



Changing the vision
for healing...

Biovotec – Presentation

Q2, 2021

Executive Summary

- ▶ Biovotec is a pan European operation, founded in Oslo in 2014 with two fully owned subsidiaries in France and Ireland.
- ▶ Biovotec is a highly innovative business that develops and markets Medical Devices that use a novel biomaterial: Egg Shell Membrane.
- ▶ Biovotec's first product to market, DermaRep, is an Advanced Wound Care product that will treat chronic wounds. Clinical trials, applying DermaRep to Venous leg ulcers, have been conducted at six UK hospitals with excellent results.
- ▶ Biovotec expects to receive a CE mark for DermaRep in Q4-2021 and launch commercially in 2022. The existing production process can support the sale of 4 million units per annum.
- ▶ As part of its preparation for receiving the CE mark, Biovotec has developed a strategic plan to achieve full commercial production.

Who We Are

- ▶ Biovotec was founded in Oslo, Norway in 2014 and has two fully owned subsidiaries in France and Ireland with a clear focus on Advanced Wound Care (“AWC”).
- ▶ The senior management team has a total of eighty years of industry experience.
- ▶ €20m has been invested in both R&D and production:
 - Biovotec has been awarded €12mn from the EU and Norwegian government
 - Biovotec shareholders have contributed €8mn
- ▶ Biovotec currently has 4 patent families that relate to Egg Shell Membrane and the composition and production of the final wound care devices.
- ▶ Biovotec has been internationally recognised winning awards and prizes for the advancement of Wound Care.
- ▶ Biovotec is fortunate to have a stable and supportive shareholder base.

Management Team



Ralf Schmidt CEO

PhD Ind. Chemistry
(U. of Oslo)
Executive MBA
(Insead)
MSc Chem. Eng.
(U. of Wisconsin)

Senior executive manager

- Scanarc ASA (stock listed): CEO (materials recycling)
- Axis Shield POC (stock listed): Man. Dir. (medical diagnostics)
- Dynal Biotech / Invitrogen: VP Operations (biotech.)
- McKinsey: Management consultant
- Norsk Hydro: Operational Director (materials recycling)



Henri-Pierre Suso CTO

PhD Biotechnology
(U. of Reading)
MSc Biotechnology
(U. of Reading)
MSc Agronomy
(Gembloux)

Biotechnology scientist

10 years' experience (PhD and post-doc)
Biotechnology, genetic engineering, functional genetics

Food industry technology manager

7 years Department manager process validation at Elopak AS
Industrial R&D project management



Enda Kenny COO

PhD Biochemistry
(Imperial College, London)
DIC Biochemistry
(Imperial College, London)
BSc Microbiology
(University College, Dublin)

Development RA/QA and General Manager

- CEO Rose Pharma AS
- VP Global RA, QA & Clinical Stryker Biotech
- New Product Technology Manager, Inamed
- New Product Manager, Delta Biotechnology

Healthcare Product Development Expert

- Managed approval of drugs and medical devices in US, Canada, South America, EU, Switzerland, Australia

Industry Awards & Recognition

2014

Research Council of Norway
4 years funding program awarded

2015

EU Horizon 2020 SME phase 1 award:
Success rate < 10%
UK Wound Care Award:
Biovotec Asked by NIHR WoundTec
HTC To Present At The World
Extreme Medicine Expo In London UK

2016 - 2017

EU Horizon 2020 SME Phase 2 Award:
Success rate < 5%.
Funds clinical studies
Symposium on American Wound Care (SAWC)
Presented Biovotec

2018 - 19

EU Fast Track to Innovation:
One of 3 companies in the EU to receive SME phase 2 and FTI
Norwegian Startup of 2019:
Newspaper? See next slide
Eurostars Award:
3D product for deep wounds
Eureka Award;
Ranked 7/234 entrants
SAWC :
Presented Biovotec
European Wound Mgt Association:
Presented Biovotec
French Wound Care Conference:
Biovotec DermaRep featured as novel product in France



