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Presenter: Dr. José Joaquín Merino

**El aprendizaje basado en problemas (ABP) con células madre para
potenciar la docencia de postgrado en medicina regenerativa**



Presenter:

Dr. José Joaquín Merino



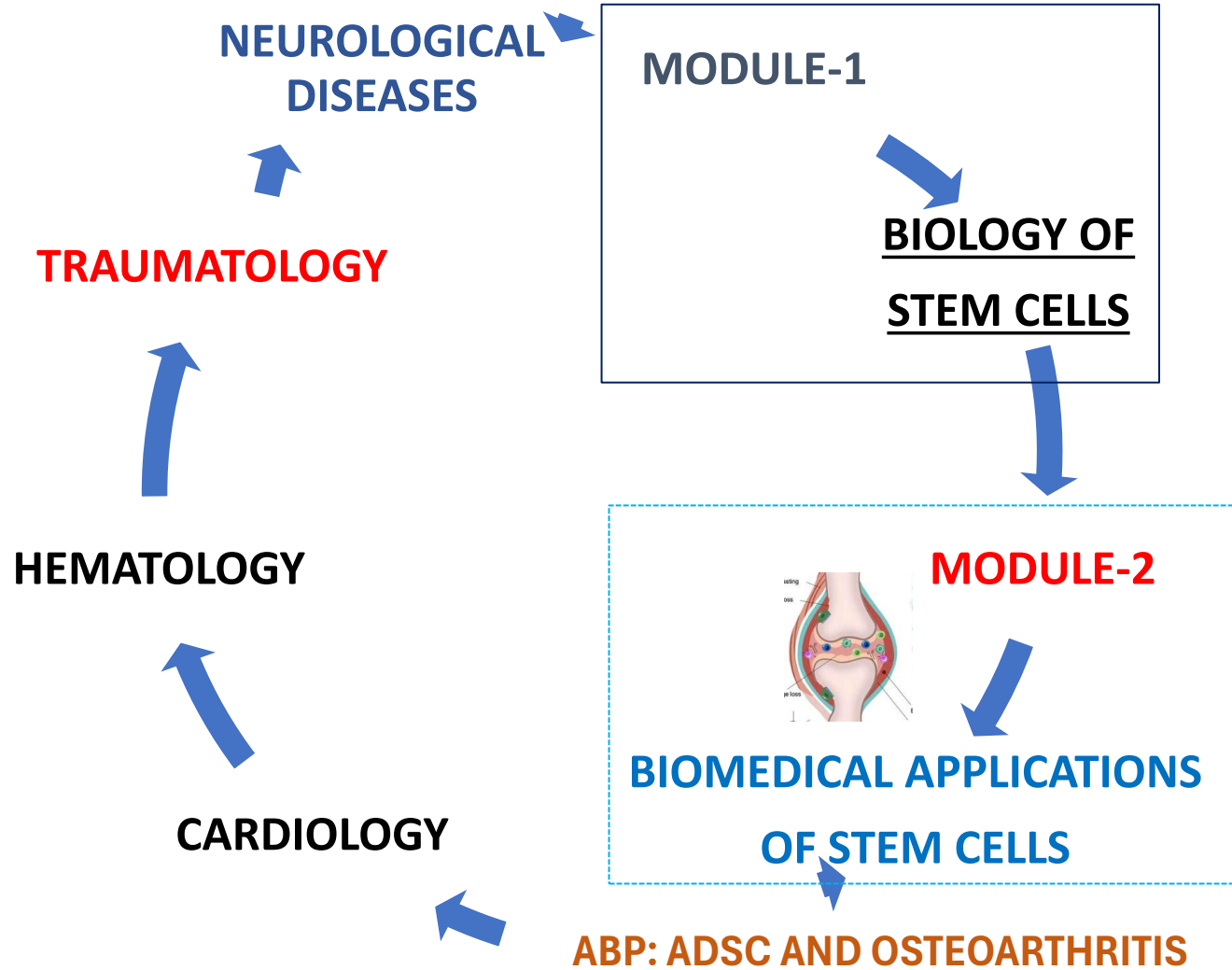
Universidad

Complutense de Madrid



Facultad de Farmacia

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MASTER IN REGENERATIVE MEDICINE AND STEM CELL THERAPY



THE EXPERIENCE OF SEVERAL POST-GRADUADES (MASTER OF REGENERATIVE MEDICINE)

