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[\[BioTech\] NCHU Presents New Antifreeze Proteins Production Technology](#)[BioTech] NCHU Presents New Antifreeze Proteins Production Technology ([Chinese Version](#))

China Times E-paper (2011/10/07) & udn.com (2011/10/06) Ten years of effort results in the National Chung Hsing University (NCHU)'s new technology producing antifreeze proteins (AFPs), which can reduce the cost and production period. The major investigator developing the technology Professor Chuan-mei YEH at the Department of Food Science and Biotechnology, NCHU, also won a silver medal of this year's National Innovation Award for the technology. The invention has also become the U.S. FDA approved impregnating process for food. Now the technology has been transferred for further commercialization.

AFPs have been widely applied to the industries of frozen food and aquatic products, because they can prevent the tissue damage by freezing. However, to extract them from natural fish bodies has also to depend on the external conditions including the industrial condition of fishery, climate, weather, etc., and a complicated process is required. Hence, the AFPs are always very expensive. The AFPs for research purpose, for example, cost 400,000 NT dollars per gram.

Professor Chuan-mei YEH at the Department of Food Science and Biotechnology and Assistant Research Fellow Chi-peng WANG (trans. temp., 王志鵬) at the Department of Animal Science have spent ten years on developing the new process obtaining AFPs with measures of genetic engineering. Now the new technology allows us to produce a large volume of AFPs with fine quality meeting the requirements of food safety. The production is now not restricted by seasonal condition or regional condition, and its cost is only one tenth of the original.

YEH points out, the protein processed via the new technology is more efficient than other materials. The new material's effective concentration is 0.035%, while the other materials' effective concentrations are at least 10%. Hence the new material can largely reduce cost. Besides, AFPs have wide applications to the fields of frozen food, aquatic products and biomedicine. The technology has been transferred to local companies for further development.

Further Information:

[China Times E-paper 2011/10/07](#) (Chinese)[Udn.com 2011/10/06](#) (Chinese)

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

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