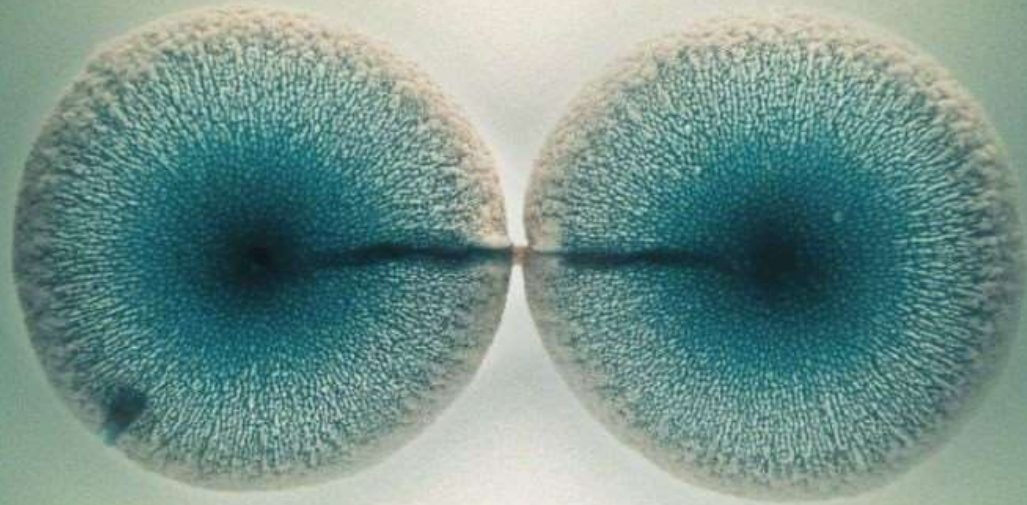


Clinical Applications of Dezawa MuseCells™ and Dezawa MuseExosomes™



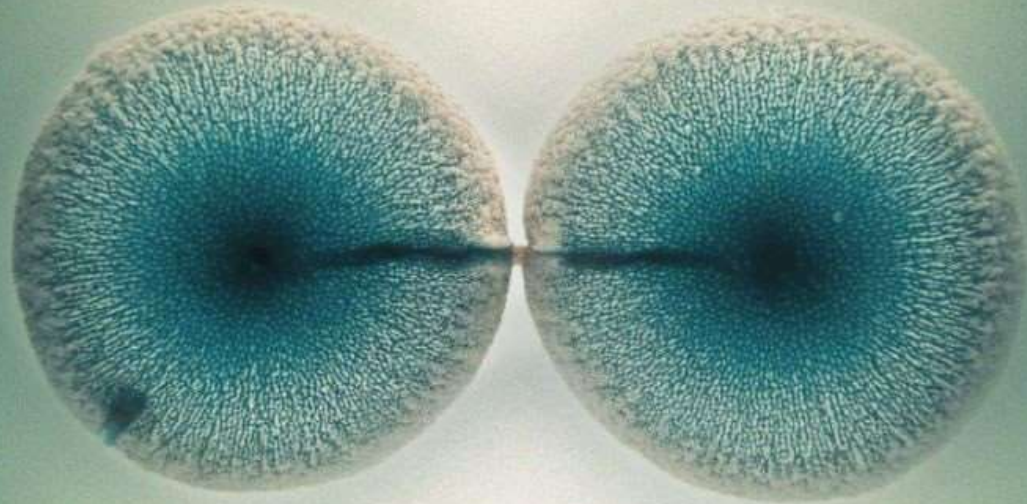
About Adeel Khan, M.D.

Dr. Adeel Khan is a Canadian-trained medical doctor and a leading specialist in regenerative medicine, focusing on anti-aging, chronic pain, athletic performance, and healing at the cellular level.

