BLÁFAR

We Design, Develop and Manufacture Functionalised Biomaterials

Welcome to BLÁFAR

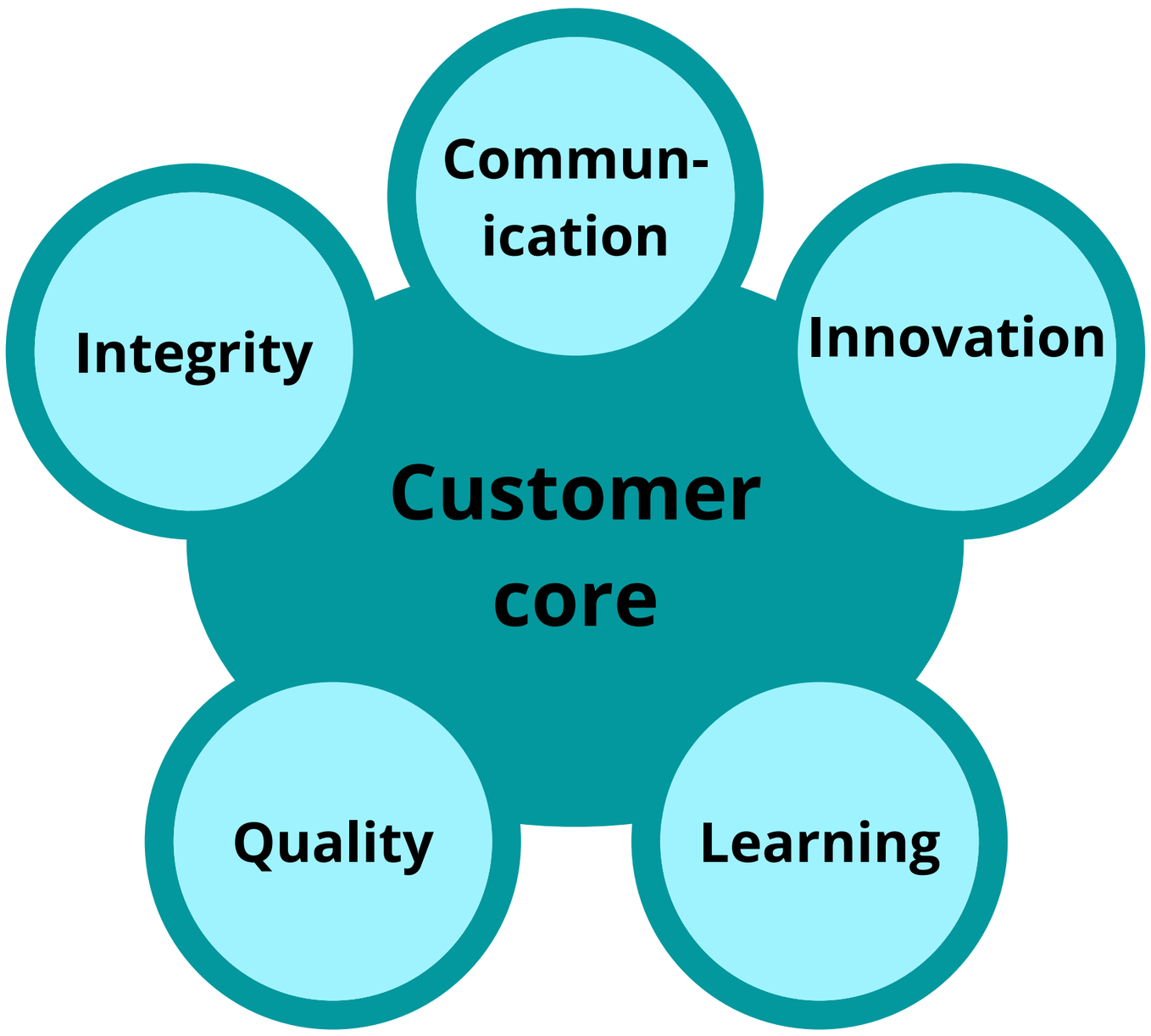
Our Vision and Mission

"To Design and Deliver Advanced Quality Biomaterial Solutions For Our Global Customers"

Blafar Ltd. specialises in the development and commercialisation of innovative functionalised biopolymers, injectable hydrogels and bio-inks from extracellular matrix (ECM) based and synthetic biopolymers for use in medical devices, pharmaceutical controlled drug release and regenerative medicine applications.

