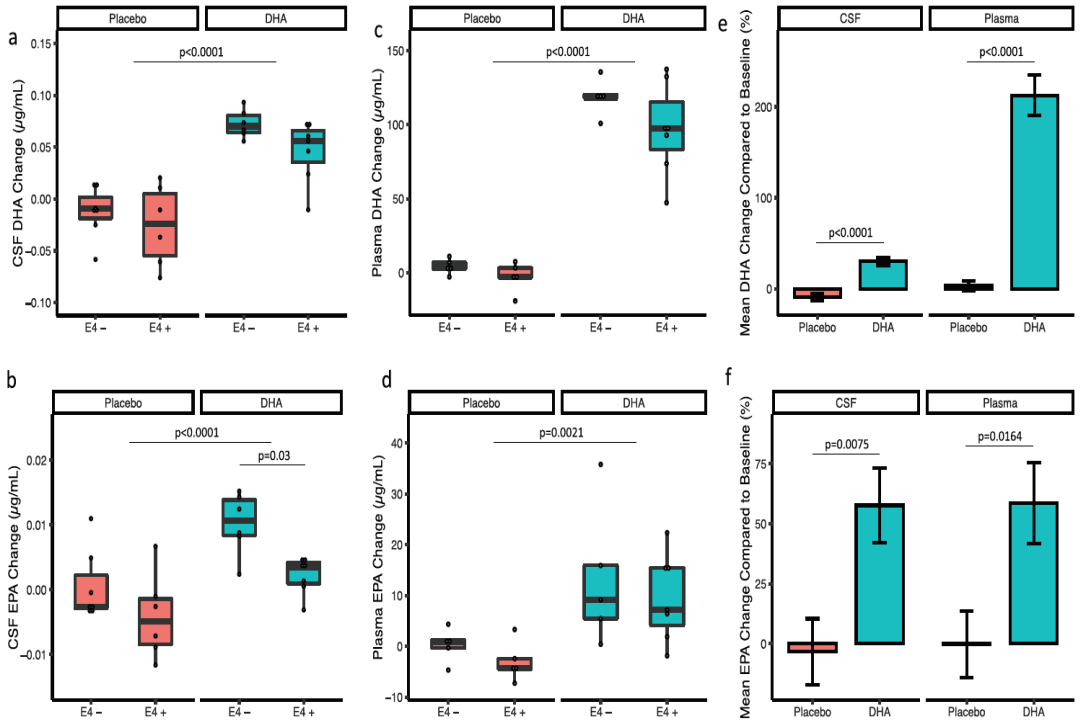
ApoE4 genotype associated with impaired DHA metabolism and brain uptake