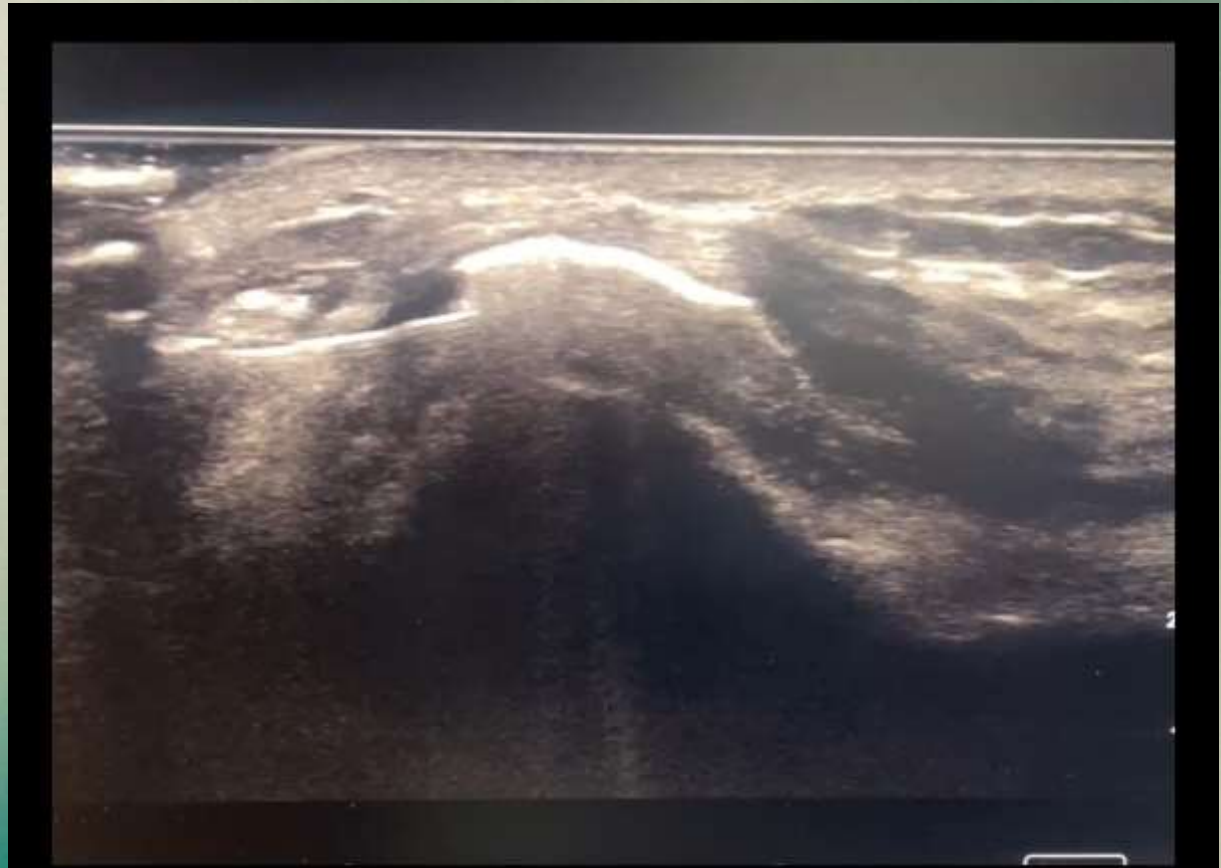
- Earned his MD from the University of Ottawa and trained in sports medicine.
- Conducted one of the first Health Canada approved clinical trials involving mesenchymal stromal cells.
- Employs stem cell therapy, exosomes, peptide therapy, and advanced regenerative techniques to treat chronic neck/back pain, sports and weightlifting injuries, and longevity concerns.
- Advocates for non invasive, body healing approaches using the body's own repair mechanisms rather than merely managing symptoms.
- Developed a vagus nerve reset procedure: injecting exosomes and peptides near the carotid artery to recalibrate the nervous system, benefiting conditions like mental health issues and trauma, including in veterans.
- Trusted by high profile clients including elite athletes, celebrities, and ultra high net worth individuals.



