BIOBYTES · PARTNERING 2026

Turning Human Data into New Medicines for Muscle Aging



Jung Woo Joseph Lee, MD, PhD
Founder & CEO

Investment Highlight

Biobytes

One End-to-End Sarcopenia Platform — not separate businesses.

800+

Multi-center biobank participants (3,000 by ‘27)

3

Therapeutic modalities under evaluation

0.903

Program AUROC — internal, AWGS 2025

+500%

‘25 revenue growth ($0.5M+, vs. ‘24)

$2.2M+

Series A ask at $22M pre-money

Why now

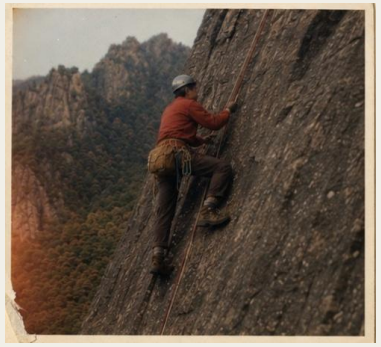
Biobytes is a single, End-to-End Sarcopenia Platform: one biobank feeds diagnosis (MyoTest), near-term revenue (Biact Tab), and a licensable drug pipeline — the same data asset compounding across all three.

The ask: Strategic Series A partners to advance our first biobank-derived targets toward global licensing.

A Large, Recognized, Yet Undertreated Disease

Biobytes

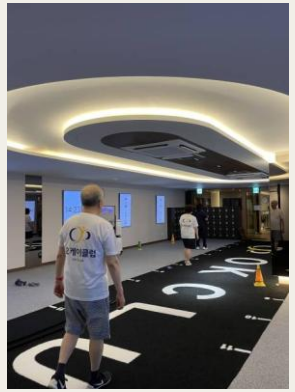
My father,
an active rock climber

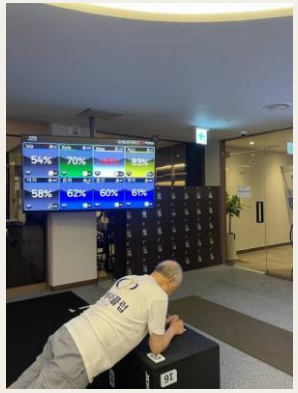




Muscle loss
took his strength away.







As an orthopedic surgeon, I kept treating the fall — never the cause.

Biobytes exists to catch it first.

M62.84
ICD-10 CM code billable since 2016 — but Medicare has no dedicated reimbursement pathway.

$18.5B+
Estimated annual direct U.S. healthcare cost attributable to sarcopenia (WHO / Janssen et al.).

50M → 200M+
People affected globally today, projected to more than triple within ~40 years as populations age.

Investment Highlight

Biobytes

Sarcopenia biobank

800+

participants



Biomarker Discovery

5

targets



AI Screening

0.903

AUROC



One longitudinal data asset powers both target discovery and clinical phenotyping.

Proprietary Data Moat

Biobytes

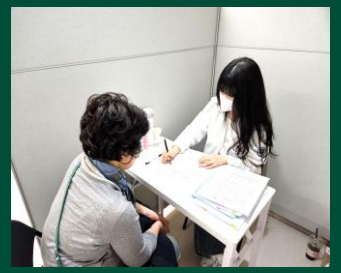
800+
3000+ by ‘27

3
hospital sites

15
year protocol

Blood & Muscle





Function and blood are common. Muscle tissue is not.





AWGS / KWGS-aligned function tests, grip strength and disease history, plus blood and muscle-tissue samples — collected by trained nurses, overseen by a PhD research director.

Biobytes

Program catches the risk early.

Exploring U.S. reimbursement pathways, including CPT 97750

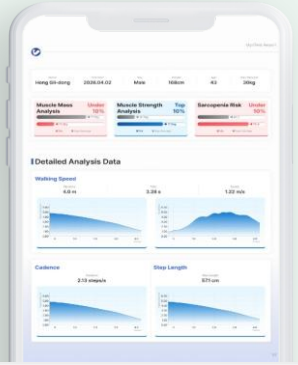
Supplement supports recovery immediately.

U.S. FDA facility/product registration in progress

REGULATORY

Certified, device pending

- GMP
- ISO13485
- GS
- EN/ISO
- Class II SaMD

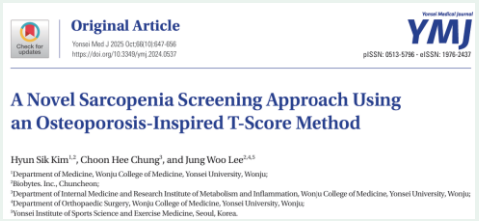


ACCURACY

Beats the current standard

0.843 AUROC vs. SARC-F 0.607

WIPO | PCT
The International Patent System


Original Article

YMJ

A Novel Sarcopenia Screening Approach Using an Osteoporosis-Inspired T-Score Method

Hyun Sik Kim, Choon Hee Chung, and Jung Woo Lee

TRACTION

5x revenue growth





Supplement provides near-term commercial revenue.

Lead Target Program: BB-SSR-01

Biobytes

Small molecule · in-house

- **Target prioritization nearing completion**

5/10 candidate biomarkers validated in vitro.

~4x mRNA expression vs. control

— top hit (dexamethasone atrophy model, qRT-PCR).

PRECLINICAL MILESTONE PATH

- **Sep 2026** Cell (in vitro) study results
- **Nov 2026** Animal (in vivo) study results
- **2H 2026** Licensing-out negotiation begins

