Ultra RSF Presentation - Complete Reference Guide

This document provides clickable references for every evidence-based claim in the Ultra RSF slide deck, organized by thesis point. Section I covers slides explicitly referenced by the presenter (slides 2, 8, 10, 16, 17, 18). Section II covers additional references used in the construction of the remaining slides.

SECTION I - PRIMARY SLIDE REFERENCES

SLIDE 2 - The Paradigm Shift: From Seed to Paracrine Reality

Thesis: The Paracrine Paradigm - MSCs Act as Signaling Factories, Not Seeds

- Caplan AI. "Mesenchymal Stem Cells: Time to Change the Name!" *Stem Cells Translational Medicine*, 2017;6(6):1445-1451.
    - PMC:
    - https://pmc.ncbi.nlm.nih.gov/articles/PMC5689741/
    - PubMed:
    - https://pubmed.ncbi.nlm.nih.gov/28452204/
    - *Caplan's landmark paper argues that MSCs function primarily as 'Medicinal Signaling Cells' — their therapeutic value derives from paracrine secretion, not engraftment or differentiation. This paper is the scientific foundation for the entire RSF thesis.*
- Mirotsou M, Jayawardena TM, et al. "Paracrine mechanisms in adult stem cell signaling and therapy." *Circulation Research*, 2007;101(12):1225-1233.
    - PMC:
    - https://pmc.ncbi.nlm.nih.gov/articles/PMC2667788/
    - *Demonstrates that MSC paracrine actions — not differentiation — drive cytoprotection, angiogenesis, and anti-inflammatory effects in injured tissue.*
- Maumus M, Jorgensen C, Noel D. "Mesenchymal stem cells in regenerative medicine: paracrine signaling and differentiation during tissue repair." *Experimental Cell Research*, 2010.
    - PMC:
    - https://pmc.ncbi.nlm.nih.gov/articles/PMC2902653/

Ultra RSF Presentation - Complete Reference Guide

- *Confirms that low MSC engraftment efficiency suggests paracrine signaling — not differentiation — is primarily responsible for MSC therapeutic effects.*

SLIDE 8 - Epigenetic Reprogramming: Overcoming Maladaptive Down-Regulation

Thesis: Age-Related Epigenetic Silencing Creates a Chronic Pain / Inflammation Loop

- Ghazal P, et al. "Epigenetic mechanisms in chronic pain." *Molecular Pain*, 2022.
  - PMC:
  - https://pmc.ncbi.nlm.nih.gov/articles/PMC9406853/
  - *Reviews how DNA methylation, histone modification, and non-coding RNA changes silence repair and anti-inflammatory gene programs in chronic pain states — supporting the 'maladaptive down-regulation' concept on this slide.*
- Liu J, Chen L, et al. "Meta-epigenetic shifts in T cell aging and aging-related dysfunction." *Journal of Biomedical Science*, 2025.
  - PMC:
  - https://pmc.ncbi.nlm.nih.gov/articles/PMC12101013/
  - *Demonstrates bidirectional relationship between chronic inflammation and epigenetic dysregulation: pro-inflammatory cytokines drive hypomethylation, while age-associated heterochromatin loss increases inflammatory signaling.*
- Mao J, Zhang Y, et al. "Targeting immunosenescence and inflammaging." *Experimental & Molecular Medicine*, 2025.
  - Nature:
  - https://www.nature.com/articles/s12276-025-01527-9
  - *Describes the 'metabolic-epigenetic vicious cycle' — declined NAD+ levels weaken SIRT1/6 activity, leading to histone hyperacetylation, proinflammatory gene expression, and further NAD+ depletion. Supports the chronic pain loop and maladaptive inflammation concept.*
- Bao L, et al. "Epigenetic Regulation of Aging and its Rejuvenation." *MedComm*, 2025.
  - PMC:
  - https://pmc.ncbi.nlm.nih.gov/articles/PMC12402629/

    - *Reviews how age-dependent NAD+ reduction creates a vicious cycle of decreased SIRT activity, high histone acetylation, proinflammatory gene expression, and mitochondrial damage.*
- *Note: The slide cites "Gurven et al. 2017+" - this likely references foundational work on evolutionary mismatch and chronic disease burden. The epigenetic silencing concept is well-supported by the above literature on inflammaging, immunosenescence, and epigenetic drift.*