COCHRANE
Biomedical applications
of stem cell therapy

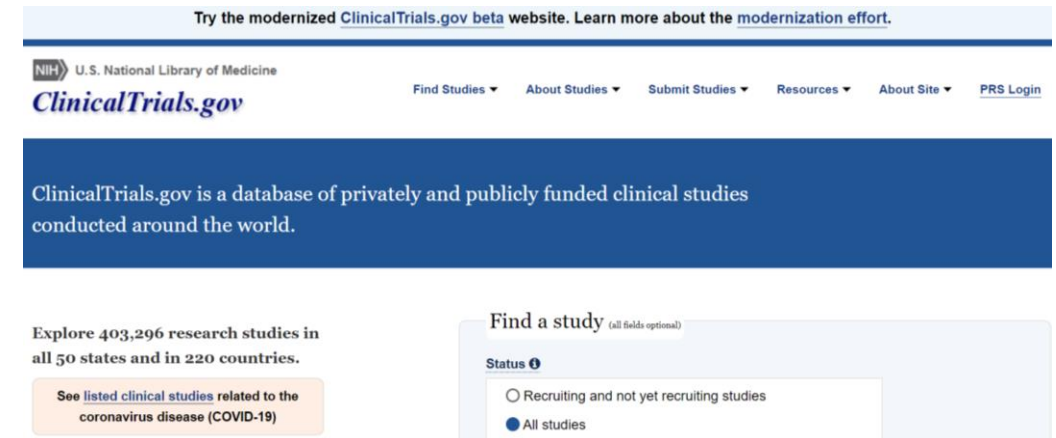
Pubmed – Biology of stem cells
Clinical trials



Herbal medicines for treating HIV infection and AIDS (Review)

Liu JP, Manheimer E, Yang M

<https://www.cochranelibrary.com/es/>



<https://clinicaltrials.gov/>

ABP: CLINICAL TRIALS WITH ADIPOSE STEM CELLS IN ARTHRITIS

<https://clinicaltrials.gov/search?cond=NCT01300598>

Autologous adipose Mesenchymal stem cells (ADSC) treatment in patients with osteoarticular lesion

ClinicalTrials.gov ID ⓘ NCT01300598

Information provided by ⓘ R-Bio (Responsible Party)

Last Update Posted ⓘ 2019-06-05

Inclusion/exclusion criteria
**Clinical trials: data, results,
findings, conclusion**

Adapted from clinical trial NCT01300598

<https://clinicaltrials.gov/search?cond=NCT01300598>

(Original website of clinical trial NCT01300598)

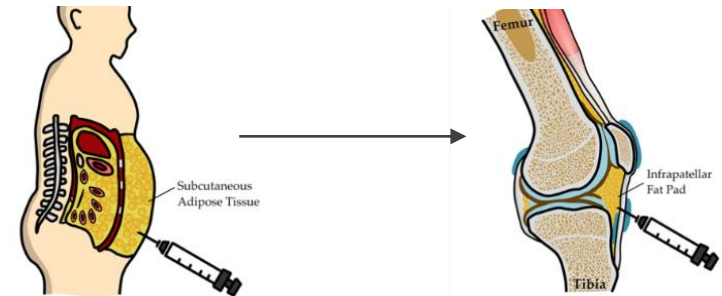


Figure: Chang TH, et al. Adipose-Derived Stem Cell Exosomes as a Novel Anti-Inflammatory Agent and the Current Therapeutic Targets for Rheumatoid Arthritis. Biomedicines. 2022; 18;10(7):1725.

How is the study designed?

Elaboration of ABP with
all published results

<https://clinicaltrials.gov/search?cond=NCT01300598>

- STUDY GROUPS (CONTROL OR NOT)
- INTERVENTION (NUMBER OF ADSC)
- PROCEDURE (AUTOLOGOUS vs ALLOGENIC)
- ROUTE OF ADMINISTRATION (I.V, INTRAARTERIAL, etc)

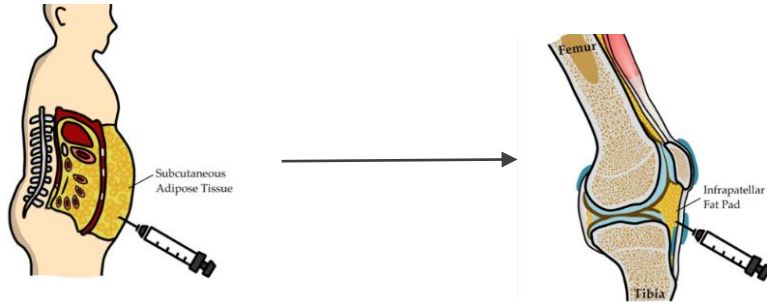


Figure: Chang TH, et al.. Biomedicines. 2022; 18;10(7):1725.

What is the study measuring?

