

### Designing Safer Medicines in Discovery: Current and Emerging Opportunities to Reduce Attrition

Thursday 17 March 2011 SCI HQ, London, UK



Programme	09.30	Registration and refreshments
	09.55	Welcome and introduction
	10.00	The safety related attrition challenge - a medicinal chemists perspective Steve Swallow, AstraZeneca
	10.35	Increasing the probability of compound survival: aligning metabolism, permeability and safety properties  Anabella Villalobos, Pfizer
	11.10	Off target pharmacology profiling: impact on discovery projects Joanne Bowes, AstraZeneca
	11.45	Using lessons from the clinic to inform early discovery: molecular clinical safety intelligence in GSK James Bailey, GlaxoSmithKline
	12.05	Lunch and exhibition
	13.30	Medicinal chemistry strategies to address bioactivation liabilities in drug discovery Tom Baillie, University of Washington
	14.05	Approaches that can be applied in drug discovery to minimize the likeli hood of drug induced liver injury in man Gerry Kenna, AstraZeneca
	14.40	Reducing attrition risk: evaluation of an in silico "medchem risk score" Kevin Dack, Pfizer
	15.15	Refreshments
	15.45	Substructural Alerts: Present and Future Francis Atkinson, ChEMBL group, EBI
	16.05	Medicinal chemists: how can we reduce attrition? Juliet Simpson, GlaxoSmithKline

16.25

16.45

toxicity

Mark Gosink, Pfizer

Jim Damewood, AstraZeneca

Avoiding aromatic hydrocarbon receptor liability in drug candidates

Newer methods of predicting toxicity: characterizing mechanisms of

This meeting will look at how better Clinical Candidates can be designed in Drug Discovery with an enhanced awareness of potential future safety issues.

The emphasis of this meeting will be on what scientists can do immediately to reduce attrition due to safety and what is coming on the 2-4 year horizon.

The current success rate for delivering a marketed drug from a nominated candidate drug is approximately 5% and much lower from the start of chemical optimization. It has been estimated that a 5-10% improvement in this attrition rate could double the output of marketed drugs with concomitant benefit to all.

Following the focus on pharmacokinetics and drug metabolism in the discovery process during the 1990's, the causes of this attrition have shifted, with drug toxicity accounting for a significant proportion of drug failures. This has led to an increased focus on developing improved preclinical safety screening strategies and compound design principles and this meeting will provide practical insights into some of the recent improvements and future directions in this key area.

#### **Attendees**

This meeting is targeted at all those who are involved in the lead identification and lead optimisation processes in Drug Discovery and those interested in furthering their knowledge of current and emerging approaches to designing safer Drug Candidates

### **Organisers**

Dr Stephen Smith, Stort MedChem Consulting Dr Alan Stobie, Pfizer Dr Steve Swallow, AstraZeneca

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