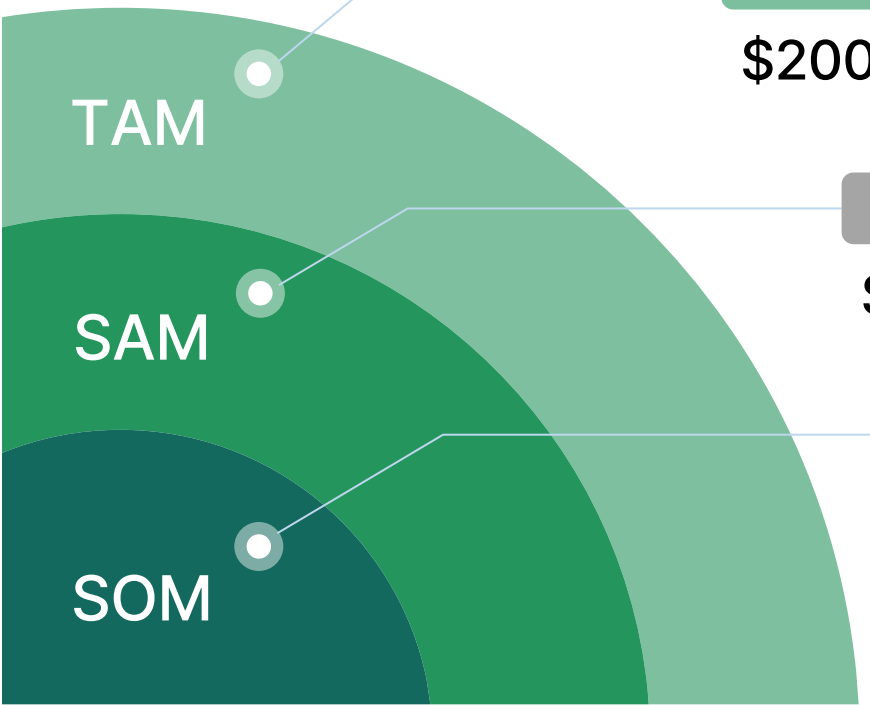
- **Antibody · YntoAb (NDA)**
- **bioPROTAC · Genexine (MOU in prep)**

Deal strategy: license out at peak value inflection
— after animal data, before Phase 1 — ahead of dilution-heavy clinical costs.

Mendelian randomization for causal validation · two-stage druggability scoring (modality fit + Pharos IDG tiering) · multi-omics tiering · biological pathway review

Biobytes

A $40B U.S. Burden Entering Regulatory Focus



First-in class

Global pharmaceutical R&D

$200B

Drug discovery & target identification

$20-30B

Muscle & aging therapeutics

$3-5B

→ **multiple** licensing deals

The Journal of Frailty & Aging
Volume 8, Issue 2, April 2019, Pages 93-99

Original Research

Economic Impact of Hospitalizations in US Adults with Sarcopenia

S. Goates [1], K. Du [1 2], M.B. Arensberg [1], T. Gaillard [3], J. Guralnik [4], Suzette L. Pereira [1 5]

Paul S. Legg, MD, U.S. Senate Aging Committee Hearing, 2025



Biobytes

Ready to co-discover the first-in-class medicine for sarcopenia.

Backed by international capital

KINGSLEY VENTURES

Completing the global picture

KR 800 > UK 100

biobank uk
Improving the health of future generations

Already partnered in Canada

MYOMAR

NOVA SCOTIA

Ontario



ACTIVE PHARMA ENGAGEMENT

CDA

Hanmi Science

NDA

Chong Kun Dang Pharm. Seoul, Korea

MOU

Dt&CRO

1st place, US Embassy competition (LA)

1 of 6 in Launchpad (SF) snowflake

Seeking: CLSA data. A McMaster partner. A shared drug target.

Biobytes

A team that has built, exited, and licensed before.

Pfizer

basgenbio



Joseph Lee, MD, PhD

CEO

Orthopedic Surgeon (Sarcopenia Specialist)
Professor at Wonju Severance Hospital
Director, Korean Sarcopenia Society



Jaewon Kim, MPH

VP/CTO

LifeSemantics (IPO & Exit)
Digital Nutrition (CTO)
Clinical Data Analysis at Pfizer
Research Institute, Basgenbio



Sol Lee, PhD

Research Director / CDO

Genomics Research Lab at Basgenbio (Exit)
Clinical Data Analysis at Pfizer
Research Center at Wooridul Hospital

RESEARCH & DEVELOPMENT ORGANIZATION

CADD Team

Hyosun Hong, Jiwoo Kim, Chanjung Lee





Computational drug design,
bioinformatics & AI-driven target analysis

Biobank Team

Hyeyeon Shin, Jiyoung Kim, Hyojin Jeon





Multi-center sample collection,
biobank operations & sample QC

- IP: 6 domestic + 2 PCT
- ASBMR member
  — 2 studies in 2025 (Seattle)
- 9 SCIE-indexed publications

+ RA, Commercial, government-project, and business operations team (9 members)

Roadmap & Financing Ask

Biobytes

NEXT 12–18 MONTHS

JUN–OCT 2026
In vitro & in vivo studies complete; hit discovery

NOV 2026
Technology transfer begins; lead optimization

2026 2H
Global biomarker license-out discussion

2027 1H
Series A; cancer/metabolic biomarker validation

FINANCING ASK — Series A ROUND

$2.2M+

Target — $22M pre-money

USE OF PROCEEDS

- Expand biobank collection sites (domestic + US institutions)
- Genetic testing for biobank samples (WGS, RNA-seq)
- Global BD hiring & partner/collaborator discovery

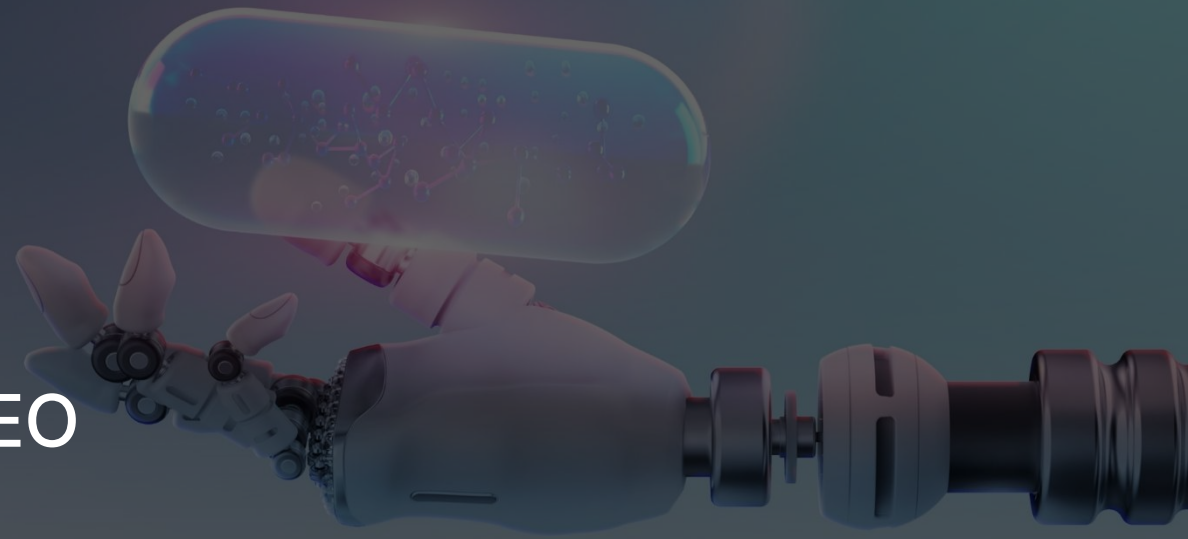
- **Bio Korea & Interbiz 2026**
  DONE · Active MOU sourcing
- **BioJapan**
  OCT 2026 · Upcoming
- **BIO International (USA)**
  Bio Korea, Japan & Interbiz
  2027 · Planned

The ask: Strategic Series A partners to advance our first biobank-derived targets toward global pharmaceutical licensing.

