

EXO-TECH PROTOCOLS

THE EXOSOME BIOIMPLANT TECHNOLOGY



Exo•Tech 
by Meta Cell Technology

Intended exclusively for healthcare professionals

EXO-TECH PROTOCOLS

Exo-Tech & MCT Exosomes

INFORMATION FOR CLINICAL USE

"This document provides recommendations and instructions for use of the product, prepared on the basis of the available technical information. It is the responsibility of the healthcare professional to assess their suitability for each individual case and to ensure correct implementation in accordance with the applicable standards of professional practice (*lex artis*). The manufacturer and/or distributor shall not be liable for any damages arising from use other than as indicated, failure to follow these instructions, or application under unforeseen conditions."

TWO TECHNOLOGIES. ONE OUTCOME: THE INJECTABLE EXOSOME BIOIMPLANT

MCT System prepares autologous platelet-derived exosomes (MCT Exosomes). Exo-Tech structures platelet-poor plasma (PPP) into a viscoelastic scaffold. Combined at the point of care, they form a next-generation injectable exosome bioimplant.



Exo-Tech Dry Bath - Program 1: 90°C

Block-heater designed with vertical wells or channels that hold filled syringes, so the barrel is heated uniformly by conduction, letting you bring viscous or thermosensitive materials to a controlled temperature without water or oil contact.

PROGRAM 1
90°C

EXOSOMES PRESET

MCT System® - Exosomes Preset

MCT System is composed of two certified medical devices (MCT Unit & MCT Kit) designed to enhance autologous products such as PRP (platelet-rich plasma). Using photothermal biomodulation, it preconditions PRP to enrich it with autologous platelet-derived exosomes (MCT Exosomes), maximizing exosome availability for optimal results.



Outcome: **Exo-Tech Gel - The injectable exosome bioimplant**

EXO-TECH FITS INTO YOUR MCT PROTOCOLS

STEP 1



OBTAINING PLASMA GEL Scaffold

Exo-Tech applies temperature to unfold and aggregate plasma proteins, creating a viscoelastic mesh.

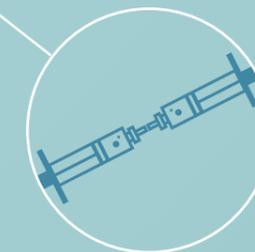
STEP 2



OBTAINING AUTOLOGOUS EXOSOMES MCT Exosomes

PRP is preconditioned with the MCT System®, selecting the Exosomes Preset mode, to yield PRP enriched with autologous platelet-derived exosomes (MCT Exosomes).

STEP 3



INTEGRATION Exo-Tech Gel Preparation

Autologous exosomes and platelets are incorporated into the scaffold, ensuring localized release and sustained biological activity over time.

STEP 1

Obtaining Plasma Gel – Scaffold

1. Switch on the Exo-Tech Dry Bath.

2. Press the **P** button on the Exo-Tech Dry Bath to select **Program 1** (displayed as P-1 on the screen). This program is preset to **90°C for 2 hours** (02:00 on the countdown timer). Begin with this step to allow sufficient time for the device to reach the target temperature.

3. Draw whole blood into tubes with anticoagulant. Gently invert to mix with anticoagulant.

4. Centrifuge the blood sample to achieve separation into red blood cells, buffy coat, and plasma fractions.

5. From the plasma layer, carefully extract:

-Platelet-poor plasma (PPP) into one sterile syringe: **Syringe 1**.

-Platelet-rich plasma (PRP) into another sterile syringe: **Syringe 2**.

6. Once the device reaches 90°C (verify on the digital display; no audible signal is emitted), insert **Syringe 1** containing PPP into one of the device syringe slots. The countdown timer will automatically initiate when the target temperature is stabilized.

7. Maintain the temperature at 90°C throughout the process. The desired gel consistency can be adjusted by selecting the appropriate exposure time:

-**9 minutes** – firm gel

-**6 minutes** – intermediate gel

-**3 minutes** – soft gel

8. Keep the syringe in the device for the selected duration. Observe the PPP color and texture transition from translucent yellow to opaque white with a dense, homogeneous consistency, indicating successful gel formation. This process is called thermogelation.

