

MUSECELL®  
INNOVATIONS



# Customer On-Boarding



Discovered in 2010 by  
Professor **Mari Dezawa,**  
**MD, PhD**

**Naturally occurring, adult-derived stem cells** —  
Produced under patented methodologies and  
documented standards by the team that pioneered  
Dezawa MuseCells®.

*Findings cannot be applied to products manufactured differently.*



**Clinical trials including double-blind phase II randomized placebo-controlled investigations conducted in Japan validate:**

**Allogeneic, off-the-shelf use** without immune rejection (HLA-G expression = no immunosuppressants needed)

**Intravenous delivery** possible — cells bypass the lungs and home directly to injury sites

**No genetic reprogramming required** — cells differentiate naturally via phagocytosis

**No tumor formation** reported in preclinical or clinical studies



**Licensed exclusively worldwide** through MuseCell Innovations® PTE Ltd.

*Backed by published Phase II clinical trials in Japan, Dezawa MuseCells® are among the most rigorously studied pluripotent-like stem cells worldwide. In peer-reviewed studies, they have shown immune-tolerant properties and no evidence of tumor formation to date. Through exclusive licensing and distribution, MuseCell Innovations® (MCI) is working to advance their role in regenerative medicine.*



# COMPARATIVE ADVANTAGE

Backed by more than 120 publications — including Phase II clinical trials conducted in Japan — genuine Dezawa MuseCells® are supported by one of the most substantial dedicated evidence bases of any emerging stem cell population.

Only cells manufactured under the strict licensed process are supported by these claims.

	Dezawa MuseCells®	Traditional MSCs
DIFFERENTIABLE CELL TYPES	Most cell types in the body	Osteocytes, chondrocytes, adipocytes
DIFFERENTIATION ABILITY IN VIVO	Yes	Very low rate, if any
TUMORIGENICITY	None	None
IMMUNE REJECTION DUE TO USE OF DONOR CELLS	None	Lesser extent
IMMUNOSUPPRESSANT TREATMENT	Not necessary	Case-by-case
MOST EFFECTIVE METHOD FOR DELIVERY TO TARGET ORGAN	Intravenous infusion	Local injection
DISTRIBUTION IN THE BODY AFTER INTRAVENOUS INJECTION	Target (damaged) organ	
DELIVERY RATE TO TARGET ORGAN AFTER INTRAVENOUS INJECTION	~15%	Less than 1%, if any
<b>MAIN FUNCTIONS AFTER HOMING TO TARGET ORGAN:</b>		
• REPLACEMENT OF DAMAGED CELLS BY DIFFERENTIATION	Yes	No
• ANGIOGENESIS	Yes	No
• VASCULAR PROTECTION	Yes	Yes
• ANTI-INFLAMMATORY EFFECT	Yes	Yes
• ANTI-FIBROTIC EFFECT	Yes	Yes
• TISSUE PROTECTIVE EFFECT	Yes	Yes
SURVIVAL IN TARGET ORGAN	Longer than several years	No
NECESSITY FOR GENE MANIPULATION	No	No

*Traditional MSCs may cause stronger immune responses—leading to more rejection, swelling, and inflammation. In up to 15% of patients, they also trigger antibodies, especially after multiple treatments<sup>12,3</sup>. According to studies, Dezawa MuseCells® decrease these occurrences because they survive longer in tissues, calm inflammation more effectively, and usually don't require donor matching.* <sup>1</sup>PMID: 28894792 <sup>2</sup>PMID: 28894792 <sup>3</sup>PMID: 34279481

Claims are based on published studies of Dezawa MuseCells® produced using the licensed intellectual property and exact methodologies of MuseCell Innovations®. Only Dezawa MuseCells® originating from MCI's manufacturing ecosystem and distributed through MCI-designated, licensed partners have the safety and clinical characteristics reported in the research.



Research Hub

# Dezawa MuseExosomes<sup>®</sup>

## What Are Dezawa MuseExosomes<sup>®</sup>?

Dezawa MuseCells<sup>®</sup> are a unique subset of mesenchymal stem cells (MSCs) that exhibit both pluripotent-like and stress-resistant properties. Their exosomes are nanosized vesicles that carry proteins, microRNAs, and other bioactive molecules that play key roles in cell communication and regeneration.