Biobytes

BIOBYTES · PARTNERING 2026

Creating a New Standard in Muscle Health



Jung Woo Joseph Lee, Founder & CEO
jwlee@biobytes.kr · biobytes.ai

BIOBYTES INVESTOR RELATIONS 2026

APPENDIX



Competitors Differentiation

Company	Item	Key Data	Key Technology	Business Status
Biobytes	Sarco-Finding & Multi-indication drug development	Exclusive multi-center sarcopenia multi-omics cohort data + Global open-source & closed governmental data	GWAS, GRS, Druggability, Network, INN, Pathway, etc	Developing treatments based on sarcopenia drug biomarkers
Insilico Medicine (HK)	Panda-Omics & IPF drug development	Open-source data, prior publication data, existing clinical data, partial omics data	GWAS, Pathway, LLM, etc	**Completed IPO in Dec 2025y** Enterprise value: $5.1B+ as of March 2026
Recursion Phamaceuticals (USA)	ASK-BEST & Multi-indication drug development	Large-scale compound subscription data, prior publication data	NLP, Knowledge Graph, Network, etc	Nasdaq IPO in 2021 Enterprise value: $2.2B+ in 2026
KSB Tugen Aventi (KR)	Sarcopenia drug development	Traditional laboratory-based drug development	Cell and animal experiments, etc	Drug repurposing & utilization of existing biomarkers Phase 2 clinical trials ongoing
ONCOCROSS(IPO) animuscure (KR)	AI-based sarcopenia drug development	Large-scale compound subscription data, prior publication data	Pathway, Network, MoA Prediction, etc	Drug repurposing & utilization of existing biomarkers Phase 1-2 clinical trials ongoing
Rejuvenate Biomed (USA) Biophytis (FR)	AI-based sarcopenia drug development	Large-scale compound subscription data, prior publication data	NLP, Knowledge Graph, Network, etc	Utilization of existing biomarkers & compound subscription Phase 2 clinical trials & platform service

Biobytes' edge: proprietary, disease-specific biobank data — not public or subscription data like competitors rely on

Market Validation: Deal Landscape

NOVARTIS → Versanis → Lilly

Bimagrumab

Sarcopenia → Obesity → Metabolic Disease

$1.9B

- 2021: Novartis out-licensed its Phase 2 sarcopenia candidate to Versanis
- 2023: Eli Lilly acquired Versanis just before Phase 3 initiation
- Muscle-mass benefit alone drove a multi-billion-dollar valuation

AMGEN → BIOAGE (2021, LICENSE-OUT)

AMG 986 (→ azelaprag)

Sarcopenia — licensed at Phase 1

$170M

- 2021: Amgen licensed its Phase 1 muscle-aging asset to BioAge
- 2024: $170M Series D funds a Phase 2 trial combining azelaprag with Eli Lilly's tirzepatide
- Lilly Ventures & Amgen Ventures joined as new investors in the round


FIERCE Biotech

BIOTECH

Hungry for more, Lilly tops off weight loss pipeline with $1.9B deal to acquire Versanis

By James Waldron · Jul 14, 2023 9:01am

Eli Lilly · Obesity · weight loss · mergers and acquisitions


With $170M, BioAge Joins Lilly in Oral, Muscle Preserving Obesity Treatment

Aging biology-based metabolic biotech completes Series D, plans Phase II trials of combination therapy starting 'mid-2024', CEO Kristen Fortney tells GEN Edge

By Alex Philippidis February 15, 2024

The takeaway: sarcopenia assets command large valuations even pre-clinical — Biobytes' biomarkers are earlier-stage, with more upside still ahead

Sources: Lilly–Versanis deal — FierceBiotech, BioPharma Dive (2023); bimagrumab sarcopenia Phase 2 — PubMed, Novartis Clinical Trial Results. Amgen–BioAge license — FierceBiotech (2021), BioSpace; $170M Series D — GEN Edge (2024).

Market Potential of Biomarkers

Biobytes

The market value of the world's first sarcopenia drug biomarker:
Range from $14.8M+ to $444M+

Non-Refundable Upfront Payment of $40M+

Basgenbio Signs Agreement with Yungjin Pharm for Novel Target Discovery and License-out in Oncology

바스젠바이오, 첫 타겟 기술 이전 계약 체결
바스젠바이오, 영진약품과의 지난 신약개발 협업을 통해 타겟 발굴 기술 검증

홈 > 산업 > 제약·바이오 가- 가+ 입력 2024.09.06 15:05 김태일 기자

CELLTRION **Celltrion - Basgenbio Joint Research & Investment in Genomic Biomarker Discovery** basgenbio

GENCURIX and Basgenbio Sign License-out Agreement for Gastric Cancer Risk Prediction Biomarkers

김동주 / 기사승인 : 2022-09-06 11:35:41

동아ST X abbvie

Milestones from Dong-A ST's Extraordinary Out-licensing Feat

기사입력 : 2017-02-14 08:43 | 수정 : 2017-03-03 21:38

동아에스티가 디스커버리 단계에서 이 정도 규모의 딜을 성사시킬 수 있었던 이유는 무엇일까? 첫째, 새로운(novel) 타깃인 'MerTK'를 억제해 "Next PD-1"의 차세대 면역항암제로서 작용할 수 있는 기전을 설명하는 충분한 데이터가 있었기 때문. 둘째, 이를 증명할 수 있는 매우 특이적(selective)인 MerTK 억제물질을 발굴했기 때문이다.

Being in the discovery stage means validating the Proof of Concept (PoC) for a target mechanism. This phase involves identifying lead compounds with superior activity and subsequently selecting a development candidate for clinical trials.