9. Once thermogelation is over, let the plasma gel cool to 37°C or below before injection.

To cool the plasma gel:

-**Immersion in water:** about 1 minute.

-**Storage at 4°C (refrigerator):** about 8 minutes.

-**Resting at room temperature:** about 10 minutes.

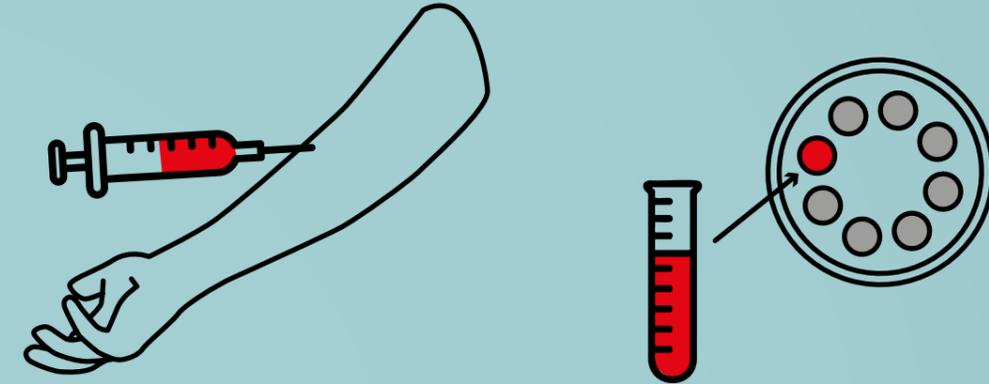
Do not inject above 37°C. Cooling sets the protein network, as gel's final viscosity and cohesivity emerge during the cooling phase after thermal unfolding.

10. The resulting plasma gel contained in the **Syringe 1** serves as a scaffold for MCT Exosomes.

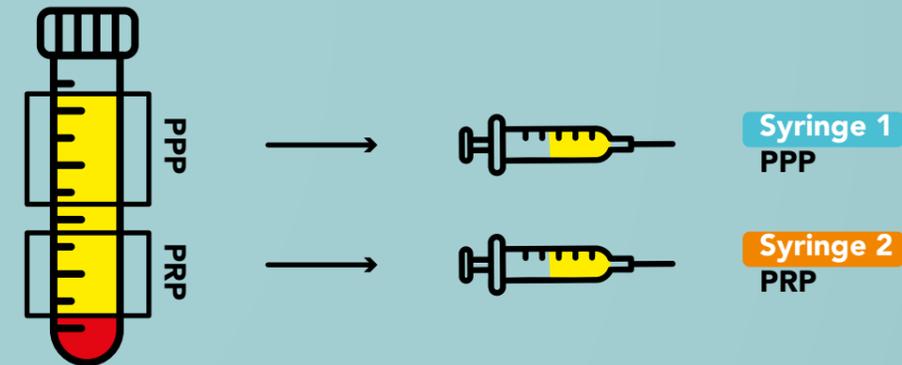
STEP 1

Obtaining Plasma Gel – Scaffold

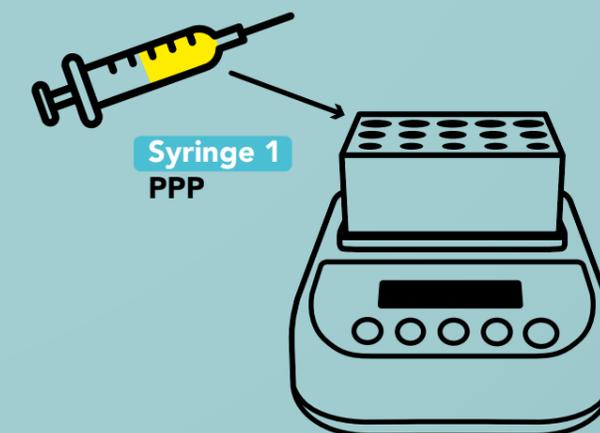
1. Whole blood withdrawal and centrifugation.



