

# 14<sup>th</sup> World Congress on STEM CELL RESEARCH

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## MESENCHYMAL STEM CELL- DERIVED EXOSOMES AS A NOVEL TECHNOLOGY IN REGENERATIVE MEDICINE

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Mesenchymal stem cells (MSCs) are a paramount section of stem cells and have been looked at as promising progeny cells in the study on regenerative medicine owing to their immunomodulatory and differentiation prospect. However, various complications arrive with their translational implementation as viability, interval, and stage of growth, tall-duration reserve, and rise repair price. So, obstacles of cell-based remedy can be conquered by a novel medicinal manner emerging in translational seek and use, i.e., exosomes. The major advantages of employing exosomes over MSCs have transferred the concentrate on these Nano-podiums. These Nano-sacs have grasped the interest of researchers with their vigor as regenerative medicine together in nano curative and drug delivery devices. According to biologically robust vesicles, exosomes have the peculiars of biopharmaceuticals and nanomedicine (Nano-drugs). Therefore, exosomes are naturalist "bio-Nano medicine". MSC-exosomes can be respected as scope Nano-healing factors. Moreover, as naturalistic Nano-soporific submission coaches, MSC-exosomes joined with engineering technology have realized hopeful outcomes in disease therapy. Thus, amelioration in our knowledge of the mechanisms, study advance, and implementations tacit MSC-exosomes supplies modern acumen into possible curative plannings for nanomedicine. Being a possible nanomedicine, MSC-exosomes offer unparalleled features in disease handling and drug delivery. Exosomes, as normal nano-tabulate tools, have several characteristics in comparison with other engineered nanoparticles. Over the integration of nanotechnology and biotechnology, exosomes have protruded as innovative agents for the evolution of nanomedicine. Exosomes are major "viaducts" for cell-to-cell connection and may have a wider area for progress and large chances in the future.

### Biography

Laila Montaser is a distinguished Prof. of Clinical Pathology. Chair Stem Cell, Regenerative Medicine, Nanotechnology and Tissue Engineering (SRNT) Research Group. She served as the Chair, Founder leader of Clinical Pathology Department, Faculty of Medicine, Menoufia University, Egypt. Montaser is an internationally recognized stem cell technology professional. She has key competence in stem cell technology and regenerative medicine policy reinforced by global level and international experience in research, formulation and capacity building. In 2020-2021, she was awarded twenty certificates of appreciation for successfully presenting thirty six Global Webinars 20/36 (55.6%) from her home office amid the lock-down of COVID-19 crisis.