Domestic Sarcopenia Drug Pipeline Analysis

Company	ID	Mechanism of Action	Stage
Biobytes	**BB-SAR-10**	➢ **Restoration of mitochondrial function and normalization of energy metabolism** ➢ **Maximization of muscle protein synthesis by overcoming anabolic resistance** ➢ **Maintenance of neuromuscular junction (NMJ) homeostasis and optimization of neural transmission**	**In-vitro test (10 Targets)**
Aventi	AVTR-101	➢ Activation of muscle progenitor cell fusion and differentiation (Drug Repositioning)	Phase 2
	AVTN30X	➢ New Chemical Entity (NCE) candidate discovered from Aventi's proprietary compound library	Candidate Discovery
	AVTP40X	➢ miRNA-based therapeutic ➢ Inhibition of muscle-specific E3 ligase (Atrogin-1)	Candidate Discovery
Oncocross	OC514	➢ Drug combination discovered via proprietary AI platform (RAPTOR AI); detailed MoA undisclosed	Phase 1 (Completed)
Animuscure	AMC#6156	➢ Induction of CDO expression and targeting PGC-1α ➢ Therapeutic for age-related sarcopenia	Phase 2
	AMC9005	➢ Therapeutic for metabolic sarcopenia ➢ Therapeutic candidate for Duchenne Muscular Dystrophy (DMD)	Lead Discovery
ENCell	EN001	➢ Allogeneic umbilical cord-derived mesenchymal stem cell (MSC) therapeutic candidate ➢ MoA: Inducing myelin sheath and muscle regeneration leveraging the multipotent differentiation capacity of MSCs ➢ Initially developed as a therapeutic for Duchenne Muscular Dystrophy (DMD) and Charcot-Marie-Tooth disease (CMT) ➢ Indication expanded to sarcopenia	Phase 1 (Ongoing)

Global Sarcopenia Drug Pipeline Analysis and Development Strategy

Company	ID	Mechanism of Action	Stage
Biophytis (France)	Sarconeos (BIO101)	➢ Promotes RAS (protective arm) and PI3K/AKT/mTOR signaling pathways via MAS receptor activation ➢ Enhances muscle protein synthesis and muscle cell function	Phase 3 (Preparing)
Amazentis (Swiss)	Urolithin A *Supplement (Non-pharmaceutical)	➢ Activates 'mitophagy' to clear damaged mitochondria and promote new mitochondrial generation ➢ Mitophagy activation → Mitochondrial renewal → Maintenance of muscle cell health/function → Potential prevention and mitigation of age-related sarcopenia	Commercialization * Developed as a 'Medical Food'; demonstrated improved muscle endurance in clinical trials for the elderly'
Scholar Rock (US)	Apitegromab (SRK-015)	➢ Inhibits 'pro-myostatin', the inactive precursor of 'myostatin' (a muscle growth inhibitor protein) ➢ Under development as an anti-catabolic therapeutic to prevent muscle loss during weight loss induced by GLP-1 therapies	Phase 3 (Completed) / Preparing for FDA submission
Epirium Bio (US)	MF-300	➢ Elevates PGE2 levels by inhibiting 15-PGDH (a PGE2-degrading enzyme) ➢ Promotes satellite cell activation and muscle regeneration	Phase 2 (Preparing)

➢ Biobytes' 3 Core Drug Development Strategies

1) **Energy Metabolism: Restoration of mitochondrial function and metabolic normalization**
2) **Muscle Synthesis: Maximization of protein synthesis efficiency by overcoming age-related Anabolic Resistance**
3) **Neural Transmission: Maximization of motor control and practical mobility recovery via Neuromuscular Junction (NMJ) protection**

Beyond Mere Muscle Mass: A 'First-in-Class' Strategy Restoring Functional Mobility via the Synergistic Recovery of the Muscle-Mitochondria-NMJ Axis

Sarcopenia Therapeutics: Licensing and Deal Landscape

Biobytes

Company	ID (Indication)	Deal	Amount
Novartis → Versanis (2021) (L/O)	**Bimagrumab (Sarcopenia)**	➢ In 2021, Novartis out-licensed its Phase 2 sarcopenia drug candidate to Versanis ➢ In 2023, Versanis was acquired by Eli Lilly just prior to Phase 3 initiation (highlighting the high valuation of the sarcopenia pipeline) ➢ This deal exemplifies the expansion of drug indications from sarcopenia to obesity and metabolic diseases ➢ A prime example where demonstrating muscle mass increase alone drove the drug's industrial valuation to a multi-billion dollar scale	$1.8B
Versanis → Eli Lilly (2023) (M&A)	**Bimagrumab (Sarcopenia, Obesity, Metabolic Disease)**		
Amgen → BioAge (2021) (L/O)	**AMG 986 (Sarcopenia)**	➢ In 2021, Amgen out-licensed its sarcopenia drug candidate to BioAge ➢ This deal demonstrates that even early-stage assets (Phase 1) can command large-scale transactions due to the high unmet need and disease specificity of sarcopenia (Currently in Phase 2)	$70M
Biophytis (NASDAQ) (SI)	**IO101 (Sarcopenia)**	➢ Biophytis, a Nasdaq-listed French biotech, secured a strategic investment (SI) from a major Chinese pharmaceutical company, driven by the value of its early-stage sarcopenia asset, IO101	$21M
HK inno.N → Kine Science	**KINE101 (Sarcopenia)**	➢ HK inno.N and Kine Science signed a joint R&D agreement for the early-stage sarcopenia asset, KINE-101 ➢ Japanese pharmaceutical company Immunis in-licensed TRK-820, an early-stage sarcopenia drug, from Japanese biotech Toray ➢ US biotech Sarcomatrix signed a comprehensive portfolio licensing agreement, securing exclusive rights to multiple early-stage candidates for muscle-related diseases, including sarcopenia, from a US pharma company	Undisclosed
Immunis → Toray	**TRK-820 (Sarcopenia)**		
Sarcomatrix → Pharma (US)	**S-969 (Sarcopenia)**		

Market Value of Biomarkers

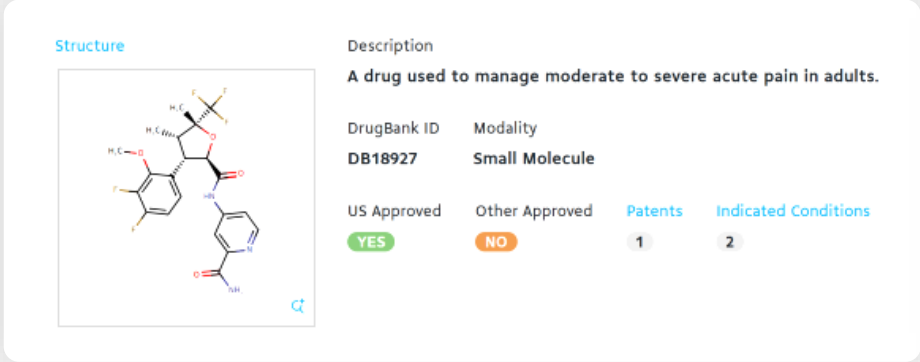
- **In February 2025, the FDA approved Vertex Pharmaceuticals' 'Suzetrigine,' a novel target-based analgesic**
  Suzetrigine is a non-opioid analgesic with a mechanism of action (MoA) entirely distinct from conventional NSAIDs and opioids, blocking pain signals at the source as a selective NaV1.8 blocker in the peripheral nerves
  As a non-opioid analgesic, it carries no risk of addiction or dependency and demonstrates significantly lower gastrointestinal and cardiovascular side effects compared to NSAIDs
- **Accordingly, the novel biomarker is projected to reach a valuation of roughly $14.8B+, assuming it disrupts a fraction of the existing markets for painkillers, NSAIDs, and local anesthetics.**