Co-funded by the Horizon 2020 programme of the European Union



The problem: Chronic wounds



Venous Leg Ulcers

- Wounds on legs or feet due to abnormal or damaged venous function
- Many heal within 2-4 weeks, however some persist for years
- Biovotec targeting long term, persistent ulcers

Pressure Ulcers

- Also known as bedsores, pressure ulcers are injuries to skin and underlying tissue resulting from prolonged pressure on the skin
- People at risk of bedsores have medical conditions that limit their ability to change positions or cause them to spend most of their time in a bed or chair

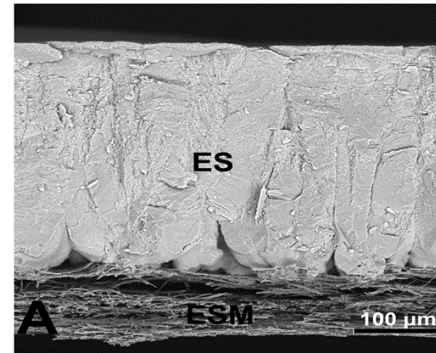
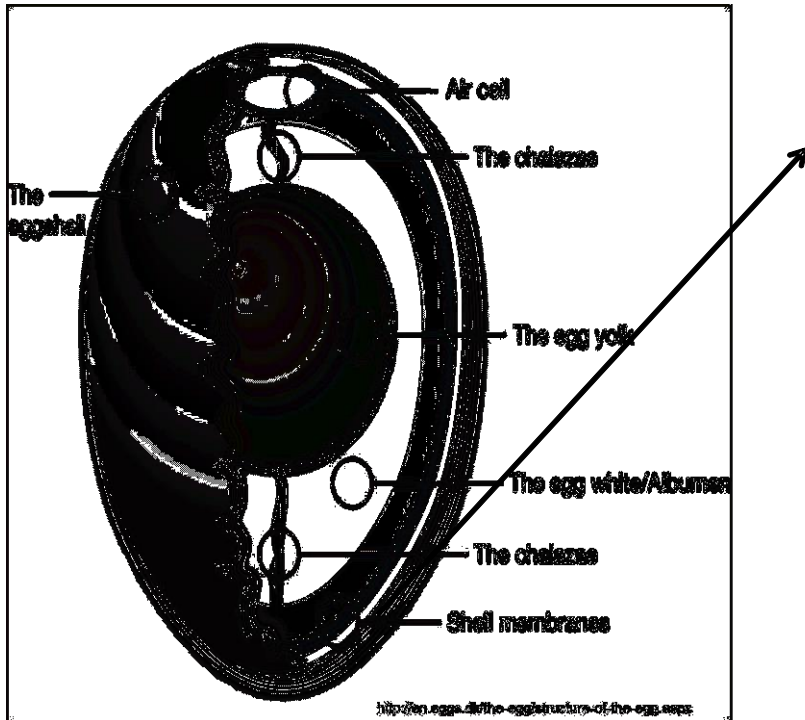
Diabetic Foot Ulcers

- A common complication of poorly controlled diabetes, forming as a result of skin tissue breaking down and exposing the layers underneath
- Of diabetic foot ulcers that do not heal, 25% will require amputation. It is estimated that up to 50% will die within 2 years following amputation

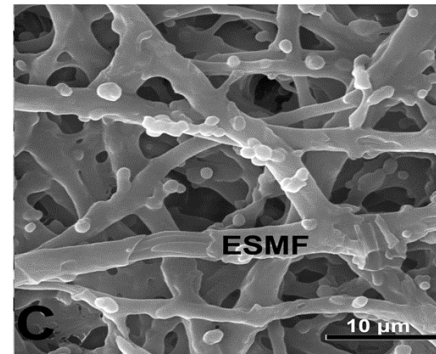
Postoperative Wound Care

- Biovotec is also targeting the broad space of postoperative wound care
- Focus on preventing infection and expediting healing following an invasive treatment