Unlike regular MSC-derived exosomes, Dezawa MuseExosomes<sup>®</sup> possess distinctive regenerative and immunomodulatory characteristics due to their unique cellular origin.

## Composition and Functional Characteristics

Dezawa MuseExosomes<sup>®</sup> are enriched with:

- ∞ **Pluripotency-Associated Proteins:** NANOG, OCT4, and SOX2, which allow them to contribute to tissue regeneration.
- ∞ **Regenerative Factors:** High levels of HGF (Hepatocyte Growth Factor), VEGF (Vascular Endothelial Growth Factor), and TGF- $\beta$ 1 (Transforming Growth Factor Beta 1) promote repair and differentiation.
- ∞ **Anti-Inflammatory Cytokines:** IL-10, IL-4, and TGF- $\beta$  suppress excessive immune responses, reducing inflammation-related damage.

## Mechanism of Action

Dezawa MuseExosomes<sup>®</sup> work through:

- ∞ **Immunomodulation:** Dezawa MuseExosomes<sup>®</sup> downregulate pro-inflammatory responses and promote a balanced immune state, aiding in tissue healing while preventing excessive immune activation.
- ∞ **Anti-Apoptotic Effects Cytokines:** IL-10, IL-4, and TGF- $\beta$  suppress excessive immune responses, reducing inflammation-related damage.



# STUDY-VALIDATED FEATURES OF DEZAWA MUSECELLS®

Trait	Why it matters	What it means
<b>PLURIPOTENT-LIKE</b>	<i>Studies validate that Dezawa MuseCells® differentiate into all cell types (ectoderm, mesoderm, endoderm) and repairs brain, heart, liver, skin, &amp; muscle without manipulation.</i>	<i>Like an architect’s master blueprint — in studies, Dezawa MuseCells® have shown the potential to become many different cell types, depending on the body’s needs.</i>
<b>NON-TUMORIGENIC*</b>	<i>Do not form teratomas, even in long-term studies.</i>	<i>Some stem cells can behave like weeds, growing unpredictably. In published studies, Dezawa MuseCells® have behaved more like well-tended plants — growing only where and how they are needed.</i>
<b>STRESS- ENDURING</b>	<i>Survive harsh conditions (low oxygen, nutrient deprivation) where other cells die.</i>	<i>Most stem cells are like tourists in a storm — easily overwhelmed. In studies, Dezawa MuseCells® act more like first responders with the right gear, able to withstand harsh environments and keep working where repair is needed.</i>
<b>IMMUNE TOLERANCE</b>	<i>Natural HLA-G+, IDO+, HLA-DR– profile. Less likely to be rejected; no immunosuppression required.</i>	<i>Like O-negative universal donor blood — in studies, Dezawa MuseCells® have been accepted by the body without the need for special matching or extra drugs.</i>
<b>STABLE KARYOTYPE</b>	<i>Maintain normal chromosomes, low telomerase. Lower risk of mutations or instability during expansion.</i>	<i>Like a manuscript copied without typos — in studies, Dezawa MuseCells® have remained steady and reliable over time.</i>

Supported by 85 peer-reviewed studies and a total of 120+ published papers, Dezawa MuseCells® offer one of the strongest evidence bases in the field of regenerative medicine.

PMID: 38261036

PMID: 28170177

PMID: 24256547

PMID: 27938474

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Research Hub



# MULTI-SYSTEM BIOLOGICAL AGE REVERSAL AFTER DEZAWA MUSECELL® THERAPY

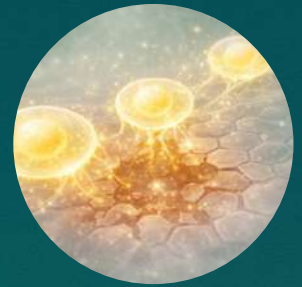
Measured by **SystemAge™**  
(DNA methylation "biological noise" across 19 organ systems)



