

Importance of Collaboration of Research Data for Scientific Researches on Natural Products

YEUNG Ming Fai

Abstract

There are many countries, organizations and laboratories performing researches on isolation and characterization of ingredients in natural products. Their research results were published internationally and/or locally in different databases, books, journals, etc. Therefore, it is difficult for finding and grouping all of their research findings. Repeation works and the dispersion of research findings result. Collaboration of research data is importance to avoid duplication of works so as to save a lot of resources, time and human effort worldwide. This can also let to the accumulation of works so that researches would be performed on a higher level.

Keywords: Collaboration, research, data, scientific, natural products, accumulation, repeated work, NPCL

Introduction and content

Natural products are used by human for curing diseases among thousands of years. However, there are still a lot of unknown mechanisms of actions of natural products for treating diseases. People in different countries use different approaches for researching and/or elucidating their mechanisms but the mechanisms are still difficult to be wholly and perfectly defined. New diseases are still developed and researches are still continued.

One of the scientific approaches for research on natural products is determinating the ingredients in natural products and then finding out their biological activities. Their dose-activity relations are then developed. This help generating chromatographic fingerprint-activity relations with the help of analytical instruments. Threefore, isolation and characterization of ingredients in natural products is the first step for the research in natural products.

There are many countries, organizations and laboratories performing researches on isolation and characterization of ingredients in natural products. Their research results were published internationally and/or locally in different databases, books, journals, etc. Therefore, it is difficult for finding and grouping their research findings. Replication of works and the dispersion of research findings result. Collaboration of research data is importance to avoid duplication of works so as to save a lot of resources, time and human effort worldwide. This can also let to the accumulation of works so that researches would be performed on a higher level.

An international platform is needed for colaborating data of the research on natural products. An international database, Natural Product Chemical Ingredient (NPCI) (<http://npci.selfip.org>), was developed for worldwide people to submit data of their findings about the type and quantity of ingredients compose natural products.¹ The submission of data is beneficial to worldwide people as a whole. Worldwide people can search the type and quantity of ingredients in natural products at any time and any place through the internet. Natural products containing oleanolic acid as their ingredients were submitted as an example.²

As the worldwide resources are limited and the types of ingredients composing natural products are virtually unlimited, it may not be possible for a single person, a single laboratory or a single organization for doing research. Efforts of worldwide people are required, especially the professionals. However, finding ingredients at different places may lead to the dispersion of works, i.e.

Importance of Collaboration of Research data for Scientific Researches on Natural Products

difficult for data to transfer and communicate. The database of NPCI can shorten the time of communication and collaboration of data which benefit the professionals such as scientists, researchers, phytochemists, etc. It also benefits worldwide people if they want to find out the type and quantity of ingredients composing the natural products.

Conclusion

Collaboration of Research Data is important for scientific research on natural products to avoid duplication of works so as to save resources, time and human effort worldwide. The accumulation of works can be performed so that researches would be performed at a higher level.

References

- [1]. YEUNG Ming Fai. Development of an international database, Natura Product Chemical Ingredients for collaborating data of ingredients in natural products. *Natura Proda Medica*, **2010**, 3: 3-12.
- [2]. YEUNG Ming Fai. An update on the presence of Oleanolic acid in natural products at Aug 2010. *Natura Proda Medica*, **2010**, 3: 13-73.