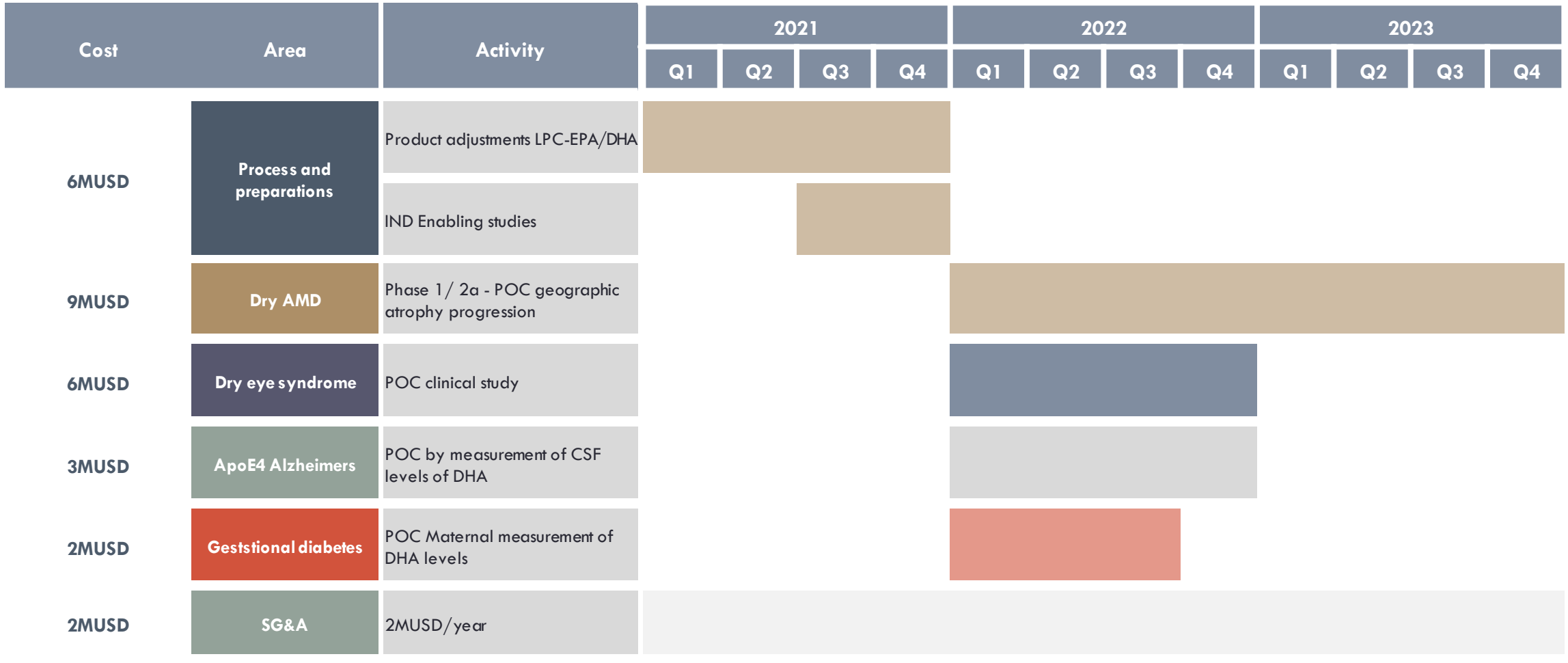
Several mechanisms associate the *APOE4* allele with DHA brain delivery, including accelerated liver catabolism of APOE4 lipoproteins, defective the onset of neurodegeneration. ABCA1 indicates adenosine triphosphate-binding cassette protein 1; FATP, fatty acid transport protein; HDL, high-density

Figure 1. Mechanisms Linking Apolipoprotein E 4 (APOE4) StatusWith Docosahexaenoic Acid (DHA) Delivery to the Brain Before the Onset of Neurodegeneration

ApoE4 have lower CSF levels of DHA and significantly decreased uptake after high dose supplementation



