

Legally, invention is a two-step process. The first step is conception of the invention and the second step is “reduction to practice” of the invention. An inventor is a person who contributes to the conception of the invention. Conception is defined as the formation in the mind of an inventor of a definite and permanent idea of the complete invention. Once the invention is conceived, a person of ordinary skill in the inventor’s field must be able to reduce the invention to practice, i.e., make use of the invention based on this conception. Therefore, it is important that the scientist capture his/her ideas/conception of an invention in written format. Laboratory notebooks, if used properly, can serve as the basis of conception. They can also serve to help in patent prosecution by enabling the scientist to swear behind a cited reference.

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Guide For Keeping Laboratory Records

Best practices for NIH scientists (researchers, technicians, fellows, visiting scientists) to follow for keeping lab records and notebooks:

- Do use a bound notebook.
- Do write legibly.
- Do write in ink.
- Do explain acronyms, trademarks, code or unfamiliar jargon.
- Do attach to your lab notebook loose notes, emails, letters, graphs, figures and charts containing any part of conception of an idea or result of an experiment.
- Do title, sign and date each attachment, as well as each laboratory notebook page.
- Do record the objective of an experiment as well as the results obtained in as much detail as possible.
- Do have at least one non-inventor person who is familiar with your field sign and date each page, stating that he/she has “read and understood” your work.
- Do obtain a signed and dated statement from collaborators

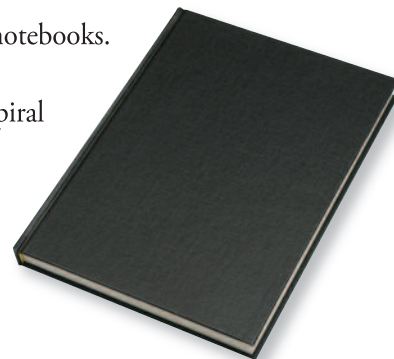
and/or contractors who carry out the experiments you designed, stating “experiments run by [insert contractor/ collaborator name], under the direction of [insert the experiment designer's name]”.

- Do record thoughts, conversations, lab meeting discussions, contractor oral reports and discussions, as well as wild speculations and future plans.
- Do write in the active voice.



- Do report completed experiments in the past tense.
- Do give cross references to previous experiments and/or projects.
- Do use a table of contents to provide cross references.
- Do keep your lab notebook under lock and key when you are not in the lab.
- Do track and save completed lab notebooks.

- Do not use binders, loose leaf or spiral notebooks.
- Do not blot out or erase mistakes.
- Do not modify the data.
- Do not rip pages out.
- Do not skip pages
- Do not leave a page blank.
- Do not cover any writings in the notebook by affixing graphs and/or charts over them.
- Do not write in the passive voice.
- Do not use words such as “obvious” or “abandoned” as they have tremendous legal significance.



Some tips for electronic notebooks:

- Do clearly define what you/your lab mean by electronic notebooks. To some, data generated on a computer and affixed to a paper notebook is an electronic notebook. To others, saving data on the desktop or hard drive of their computer is an electronic lab notebook. Yet to a third group, a particular software, e.g., LabTrack, is an electronic notebook.
- Do adopt an official procedure for electronic record keeping. Who will be the custodian of the electronically stored data? Is there a backup?
- Do back up and write-protect all electronic data.
- Do retain all electronic copies for the duration of the appropriate document retention period.
- Do store your electronic notebook contents on unchangeable mediums, e.g., CD-R, or in an electronic archive that cannot be modified.

- Do use software/hardware which prevents editing the original document, i.e., WORM (Write Once, Read Many).
- Do time stamp your entries.
- Do restrict access to the electronic notebook using key and screen locks, and/or passcodes.
- Do associate the identity of each author and/or witness with each record automatically.



- Do not create and store records randomly on disks, desktops, or hard drives.
- Do not store records on media that have limited shelf-life.
- Do not allow access to the electronic records by unauthorized personnel.
- Do not rely on methods of dating your entries that can be altered.
- Do not alter any portion of an electronic document.

