Importance of Good Laboratory Practice (GLP)

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Good Laboratory Practice (GLP) is a set of principles that guides how laboratory studies are planned, performed, monitored, recorded, reported and archived. This is different from laboratory safety standards (such as appropriate clothing). GLP helps to ensure the credibility and traceability of data submitted, thereby addressing the issue of non-reproducibility in many biopharmaceutical experiments. GLP is intended to minimise adverse drug effects and improve human health and environmental safety profiles. GLP also helps to improve accountability and precision of data through the transparent and detailed documentation of laboratory work while assigning responsibility at various steps in the experiment. In addition, the International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use (ICH) has mentioned GLP as a pre-requisite for the successful international registration of pharmaceuticals.

Tips to achieve GLP

1. Implement and/or adhere to Standard Operating Procedures (SOPs) in the laboratory
    - Including SOPs relating to inspection, maintenance, calibration and testing
    - SOPs help minimise inter-individual and inter-test variability, as well as ease reporting complicated procedures
2. Separation of different activities
    - To minimise disturbances
3. Label all reagents and solutions with their name(s), date of opening, storage conditions and expiry date
    - Reagents should be used and obtained in line with relevant SOPs
4. Ensure any animal studies are done on the appropriate species
    - This aids in proper dose selection
5. Ensure all techniques and instruments used are validated
6. All data should be linked with their sources or samples
    - Samples should be labelled with the particulars of the patient/subject that the sample was obtained from, as specified in SOP
7. Document all findings, not just the ones that favour the hypothesis
    - Ensure all documents are readily available for scrutiny
    - Document any pre-set inclusion and exclusion criteria
    - Report any excluded animals or subjects
8. All analytical reports should be signed and dated by the relevant project manager

    - Reports should be kept for at least 5 years
    - Archive the documents systematically such that they are readily available at any one time
9. Be familiar and up-to-date with all the procedures (and their relevant SOPs) required of you
    - If necessary, ensure you have or obtain the necessary certificate and qualifications required to perform the procedure
    - Adhere to good laboratory practices and techniques
10. Be familiar with SOPs in case of an emergency and be prepared to perform them at any time
    - Be familiar the safety data sheet (SDS) of the chemicals used in the experiment
11. If blood and/or urine is used, keep in mind the changes in blood/urine on keeping and ensure that the blood/urine is not kept for longer than required
    - nsure that the changes on keeping are either accounted for or do not affect the results of the experiment.