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further characterised. Therefore, they - can be used shortly after extraction or after expansion of their numbers by in vitro culture. Furthermore, MSCs can be di ff er - entiated into the desired lineage in vitro by addition of suitable growth factors and chemicals. The wide variety of cell type, source and manufacturing process represent important opportunities for treatment.

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the understanding of which will be greatly improved by molecular biology techniques and functional assay . In terms of agreed nomenclature, a report on consensus has described key parameters in the abbreviation DOSES: D /uni00A0 – /uni00A0 donor, O /uni00A0 – /uni00A0 origin tissue, S /uni00A0 – /uni00A0 separation method, E /uni00A0 – /uni00A0 exhibited characteristics, 8 S /uni00A0 – /uni00A0 site of delivery . The relative ease of cell acquisition has meant that autologous MSCs have been used in clinical settings and they represent a great opportunity for new treatment development. Before widespread adoption, more translational research is required to understand and refine the therapeutic mechanism of action and conduct well-designed clinical trials to establish the evidence of e ff ectiveness. Adult tissue resident or somatic stem cells

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