Case Series



Suprascapular US injection



C10-3
Spine

4.4 cm

2D: G: 50
Res DR: 0
MB
T1H

Facet joint injection US



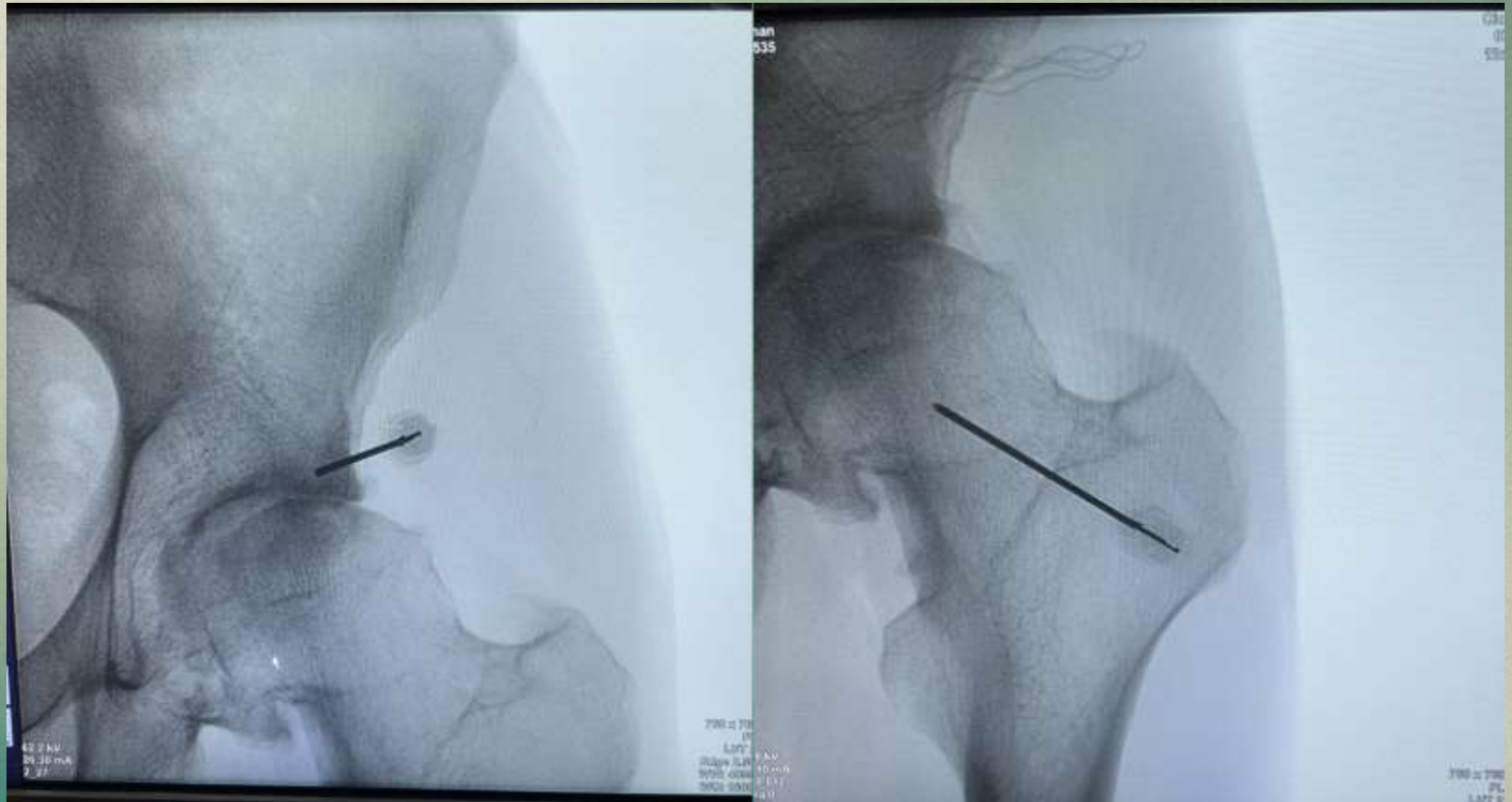
- Mid 30's male. Constant pain with sitting/standing and exacerbated by flexion/extension. Radiates to hips and thighs.
- MRI- Severe L1-2 degeneration and loss of disc height with bone marrow edema of cartilaginous end plates.
- Received 100M Dezawa MuseExosomes^{IM} to L1-2 epidurally by interlaminar injection