Founded by Professor Wenxin Wang, Blafar Ltd. was span-out from Vornia Ltd. in 2018 after being acquired by Ashland Inc. Blafar is headquartered at NovaUCD, on the campus of University College Dublin (UCD) a centre for new ventures and entrepreneurs. With our comprehensive skills and knowledge in the development of functionalised biopolymers and their applications, and in collaboration with leading researchers at UCD, we aim to be at the forefront of the global market of innovative functionalised biopolymers.

Our Company Culture and Core Values



Our Expertise

At Blafar Ltd., we have a strong and passionate technical team with extensive multidisciplinary expertise and experience in the design, development and synthesis of biomaterials, who strive towards meeting the requirements of our customers. Our functionalised polymers are designed as key functional ingredients/raw materials and we are also developing end-use products including injectable hydrogels for cell/drug delivery or aesthetic dermal filler applications and bio-inks for 3D bio-printing applications.

We produce both R&D and GMP compliance grade products. Currently, the comprehensive range of functionalised biopolymer products from Blafar Ltd includes hyperbranched PEG based polymers, functionalised hyaluronic acid, collagen, gelatin and their derived biocompatible and customisable hydrogels and bio-inks.

Product Range

Functionalised Hyaluronic Acid:

Blafar's functionalised hyaluronic acid is modified from a natural glycosaminoglycan, a component of extracellular matrix (ECM), making it particularly suited to cell culture, cosmetic and medical device applications. Thiolated (HA-SH) and methacrylated (HA-MA) hyaluronic acid available.

Bovine Collagen Type I:

Collagen type I is a common component of most tissues including bones, dermis and tendon. Blafar's collagen type I is extracted from certified BSE/TSE-free bovine Achilles tendons and is treated to minimise viral and endotoxin contamination.

Functionalised Gelatin:

Blafar's functionalised gelatin is modified from a natural protein making it particularly suited to cell culture, tissue engineering, cosmetic and medical device applications. Thiolated (Gel-SH) and methacrylated (Gel-MA) gelatin available.

Hyperbranched PEG based Multi-Acrylate Polymer (HB-PEG):

Molecular weight, branching degree and vinyl group content of Blafar Hyperbranched PEG-based Multi-Acrylate Polymer (HB-PEG) can be easily adjusted. HB-PEG is a biocompatible polymer.

Detailed information about our range of products can be found in our product leaflet or by visiting our website (www.blafar.com).

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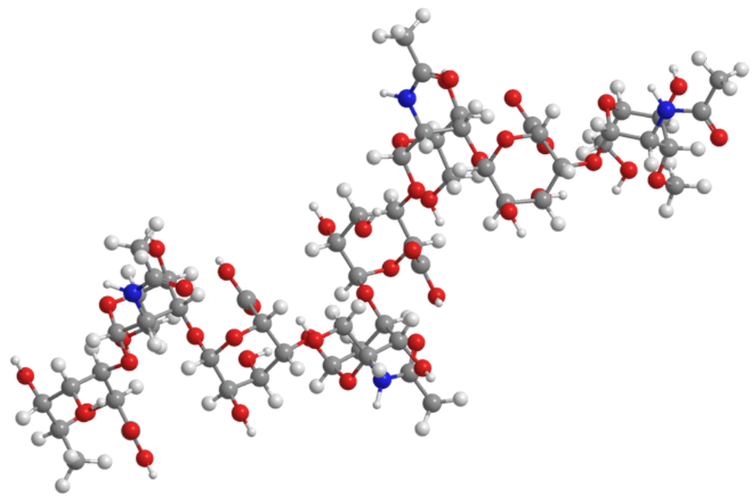
Customised Products

Aside from our standard series of products, Blafar Ltd. can provide products tailored to your needs. We provide a design, development and prototyping service for customised biomaterials. **Here are just a few of the areas that we can customise for you :**



Desired degree of Thiolation

Specific HB-PEG Branching degree

Tailored Starting Material Molecular Weights

HB-PEG Post Functionalisation

Analysis Services: NMR, GPC and rheometery

GMP like products synthesised in our ISO class 7 clean room

Desired Degree of Methacrylation

Why Choose Us?