Our solution : A Novel BioMaterial



Electron micrograph of Shell and Membrane



High power view showing fibrous structure of ESM

Circular economy

- ▶ PEP consists of insoluble collagen and collagen-like fibers, derived from the membrane lining of domestic chicken eggs
- ▶ The primary component of PEP is a direct byproduct of the global food industry's waste, and is characterized by a large supply, low capital cost, and low production cost
- ▶ The Company's current activities aim to optimize the supply chain



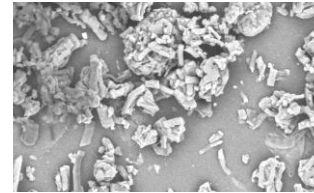
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- Egg Shell Membrane (ESM) available on a large industrial scale
- 600k tons of residue produced annually



2

- Biovotec has a patented process for ESM separation
- Plant based on the Nortura facility near Oslo



3

- ESM is then purified and milled at the ISO certified Biovotec lab in Ireland to produce PEP

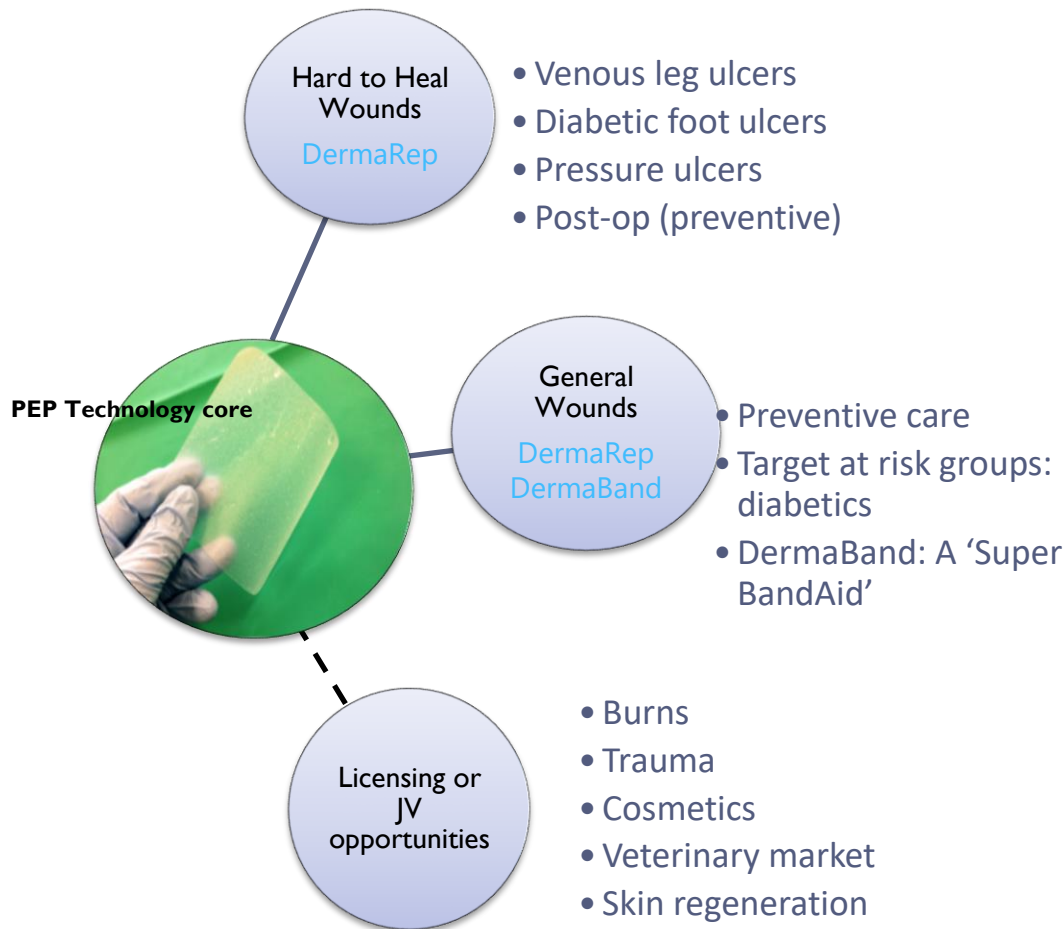
In-house, scalable, and cost-effective production model for PEP

