Medicos Biotech

The Hope for a Chronic Wound Market

Spider Silk Protein

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Medicosbiotech Inc

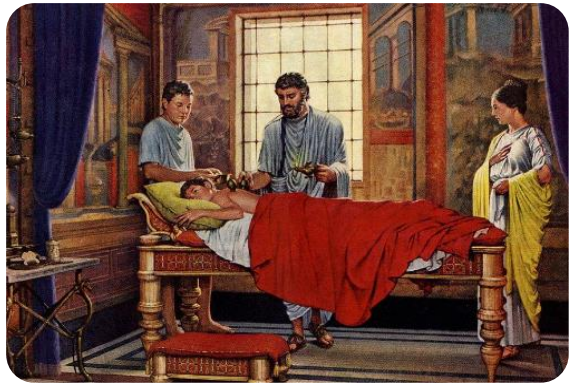
What is **Spider Silk Protein?**

Technical Definition

- ☑ Silk protein production technology using recombinant microorganisms
- ☑ Increase productivity and control of size and hardness of naturally sized recombinant spider silk protein

Spider Silk protein properties

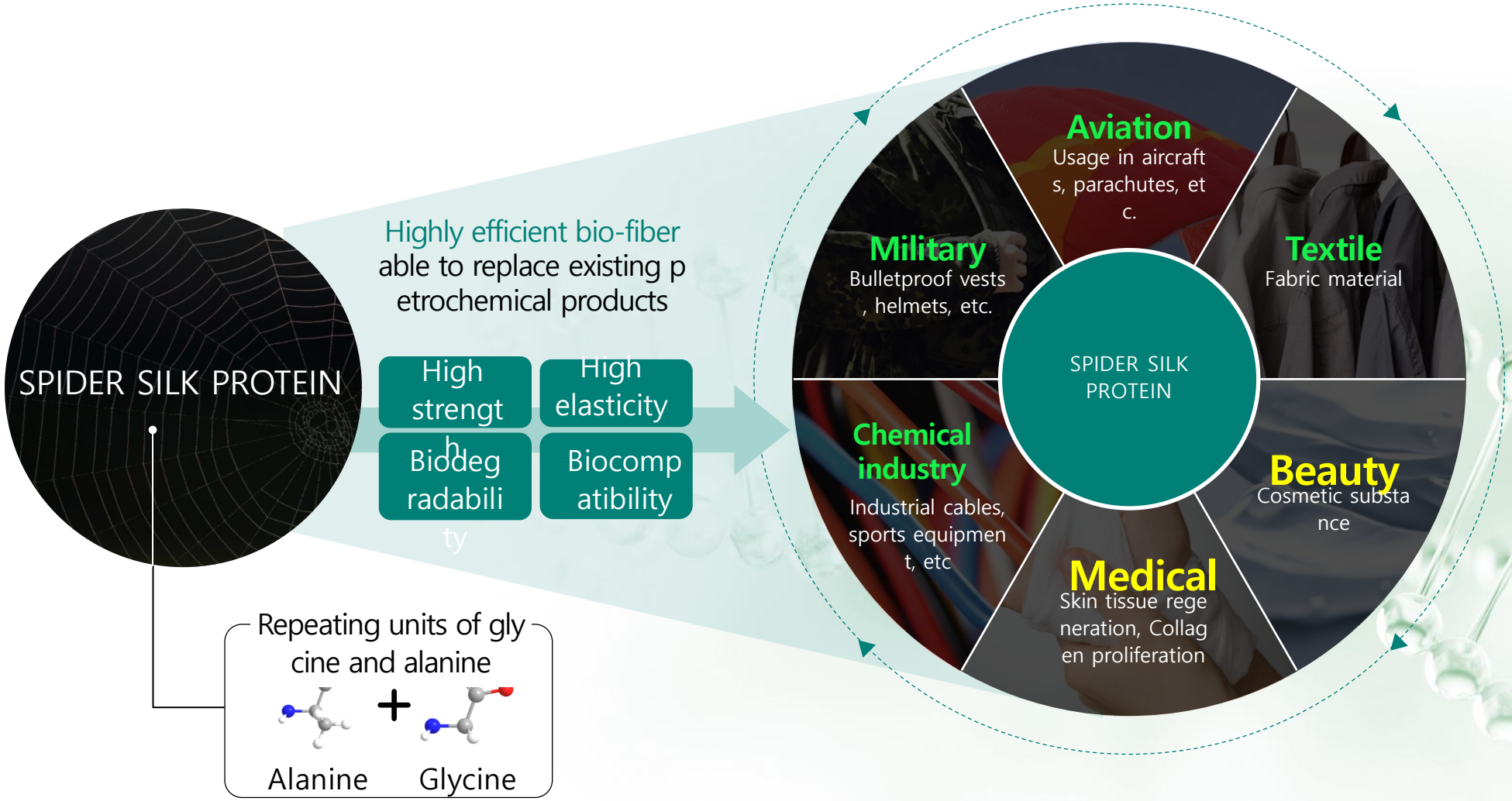
- ☑ Spider silk protein has physical property whereby it is 6 times stronger than steel (per unit mass) and 3 times harder than DuPont's Kevlar and use It for textile
- ☑ Spider silk protein has bio property whereby it is biocompatible and bio-degradable. It it also help generating lots of collages. It has used to heal the wound since 2000 years ago