FDA NEWS RELEASE

FDA Approves Novel Non-Opioid Treatment for Moderate to Severe Acute Pain

First Drug Approved in New Class of Non-Opioid Pain Medicines; Agency Continues to Take Steps to Support New Approaches for Pain Management

For Immediate Release: January 30, 2025





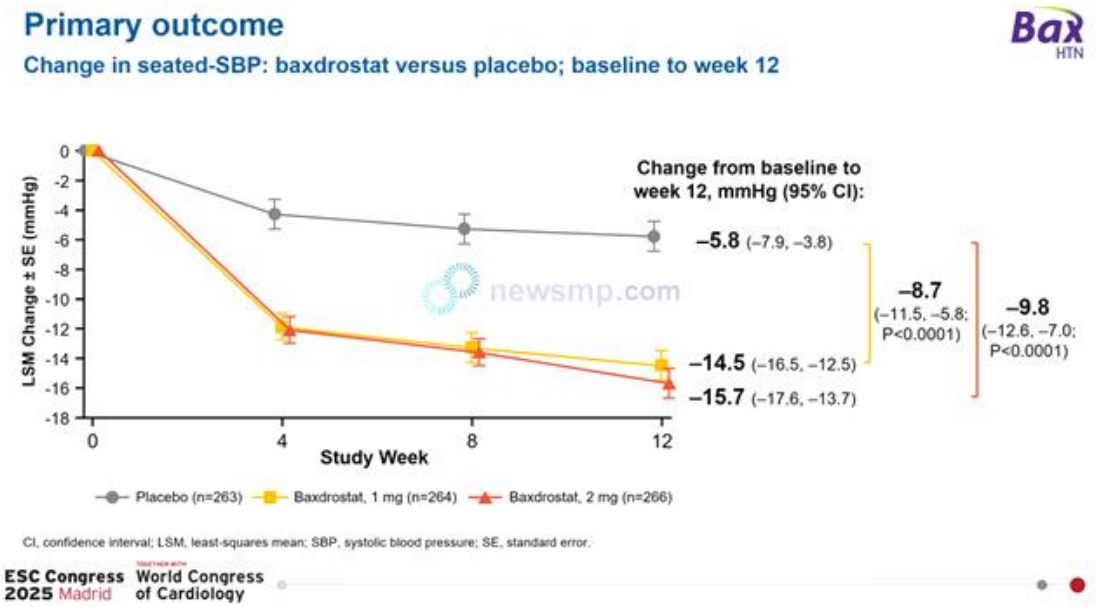
Category	Suzetrigine	Local Anesthetics	NSAIDs	Opioid Analgesics
Target	NaV1.8 channels in peripheral sensory nerves	All Na+ channels in peripheral sensory nerves (NaV1.7, 1.8, 1.9, etc.)	COX-1, COX-2 inhibition	Opioid receptor activation
Mechanism of Action	Selectively blocks pain signals only (No effect on senses like touch, temperature, etc.)	Blocks all sensations	Suppresses inflammation and pain	Suppresses pain in the central nervous system (CNS)
Purpose of Use	Analgesic (Painkiller)	Local anesthesia (For blocking sensation during procedures)	Anti-inflammatory and pain relief	Analgesic (Painkiller)
Side Effects	Paresthesia or muscle spasms	Dullness in sensation recovery or shock	Gastrointestinal issues, nephrotoxicity, cardiovascular risks	Respiratory depression, risk of addiction, etc.

Market Value of Biomarkers

Biobytes

- **July 2025: Phase 3 Success for AstraZeneca's 'BaxHTN' (Baxdrostat) – A Novel Target-Based Treatment for Resistant Hypertension**
  World's first mechanism targeting 'Aldosterone Synthase' to mitigate cardiovascular and renal complications
  AstraZeneca acquired CinCor Pharma for $1.3B in 2023, capturing the high-value potential of Baxdrostat

AstraZeneca



newsmp.com

After 12 weeks, the Baxdrostat 1mg and 2mg groups showed blood pressure reductions of 14.5 mmHg and 15.7 mmHg, respectively. Compared to 5.8 mmHg in the placebo group, these represented significant decreases of 8.7 mmHg (95% CI –11.5 to -5.8, P<0.0001) and 9.8 mmHg (95% CI –12.6 to -7.0, P<0.0001). Both dosage groups demonstrated statistically significant differences.

The clinical benefits of Baxdrostat remained consistent across all predefined subgroups, independent of age (65, 65–74, ≥75 years), sex, race, baseline hypertension phenotype (uncontrolled vs. resistant), baseline blood pressure (<145 vs. 145 mmHg), renal function (eGFR <60 vs. 60 ml/min/1.73m²), and BMI (<30 vs. 30 kg/m²).

Solution

MyoTest: Making Sarcopenia Screening Accessible

Biobytes

WHAT WE MEASURE

Video + Questionnaire + Body metrics

AWGS 2025 guideline

HOW WE ANALYZE

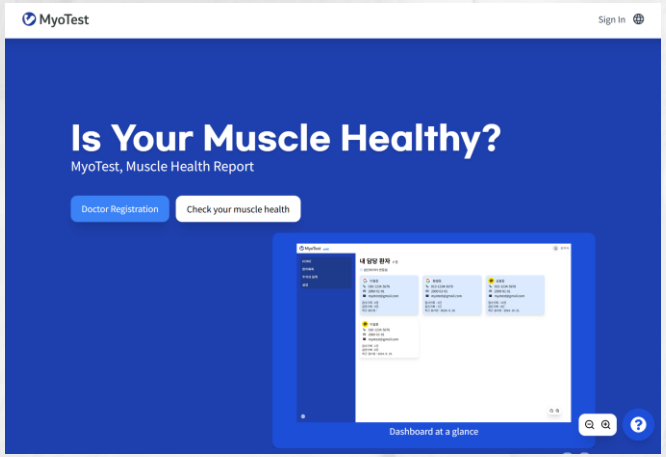
AI model predicts risk in under a minute

