

# HEALTH

## Tea and Health

Most Tea Association members are familiar with the Tea Trade Health Research Association (TTHRA). The Association was formed to manage and administer a joint research effort between the Tea Council of the USA, the Tea Council of Canada, and the UK Tea Packers Association to further scientific knowledge about the human health benefits of tea. This project research effort is part of an international project funded by the Common Fund of Commodities under the auspices of the FAO and various producer countries. Set up as a charitable organization in the UK in November 1993, the TTHRA has raised funds and managed the research project. The focus is specifically directed to black tea and its role in preventing/inhibiting the formation of cardiovascular diseases and certain forms of cancer.

The TTHRA is guided by a Steering Committee made up of technical experts from each of the participating countries. The committee last met to discuss interim results on January 23 and 24, 1997 at the offices of the Tea Council of Canada. To date, eight research grants have been issued with funds remaining to sponsor three additional studies. Most of the research is still in progress, with at least three of the projects showing positive signs; two of the studies dealing with cancer in animals and one of the studies dealing with animal cardiovascular diseases (Chung, Yang and Chait).

Dr. Chung, of the American Health Foundation, is studying the effect of tea on lung and liver carcinogenesis. He measured 8-OH-dG in DNA from liver and lung in animals exposed to tea in the diet and animals not given tea. DNA damage is a bio-marker which is frequently a forerunner of cancer. The liver levels of 8-OH-dG in animals fed the 2% tea extract (with or without exposure to the carcinogen [NNK]), were significantly lower; a similar trend was seen in DNA taken from lung tissue but the effect was not statistically significant. DNA is harder to extract from lung tissue and the data are more variable.

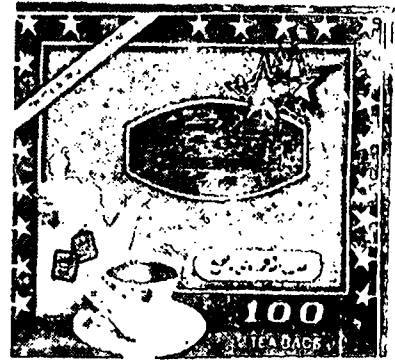
However, these results are suggestive of a protective effect of tea. While the data are generated from too few animals to warrant separate publication they will likely be included along with a longer chronic study still under way.

Dr. C. S. Yang of Rutgers conducted a study entitled "Effect of black tea and green tea on spontaneous tumorigenesis in A/J mice". Dr. Yang is investigating spontaneous cancers. This means that instead of exposing his animals to treatment like a chemical injection, that causes a specific tumour, he has a strain of mice genetically selected to be predisposed to so-called natural cancers of the type seen in humans in real life.

While the study must still complete a histopathological analysis, mice fed a 2% black tea solution significantly inhibited all parameters investigated including tumour incidence, multiplicity and size. More analysis is required to determine the effect of the lower body weight before the results may be accurately assessed.

Dr. Chait, of the University of Washington in Seattle, is studying the effect of tea fed to mice relative to the incidence of cardiovascular disease. In the first set of experiments, using a dietary manipulation to produce CVD, tea did not show an effect. However, in a second set of experiments, using mice which are genetically susceptible to cvd, tea appears to have a modest inhibitory effect against the oxidation of LDL. In addition to the studies funded by the TTHRA, many other independent studies are being investigated by scientists around the world.

Nearly every week the Tea Council hears of a new study touting various health benefits attributed to tea consumption. Just this week we received word of an Australian study which found the laboratory mice fed black tea suffered 54% fewer cancers than mice fed water or even green tea when they were exposed to damaging ultraviolet rays. The study was conducted by the



commonwealth Scientific and Indus Research Organization (CSIRO). They also plan to conduct a human trial in early 1997.

This January, the Tea Council released a Video News Release (VNR) for Hot Tea Month. This VNR was structured in such a way to benefit from the news about tea's health benefits while positioning hot (and iced) tea as a pleasurable beverage. A transcript of the VNR follows for your reading pleasure. Two scientists; Dr. Jeffrey Blumberg of Tufts University-Boston, and Dr. Carol Greenwood of the University of Toronto were prominently featured in the VNR. To date, the preliminary audience figure is well over 7 million viewers which is expected to climb even further over the next couple of weeks. This equates to a cost of less than \$. 0035 per impression or \$ 3.50 per thousand viewers.

As the Tea Council has stated before, the marketing of tea as a healthy beverage poses tremendous challenges to the global tea industry. To move aggressively in this direction risks attracting the attention of regulatory authorities and/or communicating the wrong message to consumers. Given the potential for error, the safest policy for industry is to focus their marketing efforts on the sensory pleasures of consuming tea and to leave the dissemination of potential health benefits to the medical and scientific communities.

Given the abundance of emerging scientific data identifying a broad spectrum of health benefits associated with tea consumption, the prognosis for future growth is indeed healthy.

(Source :Tea World - Spring/Summer 1997).