

techman / January 14, 2011 10:18PM

[\[BioMedical\] Research Team at NTU Graduate Institute of Clinical Medicine Invents New Drug for Asthma](#)[\[BioMedical\] Research Team at NTU Graduate Institute of Clinical Medicine Invents New Drug for Asthma \(Chinese Version\)](#)

NTU Newsletter (Issue 1035) The NTU research team co-directed by Professor Bor-Luen CHIANG at the Graduate Institute of Clinical Medicine and Professor Hong-Nong CHOU at the Graduate Institute of Fisheries Science discovered that purified phycocyanin can apparently reduce the number of inflammatory respiratory tract cells and the airway resistance. The findings have been published in the top international journal on respiratory studies, American Journal of Respiratory and Critical Care Medicine. After patenting, the research may enter clinical experiment stage.

Professor Bor-Luen CHIANG pointed out, although the presently widely used steroids treating atopic asthma have fine response to prohibit inflammation, yet this kind of drugs will accelerate the Th2-induced allergic response (Th2, type 2 T helper cells) and thus have vicious impact on the development of the disease in a long run.

In order to find better treatment, Professor Bor-Luen CHIANG and his team spend three years investigating more than thousand compound or purified materials, with the financial support of the National Science and Technology Program for Biotechnology and Pharmaceuticals (NSTPBP). The team found that the phycocyanin, contributed by Professor Hong-Nong CHOU, has fine response, so they tried to further specify the function and impacts of such material on immunocyte cells, including DC (dendritic cells) and T-lymphocytes (T-cells). The team employed purified phycocyanin to asthma models and found that the treatment can decrease the allergic antibody concentration while the inflammatory respiratory tract cells and the airway resistance are reduced as well, being drawn near to normal models.

At meanwhile, because phycocyanin changes the allergic asthma situation by adjusting the immune response, it will not cause side effects as steroids do. Professor CHIANG stressed, these two treatments have independent mechanisms, and hence they may even be jointly applied broadening the application scope.

With the support of NSC and NTU, the patent applications in relation to the findings have been submitted in the US and Taiwan. Because no record of the discovery has been notified before, the patent is expected to get granted in this year.

Further Information:

[NTU Newsletter Issue 1035](#) (Chinese)

---

[National Science Council International Cooperation Sci-Tech Newsbrief](#)

---