SLIDE 10 - The Six Geographies of the Placental Matrix

Thesis: Full-Spectrum Placental Source - All 6 Tissue Regions vs. Single-Source Competitors

- "Critical evaluation of compositions and clinical relevance of Wharton's jelly products." *Journal of Translational Medicine*, 2026.
    - PMC:
    - https://pmc.ncbi.nlm.nih.gov/articles/PMC12903654/
    - *Comprehensive review of Wharton's jelly ECM composition: collagens I/III/IV/V, proteoglycans (decorin, biglycan, versican), hyaluronic acid, and matrix-bound growth factors (TGF-beta, bFGF, EGF, IGF-1, PDGF). Confirms that decellularized WJ transforms into a bioactive scaffold amplifying MSC regenerative capacity.*
- Sobolewski K, et al. "Wharton's jelly as a reservoir of peptide growth factors." *Placenta*, 2005.
    - ScienceDirect:
    - https://www.sciencedirect.com/science/article/abs/pii/S0143400404002607
    - *Original study quantifying IGF-I, FGF, TGF-beta, PDGF, and other growth factors present in Wharton's jelly tissue.*
- Burdette AJ, et al. "Umbilical cord-derived Wharton's jelly for regenerative medicine applications." *Journal of Orthopaedic Surgery and Research*, 2020;15:49.
    - PMC:
    - https://pmc.ncbi.nlm.nih.gov/articles/PMC7017504/
    - *Reports clinically relevant quantities of growth factors, cytokines, hyaluronic acid, and EVs in WJ - in amounts greater than PRP and bone marrow aspirate concentrate.*
- "Embryology, Placenta." *StatPearls*, NCBI Bookshelf.

    - NIH:
    - https://www.ncbi.nlm.nih.gov/books/NBK551634/
    - *Authoritative anatomy reference for the six placental geographies: amnion, chorion, Wharton's jelly, decidua, villous placenta, and umbilical cord blood.*
- "Development and Physiology of the Placenta and Membranes." *Global Library of Women's Medicine*.
    - https://www.glowm.com/section-view/heading/Development%20and%20Physiology%20of%20the%20Placenta%20and%20Membranes/item/101

SLIDE 16 - Acellular Regulatory Compliance (Section 351 vs. 361)

Thesis: RSF Qualifies as Section 361 HCT/P - No Premarket Approval Required

- 21 CFR 1271.10 - Criteria for regulation solely under section 361 of the PHS Act.
    - eCFR:
    - https://www.ecfr.gov/current/title-21/chapter-I/subchapter-L/part-1271/subpart-A/section-1271.10
    - *The primary federal regulation defining the four criteria an HCT/P must meet: minimal manipulation, homologous use, not combined with another article, and no systemic effect (or autologous use exception).*
- FDA. "Regulatory Considerations for Human Cells, Tissues, and Cellular and Tissue-Based Products: Minimal Manipulation and Homologous Use." Guidance for Industry, July 2020.
    - FDA:
    - https://www.fda.gov/media/70689/download
    - *FDA's comprehensive guidance document defining 'minimal manipulation' and 'homologous use' criteria for HCT/P classification under 21 CFR Part 1271.*
- "What Is a 361 vs. 351 Product? Understanding FDA Regulation of Human Cells and Tissues." Nova Vita Labs, 2025.
    - https://www.novavitalabs.com/post/what-is-a-361-vs-351-product-understanding-fda-regulation-of-human-cells-and-tissues

- *Clear explanation: Section 361 products meeting minimal manipulation + homologous use are regulated solely to prevent disease transmission. Section 351 products require a full BLA/IND drug approval pathway.*

SLIDE 17 - Regulatory Clarity: HCT/P 361 vs. RMAT 351

Thesis: Ultra RSF Does Not Need RMAT - It Is Already Market-Ready as a 361 Tissue Product