Production facilities are established with the capacity to produce 4mm wound care units

Process can be scaled to reach a near unlimited capacity by 1H 2021 including combining film and device products

A disruptive product

Potential product pipeline:



DermaRep, has generated interest from hospital groups in **UK, Germany and France.**

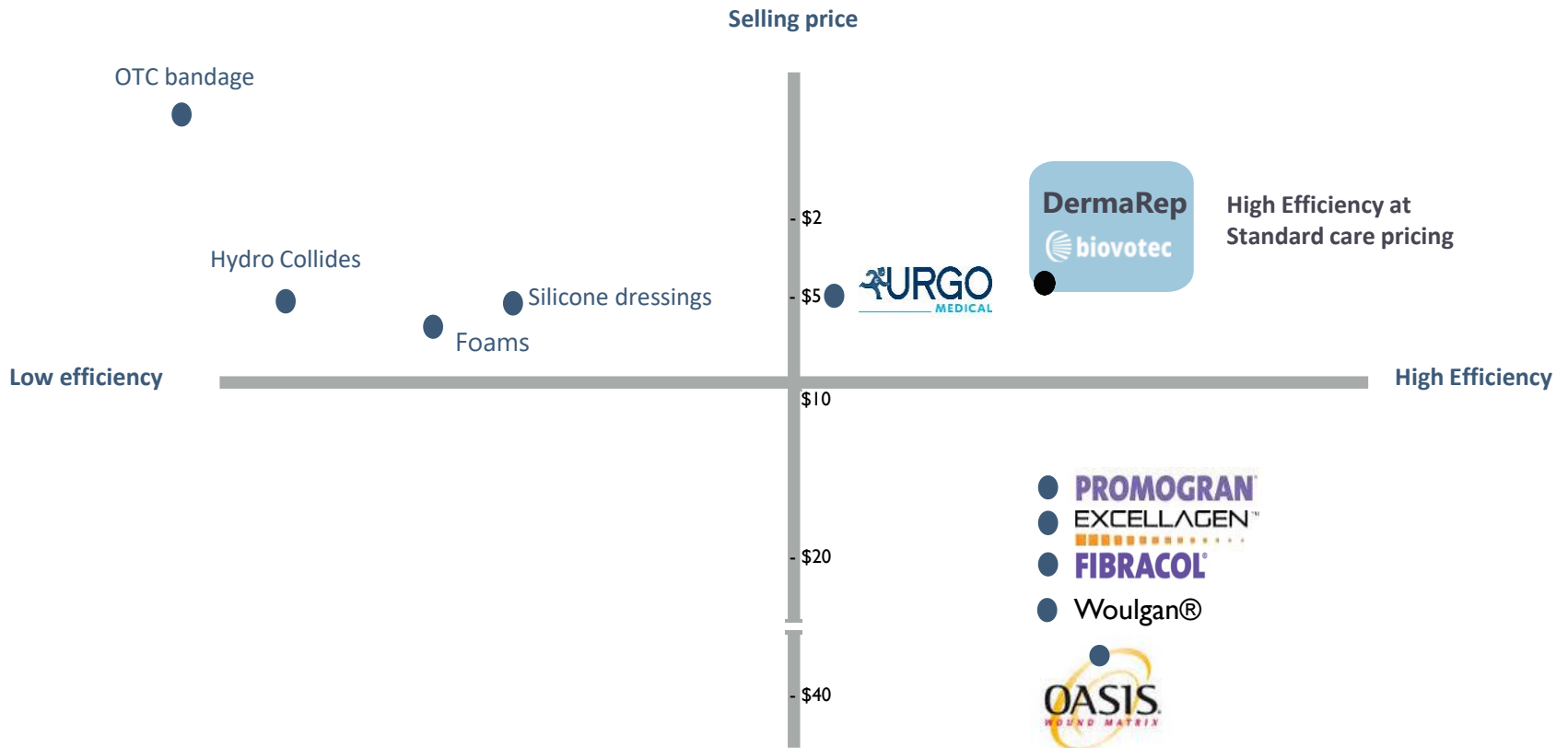
Wound Care Experts confirm that DermaRep's price will qualify as Standard Care on current hospital budgets.

