1401 Village Blvd. Apt. 1913
West Palm Beach, FL 33409
May 5, 2005

Ms. Cynthia Oshita
Office of Environmental Health
Hazard Assessment
Proposition 65 Implementation
Program
P.O. Box 4010
Sacramento, CA 95812-4010

Dear Ms. Oshita,

Please accept the following statement for use with the meeting of May 9, 2005 for discussion of danger of acrylamide.

Sincerely
Richard Segal

OFFICE OF ENVIRONMENTAL HEALTH
HAZARD ASSESSMENT
Received
MAY 10 2005
SACRAMENTO

mutations found from glycidamide exposure appear to suggest that carcinogenesis occurs unde this condition. The genes in question include the HPRT gene which seen to be site of deamination but glycidamide causes There is a mouse mutation at the la gene which correlates to ethylene oxide carcinogenesis and the kind in use is from acrylamide study of 1986 B6C3F

If APC mutation occurs it is found with colon cancer and is related to diet

The P53 gene is mutated and this can cause numerous carcinogenesis phenomena based on failure of tumor suppression

There would seem to be a repair failure of the polymerases use given the presence of mutations hereby cytidine is likely be poorly repaired part of deamination DNA to uridine

Some mutation leads 3 to tumor growth
of prevention are directed to glutathione. The
glutathione useful for prevention of adducts is
not found as such with glycidamide exposure
possibly its control gene is mutated by glycidamide.

The question of the kinds of adducts is
question begun with carboxyethyl, *in vitro*,
from acrylamide, followed with 2-carbamoyl-2
hydroxyethyl from conversion to glycidamide
in vivo and has led to glycidamide
caused uracil adducts in vitro Thus the
to exists of adducts of danger are
known, and it would appear likely that
an adduct of cytosine deaminated to uracil
will mutate a human gene carcinogenesis

The repair failures noted of glycidamide
cause may turn out to be as well-understood
as those from benzpyrene, given work on
nucleotide excision repair and base excision
repair, repair units of polymerases and
glycosylases. Certainly with some of the

same genes mutated, similar repair failures be found. The cyclic adduct, postulated as part of the deamination in question, has repair deficiencies. In addition, its formation at cytidine is of scientific inquiry, given acrolein results

It is interesting that mutations of the drosophila and uracil, shown from exposure to ethylene oxide and propylene oxide, the latter of which is known to deaminate <u>in vivo</u>, cannot be ruled out as the cause of nucleotide excision repair fault, when in comparison to guanine adducts

Uridine glycol part of mutation in vivo with
uracil glycol found to be un-repaired at
a low dose in the study of glycidamide, its
low-dose high-exposure carcinogenic factor
may be partially explained.

It is for these reasons that I agree that
a warning, such as the one devised which begins
"Baking, roasting, frying," should be provided to
consumers. I do not agree that an exemption
should be offered for acrylamide products. The
onset-of-cancer rate is one-in-three and is
approaching one-in-two. Cancer from smoking
declined while cancer from diet increased
Acrylamide likely leads in carcinogenesis causes
among food products. Since the same Swedish
researchers have contributed to their epidemiology
with mutation studies which have found
agreement and advanced mutational study
from other scientists their definition of risk
from acrylamide continues to be important
that 50 micrograms of acrylamide per day
can lead to in 0 cancer onset risk

The Nonsignificant Risk Level using this rate should be < 1.0 micrograms per day because of an occurence of very low dose and high danger.

Furthermore, attention should be directed to at risk populations due to genetics. Given that the U S E P A was to be consulted rather than action taken as a result of the October 2003 Carcinogenic Identification Committee meeting it should be noted that leading acrylamide viewpoint at U P A includes criticism of the 2004 National Toxicology Program advisory as being too weak regarding developmental effects (Bearfield). This view is in agreement with Sweden's viewpoint (Abrahamsson Jetterberg) which extends the risk to in 100 for 130 micrograms of acrylamide per day