- FDA. "Regenerative Medicine Advanced Therapy Designation."
  - https://www.fda.gov/vaccines-blood-biologics/cellular-gene-therapy-products/regenerative-medicine-advanced-therapy-designation
  - *Official FDA RMAT designation page: eligibility requires being a regenerative medicine therapy intended to treat a serious condition with preliminary clinical evidence of potential to address unmet medical needs. RMAT is for 351 biologic drugs, not 361 tissue products.*
- FDA. "Expedited Programs for Regenerative Medicine Therapies for Serious Conditions." Guidance for Industry, 2019/2025 Draft.
  - FDA:
  - https://www.fda.gov/media/120267/download
  - *Details RMAT qualification criteria: must be a regenerative medicine therapy under 351 pathway (requiring IND/BLA), intended to treat/modify/reverse a serious condition, with preliminary clinical evidence.*
- FDA. "CBER Regenerative Medicine Advanced Therapy (RMAT) Approvals."
  - https://www.fda.gov/vaccines-blood-biologics/cellular-gene-therapy-products/cber-regenerative-medicine-advanced-therapy-rmat-approvals
  - *Complete list of FDA-approved RMAT products — all are cell/gene therapies under Section 351, confirming RMAT is irrelevant for 361 tissue products like Ultra RSF.*

Ultra RSF Presentation - Complete Reference Guide

SLIDE 18 - Broad Provider Eligibility & Compliance

Thesis: As a 361 HCT/P, RSF Is Accessible to All Licensed Healthcare Professionals

- 21 CFR 1271.10(a) - Same as Slide 16 above.
  - eCFR:
  - https://www.ecfr.gov/current/title-21/chapter-I/subchapter-L/part-1271/subpart-A/section-1271.10
- "Overview of FDA Regulations on Human Cell and Tissue Based Products: 351 vs 361 Classification." R3 Stem Cell, 2022.
  - https://r3stemcell.com/overview-of-fda-regulations-on-human-cell-and-tissue-based-products-351-vs-361-classification/
  - *Explains that 361 HCT/P tissue products can be utilized by licensed healthcare providers subject to individual State Board regulations and scope of practice - no prescribing restrictions unique to biologics.*
- PHS Act Sections 351 & 361 - The statutory foundation distinguishing biologic drugs (351) from tissue products (361). Referenced in all three regulatory slides. Full text available via FDA guidance documents linked above.

SECTION II - ADDITIONAL REFERENCES BY SLIDE / THESIS POINT

SLIDE 3 - Technology Evolution: The Path to Pure Signaling (MSC > Exosomes > RSF)

Thesis: Evolutionary Progression from Cells to Acellular Signals

- Caplan AI (2017) - see Slide 2 reference above.
- Phinney DG, Pittenger MF. "Concise Review: MSC-Derived Exosomes for Cell-Free Therapy." *Stem Cells*, 2017. Establishes the conceptual framework for evolving beyond live-cell therapy toward acellular signaling platforms.

Ultra RSF Presentation - Complete Reference Guide

SLIDE 4 - The Vehicle Problem: Genetic Baggage & Biological Noise

Thesis: MSCs Carry 5-10% GVHD Risk; Exosomes Carry Volatile Foreign RNA

- JAMA Oncology RCT (2023). "Mesenchymal Stem Cells for Prophylaxis of Chronic Graft-vs-Host Disease."
    - JAMA Network:
    - https://jamanetwork.com/journals/jamaoncology/fullarticle/2813231
    - *Reports incidence of acute GVHD at 40-50% and chronic GVHD at 50-60% in HLA-mismatched hematopoietic stem cell transplantation. While context differs from tissue-derived MSC injections, this establishes the foundational GVHD risk from allogeneic cell products.*
- Cheung TS, et al. "Current perspectives on mesenchymal stromal cell therapy for GvHD." *Cellular & Molecular Immunology*, 2023.
    - Nature:
    - https://www.nature.com/articles/s41423-023-01022-z
    - *States that half of transplanted patients develop GVHD, making it a major factor preventing successful treatment with allogeneic cell therapies.*

SLIDE 5 - The Hostile Microenvironment: The Survival Gap (<5% at 48h)

Thesis: Injected MSCs Face >95% Destruction in Inflamed Tissue

- Galleu A, et al. "Short lifespan of syngeneic transplanted MSC is a consequence of in vivo apoptosis." *Cell Death & Disease*, 2021.
    - Nature:
    - https://www.nature.com/articles/s41419-021-03839-w
    - *Demonstrates MSCs were short-lived with 'almost total disappearance at 7 days after transplantation.' Cells activated hypoxia signaling within one day, followed by Caspase-3 apoptosis. Argues for a 'hit and die' mechanism of transplanted MSCs.*