- However, natural production from spiders is impossible due to spider's unique territorialism, leading to production in various platforms (yeast, E. coli, silkworms, goat milk, potatoes). **But natural sized spider silk protein (250~320 kDa) production was unobtainable.**

New Solution needs for healing Chronic Wounds

Spider Silk Protein with excellent properties with the possibility to expand to various industry



Core Technology for healing Chronic Wounds

7 times higher productivity than other competitors

Incomparable global competitiveness secured based on outstanding technological competence

7 times higher productivity than others

Production of ultra high-molecular weight spider silk protein

Application of metabolic engineering possible (production of bio-based chemical and substance)

Category		Kraig Biocraft	AMSilk	Spiber	Bolt Threads	Medicos biotech
Time of development		2012	2008	2007	2009	2018
Accumulated Investment		$5M	$42.3M	$910.9M	$218.1M	**1.8M**
Technology platform		Silkworm	Colon Bacillus	Colon Bacillus	Yeast	E. Coli
Technology development team		University of Wyoming	University of Bayreuth	Keio University	MIT	KAIST
Core technology	Maximum protein size produced (kDa)	15	50	200	100	370
	Production capability	-	0.36 g/L	1 g/L	0.5 g/L	~7 g/L

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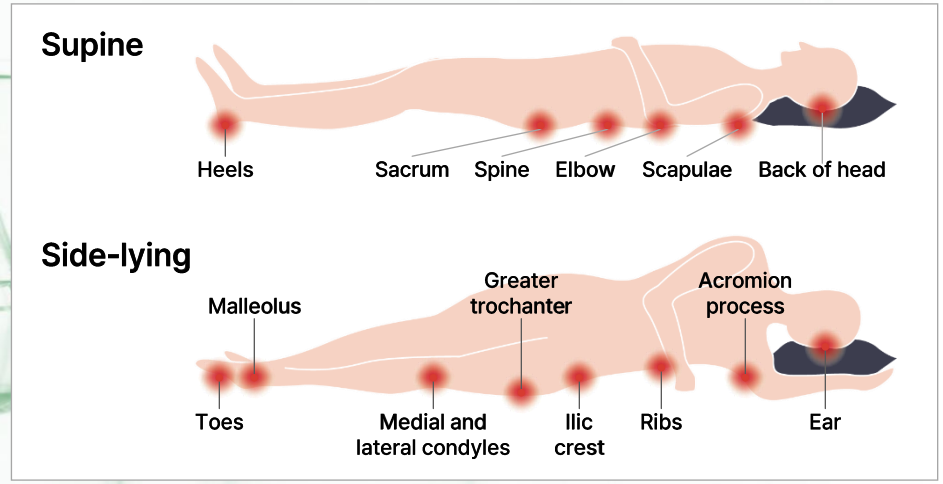
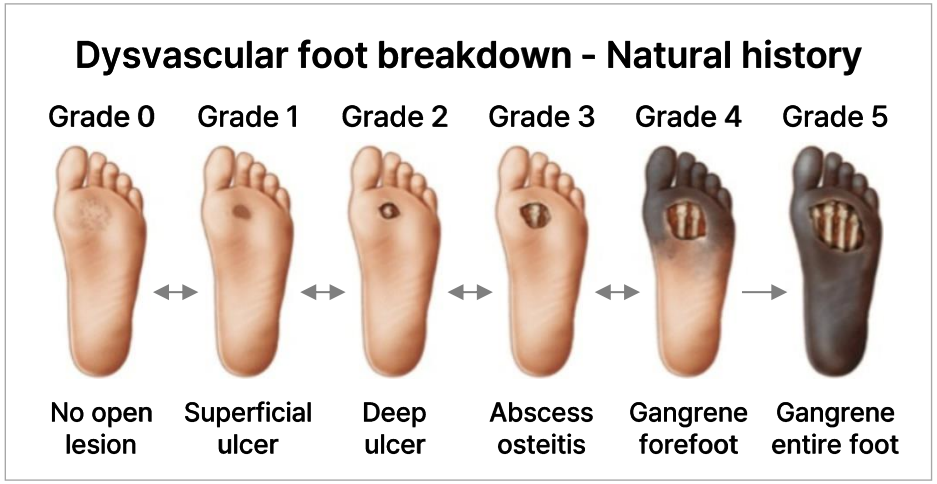
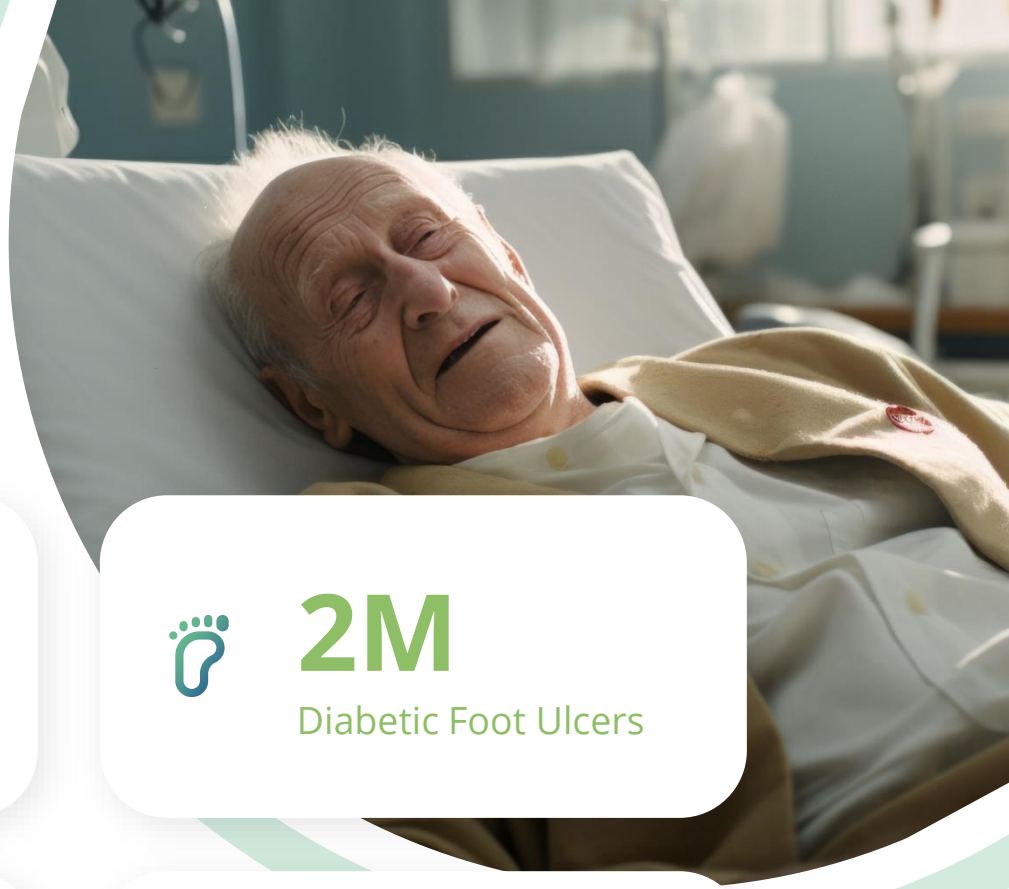
Due to aging society and adult diseases, increase in demand for **Acute and CHRONIC Wound treatment**





However, **no clear treatment** exists to treat intractable wounds.

