ANIMAL CELL TECHNOLOGY:
FROM TARGET TO MARKET

Animal Cell Technology: From Target to Market

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Introduction: From Target to Market

This book is the lasting product, a resource of up-to-date information in the scientific literature for the field of animal cell technology, as it was presented during a pleasant and stimulating meeting that was held in Tylösand, Sweden in June 2001. The title of the meeting, *From Target to Market*, indicates the usefulness of animal cell technology during all steps in the pharmaceutical development process.

It costs around 600 million USD to bring a new Molecular Entity to the market including a 440 million USD cost for New Molecular Entities failing in the R&D process. In order to reduce the attrition cost, many companies have put in place portfolio management systems with particular emphasis on project selection prior to entry in the development phase. This has triggered a shift in expenditure from discovery to non-clinical research by the leading companies, reflecting the portfolio management using more extensive preclinical data before a development decision is taken. Animal cells have become a very important tool in the drug discovery process. A new session was held on this topic.

Looking specifically on biotech products, historically the anti-infectives, growth hormone and cardiovascular areas have been strongest. In the development pipeline though anti-cancer represents the largest proportion, 27%, of the total number of biotech projects in development followed by immunologicals, 15%, and anti-infectives 14%.

The majority of projects reaching from preclinical to market are still recombinant proteins with monoclonal antibodies representing the largest proportion, recombinant vaccines and growth factors being other major subclasses. Following the biotech products reaching the market shows an upward trend in the contribution of biotech products to total NME output in the 1990s, which continued until 1996 when biotech represented 25% of the annual output. In 1997, 5 products were launched representing only 11%. Looking at approvals 1998–2000, there is no change in this trend.

A perceived hurdle from a market perspective is that a protein is per definition biodegradable and thus requires intravenous, or for some drugs, subcutaneous administration. Intravenous administration is connected to hospital care and subcutaneous administration can be used for self-medication. New promising administration technologies such as pulmonary delivery were highlighted on this meeting.

The next generation of products will evolve from applications such as gene therapy, novel vaccines, cell therapy and gene regulation.

Animal Cell Technology has a major role to play in the post-sequence era.

The conference in Tylösand attracted the largest number of participants in the history of ESACT.

This is probably a reflection of the incorporation of new fields that had not previously been considered to have animal cell applications.

This book captures, in the form of concise papers of limited length, the essence of the latest development in those fields of animal cell technology. We hope that it will become a useful resource of the most up to date information in Animal Cell Technology, at least until the next meeting in May 2003 in Spain.

Elisabeth Lindner-Olsson

Nathalie Chatzissavidou

Elke Lüllau

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We would also like to thank Micael Worbin at Tylösand for local coordination.

We have just had a stimulating, pleasant and enriching ESACT 2001 meeting. Your participation was a success and we feel privileged and honored that you decided to come to Tylösand.

Elisabeth Lindner-Olsson
Chair ESACT 2001