2. Separation of platelet-poor plasma (PPP) and platelet-rich plasma (PRP) into different syringes.



3. Generation of plasma gel with Exo-Tech Dry Bath.



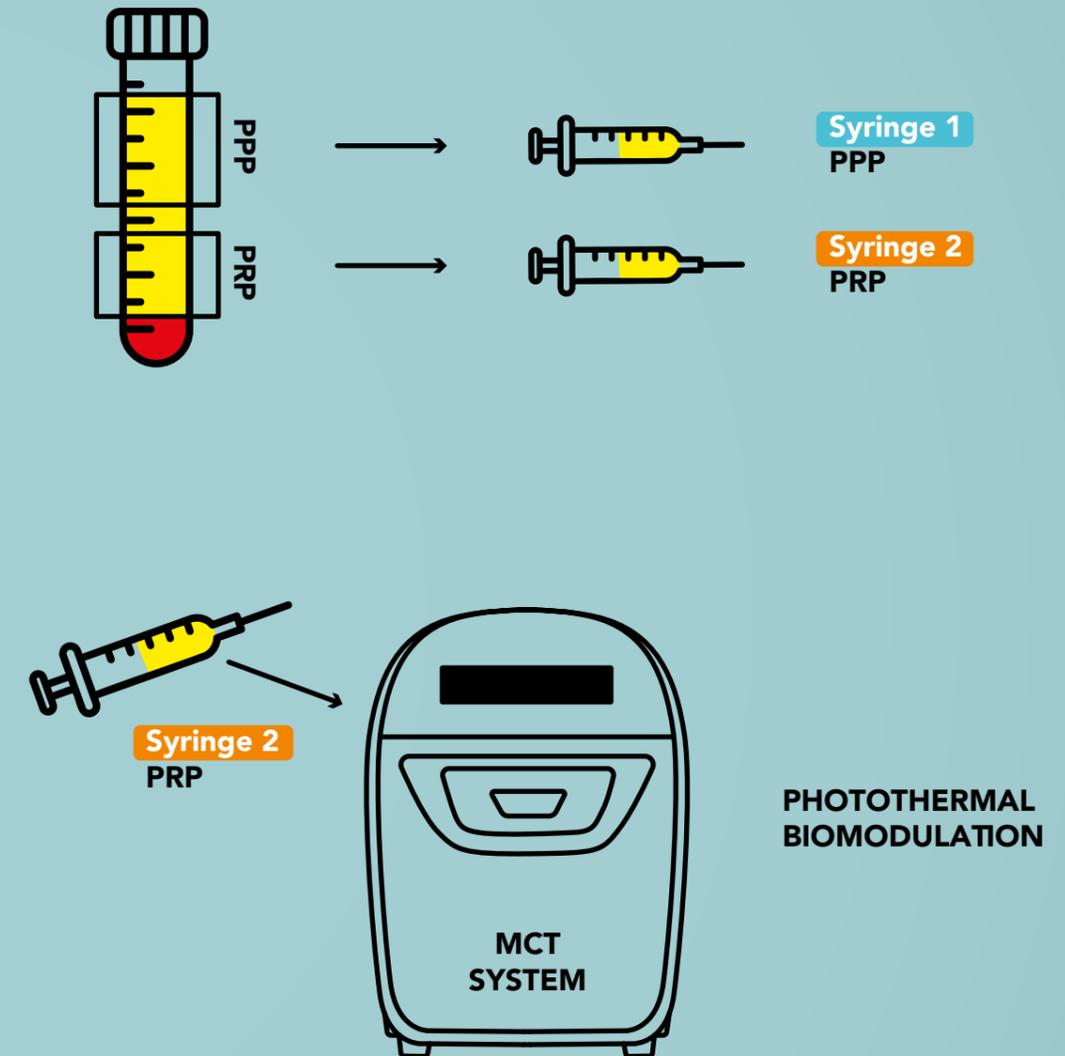
STEP 2

Obtaining Autologous Exosomes – MCT Exosomes

1. Switch on the MCT Unit using the rear button.
2. Open both docking ports of a sterile MCT Kit.
3. Dock **Syringe 2**, containing PRP, into one MCT Kit port and insert PRP into the kit, then remove the syringe.
4. Close both docking ports of the MCT Kit.
5. Place the loaded MCT Kit into the MCT Unit tray, ensuring correct orientation.
6. On the MCT Unit touchscreen, select the Exosomes preset. The Exosomes preset automatically applies the specific photothermal biomodulation parameters required to precondition the PRP sample, resulting in the generation of MCT Exosomes, a preconditioned, autologous PRP sample with an enhanced concentration of platelet-derived exosomes.
7. After processing, open both ports of the MCT Kit and dock **Syringe 2** to extract the MCT Exosomes.
8. **Syringe 2** now contains the final MCT Exosomes product.

