



## **Submission from Cancer Council Australia to FSANZ's Proposal P1016- Hydrocyanic acid in Apricot Kernels & other Foods**

6 February 2015

Cancer Council is Australia's peak national non-government cancer control organisation. Its members are the eight state and territory cancer organisations, working together to undertake and fund cancer research, prevent and control cancer and provide information and support for people affected by cancer.

Cancer Council's goal is to lead the development and promotion of national cancer control policy in Australia, in order to prevent cancer and reduce the illness, disability and death caused by cancer.

Cancer Council strongly welcomes and supports a regulatory approach (prohibition on the sale of both unhulled (skin on) and hulled (skin off) raw apricot kernels in Standard 1.4.4 with exemptions for raw apricot kernel-derived foods that are safe for consumption (option 5 presented in the call for submissions). Our organisation supports the view of FSANZ that this is likely to have the greatest net benefit in managing the risk to public health and safety from consumption of raw apricot kernels.

Raw apricot seeds contain cyanogenic glycosides which cause poisoning and death when eaten raw and in sufficient amounts. Cases of poisoning from apricot seeds have been reported in the medical literature since the 1960s. The first reported cases of cyanide poisoning due to apricot seed ingestion were nine children in Turkey in 1957 (Sayre, 1964) which included two deaths. Twenty-four cases of cyanide poisoning in children were also reported in 1981 in Gaza with three deaths due to apricot seed ingestion (Lasch, 1981).

Cyanide poisoning is rapidly fatal if not promptly treated. Clinical features are not specific which makes diagnosis complicated. There is compelling evidence for the toxicity of apricot seeds when ingested (Suchard, 1998; Rubino 1979). More recently, in addition to the two cases of poisoning reported in Australia, the Department of Health in Hong Kong issued a warning against consuming raw apricot seeds due to a case of poisoning in a 26 year old male.

The continuing sale of apricot kernels as health food is of major concern given the risk of poisoning and death. There is no evidence that the consumption of apricot seeds related to the use of laetrile is effective in the treatment or prevention of cancer. Promoters claim that malignant cells contain an abnormally high number of enzymes that break down laetrile and amygdalin, and as a result the release of hydrocyanic acid kills cancer cells while normal cells are left unaffected (Milazzo, 2006; American Cancer Society, 2012). Another commonly advertised claim is that cancer is a vitamin deficiency, and that laetrile is the missing vitamin B17, therefore claiming that consuming laetrile prevents the development of cancer. Any success attributed to the above claims have been generated by individual cases, testimonials and through publicity, and are not based on scientific evidence. Moertel et al

(1982) published the outcomes from a clinical trial supported by the National Cancer Institute into the effect of laetrile in combination with metabolic therapy for cancer patients. Among the 175 cancer patients, only one case reported a partial response (reduction in tumour size) while three others claimed symptomatic improvement. Fifty-four per cent of participants had measurable tumour growth at three months of treatment, and by seven months all had reported tumour progression (Moertel, 1982). In addition, several patients with cyanide toxicity saw a reduction of related symptoms when laetrile treatment was discontinued. Based on these outcomes (Moertel, 1982), the National Cancer Institute deemed laetrile a toxic drug and, in combination with metabolic therapy, is of no substantive value in the treatment of cancer.

A systematic review into the effectiveness of laetrile interventions as a cancer treatment in humans found no randomised controlled trials had been conducted, which has remained unchanged since the review (Milazzo, 2006; Milazzo 2011). Milazzo et al. (2006) concluded that claims of laetrile's therapeutic benefit for cancer patients was not supported by sound evidence.

The consensus of available scientific evidence does not support claims that laetrile is an effective anti-cancer treatment either in animal studies or in human clinical trials. Given the lack of scientific evidence for the use of raw apricot kernels for cancer treatment as well as the risk to public health, the Cancer Council strongly welcomes and supports the prohibition on the sale of raw apricot kernels.

## References

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