Cost and timeline – 30 MUSD to reach POC for targeted indications



Investment Highlights

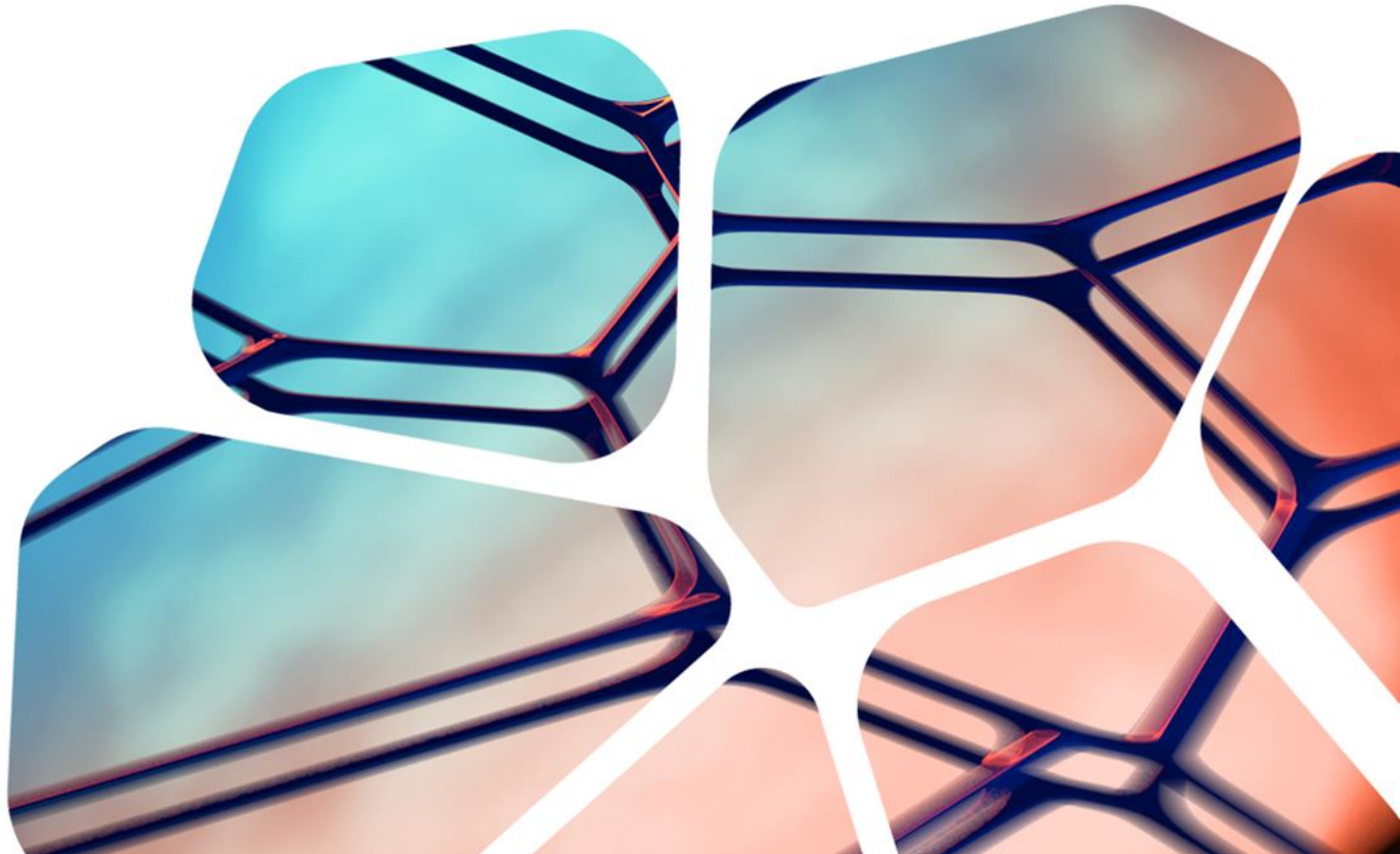
MD3 has partnered with Aker BioMarine to Develop LPC-PUFAs for Eye and Brain Disorders

$30M provides clinical proof of concept within two years for 4 major indications with blockbuster potential