1. HOME TO INJURED TISSUES



2. CALM CHRONIC INFLAMMATION



3. SUPPORT REPAIR & TISSUE RENEWAL

## CASE 1

45-year-old, 2 Dezawa MuseCell® infusions, 3-month follow-up

SYSTEMAGE

AFTER

53.0 Years

42.1 Years



BRAIN

BEFORE

AFTER

53.6

40.0



IMMUNE

BEFORE

AFTER

56.4

50.3



URINARY

BEFORE

AFTER

55.1

47.6



REPRODUCTIVE

BEFORE

AFTER

50.5

45.6



URINARY

BEFORE

AFTER

55.1

47.6



REPRODUCTIVE

BEFORE

AFTER

50.5

45.6

INFLAMATON INDEX: +13.84% ➡ -4.67%

## CASE 2

60-year-old, 1 Dezawa MuseCell® infusion, 6.5-month follow-up

SYSTEMAGE

AFTER

63.7 Years

52.8 Years



REPRODUCTIVE

BEFORE

AFTER

69.0

59.3



BLOOD & VASCULAR

BEFORE

AFTER

68.0

57.9



CARDIAC

BEFORE

AFTER

65.5

56.8



NEURODEGENERATION

BEFORE

AFTER

63.7

56.3



AUDITORY

BEFORE

AFTER

61.5

55.5



IMMUNE

BEFORE

AFTER

60.3

53.9

INFLAMATON INDEX: +13.84% ➡ -4.67%

Case reports (n=2); follow-up 3-6.5 months, results vary. Not FDA-approved.

Khan A, et al. (2025). Multi-System Biological Age Reversal Following MUSE Stem Cell Therapy: Case Reports. *Mathews J Case Rep.* 10(4):210.

# DEZAWA *GOLDEN IV™*

A REVOLUTIONARY IV THERAPY FOR OPTIMAL  
HEALTH & LONGEVITY

The *DEZAWA GOLDEN IV™* offers numerous advantages over traditional mesenchymal stem cells and their exosomes due to being pluripotent-like and stress-resistant, having a higher safety profile, and broader therapeutic potential. These characteristics make Dezawa MuseCells® an exciting innovation in regenerative medicine, especially for patients seeking more effective and versatile treatments.

Harnessing the synergy of cutting-edge science, this therapy delivers unmatched rejuvenation at the cellular level.



## KEY COMPONENTS

### Dezawa MuseCells® (100 Million)

- ∞ Promotes longevity and reduces inflammation
- ∞ Supports balanced immune system function
- ∞ Seamlessly integrate into your body, repairing and regenerating tissue by transforming into healthy, functional cells.

Claims are based on published studies of Dezawa MuseCells® produced using the licensed intellectual property and exact methodologies of MuseCell Innovations®. Only Dezawa MuseCells® originating from MCI's manufacturing ecosystem and distributed through MCI-designated, licensed partners have the safety and clinical characteristics reported in the research.



# ELEVATE YOUR VITALITY

## WHY CHOOSE THE DEZAWA **GOLDEN IV™**

### KEY ADVANTAGES INCLUDE:

- Superior tissue repair and vascular protection ∞
- Long-lasting therapeutic effects without gene manipulation ∞
- Enhanced targeting and distribution within the body ∞

	<b>DEZAWA GOLDEN IV™</b>	Traditional MSC IV Infusion
IMMUNE SYSTEM RESPONSE	Longer persistence in the body due to low immune system clearance and no immune reaction, ensuring safe and seamless integration	Cleared by the immune system within days to weeks, with potential immune rejection in some cases
STRESS ENDURANCE	Highly resistant to harsh tissue environments for improved survival and functionality	Susceptible to stress, leading to reduced efficacy in damaged tissues
TARGETED THERAPEUTIC EFFECTS	Selectively homing to damaged tissues for precise regeneration	May remain trapped in the lungs, limiting delivery to the target organ
PLURIPOTENCY	Differentiates into most cell types in the body for versatile repair	Limited to specific cell types (e.g., osteocytes, chondrocytes)

THE **DEZAWA GOLDEN IV™** REPRESENTS THE PINNACLE OF REGENERATIVE MEDICINE, ENABLING YOU TO UNLOCK UNPARALLELED HEALTH, LONGEVITY, AND TOTAL REJUVENATION.