Biovotec has setup and verified the scalability needed to rapidly become **an industry leader** in advanced wound care

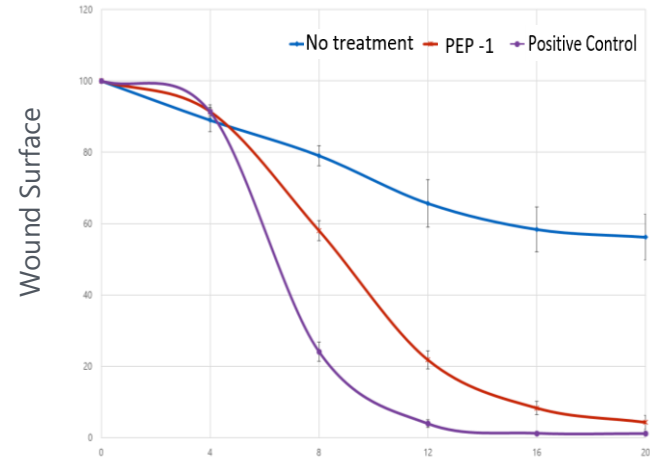
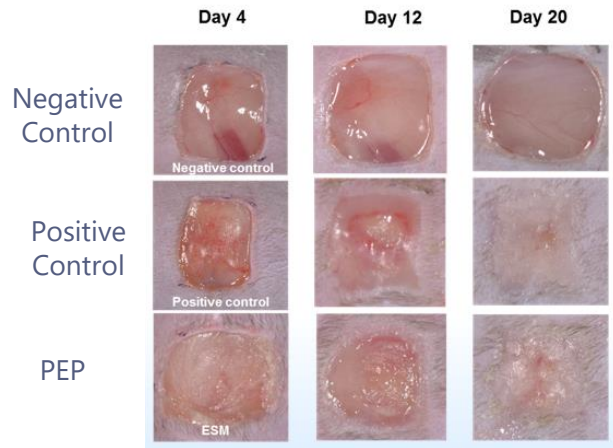
DermaRep/DermaBand and can be used broadly as a tool to **accelerate healing** and contribute to avoid possible infections or challenges with antibiotic resistance bacteria

The scalable nature of our PEP technology platform opens up for **other applications** beyond wound healing.