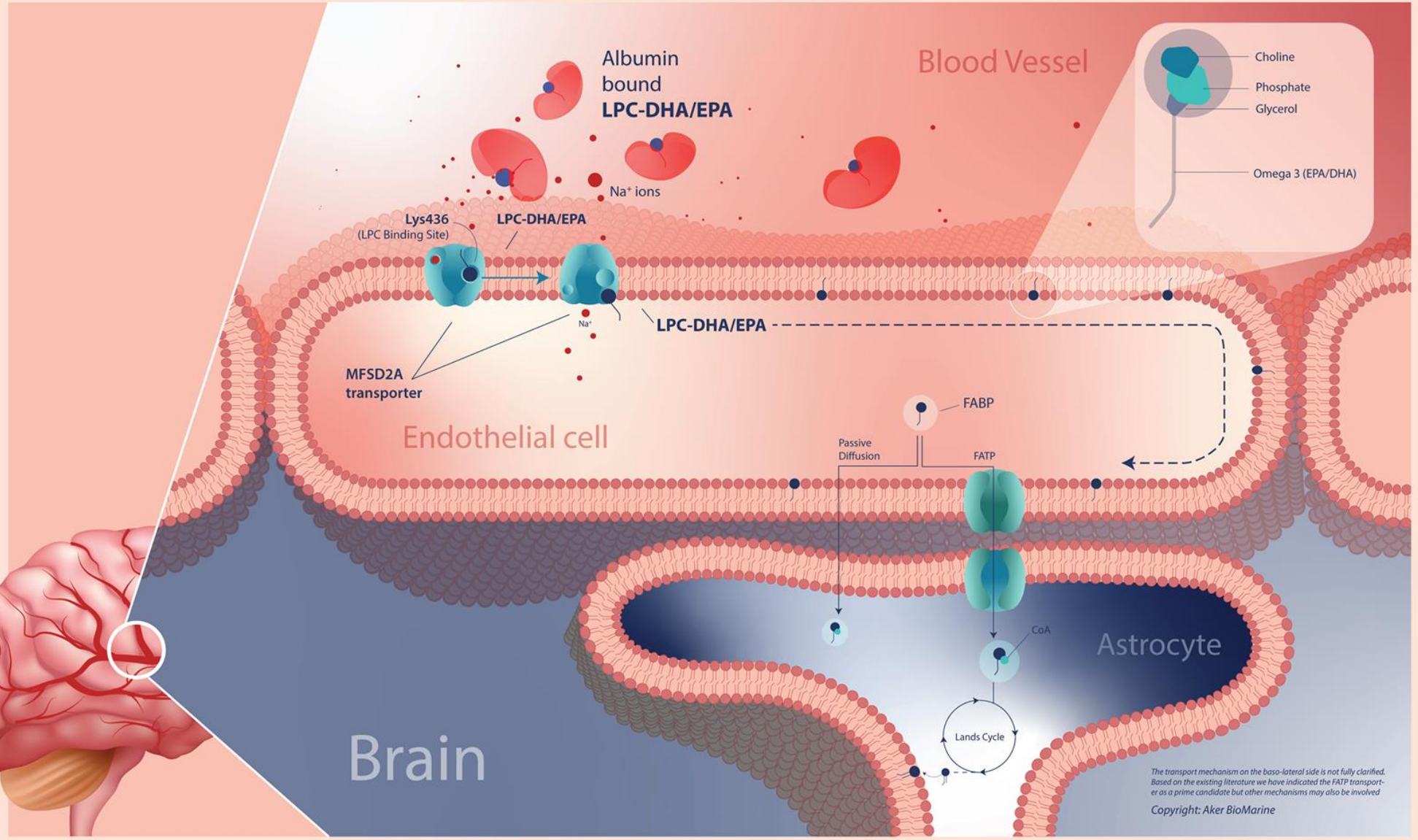
- Dry age associated macular degeneration (geographic atrophy)-the leading cause of blindness
- Eye drops solution for dry eye- the most common condition requiring a visit to an Ophthalmologist
- ApoE4 associated Alzheimer's Disease- 60% of patients with dementia linked to low CSF DHA levels
- Gestational Diabetes and Zika infections- associated with congenital brain disorders linked to low DHA levels

- Orphan path for Stargardts Type 3 with LPC-VLC-PUFA- combining Aker BioMarine and NIH IP for optimal eye delivery
- Experienced Team for Clinical Development and Manufacturing of Novel Pharmaceutical products

APPENDIX



LPC-DHA/EPA transport through the Blood-Brain Barrier



1. Lagarde, M., et al., Lysophosphatidylcholine as a preferred carrier form of docosahexaenoic acid to the brain. Journal of Molecular Neuroscience, 2001. 16(2-3): p. 201-4.

2. Nguyen, L.N., et al., Mfsd2a is a transporter for the essential omega-3 fatty acid docosahexaenoic acid. Nature, 2014. 509(7501): p. 503-6.

3. Quek, D.Q., et al., Structural Insights into the Transport Mechanism of the Human Sodium-dependent Lysophosphatidylcholine Transporter MFSD2A. J Biol Chem, 2016. 291(18): p. 9383-94.