FOR MORE INFORMATION CONTACT: [INFO@MUSECELLINNOVATIONS.COM](mailto:INFO@MUSECELLINNOVATIONS.COM)

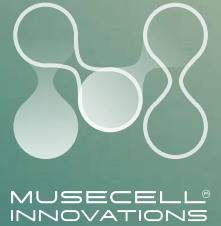
[WWW.MUSECELLINNOVATIONS.COM](http://WWW.MUSECELLINNOVATIONS.COM)

# DEZAWA *DIAMOND IV™*

A REVOLUTIONARY IV THERAPY FOR OPTIMAL  
HEALTH & LONGEVITY

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## KEY COMPONENTS:

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- ∞ Promotes longevity and reduces inflammation
- ∞ Supports balanced immune system function
- ∞ Seamlessly integrate into your body, repairing and regenerating tissue by transforming into healthy, functional cells.

### 2 Dezawa MuseExosomes® (1 Trillion)

- ∞ Enhances neuroregeneration and memory function
- ∞ Provides powerful anti-inflammatory benefits
- ∞ Elevates mental clarity and cognitive performance

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# ELEVATE YOUR VITALITY

## WHY CHOOSE THE DEZAWA *DIAMOND IV*<sup>TM</sup>

### KEY ADVANTAGES INCLUDE:

- Superior tissue repair and vascular protection ∞
- Long-lasting therapeutic effects without gene manipulation ∞
- Enhanced targeting and distribution within the body ∞

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# THE NEXT ERA OF SKINCARE LUXURY



Experience the future of regenerative medicine with a dual-phase facial treatment powered by patented DeZawa MuseCells® and DeZawa MuseExosomes®. This advanced technology works from the inside out – repairing damaged tissue, enhancing skin structure, and revitalizing cells for a smoother, more youthful appearance.

While DeZawa MuseCells® actively rebuild and replace damaged skin, DeZawa MuseExosomes® deliver potent growth factors to deeply repair, refine texture, and restore a radiant glow. Designed for maximum efficacy, this treatment combines both an in-clinic procedure and a take-home regimen, surpassing traditional biostimulatory injectables with superior, longer-lasting results.



## IMMEDIATE SKIN REVITALIZATION: COSMETIC BENEFITS YOU CAN SEE & FEEL

- 1** **100 million DeZawa MuseCells®**  
*Deeply repair skin, reduce scarring, and strengthen skin from within.*
- 2** **200 billion DeZawa MuseExosomes®**  
*Boost skin hydration, smooth fine lines, and refine texture.*
- 3** **Scaffolding Cross-Linked Hyaluronic Acid**  
*Provides advanced, long-lasting hydration, structure, and support.*

+ Post-procedure: daily use DeZawa MuseExosomes® Facial Serum  
*Extends and enhances results long after leaving the clinic.*



# THE DEZAWA MUSECELLS® FACIAL IS *THE GOLD STANDARD* IN LUXURY SKINCARE

## Luminous Skin Regeneration ∞

Outperforms traditional biostimulatory injectables by restoring damaged skin at the cellular level.

## Precision Cellular Therapy for Advanced Healing ∞

Unlike outdated technologies, Dezawa MuseCells® adapt to the skin's needs, accelerating deep tissue repair and regeneration.

## Lasting Radiance Beyond the Treatment Room ∞

A powerful in-clinic and take-home regimen delivers longer-lasting rejuvenation compared to conventional treatments.