AUC 97%, peer-reviewed model

WHAT YOU GET

Risk score, muscle report, and a recommendation

ISO, GMP, SaMD







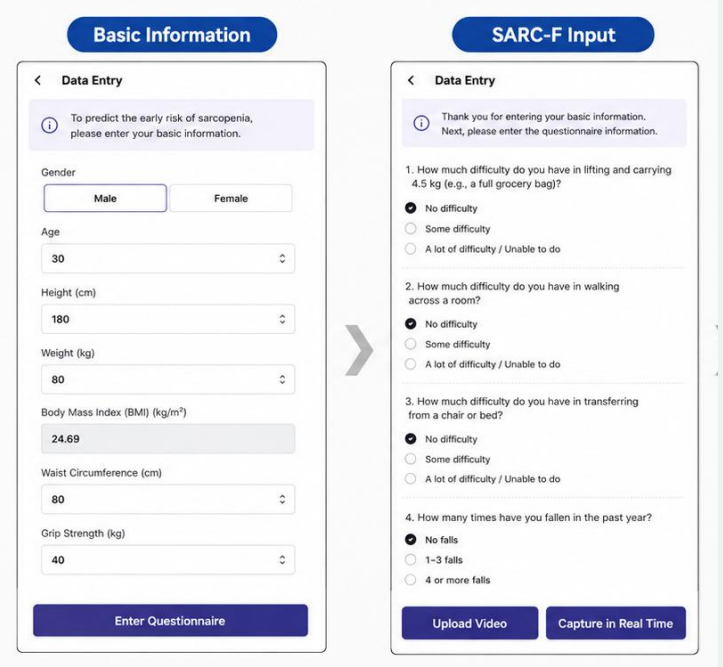
Field validation — IND trial, completion Dec 2026