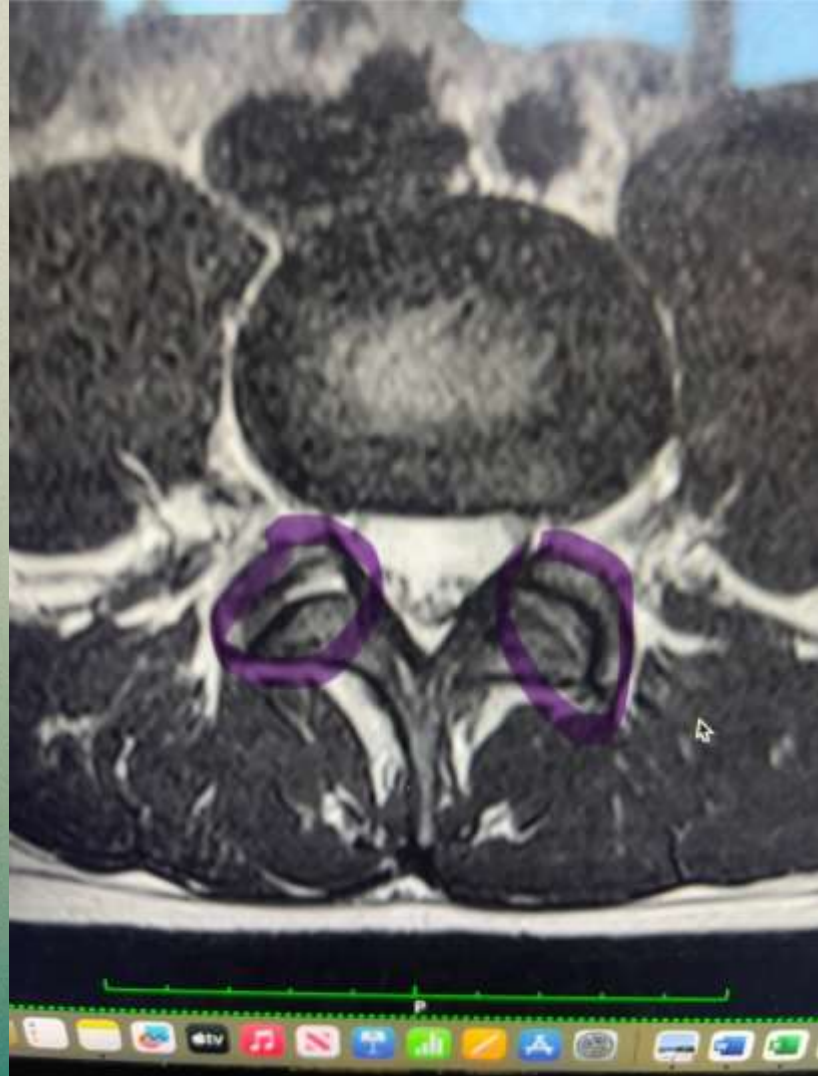




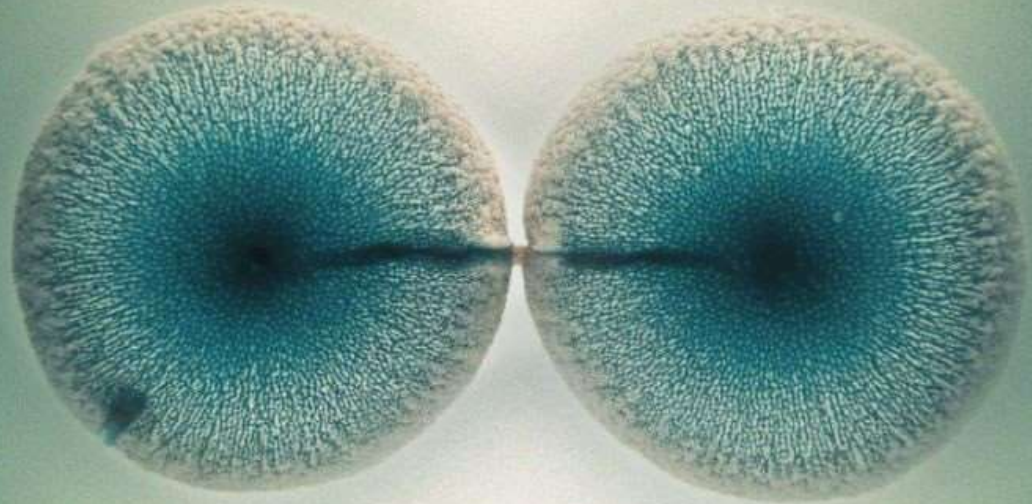
Intraosseous hip injection



- Mid 40's female presented with left shoulder pain and found to have supraspinatus tear
- Additionally, complained of axial low back pain particularly with prolonged sitting or standing.
- Decided to have rotator cuff tear treated with US guided injection but defer treatment of L-spine
- Injection of 20 million Dezawa MuseCells^{IM} and 100 billion Dezawa MuseExosomes^{IM}.



Use Cases in Regenerative Practice



Use Cases in Regenerative Practice

- **IV Applications:**
 - Long COVID and post-viral fatigue
 - ALS, MS, neurodegenerative
 - Autoimmune flares (e.g., RA, SLE)
- **Injection Applications:**
 - Spine (discs, facet joints)
 - Orthopedic injuries (tendon, labrum, cartilage)
 - Nerve entrapments and neuropathy
- **Cosmetics**
- **Longevity**

Neurologic Conditions

- **Examples:**

- ALS
- Parkinson's disease
- Alzheimer's and cognitive decline
- Multiple sclerosis
- Peripheral neuropathy
- CRPS
- Post-concussive syndrome / TBI
- Stroke (chronic phase)

- **Delivery Modalities:** Primarily IV, consider intrathecal, consider stellate ganglion block/vagal nerve augmentation, perineural injections

- **IV Dosage:**

- Typically, 20 million Dezawa MuseCells^{IM}, maximum 100 million Dezawa MuseCells^{IM}. Exosomes 100 Billion to 1 Trillion
- Frequency based on condition and feasibility. Likely weekly at most. Lower dose if more frequent

Rheumatologic Conditions

- **Examples:**

- Rheumatoid arthritis
- Psoriatic arthritis
- Crohn's/UC
- Sjögren's syndrome
- Autoimmune myositis
- Vasculitis
- Scleroderma
- Lupus (SLE)

- **Delivery Modalities:** IV, intra-articular

- **IV Dosage:**

- Typically, 20 million Dezawa MuseCellsTM, maximum 100 million Dezawa MuseCellsTM.
- Exosomes 100 Billion to 1 Trillion
- Acute vs maintenance TBD

Long COVID / Post-Viral Syndromes

- **Examples:**

- Chronic fatigue
- POTS
- Brain fog
- Microvascular inflammation
- Myalgia and arthralgia
- Autoantibody-mediated sequelae
- Post-viral dysautonomia

- **Delivery Modalities:** IV, SGB/vagal nerve

- **IV Dosage:**

- Typically, 20 million Dezawa MuseCellsTM, maximum 100 million Dezawa MuseCellsTM. Exosomes 100 Billion to 1 Trillion

