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Establishing the necessary data to model the future resource requirements and predicted healthcare targets for cell therapy as part of routine clinical practice

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Stem cell science has advanced to where patient benefits are starting to emerge. However, if cell therapies are to realize their full potential and become routine clinical practice for large numbers of patients, additional science coupled to commercial translation will be essential. The cell therapy industry (CTI) is presently a small but potentially rapidly growing new global healthcare sector. Success is totally dependent on resolving a number of factors unique to cells as therapies including: mechanisms of action, manufacturing, regulation and clinical trials. To understand how to solve these challenges, it is essential to robustly forecast the size and resource demands of the sector over the next two decades. Due to the highly regulated nature of medicines, one reliable method is to analyze the therapies that are currently undergoing clinical trials – the future pipeline. A search was performed on the website clinicaltrials.gov using the embedded search-engine and key terms relating to 'cell therapy'. 17,362 files were extracted (27/06/2010) and individually screened for relevance using the British Standard Institute (BSI) definition of 'cell therapy'. The resulting 2,765 trials were then categorized and core information collated including: trial phase, cell source (autologous/allogeneic), current activity of the trial and responsible national regulatory agency. Key results: [1] Near equal number of autologous and allogeneic trials, [2] Majority of trials are late-stage, [3] Significantly larger number of transient cell therapies as opposed to permanent cell replacement. This poster highlights all the key findings and discusses the implications for discovery scientists, clinicians, businesses and governments.

Biography

Culme-Seymour has a background in chemistry (BSc, University of Edinburgh and MSc, University College London) and holds a PhD in stem cell bioprocessing from the Advanced Centre for Biochemical Engineering, University College London. Emily is Director of the London Regenerative Medicine Network (LRMN), which has over 5,500 members. Emily represents the LRMN on the British Regen Industry Tool Set project funded by the Technology Strategy Board and is a regular author of industry-orientated publications. She also works as an Associate for Proteus Venture Partners and is an advisor to the internationally-acknowledged stem cell and regenerative medicine lawyers, Lawford Davies Denoon (London, UK).

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