	DEZAWA MUSECELLS® FACIAL	Conventional Treatments
COSMETIC RESULTS	Improves the skin texture by reducing fine lines and scarring while boosting hydration	Offers limited skin repair and elasticity with less consistent results
REGENERATIVE POWER	Transforms into various cell types to refresh and repair damaged skin with new growth at the cellular level	Stimulates only fibroblasts/ collagen production but lacks deep regenerative capacity
MAGNITUDE OF EFFECT	Directly integrates into tissues offering lasting cosmetic improvements and the highest regenerative potential	Provides building blocks for repair but doesn't directly replace damaged cells
ANTI-INFLAMMATORY RESULTS	Regulates and reduces inflammation by removing damaged cells, promoting calm, healthy skin	Possible reduction in inflammation, with less consistent healing
STANDARDIZATION	Standardized cell population with defined properties and growth factor profiles	Extraction results vary, offering little to no consistency in effects

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# DEZAWA MUSECELLS® HAIR TREATMENT



## THE FUTURE OF HAIR RESTORATION IS HERE

Powered by the regenerative potential of DeZawa MuseCells® and DeZawa Muse-Exosomes®, the DeZawa MuseCells® Hair Treatment is an advanced, non-surgical treatment designed to restore, rejuvenate, and regenerate hair at the cellular level.

### BENEFITS:

- ∞ Reactivates dormant follicles
- ∞ Promotes thicker, stronger hair
- ∞ Reduces inflammation and fibrosis around follicles
- ∞ Improves scalp health and blood flow
- ∞ Supports long-term hair cycle stability
- ∞ Suitable for men and women experiencing early-stage hair loss, thinning, or scalp aging.

## DEZAWA MUSECELLS® HAIR TREATMENT CONTAINS:

### 40M DeZawa MuseCells®

Which differentiate into dermal papilla cells, and play a key role in hair follicle regeneration and improving blood circulation to the scalp.

### 400B DeZawa MuseExosomes®

Containing bioactive molecules such as proteins, lipids, and microRNAs that promote tissue repair, reduce inflammation and follicle regeneration.

### Essential Oils and Amino Acids



VISIBLY TRANSFORM AND REGENERATE HAIR WITH

# DEZAWA MUSECELLS® + MUSEEXOSOMES®

## WHY DEZAWA MUSECELLS® FOR HAIR?

MUSE (Multilineage-differentiating Stress-Enduring) cells are a rare, naturally occurring population of stem cells found in bone marrow, fat tissue, and connective tissue. Unlike ordinary stem cells, Dezawa MuseCells® are:

### Pluripotent-like ∞

Capable of transforming into multiple cell types, including dermal papilla cells that support hair follicle growth.

### Resilient ∞

Stress-tolerant and designed to repair tissues under harsh conditions.

### Anti-inflammatory ∞

Able to reduce local inflammation, creating a healthy environment for hair follicles.

### Self-renewing ∞

Supporting long-term tissue regeneration and follicular health.

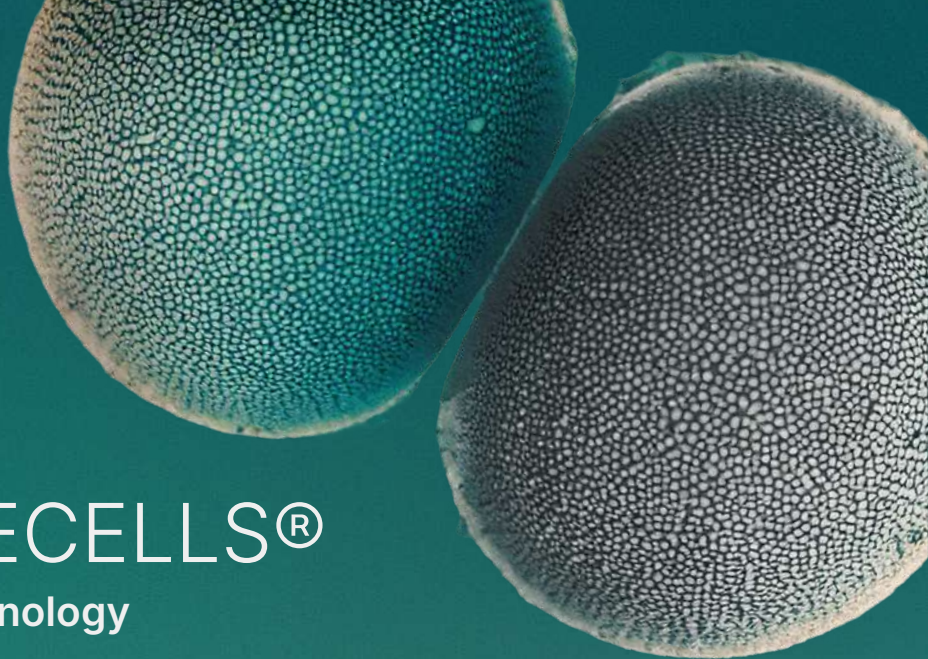
## THE POWER OF DEZAWA MUSEEXOSOMES® FOR HAIR