- **Adjuncts & Strategy:**

- Peptides, ozone, immune modulators, NAD+

Orthopedic / MSK

● **Examples:**

- Shoulder- Rotator cuff tears/tendinopathy, glenohumeral joint
- Hip- labral tears, intra-articular
- Knee- Meniscal pathology, ACL/PCL, marrow edema, OA
- Tendon injuries (Achilles, patellar, hamstring)
- Muscle tears or chronic strain
- Ligament instability
- Wrist, Ankle, fingers, etc

● **Delivery Modalities:** Consider IV (general) vs targeted, intra-articular, intraosseous, hydrodissection, peripheral nerve

● **Injection Technique:**

- ultrasound-guided, fluoroscopy

● **Cell Type & Dose:**

- Dosage typically based on joint size and injury severity. Range from 5 million to 20 million cells. 50 to 100 billion exosomes.
- Consider use of scaffold (HA, fat graft, Wharton's jelly, placental matrix)

Spine / Axial Pain

- **Examples:**
 - Discogenic pain
 - Facet arthropathy
 - Sacroiliac dysfunction
 - Failed back surgery syndrome
 - Acute herniation
 - Radiculopathy
- **Delivery Modalities:** General vs targeted, epidural vs intra-discal, functional spinal unit approach
- **Techniques:**
 - Ultrasound, fluoroscopy
- **Dosage Strategy:**
 - Epidurally and intrathecally strictly exosomes
 - Facet joints generally 5 million cells
 - Paraspinal muscles and ligaments
 - Intradiscal low dose Dezawa MuseCellsTM

Longevity & Preventive Use

- **Examples:**

- Healthy aging
- Mitochondrial optimization
- Immune resilience
- Neuroplasticity / cognition support
- Musculoskeletal maintenance
- Telomere support / senescence targeting

- **Delivery Modalities: IV**

- **IV Maintenance Plan:**

- Golden bag
- Scale dosage
- Timing based on patient

- **Adjunct Therapies:**

- NAD+, peptides, senolytics



THE DEZAWA MUSE CELL™ DEZAWA GOLDEN IV™

A REVOLUTIONARY IV THERAPY FOR OPTIMAL HEALTH & LONGEVITY

Named after the inventor of the MUSE cell, MCI's **DEZAWA GOLDEN IV™** offers numerous advantages over traditional MSCs and their exosomes due to their pluripotency, stress resistance, safety profile, and broader therapeutic potential. These characteristics make MUSE cells 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. Muse cells and their exosomes are stress-resistant, pluripotent, and naturally migrate to damaged tissues, outperforming traditional mesenchymal stem cells (MSCs).

KEY COMPONENTS

- 1 DEZAWA MUSE Cells™ (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.
- 2 DEZAWA MUSE Exosomes™ (1 Trillion)**
 - Enhances tissue regeneration and immunity function
 - Provides powerful anti-inflammatory benefits
 - Elevates mental clarity and cognitive performance
- 3 Cord Blood Plasma (100ml)**
 - Boost brain health and memory:
 - Harness the power of young plasma to promote tissue regeneration, improve skin elasticity, and support cardiovascular and joint health.
 - Helps reduce chronic inflammation and cellular damage, helping you stay vibrant and resilient as you age.

This MCI licensed intravenous product is at the forefront of human regeneration science.

DEZAWA GOLDEN IV™

ELEVATE YOUR VITALITY

WHY CHOOSE THE DEZAWA MUSE CELL™ 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

	DEZAWA GOLDEN IV™	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.

WWW.BIOCELL-TEC.COM

FOR MORE INFORMATION ON THE MCI DEZAWA GOLDEN IV, CONTACT: info@biocell-tec.com

Recovery & Post-Treatment Guidance

● General Activity Recommendations

- First 24–48 hours: prioritize rest and hydration
- If IV therapy only: resume normal activity within 1 day
- If injections were performed:
 - Avoid strenuous activity to the treated area for 5–7 days, varied by patient. Use clinical judgement
 - Limit stretching, loading, or direct pressure

● Substances to Avoid

- Alcohol (for at least 72 hours)
 - Inhibits regenerative signaling
 - Increases oxidative stress and may blunt cell survival
- NSAIDs (unless medically necessary)
 - May interfere with inflammatory cascades crucial for healing
- Corticosteroids or immune suppressants
 - Can counteract the immunomodulatory or engraftment benefits

● Supportive Measures

- Maintain optimal hydration ($\geq 2\text{L/day}$)
- Prioritize anti-inflammatory nutrition (e.g., high polyphenol, low sugar)
- Consider adjuncts:
 - Peptides, NAD⁺, vitamin D3, omega-3s
- Optional: light lymphatic movement (e.g., walking, sauna, gentle compression)

DEZAWA MUSECELL™ FACIAL TECHNOLOGY

THE NEXT ERA OF SKINCARE LUXURY

Experience the future of regenerative medicine with a dual-phase facial treatment powered by billions of 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 hydrate, 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.