Chronic and open wounds cost US patients billions each year.



US ANNUAL CHRONIC AND OPEN WOUND INCIDENCE

40M
Traumatic Injuries
(ER)

2.5M
Pressure Ulcer Cases
(Bedsores)

2M
Diabetic Foot Ulcers

600k
Venous/Stasis Ulcers

1.7M
Large Surgical Wounds

450k
Serious Burn Injuries

Medical Expense & **Market size**

U.S alone estimates **6.5 million patients** suffering from chronic wound, which is almost **2%** of its population.

3Mil Seniors are suffering from Bed Sore

Stage	Contents	Medicine	Price/patient ($)	Medical Cost / Year ($)
I	· Inflammation · The skin becomes red and hard	· Tegaderm · Comfeel	1,912$	9.1 billion $
II	· Epidermal and dermal damage · Skin sores and ulcers	· Duoderm · Mediform	10,255$	11.6 billion $
III	· Whole body damage · Wounds grow and deepen	**None**	40,240$	14.9 billion $
IV	· muscle/bone damage;	**None**	150,222$	26.8 billion $

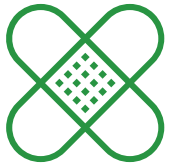
Market Total wound care market **USD 27.2 billion by 2027** (CAGR 5.4%)

Analysis Patch-wound market **USD 1.3 billion;** (CAGR 4.8%)

Comparative **Advantage**

Possible market entry through differentiated mechanism and material

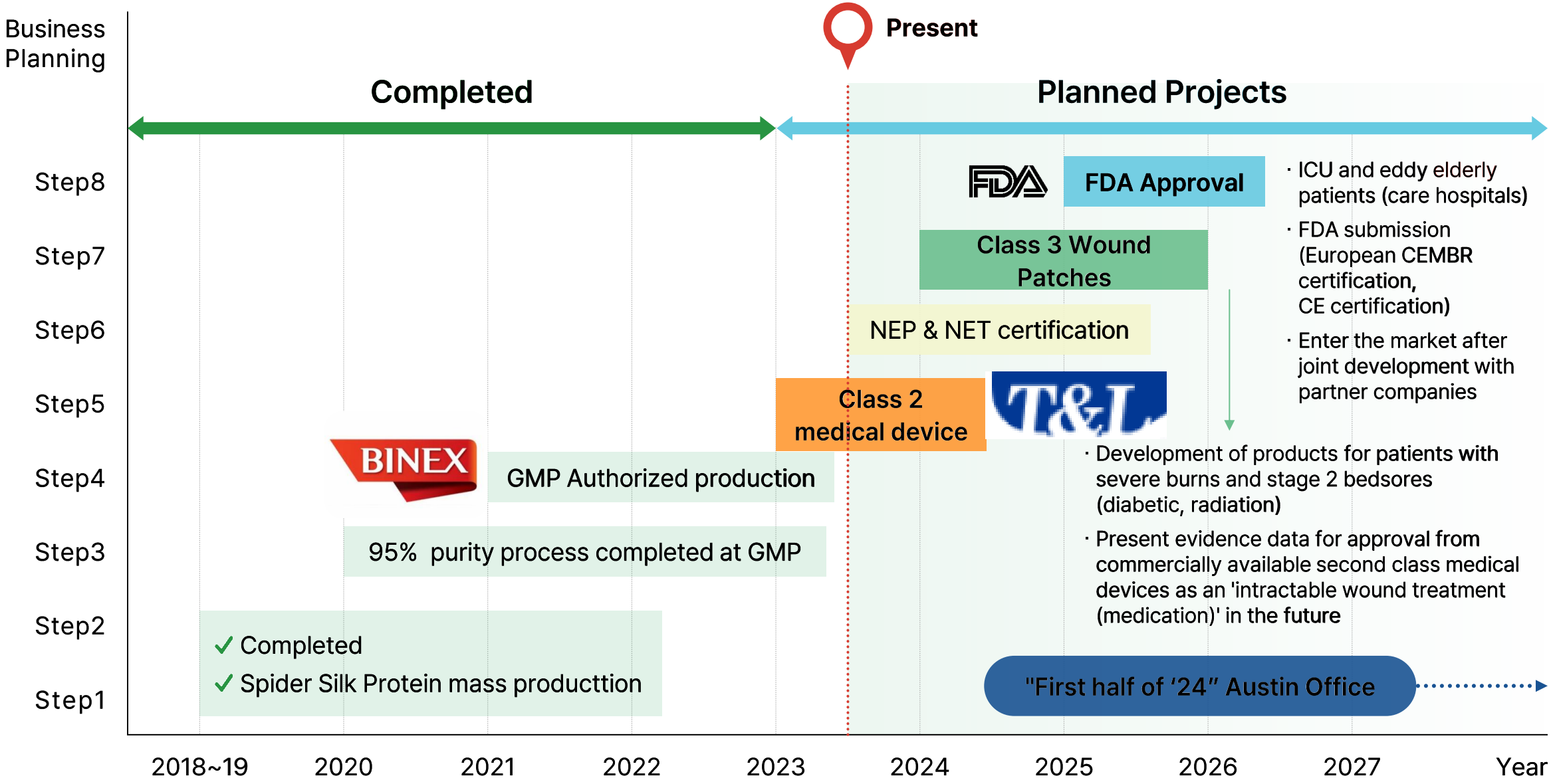
Compared to existing products, **superiority in wound protection and regeneration** performance was confirmed