STEP 2

Obtaining Autologous Exosomes – MCT Exosomes



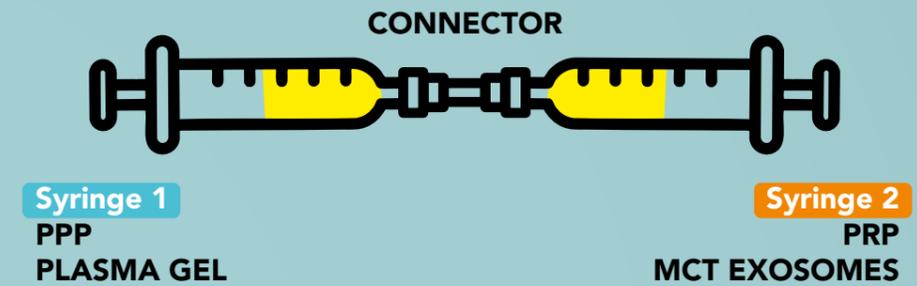
STEP 3

Integration – Exo-Tech Gel Preparation

1. **Syringe 1** contains plasma gel (solid phase), and **Syringe 2** contains MCT Exosomes (liquid phase).
2. Connect both syringes using a syringe connector.
3. Mix the solid phase (plasma gel) with the liquid phase (MCT Exosomes) thoroughly until a uniform consistency is achieved.
4. The resulting mixture is called Exo-Tech Gel.
5. Transfer the Exo-Tech Gel into one or more injection syringes as needed.
6. Attach the appropriate needle to each syringe or syringes.
7. Exo-Tech Gel is now ready for patient injection.

STEP 3

Integration – Exo-Tech Gel Preparation





REFERENCE PROTOCOL

No. of treatment
sessions:
3 sessions

Interval between
treatment sessions:
30 to 45 days

Follow-up sessions:
**Every 6 months
or every year,
depending on the patient.**

**EXO-TECH DRY BATH AT 90°C
EXO-TECH GEL GENERATION**

INJECTION MATERIAL

INJECTION TECHNIQUE*

CLINICAL PROTOCOL

TREATED AREA
Cheeks
Chin
Scars
Marionette lines
Nasolabial folds
Lips
Hands
Perioral expression lines
Crow's feet
Under-eye
Neck
Temporal area

TIME (min)
9
9
3 to 9
6
6
6 to 9
6 to 9
3
3
6 to 9
3
9

RATIO Plasma Gel/MCT Exosomes
2:1
2:1
2:1
2:1
2:1
2:1
2:1
2:1
2:1
1:1
1:1
1:1

CANNULA GAUGE
22G
25G
25G
25G
22G
22G

NEEDLE GAUGE
27G
27G
27-30G DEPENDING ON SCAR
30G

DEPTH
Subdermal
Subdermal
Subdermal
Intradermal
Intradermal
Subdermal
Subdermal
Intradermal
Intradermal
Subdermal
Subdermal
Subdermal

INJECTION TECHNIQUE
Lineal retrograde + bolus
Retrograde + bolus
Bolus
Retrograde
Retrograde
Bolus
Retrograde
Retrograde + bolus

EXO-TECH GEL (mL)/side
1.5
0.5
0.5 - 1
0.5
0.5
0.5 - 1
2 - 3
0.5
0.5
1
1 - 2
1 - 1.5

TREATMENT SESSIONS
3
3
3
3
3
3
3
3
3
3
3
3

SESSION'S INTERVALS
From 35 to 45 days

TREATMENT FOLLOW-UP
Every 6 months or every year, depending on the patient
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***Pre injection**

- Always cleanse the skin before any treatment.
- When a cannula is used, always apply anesthesia at entry point.
- For full-face procedures, topical anesthetic cream is mandatory; for other areas, it is optional.

***Injection**

- Ultrasound-guided injection is not generally needed.
- Cannula is always the preferred option.

***Post Injection**

- Use moisturizing cream and sunscreen.



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by Meta Cell Technology



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