4. Yalagala, P.C.R., et al., Lipase Treatment of Dietary Krill Oil, but Not Fish Oil, Enables Enrichment of Brain Eicosapentaenoic Acid and Docosahexaenoic Acid. Mol Nutr Food Res, 2020. 64(12): p. e2000059.

5. Sugasini, D., P.C.R. Yalagala, and P.V. Subbaiah, Efficient Enrichment of Retinal DHA with Dietary Lysophosphatidylcholine-DHA: Potential Application for Retinopathies. Nutrients, 2020. 12(10).

6. Wong, B.H. and D.L. Silver, Mfsd2a: A Physiologically Important Lysolipid Transporter in the Brain and Eye. Adv Exp Med Biol, 2020. 1276: p. 223-234.

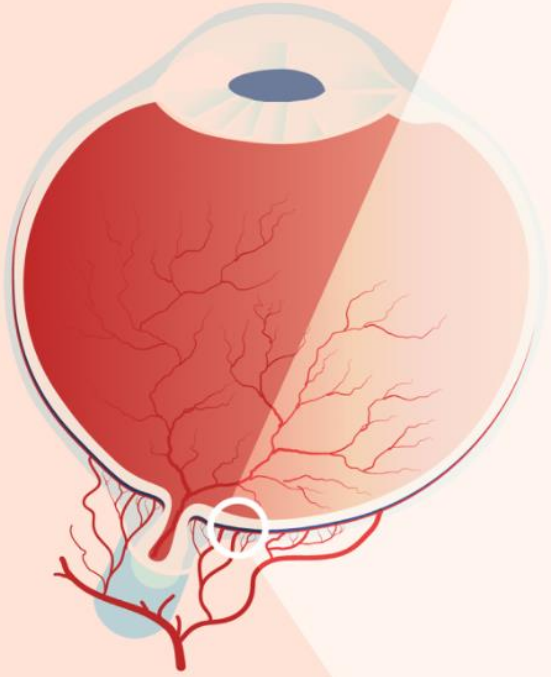
7. Wong, B.H., et al., Mfsd2a Is a Transporter for the Essential ω-3 Fatty Acid Docosahexaenoic Acid (DHA) in Eye and Is Important for Photoreceptor Cell Development. J Biol Chem, 2016. 291(20): p. 10501-14.

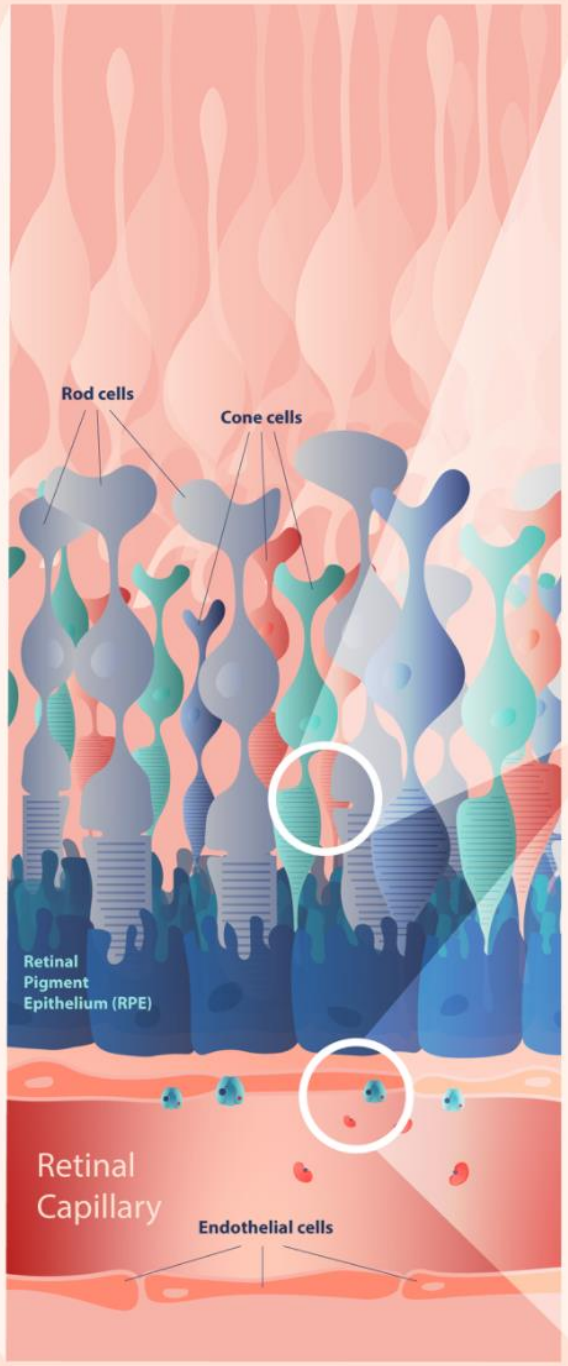
8. Sugasini, D., et al., Dietary docosahexaenoic acid (DHA) as lysophosphatidylcholine, but not as free acid, enriches brain DHA and improves memory in adult mice. Sci Rep, 2017. 7(1): p. 11263.