Applies international diagnostic criteria — no equipment needed

From Input to Insight in Under a Minute

Biobytes

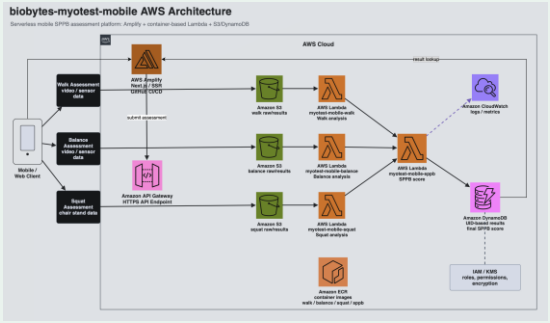
Input

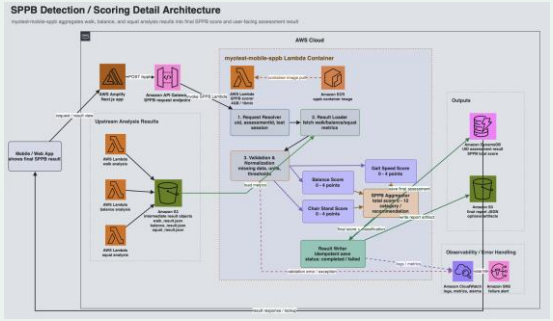


- SPPB video, grip strength, SARC-F
- Captured at home on a phone

AWGS 2025-validated tools

AI model

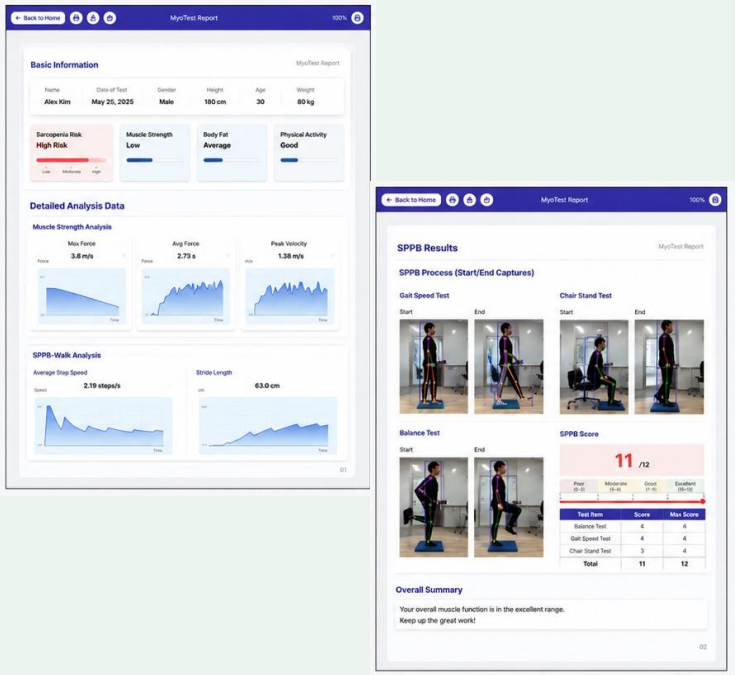




- 7 variables, ensemble model
- Cross- and externally validated

AUC 97%
ensemble of RF, XGBoost, LightGBM

Result



- Risk grade + muscle health score
- Age/sex-matched percentile

External validation: n=690, AWGS 2025 (AUROC 0.843) — see Evidence Base

Supports linked check-up data and automatic correction for missing values

Our Model, Verified by Peer-Reviewed Science

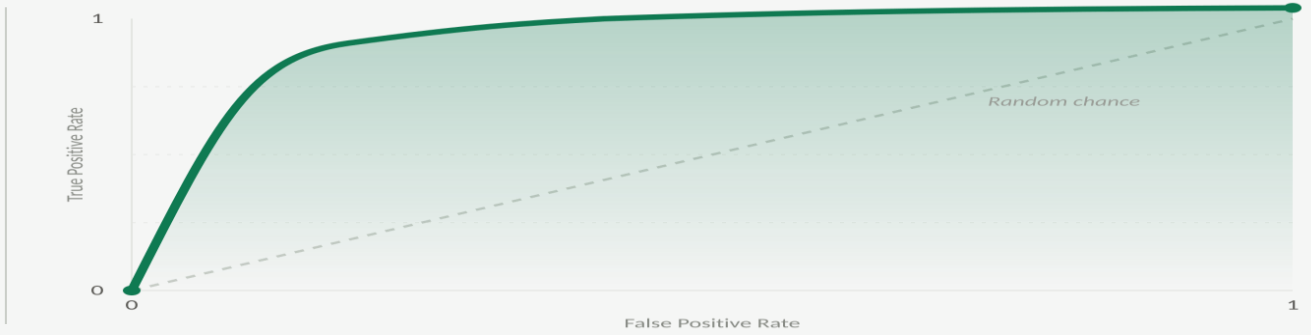
Biobytes

OUR MODEL — INTERNAL VALIDATION

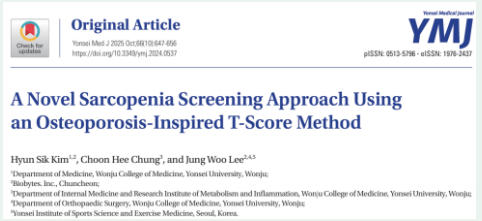
AUC 97%

Ensemble: Random Forest + XGBoost + LightGBM

MyoTest v1.0 pipeline, cross-validated



Model Development


Original Article

YMJ

A Novel Sarcopenia Screening Approach Using an Osteoporosis-Inspired T-Score Method

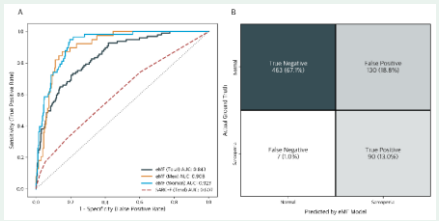
Hyun Sik Kim, Choon Hee Chung, and Jung Woo Lee

KNHANES (n=4,052) → KoGES (n=888)

AUROC

0.932

External Cohort Validation

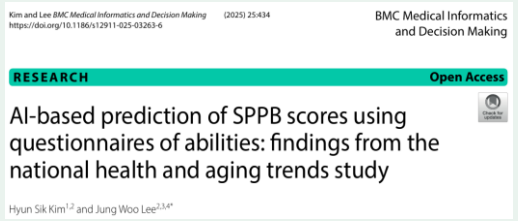


Biobytes Biobank (n=690)

AUROC (vs. SARC-F 0.607)

0.843

Equipment-free scoring


BMC Medical Informatics and Decision Making

RESEARCH Open Access

AI-based prediction of SPPB scores using questionnaires of abilities: findings from the national health and aging trends study

Hyun Sik Kim and Jung Woo Lee

NHATS (n=4,988, U.S.), no equipment

AUC (SPPB ≥ 10)

0.920

10,600+ patients across 3 studies — Korea and the U.S.

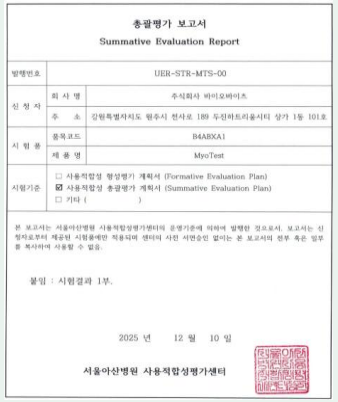
Certified, Regulated, and Proven in Real World

Biobytes

Completed Certifications



ISO13485





GMP

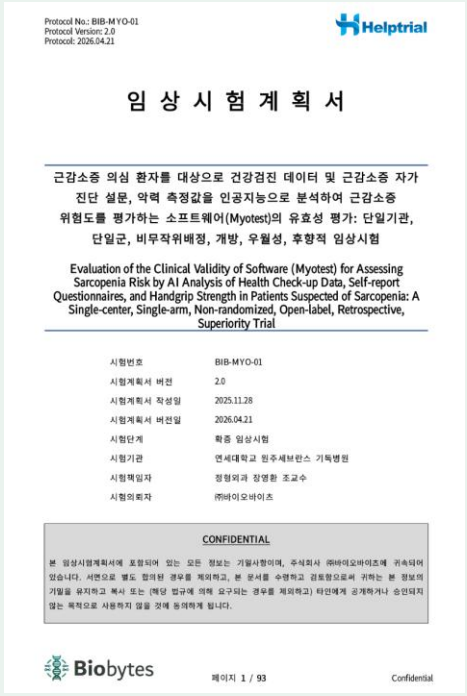


GS

Regulatory Pipeline

SaMD Confirmatory Clinical Trial

→ Class II Device Certification



Pending IND outcome

Field Validation



Validated with real, community-dwelling seniors & hospitals

원주시 HAPPY 700 평창

Quality-certified, in regulatory review, and validated

Competitive Positioning

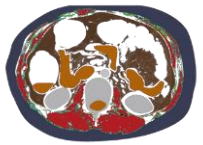
The Only Solution That's Both Rigorous and Accessible

Biobytes



DXA

clinical gold standard



PROMEDIUS

CT imaging (MyoSignal, KR)



InBody®

(BIA ,KR)

NEUROGAIT

smart insole (Salted, KR)



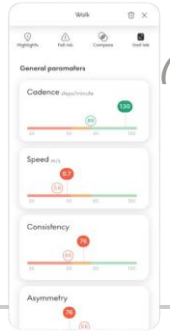
AiT STUDIO

camera gait (Medistep, KR)





MyoTest



OneStep

(motion-sensor gait, US)

SARC-F

questionnaire

Clinical Evidence → (peer-reviewed validation)

Ease of Use → (no special equipment needed)

Sarcopenia-specific, peer-reviewed, and equipment-free

Biobytes 1st Health supplement ‘Biact Tab.’

- Target Markers: MuRF1, Atrogin-1, PGC-1α / Control: Metformin / Assays: Cytotoxicity, Glucose Uptake, RT-qPCR, Western blot
- Dual-Action Mechanism : Demonstrated simultaneous muscle-sparing and mitochondrial-boosting effects
- Muscle Degradation Inhibition : BW and BE dose-dependently downregulated MuRF1 and Atrogin-1 mRNA expression
- Mitochondrial Recovery : BW and BE significantly restored PGC-1α protein levels, improving mitochondrial efficiency



㈜엔피켐바이오

경상남도 진주시 문산읍 월아산로 991
Tel. 055-761-1708 Fax. 055-762-1708

성적서 번호 : COANPC25026
페이지 (1)/(11)

1. 의뢰자
○ 기 관 명 : 바이오바이츠
○ 주 소 : 강원특별자치도 춘천시 강원대학길1, KNU 스타트업 큐브 106-3호

2. 시험대상품목/물질/시료 설명
바이액트 물추출물 및 바이액트 주정추출물

3. 시험기간 : 2025.04.08. ~ 2025.06.09. **4. 성적서용도** : 내부 참고용

5. 시험장소 : ☑ 고정시험실 ☐ 현장시험
(주소: 경남 진주시 문산읍 월아산로 991, 시험생산동 205호)
온도 25 ± 2 ℃ 습도 44 ± 5 % R.H.