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





DEZAWA MUSECELL™ 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 MUSECELL™ + DEZAWA MUSEXOSOME™ FACIAL

COSMETIC RESULTS

Improves the skin texture by reducing fine lines and scarring while boosting hydration.

REGENERATIVE POWER

Transforms into various cell types to refresh and replace damaged skin with new growth at the cellular level.

MAGNITUDE OF EFFECT

Directly integrates into tissues offering lasting cosmetic improvements and the highest regenerative potential.

ANTI-INFLAMMATORY RESULTS

Regulates and reduces inflammation by removing damaged cells, promoting calm, healthy skin.

Conventional Treatments

Offers limited skin repair and elasticity with less consistent results.

Stimulates only fibroblasts/ collagen production but lacks deep regenerative capacity.

Provides building blocks for repair but doesn't directly replace damaged cells.

Possible reduction in inflammation, with less consistent healing.

Side Effects & Complications

- **Common, Mild Effects**

- *(Typically self-resolving within 24-72 hours)*

- **IV Administration:**

- Low-grade headache or fatigue
 - Transient body aches or “flu-like” symptoms

- **Local Injections:**

- Mild post-procedural soreness
 - Swelling or stiffness at injection site
 - Mild redness or warmth without infection
 - Temporary flare in baseline symptoms (healing response)

- **Less Common but Known Reactions**

- **Immune-related:**

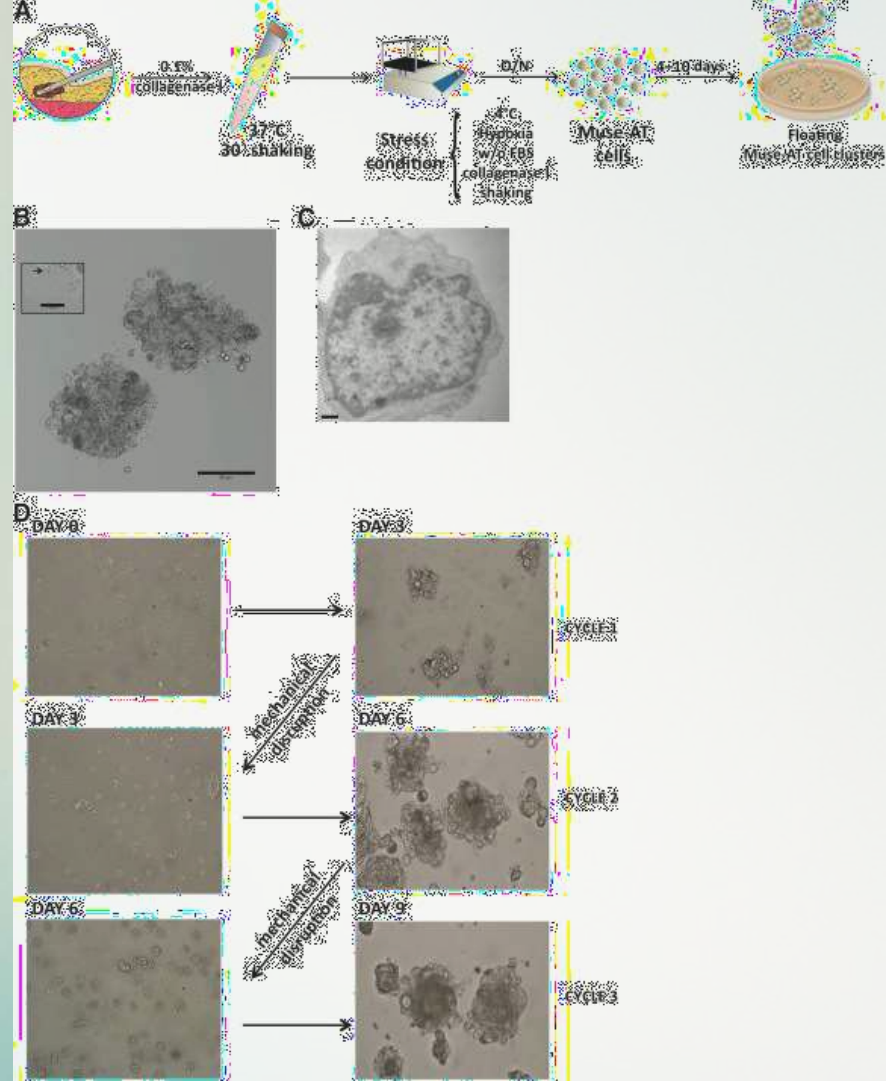
- Transient fever (cytokine response, <1%)
 - Mild lymphadenopathy
 - Rare skin flushing or itching

- **Serious Complications (Extremely Rare)**

- Infection at injection site (estimated <0.1%)
 - Neurovascular injury (procedure-related, not product-specific)