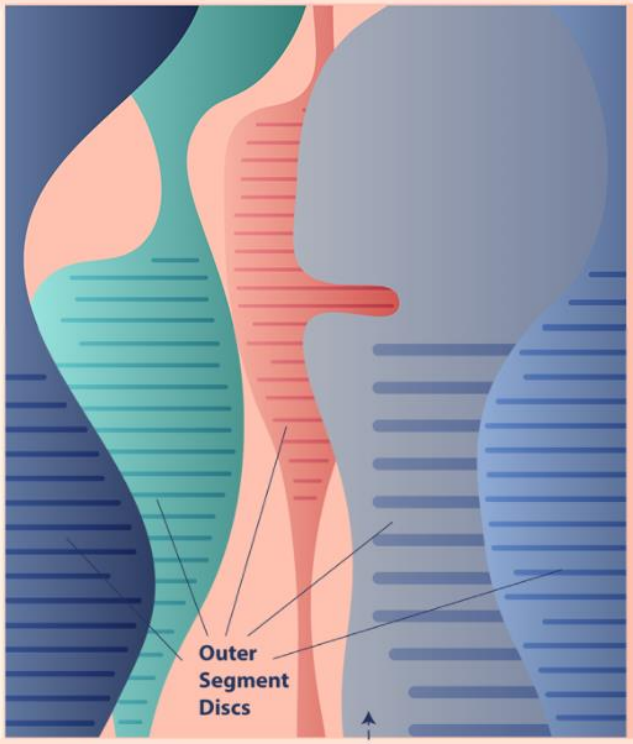
9. Alakbarzade, V., et al., A partially inactivating mutation in the sodium-dependent lysophosphatidylcholine transporter MFSD2A causes a non-lethal microcephaly syndrome. Nat Genet, 2015. 47(7): p. 814-7.

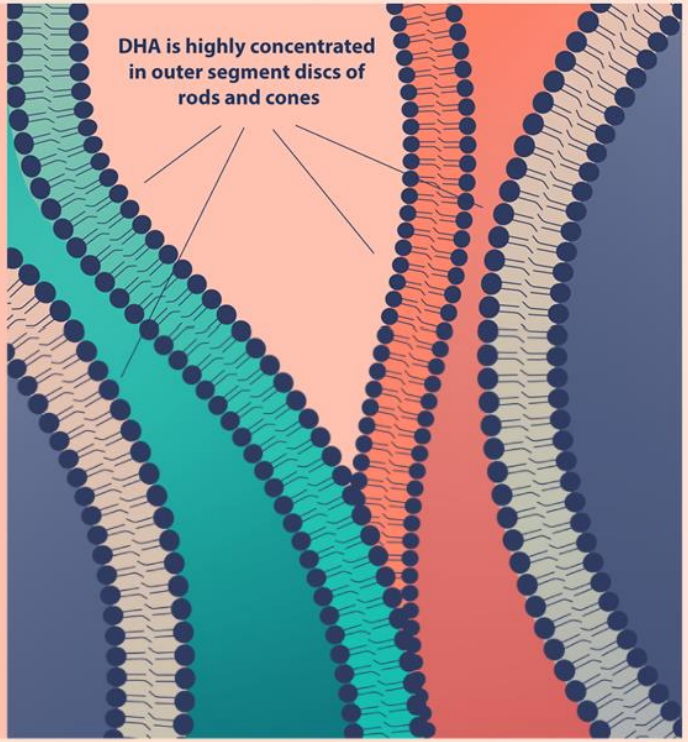
10. Bazinet, R.P. and S. Laye, Polyunsaturated fatty acids and their metabolites in brain function and disease. Nature Reviews Neuroscience, 2014. 15(12): p. 771-85.