Securing competitiveness through **self-production of materials** and **possession of source technology**

	Foam type patch	Stem cell Patch	Patch with growth factors	Spider silk protein patch
Antibacterial ingredient	✗	✗	✗	✓
Anti-inflammatory	✗	✗	✗	✓
Easy handling	✓	✗	✗	✓
Biocompatible	✓	✓	✓	✓
Price	50~100$	300 $ ~	150~200 $	100~150 $

Business **Roadmap**




MEDIROK
Next-Gen Chronic Wound Care
Patented, scalable spider silk protein medications
with remarkable regeneration properties.
SERIES-A INVESTOR PRESENTATION

TEAM

MediRok: A joint venture between Rokline and Medicos teams.

Ann Thomas
INTERIM CO-CEO

25+ years in healthcare, specializing in business dev. and marketing

Drove significant public investments and private practice mergers

MEDIROK ROKLINE Health Concepts

Herbert Fritsche
PhD | INTERIM CO-CEO

54+ years in clinical chemistry, cancer diagnostics and lab mgmt

Over 200 publications for diagnostic innovations and research initiatives

THE UNIVERSITY OF TEXAS MD Anderson Cancer Center ASPIRA

Won Min Yoo
MD, PhD | SCI. FOUNDER

24+ years in plastic surgery; focus on clinical practice and education

Former head professor of plastic surgery at leading hospitals in Korea

강남세브란스병원 GANGNAM SEVERANCE HOSPITAL DM Plastic Surgery

Daniel Kim
Executive VP

26+ years in biotech, business strategy, and product innovation

Founded multiple ventures, in education, security, and healthcare

IBM FUJITSU

Cain Linville
MD | MED. ADVISOR

17+ years in surgery, specializing in plastic and reconstructive procedures

Pioneered advanced microsurgical techniques, enhancing breast reconstruction outcomes

LINVILLE PLASTIC SURGERY Combining Art and Science MEMORIAL HERMANN

Ji Yong Kim
PhD | Tech Director

4+ years in chemical and biomolecular engineering sectors

Pioneered advancements in metabolic and protein engineering research

Medicos Biotech KAIST

Sang Yup Lee
PhD | SCI. FOUNDER

30+ years in chem. And biomolecular engineering

Authored 751 journal papers and holds 841 patents, including 573 international patents

KAIST Northwestern University

Medicos Biotech

Dedicated to
healthy and beautiful life
Throughout **what we have**

Thank you.

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