EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

efpia
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EMA-EFPIA Modelling and Simulation Workshop

Break out Session 1 (BOS1)

Room 4C

Chairs: Thomas Kerbusch, Sandra Visser, Efthymios Manolis
Organisers/Panellists: Thomas Kerbusch, Sandra Visser, Efthymios Manolis, Meindert Danhof, Beatriz Silva Lima, Markku Pasanen, Walter Janssens, Antti Poso, Jean Marc Vidal

Framework: Use of M&S with existing information (data, physiological/mechanistic knowledge) and reasonable assumptions will allow for optimisation of preclinical development, better translation to human and acceleration of early clinical development without compromising the outcomes for patient efficacy/safety. The use of M&S in this phase will help minimising the false positive and false negative rates in candidate drug selection.

Introduction	08:30-08:45
Industry Expectations	Thomas Kerbusch and Sandra Visser
Regulatory Expectations	Efthymios Manolis

Theme 1			08:45-09:40
Position statement	Record Industry Use and Regulatory Status	Open questions	Case studies
M&S should be used to optimise the preclinical development program and analyse preclinical data for mechanistic PoC and toxicity signal detection.	• How M&S is currently used in industry? • What is the regulatory experience/acceptance of M&S? • Identify Gaps	• Is there room for improvement in the preclinical evaluation of new drugs? • How regulators and industry envisage sharing the results of M&S at this sage of development?	• Predicting thyroid hormone side effects in human from preclinical toxicity studies Sandra Visser (15min)

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Theme 1			08:45-09:40
	and Room for improvement.	• What are the standards expected for use and reporting if M&S is used as a basis to justify deviation from the preclinical regulatory requirements? • Sharing data, database development.	• Utility of preclinical PKPD modeling in QT safety testing: Piet Van Der Graaf & Sandra Visser (15min)
Regulatory Discussant		Markku Pasanen (10min)	
Panel Discussion		(15min)	

Theme 2			09:40-10:20
Position statement	Record Industry Use and Regulatory Status	Open questions	Case studies
M&S should be used for first in man dose selection	• How M&S is currently used in industry? • What is the regulatory experience/acceptance of M&S? • Identify Gaps and Room for improvement.	• What are the expectations from Regulators on M&S to support First in Man? • What are the standards expected for use and reporting if M&S is used as a basis to justify FIM dose? • Sharing data, database development.	• Modelling and simulation support for design of First-in-Man studies: the MABEL approach Hélène Karcher, Stacey Tannenbaum, Philip Lowe (15min)
Regulatory Discussant		Walter Janssens (10min)	
Panel Discussion		(15min)	

~ Coffee Break ~

10:20-10:35

Theme 3			10:35-12:15
Position statement	Record Industry Use and Regulatory Status	Open questions	Case studies
M&S should be used to make optimal use of all available information including in vitro, preclinical (translational M&S), literature and in house data to optimize clinical development and help early selection of safe and efficacious drugs.	• How M&S is currently used in industry? • What is the regulatory experience/acceptance of M&S? • Identify Gaps and Room for improvement.	• What is the role of M&S in translation from in vitro-preclinical data to human? • Sharing data, database development for translational M&S. • What are the expectations from Regulators on M&S to support IPoM	• Mechanistic-PKPD modeling platform of TIPharma Meindert Danhof (15min) • Quantitative Systems Pharmacology: Sandy Allerheiligen & Thomas Kerbusch (15min)

Theme 3			10:35-12:15
		and PoP/C study design documentation and for their regulatory decision making? • Is success or failure in early development an internal issue for Pharma companies or is there a role for the regulators? • How can regulators help Pharma companies make better internal decisions that ultimately result in faster access for patients to safe and effective new medicines? • What are the standards expected for use and reporting if M&S is used as a platform to compile data and optimize development and candidate drug selection?	• Integration of Multiple Biomarkers (BMs), Mechanism-based Translation of BMs to Surrogate / Outcomes and Their Application in Early Drug Development – A Case Study to Support Phase IIa Design Alan Xiao (15min) • PK-PD modelling to support go/no go decisions for a novel gp120 inhibitor Phylinda Chan (15min) • Phase 2b dose selection for the treatment of autoimmune disorders leveraging comparator data Thomas Kerbusch (15min)
Regulatory Discussant		Efthymios Manolis (10min)	
Panel Discussion		(15min)	

Conclusions Beatriz Silva Lima and Thomas Kerbusch	12:15-12:30