EMEA’s Guide on Advanced Therapy Medicinal Products

Non-clinical development

To help developers of gene therapy medicinal products (GTMPs) and cell-based medicinal products (CBMPs) navigate the most important regulatory requirements during the non-clinical development phase.

What you should know

Additional information applicable to all the above objectives

- Analyse the dose-response relationship (not applicable to CBMPs).
- ▪ Pivotal non-clinical studies should use material manufactured using the clinical manufacturing process.
- ▪ Route and mode of administration in animal studies should mimic the clinical use. If this is not feasible in an animal model, another animal model can be used or an alternative administration route should be used in the non-clinical study. This alternative administration route should result in similar pharmacokinetic characteristics (e.g. bioequivalence).
- ▪ Investigate the inadvertent germline transmission in one species before starting the non-clinical study. Complete details before marketing authorization.
- ▪ guideline on non-clinical testing for inadvertent germline transmission of the gene therapy medicinal products (CTWP/686637/2011).

Your checklist

- Perform a risk-based approach
- Conduct safety and toxicity studies
- Address safety concerns from previous trials
- Conduct proof-of-concept studies
- Investigate pharmacokinetics
- Have a clear rationale for the tissues selection in the pharmacokinetics studies
- Determine intended patient population
- Assess relevance and suitability of animal model
- Use the same administration route as will be used in clinical studies
- Identify the role and added value of each of the separate components of the cell product
- Ask for Scientific Advice

Regulatory support

ATMP classification: This procedure aims to identify any potential issues of quality and non-clinical data. For more information see: www.ema.europa.eu/ataopharmaceuticalproducts.

ATMP classification: It is to determine if the product meets the scientific criteria ATMP and consequently to clarify the applicable regulatory framework, development path, and scientific and guideline advice to be followed. For more information see: www.ema.europa.eu/ataopharmaceuticalproducts.

ATMP: The innovation task force (ITF) is a multi-disciplinary group that includes scientific, regulatory and legal competencies. It was set up to provide a forum for early dialogue with applicants on interactive aspects in medicines development. For more information see: www.ema.europa.eu/ataopharmaceuticalproducts.

Onchopox designation: medicines for non-bacterial or non-viral orphan neglected tropical diseases. Signatories of designated orphan medicines can benefit from incentives described in the EMA’s Guide on Advanced Therapy Medicinal Products.

Onchopox: the Community register of orphan medicinal products to see if a similar medicinal product for the same therapeutic characteristics?

PME status: It allows support for the development of medicines that target an unmet medical need. For more information see: www.ema.europa.eu/ataopharmaceuticalproducts.

Scientific advice and protocol assistance: developers can be advised on the most appropriate way to generate robust evidence on a medicine’s benefits and risks. During the non-clinical development phase and prior to the start of the clinical phase. For more information see: www.ema.europa.eu/ataopharmaceuticalproducts.

SMED status: The small, medium and medium-sized enterprise (SME) status can benefit from relief from regulatory and administrative assistance, and fee incentives. It is recommended to register as soon as possible. For more information see: www.ema.europa.eu/ataopharmaceuticalproducts.