



US010463690B2

(12) **United States Patent**
Alliger

(10) **Patent No.:** **US 10,463,690 B2**
(45) **Date of Patent:** **Nov. 5, 2019**

(54) **METHOD AND COMPOSITIONS FOR TREATING CANCEROUS TUMORS**

(71) Applicant: **Howard Alliger**, Melville, NY (US)

(72) Inventor: **Howard Alliger**, Melville, NY (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **16/124,391**

(22) Filed: **Sep. 7, 2018**

(65) **Prior Publication Data**

US 2019/0000875 A1 Jan. 3, 2019

Related U.S. Application Data

(63) Continuation of application No. 15/475,704, filed on Mar. 31, 2017, now Pat. No. 10,105,389.

(60) Provisional application No. 62/337,073, filed on May 16, 2016, provisional application No. 62/317,330, filed on Apr. 1, 2016.

(51) **Int. Cl.**

A61K 33/00 (2006.01)

A61K 45/06 (2006.01)

A61K 9/00 (2006.01)

(52) **U.S. Cl.**

CPC **A61K 33/00** (2013.01); **A61K 45/06** (2013.01); **A61K 9/0019** (2013.01)

(58) **Field of Classification Search**

CPC **A61K 33/00**; **A61K 33/20**
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2002/0098246 A1 7/2002 Howes
2011/0262525 A1 10/2011 Wang
2014/0329785 A1* 11/2014 Wong **A61K 9/0019**
514/171

OTHER PUBLICATIONS

Abdel-Rahman, et al. Metabolism and Pharmacokinetics of alternate drinking water disinfectants. Environmental health Perspectives, 1982;46:19-23.

American Cancer Society. Questionable methods of cancer management hydrogen peroxide and other hyperoxygenation therapies, C A Cancer J Clin, 1993;43:47-56.

Alarcon RA. Anticancer system created by acrolein and hydroxyl radical generated in enzymatic oxidation of spermine and other biochemical reactions. Med Hypotheses, 2012;79(4):522-530 A.

Bachrach U. Polyamines and Carcinogenesis. Scientific Journal of the Faculty of medicine in Nis, 2012;29(4):165-174.

Balendiran GK, et al. The role of glutathione in cancer. Cell Biochemistry and Function, 2004;22(6):343-352.

(Continued)

Primary Examiner — Benjamin J Packard

(74) *Attorney, Agent, or Firm* — Henry D. Coleman; R. Neil Sudol

(57)

ABSTRACT

The present invention relates to the use of chlorine dioxide compositions for treating cancerous tumors. The present invention relates to compositions and methods for treating cancerous tumors, including naïve, metastatic and recurrent cancers. The compositions comprise chlorine dioxide in an effective amount, which is injected into the cancerous tumor at least once, and often at least several times over the course of treatment. The chlorine dioxide compositions are injected directly into the cancerous tumor and the resulting tumor is effectively eliminated from the patient or subject over a period of one to several days to a few weeks, often after a single injection, or multiple injections at one session into the tumor. Often, an initial injection or multiple injections at one session are sufficient to dissolve the cancerous tumor. Often the cancer is eliminated (as evidenced by no remission) in a period of no more than several days to about two-three months and does not recur.

19 Claims, 22 Drawing Sheets