Quality

All products are developed and manufactured in compliance with ISO 13485:2016 QMS standard.

R&D

High R&D capacity to generate new intellectual properties and tailor our products to your needs.

State of the Art Clean Room

Our GMP compliant products are produced in ISO 13485:2016 certified facilities including an ISO class 7 clean room.

Dedicated Team

A multidisciplinary, passionate and experienced team, dedicated to meeting the needs of our customers.

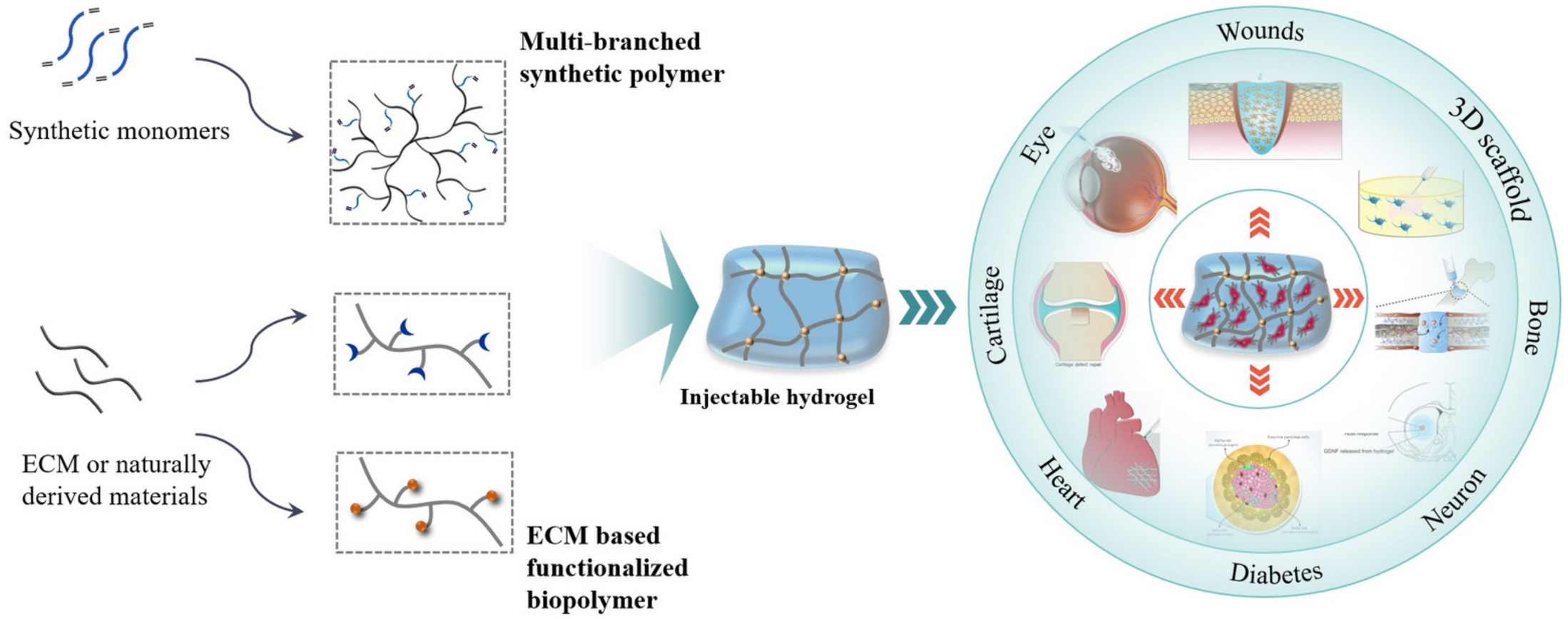
Customised Products

We can tailor the molecular weights, functionality and degrees of substitution/branching to meet your requirements.

Our Research and Development and Intellectual Properties

Blafar Ltd's product portfolio and patented technologies encompass the inherent merits of natural and synthetic biopolymers, whilst controlling the shortcomings with the synthetic functionalisation. These polymers will enable the production of medical devices with advantages over traditional therapeutic approaches such as controlled biodegradability, biocompatibility and tunable mechanical properties. Applications include tissue regeneration, cell/drug delivery, tissue adhesives, dermal fillers and 3D bio-inks.