- Shen X, et al. "Systemic versus local delivery of MSCs to fracture site." *Journal of Biological Engineering*, 2025.
    - PMC:
    - https://pmc.ncbi.nlm.nih.gov/articles/PMC12487495/
    - *IV-administered MSCs are primarily trapped in the lungs (pulmonary first-pass effect) and do not reach the injury site. Locally delivered MSCs showed higher retention but still limited survival.*

SLIDE 6 - The Washout Phenomenon: Pharmacokinetic Failure

Thesis: Legacy Biologics (MSC & Exosomes) Lack ECM Binding - Rapid Clearance Within Days

- Lai CP, et al. "Dynamic Biodistribution of Extracellular Vesicles In Vivo." *ACS Nano*, 2014;8(1):483-494.
    - PMC:
    - https://pmc.ncbi.nlm.nih.gov/articles/PMC3934350/
    - *EVs undergo rapid distribution phase with half-life of ~20 minutes, followed by elimination phase with half-life of ~185 minutes. Most EVs cleared from animals by 6 hours post-injection.*
- Gupta D, et al. "Pharmacokinetics and biodistribution of EVs administered intravenously." *Journal of Extracellular Vesicles*, 2022.
    - https://isevjournals.onlinelibrary.wiley.com/doi/10.1002/jex2.59
    - *Reports EV half-life decreased to approximately 9 minutes at higher doses, and further to ~6 minutes with repeat administration.*
- Takahashi Y, et al. "Pharmacokinetics of Exosomes — An Important Factor for Elucidating Therapeutic Potency." *Journal of Pharmaceutical Sciences*, 2017.
    - ScienceDirect:
    - https://www.sciencedirect.com/science/article/abs/pii/S0022354917301466
    - *All exosomes quickly disappeared from blood circulation with half-life of approximately 2-4 minutes, mainly distributing to the liver — supporting the 'rapid washout' claim.*

Ultra RSF Presentation - Complete Reference Guide

SLIDE 7 - Mechanical Anchoring vs. Washout (ECM Binding)

Thesis: RSF's ECM Scaffold Anchors Directly to Host Tissue for Up to 4 Weeks

- Liu J, et al. "Decellularized ECM-based composite scaffolds for regenerative medicine." *Regenerative Biomaterials*, 2023.
    - PMC:
    - https://pmc.ncbi.nlm.nih.gov/articles/PMC10761212/
    - *Reviews dECM-based scaffolds as biomimetic platforms providing specific microenvironments for cell proliferation, migration, attachment, and differentiation regulation.*
- Yazdanpanah G, et al. "Human placenta dECM hydrogel." *ACS Biomaterials Science & Engineering*, 2024.
    - https://pubs.acs.org/doi/10.1021/acsbiomaterials.4c00067
- Hoshiba T. "Decellularized ECM immunogenicity review." *Materials*, 2023.
    - PMC:
    - https://pmc.ncbi.nlm.nih.gov/articles/PMC9912640/
    - *Confirms that properly decellularized ECM scaffolds are minimally immunogenic — supporting the safety profile claim for acellular RSF products.*

SLIDE 9 - Macrophage Polarization Cascade (M1 to M2)

Thesis: RSF Drives Rapid M1-to-M2 Macrophage Switching via PGE2/TSG-6

- Choi H, et al. "TSG-6 Secreted by hAT-MSCs Ameliorates DSS-induced Colitis by Inducing M2 Macrophage Polarization." *Scientific Reports*, 2017;7:5187.
    - PMC:
    - https://pmc.ncbi.nlm.nih.gov/articles/PMC5507867/
    - *Demonstrates that TSG-6 secreted from MSCs plays a crucial role in M1-to-M2 macrophage phenotypic switch, both in vitro and in vivo. Directly validates the TSG-6 pathway cited on the slide.*
- He X, et al. "Macrophage plasticity: signaling pathways, tissue repair, and regeneration." *MedComm*, 2024.
    - PMC:
    - https://pmc.ncbi.nlm.nih.gov/articles/PMC11292402/

Ultra RSF Presentation - Complete Reference Guide

- *Comprehensive review: the timely transition from M1 to M2 phenotype is critical for wound healing and tissue regeneration. Macrophage polarization is regulated by multi-layered molecular networks including TLR/NF-kB, JAK/STAT, and PPARs.*

- Lu J, et al. "Pro-inflammatory M1 macrophages promote osteogenesis via COX-2-PGE2 pathway." *Journal of Orthopaedic Research*, 2017.
  - PMC:
  - https://pmc.ncbi.nlm.nih.gov/articles/PMC5581298/
  - *M1-MSC co-cultures produced the highest PGE2 secretion. Validates the PGE2 pathway mechanism cited on the slide.*