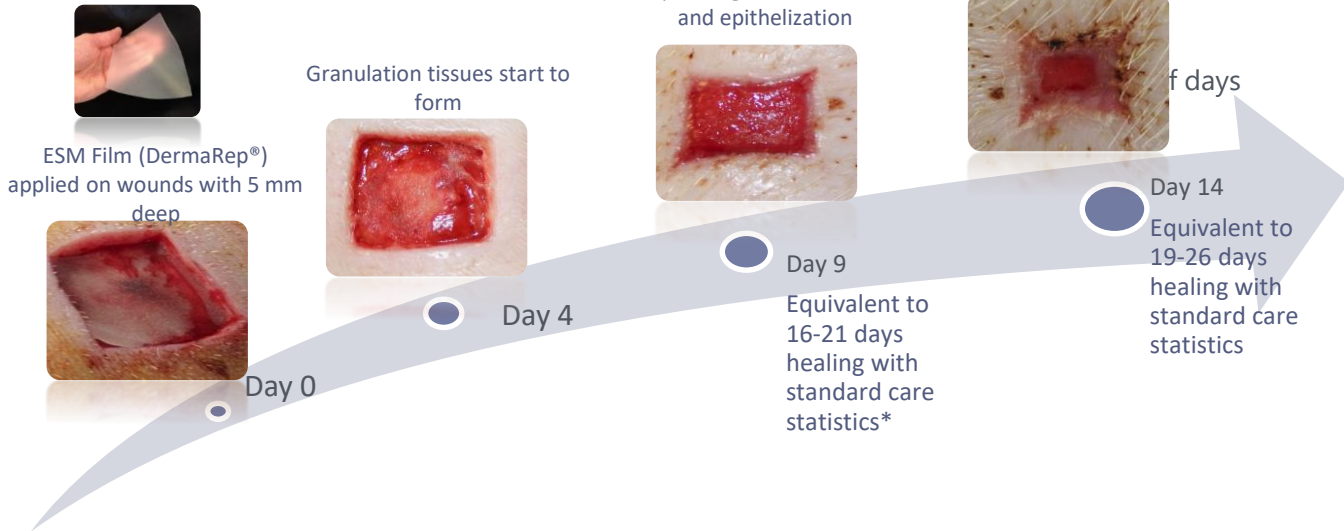
Potential savings in the health sector



First demonstrate feasibility



Pig model representing human skin



Demonstrate your marketing strategy

Biovotec is tentatively planning for a launch in France. This commercial plan is intended as a holding action until a partner is in place

With a partner, the Company would target expansion into the rest of the EU and the UK

2021 France Commercial Plan

- ▶ Focusing on 10 KOLs across 6 hospitals
 - ▶ Reference group headed by Dr Luc Téot (Head of wound healing society France)
- ▶ Target patients with Pressure and leg Ulcers, up to 10 patients per hospitals
- ▶ Key Objectives: Turn reference hospitals into customers and influence other hospitals



2022 France Commercial Plan

Expansion within existing hospital network

13 Main hospitals identified in Biovotec's network

Target patients with Pressure and leg Ulcers

Objective: Sale volume/ Reimbursement



Develop your communication

Biovotec on TV:

2016 Biovotec featured on NRK showcasing the developments in chronic wound care treatments and the benefits for diabetics: <https://tv.nrk.no/serie/dagsrevyen/NNFA19011116/11-01-2016#t=31m5s>

2016 Biovotec on Norwegian TV: <http://www.nrk.no/telemark/egghinne-kan-hindre-amputasjon-1.12744462>

2017, Biovotec was on Norwegian TV: <https://tv.nrk.no/serie/distriktsnyheter-oestafjells/DKTE99032317/23-03-2017#t=4m29s>

Biovotec in the Newspapers:

2015, DNB selects every year a number of promising and upcoming medical and medical device companies to mainly Scandinavian investors, DNB has been the market leader in health care company financing in Norway for many years.

<https://www.biovotec.com/news/date/2015-11>

2016, Biovotec featured in an article by DailyMail: <http://www.dailymail.co.uk/health/article-3558374/Eggshell-plaster-helps-heal-chronic-wounds-Membrane-inner-surface-shell-thought-healing-properties.html>

2016, Biovotec Featured In Norway's largest Newspaper Aftenposten: <http://www.aftenposten.no/okonomi/Hinnen-i-egget-kan-bli-til-sarhelende-plaster-8369079.html>

2017, Biovotec on the Front Page page of the Norwegian national most read Scientific / Technical magazine

<https://www.tu.no/emne/biovotec>

2017, Biovotec featured in Pan European network. . Biovotec has been recently featured as one of the Future and Emerging project funded by the Horizon 2020.

