

Joint Solutions Limited

Company Background

Joint Solutions Limited (JSL) is a consultancy group in the musculo-skeletal segment of the healthcare market, which offers a range of services, including intellectual property (IP) advice and technology commercialization programmes for companies and individual inventors.

Orthopaedics Industry

Orthopaedics is a well-established industry and in terms of trauma and joint replacement, treatment regimes are dominated by implantation of products designed to mimic load transfer and replace articular bearing surfaces. The success of these implants is well documented and in comparison with other surgical procedures success rates are generally very high with significant patient benefits. From an economic standpoint the QALY (quality of life year) scores for joint replacement are high in comparison with other surgical procedures, indicating that it represents excellent value from a healthcare spend point of view. The industry is characterized by a few large multinational companies, such as 3M, Johnson & Johnson, Smith & Nephew and Centerpulse, and a very large number of smaller firms serving niche markets and applications. The implant market is currently worth \$14bn a year.

Tissue Engineering Technologies

Tissue engineering is an interdisciplinary field that applies the principles of engineering and the life sciences toward the development of biological substitutes that restore, maintain or improve tissue function. Tissue engineering is an emerging medical area with some clinical success stories, however there is a plethora of techniques, technologies and research programmes, some relevant and some at the boundaries of clinical relevance. It can be split into three broad areas: 1) tissue engineering as medicine, 2) tissue engineering as manufacturing, and 3) tissue engineering as technology.

Tissue engineering is an exciting area and has the potential to fundamentally change healthcare provision and treatment options in many medical and surgical specialties. However, it may also cost significantly more than current treatments and therefore new inventions and innovations need to be looked at with this in mind. JSL is interested in three areas of tissue engineering:

- Scaffolding
- Cell Research
- Enabling Technologies

The strategy of the company is to identify technologies specific to orthopaedics and in particular interventions earlier in the treatment pathway for total joint replacement, which have a likelihood of commercial availability within a five-year timeframe. To help achieve this, they want to review current tissue engineering technologies, products and services which might be relevant to orthopaedics, and to identify 'who is doing what where'.