Dezawa MuseExosomes® are nanoscopic messengers packed with bioactive molecules that command repair and regeneration. Within Dezawa MuseCells® Hair Treatment, these exosomes:

- ☞ Deliver high concentrations of growth factors and cytokines that promote angiogenesis (new blood vessel formation) to nourish follicles.
- ☞ Modulate immune responses, calming autoimmune triggers that contribute to hair loss (like in alopecia areata).
- ☞ Enhance collagen production, strengthening the scalp and improving hair anchoring.
- ☞ Reactivate dormant hair follicles by reprogramming the follicular microenvironment.

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# DEZAWA MUSECELLS®

The Future of Stem Cell Technology

## PRODUCT STORAGE AND SHIPPING RECOMMENDATIONS

Product	Long Term Storage Temp	Additional Comments	Transportation Requirements
Dezawa MuseCells®	-80°C	Expiration 8 months from shipment date*	Dry ice, -80°C
Dezawa Musecells®	-150°C	Expiration 36 months from manufacturing date	Dry ice, -80°C
Dezawa MuseExosomes® (Lyophilized)	-15°C	Expiration 24 months from manufacturing date	Below 25°C
Dezawa MuseExosomes® (Fresh Frozen)	-80°C	Expiration 6 months from shipment date	Dry ice, -80°C
Dezawa MuseExosomes® (Fresh Frozen)	-150°C	Expiration 6 months from shipment date	Dry ice, -80°C
Fresh Dezawa MuseCells®	N/A	72-hour viability	2-8°C (no Freezing)

\*Dezawa MuseCells® and Dezawa MuseExosomes® are stored at -150°C until shipment.



# SAFETY PROFILE

As demonstrated in Japanese clinical trials

**Immune-Privileged:** HLA-G<sup>+</sup>, IDO<sup>+</sup>, HLA-DR<sup>-</sup>

**No need for immunosuppressants**

**Well-tolerated across all ages**



## Safety

∞ **GENETICALLY STABLE**  
Normal karyotype, low telomerase activity

∞ **Non-tumorigenic:** In more than a decade research on Dezawa MuseCells<sup>®</sup> made with MuseCell Innovations<sup>®</sup> licensed methods, no tumors have been reported in pre-clinical or clinical studies. Their safety comes from the way they grow slowly, repair their own DNA, and carry natural 'safety signals' that help prevent the uncontrolled growth seen with embryonic or lab-made stem cells.

### Research Hub



### Summary: Immune Tolerance + Tumor Safety

Safety Attribute	Dezawa MuseCells <sup>®</sup>
Tumor Formation	None (in vitro, in vivo + clinical)
HLA Matching Required	No
Immunosuppression	Not required in any human trial
Pluripotency Method	Natural (no reprogramming)
Immune Profile	HLA-G <sup>+</sup> / IDO <sup>+</sup> / HLA-DR <sup>-</sup>

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# PARTNER WITH THE FUTURE OF REGENERATIVE MEDICINE



## BE AMONG THE FIRST

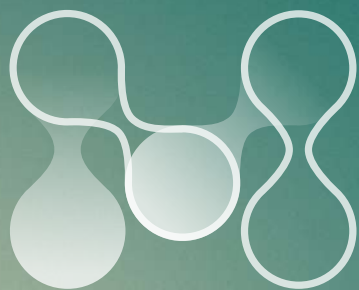
Distribution opportunities are limited and protected.  
Partner with us to bring **Dezawa MuseCells®** to your market.

## CONTACT US

**MuseCell Innovations® PTE LTD**

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**MUSECELL®**  
INNOVATIONS