Autologous options

- Adipose Tissue as a Source of Dezawa MuseCells^{IM}
Human adipose tissue contains a distinct subpopulation of pluripotent, non-tumorigenic Dezawa MuseCells^{IM}.
 - Identified by SSEA-3+ marker expression and stress-endurance characteristics.
 - Can be isolated either by the combination of stresses, or magnetic-activated cell sorting (MACS) using SSEA-3+ antibody.
- Clinical Implications
 - Enables personalized autologous cell therapy
 - No need for immunosuppression or HLA matching
 - Reduced risk of immune rejection
 - Particularly useful in chronic degenerative conditions or autoimmune disorders
 - May be cryopreserved and expanded for repeat or long-term use



Dr. Khan's Clinical Tips for Optimal Dezawa MuseCells™ Outcomes

1

Patient Preparation

● **Senolytic Priming**

- Some evidence senolytics could reduce biological “noise”

● **Baseline Labs** (optional):

- CRP, ESR, ferritin (inflammation load), consider basic labs (optimizing health prior)
- Tumor markers- use clinical discretion

2

Timing Relative to Inflammation

- Avoid infusion during acute flares of autoimmune disease or severe infection
- **Ideal window:** post-acute but still inflamed enough to draw homing signals (S1P/S1PR2 axis)
- Consider temporary anti-inflammatory bridging (e.g., ozone, peptides)

3

Methylene Blue

- Minimizes oxidative stress
- Supports mitochondrial function

Dr. Khan's Clinical Tips for Optimal Dezawa MuseCells™ Outcomes

4

Autologous vs Allogeneic – Patient Matching

● Autologous Muse Cells:

- Best for younger, low-inflammatory burden patients
- May benefit patients concerned with biologics from external sources

● Allogeneic Muse Cells:

- Ideal for older patients (>55), or those with poor stem cell quality
- Ready-to-use, predictable yield and behavior
- No HLA matching or immunosuppressants required

5

Expectation Management

- Set clear goals: functional recovery, symptom modulation, tissue healing, not “cure”
- Multiple rounds may be necessary (esp. in neurodegeneration, long COVID)
- Frame results in regenerative timelines:
 - Improvements typically begin at 2–6 weeks, peak at 3 months
- Reassess with functional scales (e.g., WOMAC, DASH, PROMIS, MoCA)

Future Direction

Neurological Applications

Acute Injury

- Traumatic Brain Injury (TBI)
- Chronic Traumatic Encephalopathy (CTE)

Neurodegeneration

- Parkinson's Disease
- Alzheimer's Disease
- ALS
- Huntington's Disease

Musculoskeletal & Skin Regeneration

- Strong chondrogenic and osteogenic potential
- Preclinical studies demonstrate accelerated bone and cartilage repair with immunomodulatory synergy

Cardiovascular Disorders

Autoimmune Conditions

- Unique trifecta of immunomodulatory, immunosuppressive, and immune-tolerant behavior

Radiation Injury & Recovery

- Animal studies show intestinal and hematopoietic regeneration
- Potential application for radiologic events and cancer therapy recovery

Military & Remote Applications

- Compact, cryopreservable, rapidly deployable
- Potential for use in combat zones, disaster response, or forward-operating surgical units

Extreme Environment Support

- Speculative but promising interest in space medicine, hypoxic environments

Case Study on Dezawa MUSE Cells™



13.6 years decrease

in Inflammation and Brain
biological age, tracked across
two SystemAge Tests.

6.1 years decrease

in Immune System biological age
before vs. after Dezawa MUSE
Cells.