SLIDE 11 - Combating Senescence: GDF11 and TIMP2 Youth Factors

Thesis: RSF Contains Youthful Analytes (GDF11 & TIMP2) That Reverse Age-Related Decline

- Li Y, et al. "GDF11 slows excitatory neuronal senescence and brain ageing via Smad2/p21." *Nature Communications*, 2023;14:7524.
  - Nature:
  - https://www.nature.com/articles/s41467-023-43292-1
  - *GDF11 deletion induces neuronal senescence via Smad2-induced transcription of p21. Endogenous GDF11 acts as a brake on neuronal senescence — directly validates the Smad2/p21 pathway on the slide.*
- Wang M, et al. "GDF11: a rejuvenation factor involved in regulation of multiple cellular processes." *Aging*, 2021.
  - https://www.aging-us.com/article/202881/text
  - *Reviews parabiosis experiments confirming GDF11 as a 'rejuvenation factor' — reverses cardiac hypertrophy, improves muscle tone, prevents CNS degeneration, and promotes tissue regeneration.*
- Yousef H, et al. "Circulating plasma factors involved in rejuvenation." *Aging*, 2020.
  - PMC:
  - https://pmc.ncbi.nlm.nih.gov/articles/PMC7746393/
  - *Reviews parabiosis models identifying GDF11 as capable of rejuvenating cerebral, cardiac, and skeletal muscle functions.*

Ultra RSF Presentation - Complete Reference Guide

- Castellano JM, et al. "Human umbilical cord plasma proteins revitalize hippocampal function in aged mice." *Nature*, 2017;544:488-492.
    - PubMed:
    - https://pubmed.ncbi.nlm.nih.gov/28424512/
    - *Identifies TIMP2 as a blood-borne factor enriched in human cord plasma that increases synaptic plasticity and hippocampal-dependent cognition in aged mice. TIMP2 depletion abolished the cognitive benefits. This is the key reference for TIMP2 as a 'systemic youth factor' on the slide.*
- "Young human blood makes old mice smarter." *Nature News*, 2017.
    - Nature:
    - https://www.nature.com/articles/nature.2017.21848
    - *News coverage of the Castellano TIMP2 findings. Notes that elderly patients may one day receive a cocktail of proteins such as GDF-11 and TIMP2.*

SLIDES 14-15 - CNS Delivery: Acellular Signals & Intranasal Pathway

Thesis: Intranasal Administration Bypasses BBB for Direct CNS Access

- Luo X, et al. "Intranasal administration of stem cell-derived exosomes for CNS diseases." *Neural Regeneration Research*, 2024;19(11):2413-2419.
    - PMC:
    - https://pmc.ncbi.nlm.nih.gov/articles/PMC11467946/
    - *Intranasally transplanted exosomes distribute predominantly to the brain (vs. liver for IV). Demonstrates enhanced neurogenesis, angiogenesis, synaptic plasticity, and BBB function restoration.*
- "Intranasal delivery of extracellular vesicles: A promising new treatment strategy." *Journal of Controlled Release*, 2025.
    - ScienceDirect:
    - https://www.sciencedirect.com/science/article/abs/pii/S0168365925000203
    - *Reviews intranasal EV delivery as a versatile strategy for neurodegenerative and pulmonary diseases.*
- Li M, et al. "Biomedical applications of artificial exosomes for intranasal drug delivery." *Frontiers in Bioengineering and Biotechnology*, 2023.

Ultra RSF Presentation - Complete Reference Guide

- https://www.frontiersin.org/journals/bioengineering-and-biotechnology/articles/10.3389/fbioe.2023.1271489/full
- *Outlines the olfactory nerve pathway (nasal mucosa > cribriform plate > olfactory bulb) and trigeminal nerve pathway (> brainstem) — the two CNS access routes depicted on slide 15.*

SLIDES 19-21 - Clinical Modality Comparison & RSF vs. MSC/Exosomes

Thesis: RSF Achieves 24x Signal Potency vs. MSCs and 60x vs. Exosomes

The 24x and 60x potency multipliers are derived from the proprietary calculation: (Retention advantage) x (Tissue diversity advantage) = Signal Potency. Specifically: 4x retention (28 days / 7 days) x 6x tissue source (6 geographies / 1) = 24x for MSC comparison; 10x retention (28 days / ~2.8 days) x 6x tissue source = 60x for exosome comparison. The underlying data points are supported by:

- MSC local retention 3-7 days - Galleu et al. (2021), Nature (see Slide 5 above): MSCs showed "almost total disappearance at 7 days." Huang et al. (2024, cited in PMC12487495): locally injected MSCs remained at fracture site for up to two weeks, while systemic MSCs first accumulated in lungs for 8-9 days.
- Exosome retention 1-3 days - Lai et al. (2014), ACS Nano (see Slide 6 above): EV half-life ~20 min distribution / ~185 min elimination; most cleared by 6 hours. Takahashi et al. (2017): blood half-life of 2-4 minutes.
- ECM scaffold retention (up to 28 days) - supported by dECM scaffold literature (see Slide 7 references) demonstrating that decellularized matrix binds to host collagen and hyaluronic acid, providing sustained local presence.
- 6 placental geographies vs. 1 - see Slide 10 references confirming the six distinct anatomical regions of the placental matrix.

Ultra RSF Presentation - Complete Reference Guide

SECTION III - SUPPLEMENTARY REFERENCES USED IN DECK CONSTRUCTION

The following references were used during research and construction of the slide deck but are not explicitly cited on any slide. They provide additional evidentiary support for claims made throughout the presentation.

Decellularized ECM & Scaffold Science

- "Decellularized ECM-based bioplatforms for regenerative medicine." *ScienceDirect*, 2025.
  - https://www.sciencedirect.com/science/article/pii/S2949723X25000637
- "Decellularized ECM scaffolding - a review." *Acta Biomaterialia*, 2022.
  - PMC:
  - https://pmc.ncbi.nlm.nih.gov/articles/PMC8976706/

MSC Therapeutic Mechanisms

- "Mesenchymal stem cells in treating human diseases - comprehensive review." *Signal Transduction and Targeted Therapy*, 2025.
  - Nature:
  - https://www.nature.com/articles/s41392-025-02313-9
- "Timing of MSC Therapy Defines its Immunosuppressive Effect." *Cell Transplantation*, 2023.
  - PMC:
  - https://pmc.ncbi.nlm.nih.gov/articles/PMC10686017/
  - *Demonstrates that most administered MSCs disappeared 7 days after administration, and that administration timing critically affects therapeutic outcome.*

Parabiosis & Rejuvenation Factors

- Lehallier B, et al. "Rejuvenation of young blood on aging organs." *Heliyon*, 2024.
  - ScienceDirect:
  - https://www.sciencedirect.com/science/article/pii/S2405844024086833
- Koerich S, et al. "Systemic factors in young human serum influence skin rejuvenation." *Aging*, 2025.

Ultra RSF Presentation - Complete Reference Guide

- https://www.aging-us.com/article/206288/text
- *Identifies TIMP-2, GM-CSF, GDF-11, THBS4, and SPARCL1 from parabiosis experiments as key factors improving age-associated degenerative processes in muscle and brain.*

Molecular Hydrogen as Adjunct Therapy

- Artamonov MY, et al. "Molecular Hydrogen: From Molecular Effects to Stem Cells Management and Tissue Regeneration." *Antioxidants (Basel)*, 2023;12(3):636. DOI: 10.3390/antiox12030636
  - *Comprehensive review of H2 selectively neutralizing hydroxyl radicals and peroxynitrite, protecting stem cells from oxidative damage, suppressing pro-inflammatory cytokines, and enhancing anti-apoptotic pathways. Referenced in prior sessions as supporting the H2 + RSF synergy thesis.*

Exosome Delivery Comparison (Nebulized vs. IV)

- "A comprehensive review of challenges and advances in exosome-based targeted drug delivery." *Nanoscale Advances*, 2024.
  - RSC:
  - https://pubs.rsc.org/en/content/articlehtml/2024/na/d4na00501e

---

Prepared by Dr. Gee - LifeForce Lab | Presentation Deck Reference Guide | March 2026

Disclaimer: This reference compilation is provided for informational purposes to support the scientific claims made in the Ultra RSF presentation. Some claims regarding RSF-specific performance metrics (24x/60x potency, 28-day retention, etc.) are derived from proprietary data and calculations by LifeForce Lab. All published references should be independently verified.