6. 시험방법 : WST-1 assay, Glucose uptake assay, Real time RT-PCR 및 Western blotting

7. 시험결과 :

시료 BW와 BE 모두 근감소 조건에서 glucose uptake에는 영향을 미치지 않으나, MuRF 및 Atrogin-1 발현 증가를 억제하고, PGC-1α 발현을 증가시킴으로써 근력 개선 기능성을 가지는 것으로 판단됨

끝.

· 이 시험 결과는 의뢰자가 제시한 시료 및 시료명에만 한정됩니다.
· 이 성적서의 일부 또는 전부를 당사와의 문서화된 협의 없이 법적 소송, 홍보 등 기타 목적으로 사용할 수 없습니다.

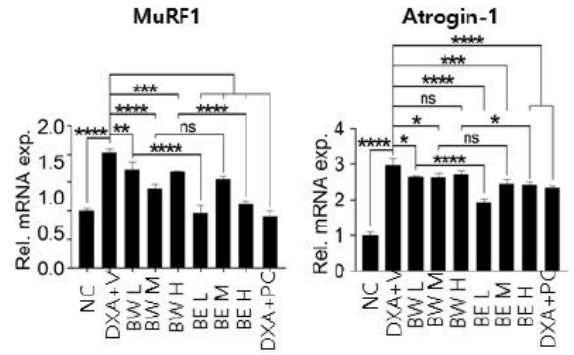
확 인	작 성 자 성 명	제 혜 미 (서명)	기술책임자 성 명	엄 연 지 (서명)

· 본 성적서는 KS Q ISO/IEC 17025 및 KOLAS 인정과 관련이 없습니다.

2025. 06. 22.

주식회사 엔피켐바이오 (인)

NPC-QPF-15-03(01) ㈜엔피켐바이오



[Fig. 5] MuRF1 and Atrogin-1 mRNA Expression in a Muscle Atrophy Model



Biobytes 2nd and 3rd Health supplement : Easy Rest & Nirex Tab.

- Utilizes Magnesium Lactate (organic acid) with a bioavailability 2–3 times higher than conventional magnesium
- This natural sleep-inducing chewable jelly is formulated with Vitamin D, L-Theanine, L-Tryptophan, Collagen, Rosavin, Valerian Extract, and Lemon Balm Extract
- As the world's first integrated sleep solution, it combines a physical health functional food with sleep-inducing sound DTx (via QR code)
- Currently distributed in 1-day (3 jellies), 1-week, and 3-week units, with bulk supply already completed for Hanwha Resorts and Hyundai E&C









Formulation & Supply Biobytes

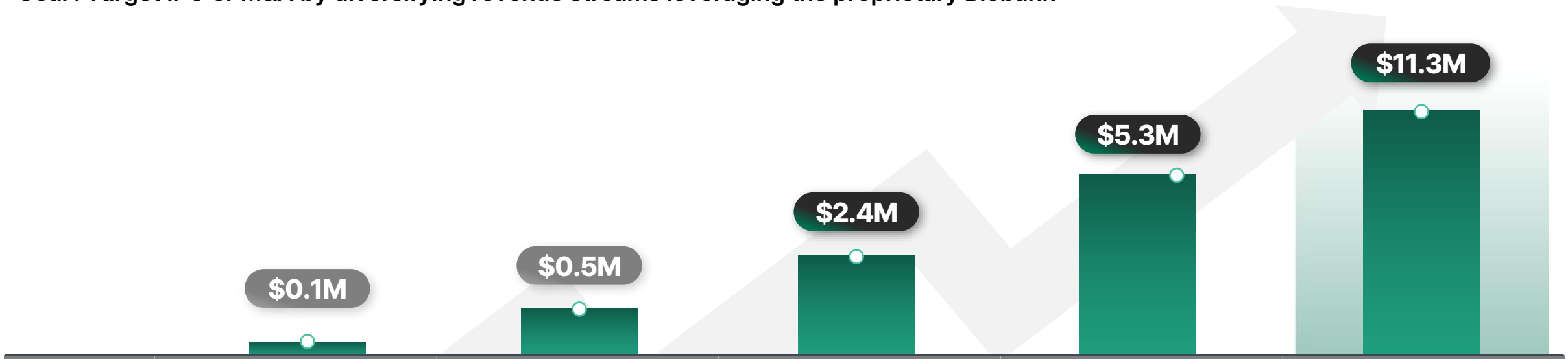
Manufacturing Kolmar B&H, Yuyu Pharma



Sales Projection

Biobytes

- **Achieved KRW $0.5M in 2025; Targeting $2.4M in 2026**
- **Goal : Target IPO or M&A by diversifying revenue streams leveraging the proprietary Biobank**



Category	2024	2025	2026	2027	2028
AI Solution & Biobank	MyoTest Dev & Supply $0.1M+	B2B & B2H Contract $0.1M+	B2B & B2H Contract $0.1M+	B2B & B2H Contract $0.1M+	B2B & B2H Contract $0.2M+
	M-Bank Platform Established	700 cases collected	2,000cases collected	3,000cases collected	5,000cases collected
Biomarker	Tech Setup	5 types discovered	1 L/O $1.5M+	1 L/O $3.7M+	5 L/O $7.4M+
Health supplement	Biact Tab Dev. Complete	Biact Tab., Easy Rest, Nirex Tab $0.4M+	2 New Items $0.7M+	2 New Items $1.5M+	2 New Items $3.7M+
Total	**$0.1M+**	**$0.5M+**	**$2.4M+**	**$5.3M + IP**	**$11.3M+ IP**

2025 Achievements and 2026 Goals

Biobytes

2025 Achievements

- Achieved **$0.5M+** (500% Growth Compared to 2024)
- Completed Discovery of **10 Types of Sarcopenia Biomarkers** / 9 Research Papers, 8 Patents
- Completed Biobank Data Collection for **700 Subjects**
- Launched a total of 4 Health supplement
- Completed Certifications **GMP & ISO13485**

2026 Goals

- **Aiming for $2.4M+ in Revenue**
- **Execute License-Out for 1 Sarcopenia Biomarker**
- **Expand Biobank Institutions and Reach a Total of 2,000 Subjects**
- **Attract $2.2M+ in New Investment**
- **Complete Licensing/Approval for Software as a Medical Device (SaMD)**