Before
Test 1



After
Test 2



Consistent Reduction in Biological Age After MUSE treatments



13.6 years

in the Brain System



4.9 years

in the Reproductive System

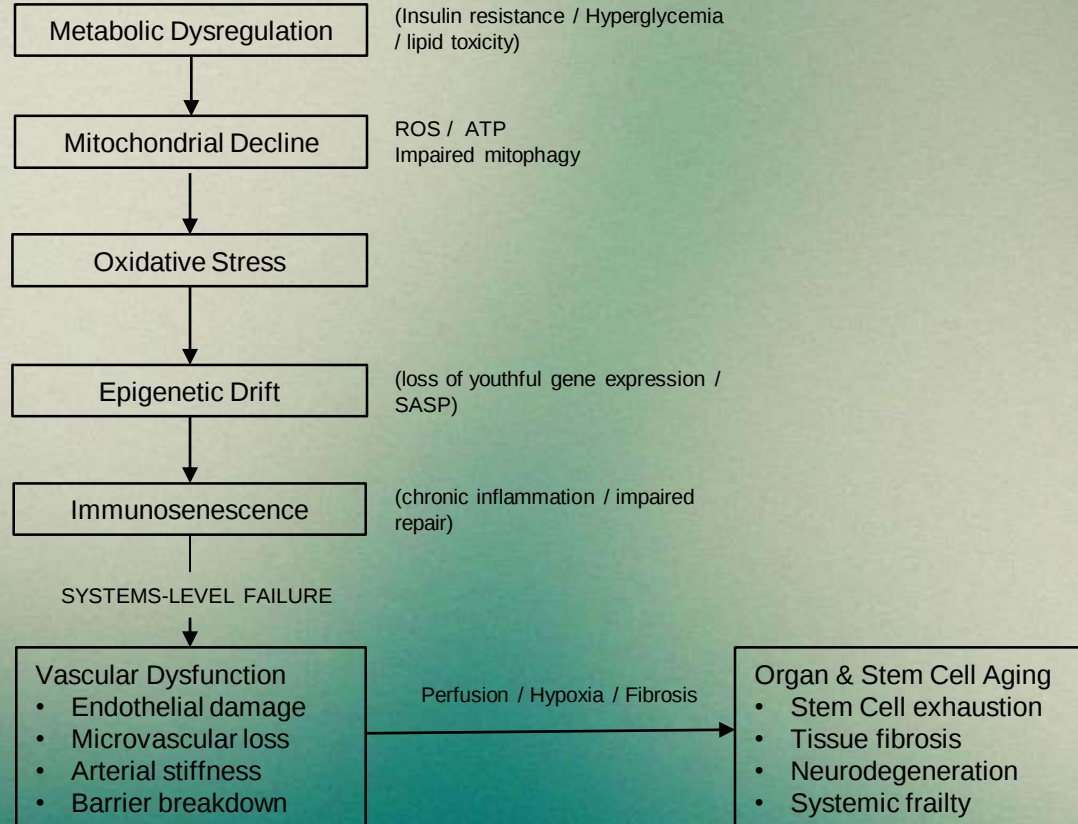


7.5 years

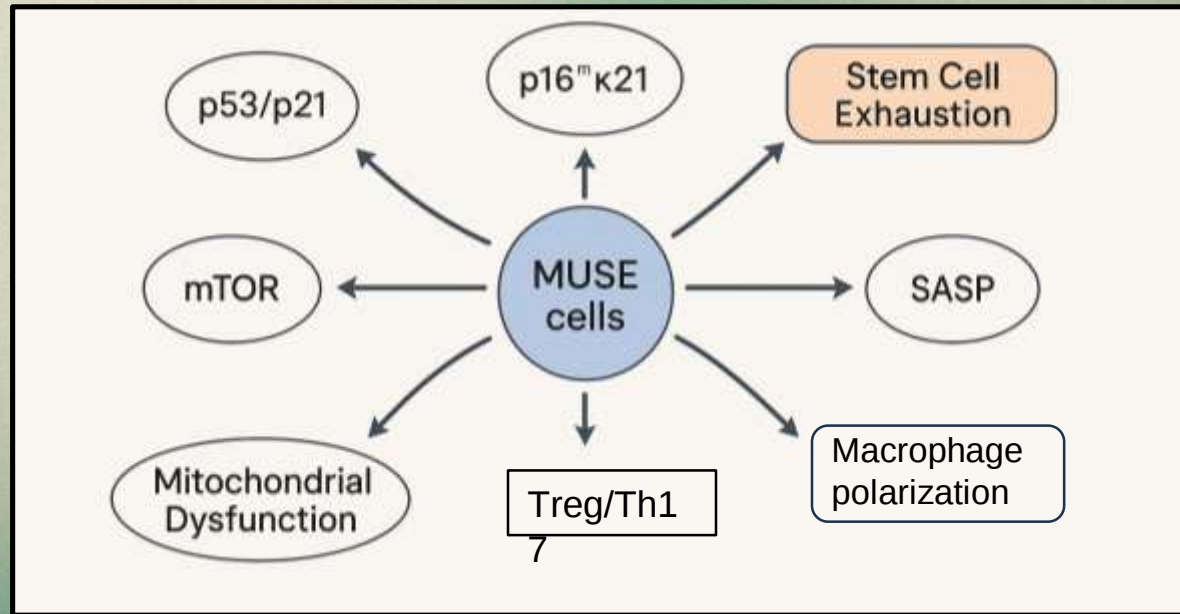
in the Urinary System



From Cellular Stress to Systems Failure: Vascular Aging as the Bottleneck



How MUSE Cells Impact Longevity Through Aging Pathways



Final Summary & Takeaways

● Dezawa MuseCells™ are:

- Endogenous, stress-resilient, non-tumorigenic
 - Immune-privileged and clinically validated
 - Effective in stroke, heart attack, ALS, HIE, SCI, EB
 - Demonstrate true tissue repair — not just modulation
 - Dezawa MuseExosomes™ provide a promising cell-free adjunct
- Muse-based therapies are ready for clinical adoption today

Closing Message:

*Dezawa MuseCells™ bring us closer to what regenerative medicine was always meant to be: **safe, precise, and functionally restorative.***

Let's Connect

 LinkedIn



linkedin.com/in/...

 Instagram



instagram.com/...

Thank you.