- Safety evaluation
- Clinical efficacy of ADSC transplant

Intervention/Treatment

AUTOLOGOUS ADSC TREATMENT

Procedure: Autologous Adipose Tissue derived MSCs Transplantation

- Intra-articular infusion of Autologous Adipose Derived Mesenchymal Stem Cells. Dose : 1x10e7 cells/3mL, 5x10e7 cells/3mL, 1x10e8 cells/3mL

Secondary Outcome Measures

Outcome Measure	Measure Description	BIOMARKERS	Time Frame
Magnetic Resonance Imaging	Changes in the MRI knee with cartilage mapping and clinical improvement assessed by radiologist.		24 weeks
KSCRS(Knee Society Clinical rating System)	Changes in exercise score and function of joint evaluation by KSCRS(Knee Society Clinical rating System).		24 weeks
VAS(11-point box visual analogue scale)	Changes in VAS(11-point box visual analogue scale) score.		24 weeks
Histological evaluates	Biopsy specimens subject to safranin-O staining and immunohistochemistry for type I and II collagen. Thickness of the articular cartilage before and after injection measure, and specimens evaluate with ICRS II by a blind histopathologist.		24 weeks

Adapted from clinical trial NCT01300598

<https://clinicaltrials.gov/search?cond=NCT01300598>

RESULTS



Knowledge of
Transfer is improved



stem cell
therapy



Reviews

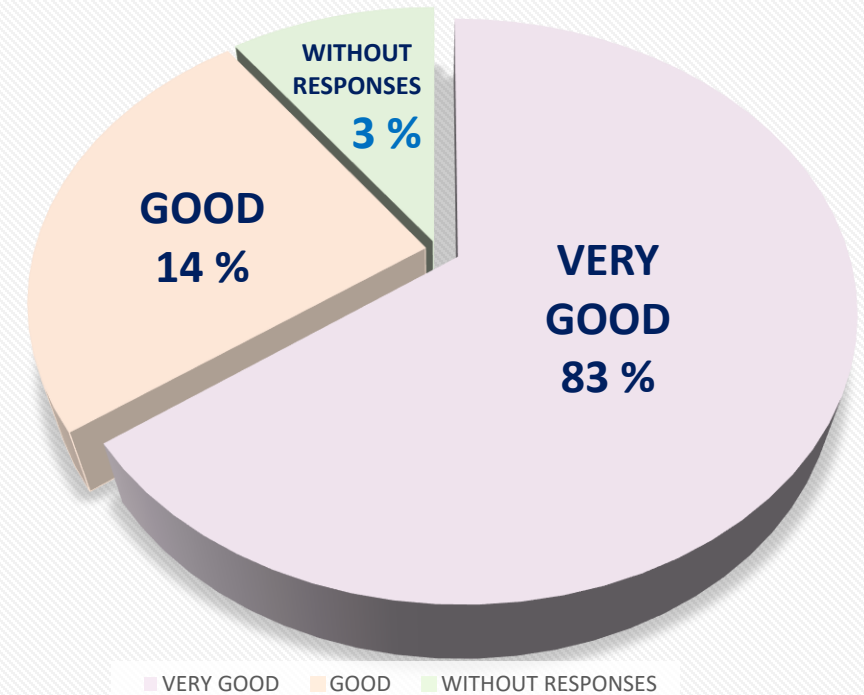
**-IMPROVEMENT OF KNOWLEDGEMENT
TRANSFER**

**-CONSOLIDATION OF THEORICAL ASPECTS
ON REGENERATIVE MEDICINE**

**-BETTER SKILLS IN THE FIELD OF
STEM CELL THERAPY**

Key questions to ask your Postgraduate students in a survey

**Are you satisfied with the ABP
content?**



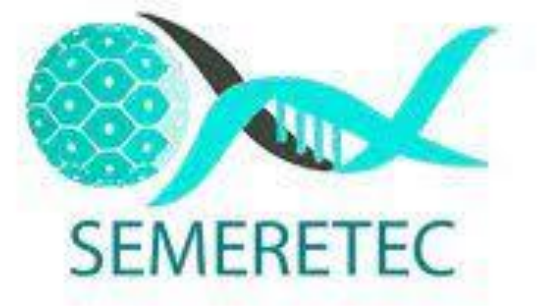
n = 37 postgraduates

CONCLUSIONES

- ABPs favorecen el razonamiento crítico en medicina regenerativa
- Potencian la transferencia de conocimiento y mejoran el aprendizaje de aspectos teórico-prácticos mediante el uso de casos clínicos

Gracias

AGRADECIMIENTOS



M Carmen de Luna