2019, Biovotec has been elected to be the Startup company of the year 2019 by Norway's largest financial newspaper

<https://www.dn.no/morgendagens-naringsliv/arets-grundere/revetal/ralph-schmidt/fulgte-kjerringrad-og-klekket-ut-vinnerbedrift/2-1-574107>



Develop your Patent Portfolio

Dehns Patent Ref./Country	Title	Owner	Application/Patent No.	Filing Date	Appl. Publication/Patent No.	Earliest Priority Date	Earliest Priority No.	Predicted Normal Expiry Date	Current Status
121088/04 (Australia)	Micronized eggshell membrane particles and the use thereof to promote the healing of wounds	Biovotec AS	AU 2015340635	28-10-15	AU 2015340635	28-10-14	GB 1419183.7	28-10-35	Application filed, awaiting exam
121088/05 (Canada)			CA 2963595		CA 2963595			28-10-35	
121088/06 (China)			CN 201580058749.4		CN 107106733A			28-10-35	
121088/07 (Japan)			JP 2017-542294		Awaiting			28-10-35	
121088/08 (New Zealand)			NZ 731569		Awaiting			28-10-35	
121088/09 (Korea)			KR 10-2017-7011901		KR 20170077145			28-10-35	
121088/10 (United States)			US 15/422,441		Awaiting			28-10-35	
121088/11 (EPO)			EP 15786962.9		EP 3212204			28-10-35	Application filed, undergoing exam
122976/02 (International)	Tissue engineering scaffolds comprising particulate egg shell membrane	Biovotec AS	PCT/EP2016/064674	24-06-16	WO2016/207355	24-06-15	GB 1511146.1	24-06-36	Application filed, ISR received, national phases due December 2017
126150/01 (International)	Dry biocompatible disintegratable films for delivering particulate egg shell membrane to a wound	Biovotec AS	PCT/EP2016/077443	11-11-16	WO2017/081259	11-11-15	GB 1519923.5	11-11-36	Application filed, ISR received, national phases due May 2018
122301/01 (US)	Fiber, fiber assembly, and fiber producing method	Biovotec AS	US 12/181560	29-07-08	US 7767297	30-07-07	JP 20070197274	29-07-28	Granted
122301/02 (JP)	Fiber, fiber assembly, and fiber producing method	Biovotec AS	US 2008-108740	18-04-08	JP 5166953	30-07-07	JP 20070197274	18-04-28	Granted



Build a good Academic Background

Processed eggshell membrane powder: Bioinspiration for an innovative wound healing product. Mater Sci Eng C Mater Biol Appl. **2019** Feb 1;95:192-203.

Experimental datasets on processed eggshell membrane powder for wound healing. Data Brief. **2019** Aug 31;26:104457.

Processed eggshell membrane powder regulates cellular functions and increase MMP-activity important in early wound healing processes. PLoS One. **2018** Aug 6;13(8)

Transformative treatment. Biovotec Article in the European Networks issue 1, **2018**.

The extracellular matrix of eggshell displays anti-inflammatory activities through NF- κ B in LPS-triggered human immune cells. J Inflamm Res. **2017** Jul 4;10:83-96.

Cryogels as potential scaffolds for wound healing applications. Journal of Medical Materials and Technologies **2017** Vol 1, No 2, Special Issue Proceedings of 4th Euro BioMAT, Page No. 26-29.

In-depth comparative analysis of the chicken eggshell membrane proteome. J Proteomics. **2017** Feb 23;155:49-62.

The economics of wound care. Pan European networks, Government, 22, View point, **2017**.

Transformative treatment. Special focus wound care. Biovotec Article in the European Networks issue 12, **2016**.

Cost effective wound healing. Pan European networks, Government, Profile,17, **2016**