Injectable therapeutics enabled by engineered biomaterials are becoming increasingly popular in research, transforming traditional clinical practices (such as open wound surgery, sutures or staples) into a minimally invasive and regenerative regime. Injectable hydrogels have been used to deliver a variety of cargo molecules, including growth factors, chemokines, therapeutic cells to promote tissue regeneration in many areas of the body.



Application of our versatile natural and synthetic biopolymers and injectable hydrogels towards biomedical industry and research.

Collaborations and Partnerships

In order to develop medical device products using our unique biopolymer technology platform, Blafar Ltd works in collaboration with industry partners to enhance and accelerate the realisation of our company vision. We develop new technologies by collaborating with other research institutes, universities and life science companies.

We are currently collaborating with healthcare professionals in different medical fields such as the development of drug delivery injectable hydrogels with orthopaedic surgeons for the treatment of lumbar disc herniation induced pain and osteoarthritis, with ophthalmologists for ocular injection, with endocrinologists developing a cell delivery system for hormones supplementation and with plastic surgeons for wound healing and cosmetic surgeries.

If you're interested in collaborating with Blafar, please get in touch at info@blafar.com.

"To provide products that respond to the needs of our customer, Blafar Ltd is dedicated to encouraging innovation, fostering successful academic and industrial partnerships, using motivated, qualified staff and implementing and maintaining an effective Quality Management System throughout the organisation, which was developed in compliance with international regulatory requirements, including but not limited to EN ISO13485:2016 and US FDA 21 CFR Part 820 Quality System Regulation".

Product Range

Catalogue No.	Description	Catalogue No.	Description
Functionalised Hyaluronic Acid			
Thiolated Hyaluronic Acid		**Methacrylated Hyaluronic Acid**	
HASH0101	450 kDa raw material HA, 75% SD (±10%)	**HAMA0101**	450 kDa raw material HA, 50% SD (±10%)
HASH0102	450 kDa raw material HA, 50% SD (±10%)	**HAMA0102**	450 kDa raw material HA, 25% SD (±10%)
HASH0103	450 kDa raw material HA, 25% SD (±10%)	**HAMA0103**	450 kDa raw material HA, 10% SD (±10%)
HASH0201	220 kDa raw material HA, 75% SD (±10%)	**HAMA0201**	220 kDa raw material HA, 50% SD (±10%)
HASH0202	220 kDa raw material HA, 50% SD (±10%)	**HAMA0202**	220 kDa raw material HA, 25% SD (±10%)
HASH0203	220 kDa raw material HA, 25% SD (±10%)	**HAMA0203**	220 kDa raw material HA, 10% SD (±10%)
HASH0301	110 kDa raw material HA, 75% SD (±10%)	**HAMA0301**	110 kDa raw material HA, 50% SD (±10%)
HASH0302	110 kDa raw material HA, 50% SD (±10%)	**HAMA0302**	110 kDa raw material HA, 25% SD (±10%)
HASH0303	110 kDa raw material HA, 25% SD (±10%)	**HAMA0303**	110 kDa raw material HA, 10% SD (±10%)
Functionalised Gelatin			
Thiolated Gelatin		**Methacrylated Gelatin**	
GelSH01	Type A Gelatin Raw Material	**GelMA01**	Type A Gelatin Raw Material
GelSH02	Type B Gelatin Raw Material	**GelMA02**	Type B Gelatin Raw Material
Bovine Collagen Type I			
COL01003	Collagen Type 1 solution 3 mg/ml	**COL02**	Collagen Type 1 Powder
COL01005	Collagen Type 1 solution 5 mg/ml	-	-
COL01010	Collagen Type 1 solution 10 mg/ml	-	-
Hyperbranched PEG based Multi-Acrylate (HB-PEG)			
HBPEG10K	MW 10 kDa	HBPEG20K	MW 20 kDa

Quality Management System

Blafar Ltd is committed to the manufacture and delivery of superior quality biomaterials and services for medical device and pharmaceutical applications. Blafar Ltd's range of biopolymer products are manufactured under a Quality Management System in compliance with ISO 13485:2016 standard, which is certified by the Notified Body Lloyd's Register for quality assurance.

BLAFAR

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