

**Actions from Peer Review of the Draft Report on Carcinogens
Monograph on Haloacetic Acids Found as Water Disinfection By-Products
July 24, 2017**

The NTP Peer Review Panel (“the Panel”) was convened on July 24, 2017, to peer review the *Draft Report on Carcinogens (RoC) Monograph on Haloacetic Acids Found as Water Disinfection By-Products* (available at <https://ntp.niehs.nih.gov/go/38854>). A meeting report will be prepared and posted to the NTP website when completed. The Panel peer reviewed the draft monograph and provided its opinion on the NTP’s draft conclusions for the level of evidence for carcinogenicity from human studies and experimental animal studies and the NTP’s preliminary listing decisions for haloacetic acids found as water disinfection by-products. NTP will consider the Panel’s peer review comments in finalizing the monograph. When completed, the monograph will be published on the NTP website (<http://ntp.niehs.nih.gov/go/aboutroc>).

The Panel concurred with the statement that a significant number of persons living in the United States are exposed to mono-, di-, and trihaloacetic acids found as water disinfection by-products.

The Panel voted unanimously (7 yes, 0 no, 0 abstentions) to accept NTP’s level of evidence conclusion that the *available data from epidemiological studies are inadequate* to evaluate the relationship between human cancer risk and exposure specifically to haloacetic acids (either as a class or individual haloacetic acids).

The Panel voted unanimously (7 yes, 0 no, 0 abstentions) to accept the draft NTP level of evidence conclusion of *sufficient evidence of carcinogenicity* from studies in experimental animals for bromochloroacetic acid. This conclusion was based on an increased incidence of malignant and/or a combination of malignant and benign tumors in two species and in one species at multiple sites.

The Panel voted unanimously (7 yes, 0 no, 0 abstentions) to accept the draft NTP level of evidence conclusion of *sufficient evidence of carcinogenicity* from studies in experimental animals for bromodichloroacetic acid. This conclusion was based on an increased incidence of malignant and/or a combination of malignant and benign tumors in two species at multiple sites.

The Panel voted unanimously (7 yes, 0 no, 0 abstentions) to accept NTP’s draft level of evidence conclusion of *sufficient evidence of carcinogenicity* from studies in experimental animals for dibromoacetic acid. This conclusion was based on an increased incidence of malignant and/or a combination of malignant and benign tumors in two species at multiple tissue sites.

The Panel voted unanimously (7 yes, 0 no, 0 abstentions) to accept NTP’s draft level of evidence conclusion of *sufficient evidence of carcinogenicity* from studies in experimental animals for dichloroacetic acid. This conclusion was based on an increased incidence of malignant and/or a combination of malignant and benign liver tumors in two species.

The Panel voted unanimously (7 yes, 0 no, 0 abstentions) to accept NTP's draft level of evidence conclusion of *not sufficient evidence of carcinogenicity* from studies in experimental animals for chloroacetic acid.

The Panel voted unanimously (7 yes, 0 no, 0 abstentions) to accept the NTP's draft level of evidence conclusion of *not sufficient evidence of carcinogenicity* from studies in experimental animals for trichloroacetic acid.

The Panel agreed unanimously (7 yes, 0 no, 0 abstentions) with the NTP's preliminary policy decision to list dichloroacetic acid, dibromoacetic acid, bromochloroacetic acid, and bromodichloroacetic acid as *reasonably anticipated to be human carcinogens* based on sufficient evidence from studies in experimental animals and supporting mechanistic data. The Panel voted on the four haloacetic acids individually.

The Panel agreed unanimously (7 yes, 0 no, 0 abstentions) with the NTP's preliminary policy decision to list chlorodibromoacetic acid as *reasonably anticipated to be a human carcinogen* based on its metabolism to the rodent carcinogen bromochloroacetic acid and supporting mechanistic data.

The Panel agreed unanimously (7 yes, 0 no, 0 abstentions) with the NTP's preliminary policy decision to list tribromoacetic acid as *reasonably anticipated to be human carcinogens* based on its metabolism to the rodent carcinogen dibromoacetic acid and supporting mechanistic data.