

Researchers fishing for cancer cure discover active DHA derivatives

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The next treatment for cancer might come from fish says a new research report published in the March 2010 print edition of the *FASEB Journal*. In the report, scientists show that the omega-3 fatty acid, "docosahexaenoic acid" or "DHA," and its derivatives in the body kill neuroblastoma cancer cells. This discovery could lead to new treatments for a wide range of cancers, including neuroblastoma, medulloblastoma, colon, breast, and prostate cancers, among others.

"We hope that this study can provide a deeper understanding of the actions of <u>omega-3 fatty acids</u> and their products in <u>cancer cells</u>, and why they can be of such high importance in treatment of the disease," said Helena Gleissman, Ph.D., co-author of the study from the Childhood Cancer Research Unit of the Karolinska Institutet in Stockholm, Sweden. "Ultimately, we hope that we can be able to cure more children with neuroblastoma, and possibly other cancers."

Scientists administered DHA to <u>neuroblastoma cells</u> from the <u>nervous</u> <u>system</u> and analyzed the cells for byproducts as the DHA was metabolized into the cells. Researchers then examined the affect of both DHA and its derivatives on the growth of cancer cells. Results showed that DHA killed the cancer cells, but that the toxic derivatives produced by DHA were even more effective at killing the cancer cells. This suggests that DHA could become a new agent for treating neuroblastoma and possibly many other cancers.

"This is good news for those looking to stop cancer. We now know that



DHA plays both offense and defense when it comes to protecting our health," said Gerald Weissmann, M.D., Editor-in-Chief of the <u>FASEB</u> Journal. "It's ability to help prevent numerous diseases is well documented, but now we see that DHA or one of its byproducts might serve as the starting point for a new class of anti-cancer drugs."

More information: Helena Gleissman, Rong Yang, Kimberly Martinod, Magnus Lindskog, Charles N. Serhan, John Inge Johnsen, and Per Kogner. Docosahexaenoic acid metabolome in neural tumors: identification of cytotoxic intermediates. FASEB J. 2010 24: 906-915. <u>doi:10.1096/fj.09-137919</u>

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