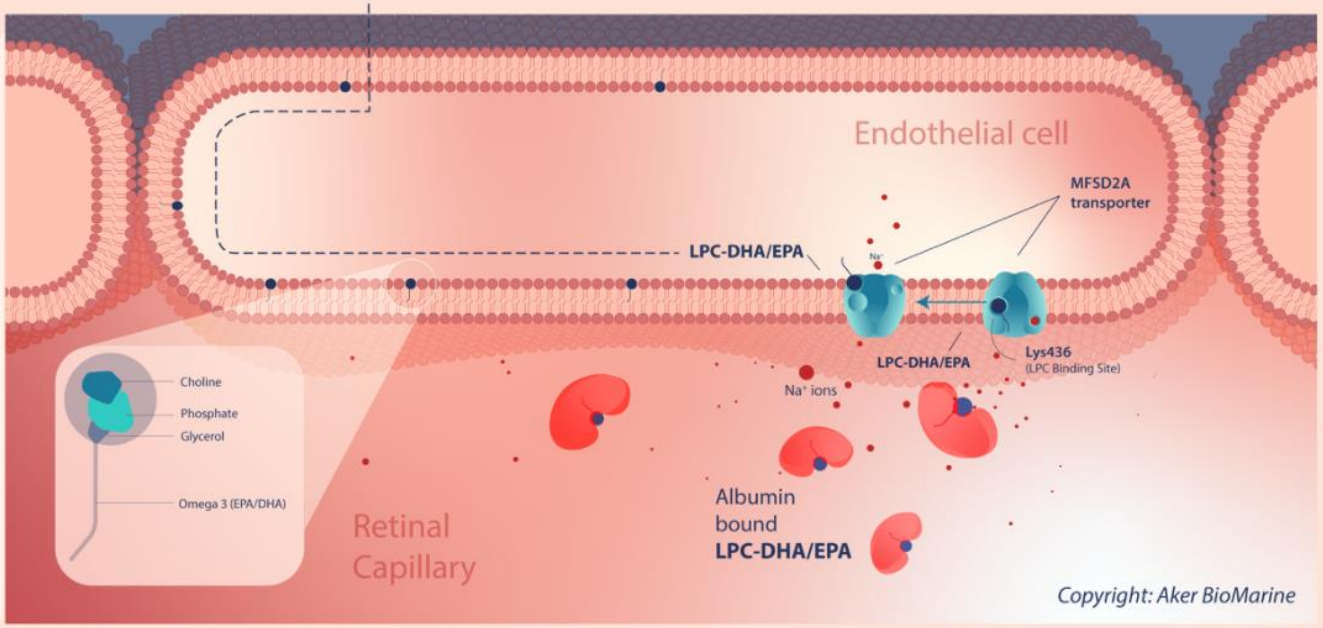
LPC-DHA/EPA transport into the Eye











1. Wong, B.H., et al., Mfsd2a Is a Transporter for the Essential ω-3 Fatty Acid Docosahexaenoic Acid (DHA) in Eye and Is Important for Photoreceptor Cell Development. J Biol Chem, 2016. 291(20): p. 10501-14.

2. Lobanova, E.S., et al., Disrupted Blood-Retina Lysophosphatidylcholine Transport Impairs Photoreceptor Health But Not Visual Signal Transduction. The Journal of Neuroscience, 2019. 39(49): p. 9689-9701.

3. Wong, B.H. and D.L. Silver, Mfsd2a: A Physiologically Important Lysolipid Transporter in the Brain and Eye. Adv Exp Med Biol, 2020. 1276: p. 223-234. 2.

4. Sugasini, D., P.C.R. Yalagala, and P.V. Subbaiah, Efficient Enrichment of Retinal DHA with Dietary Lysophosphatidylcholine-DHA: Potential Application for Retinopathies. Nutrients, 2020. 12(10).

Aker BioMarine LPC-portfolio and in-license

AKBM IP	Status	Claims
Phospholipid capsules **US10117882 (B2),**	**Filed Aug 4, 2010** **Granted** **(Nov 6, 2018)**	**Gel capsules:** - Mix of PL - At least 15-45 % w/w of all types of lyso-PL (LPC, LPE, LPS, LPI) in mix with other PL. - Independent of origin - At least 1 % EPA or DHA
LPC-EPA **US 10555957 (B2)**	**Filed May 10, 2018** **Granted – Exclusive license** **(Feb 11, 2020)**	**LPC-EPA:** - Formulations comprising the compound - Medical method
Phospholipid capsules **US10525068 (B2)**	**Filed March 7, 2019** **Granted** **(Jan 7, 2020)**	**Gel capsules:** - Mix of PL, independent of origin - At least 15-60 % w/w of all types of lyso-PL (LPC, LPE, LPS, LPI). - At least 1 % EPA or DHA - TG
LPC-compositions WO2019123015 (A1) KR, AU, NZ, ID, EUR, IN, EP, BR, US, CA, SG, CN, JP, MX, IL	Filed Des 21, 2018 Pending (National phases – 15 countries)	**LPC Composition** - Natural sources, marine origin - 10-100% w/w LPC - 5-50 % w/w omega-3
Phospholipid compositions US Appl No No. 16/734,850	Filed Jan 6, 2020 Pending	**Lipid composition:** - Mix of PL - At least 15-60 % w/w of all types of lyso-PL (LPC, LPE, LPS, LPI) - At least 1 % EPA or DHA - TG
Pharmaceutical LPC-composition WO2020254675 (A1)	Filed June 21, 2020 PCT-application (International phase)	**Pharmaceutical LPC-composition** - Medical use/methods

Aker BioMarine IP overview – Krill oil portfolio

Product	Patents/applications	Claims
Krill oil (NKO)	1 patent family – 7 granted patents 1999/2002 priority Geographical scope: USA, Canada and Australia	• Krill oil with >40%PL and >15 % omega-3 • Contains EPA-PL or DHA-PL
Krill oil (Superba)	1 patent family - 25 granted/validated patents, 1 pending application 2007 priority Geographical scope: USA, EU, Canada and Australia	• Krill oil w/ defined PLs • Extraction from krill meal, not limited to any specified extraction method
Krill oil (Enzymotec)	2 patent families- 21 granted/validated patents, 6 pending applications Priorities from 2014 Geographical scope: EU, USA, Australia, ZA, MY, CN	• Krill oil with low TMAO • Krill oil w/ specified ratio between different fatty acids
Purified krill oil	3 patent families – 9 granted – 11 pending applications Priority from 2013 and 2015 Geo scope: US, EU, AUS, CN, BR, ID, KR, NZ, RU,	• Extraction and purification processes, washing cycles • Clean 2nd generation krill oil with e.g. low salt, TMAO, arsenic and copper levels, FlexiTech process
Uses	2 patent families Priority from 2007-14	• Metabolic syndrome and appetite reduction • Brain age – ADHD
Others	6 patent families related to different krill oil formulations Priorities from 2012-2014. Mostly US, some also in EP, CA, AU	• High PL-content formulations • Krill oil compositions, capsules, pre-formulations with PL-content above 85%. • Krill oil + TG/EE (fish oil) • Krill oil with improved viscosity