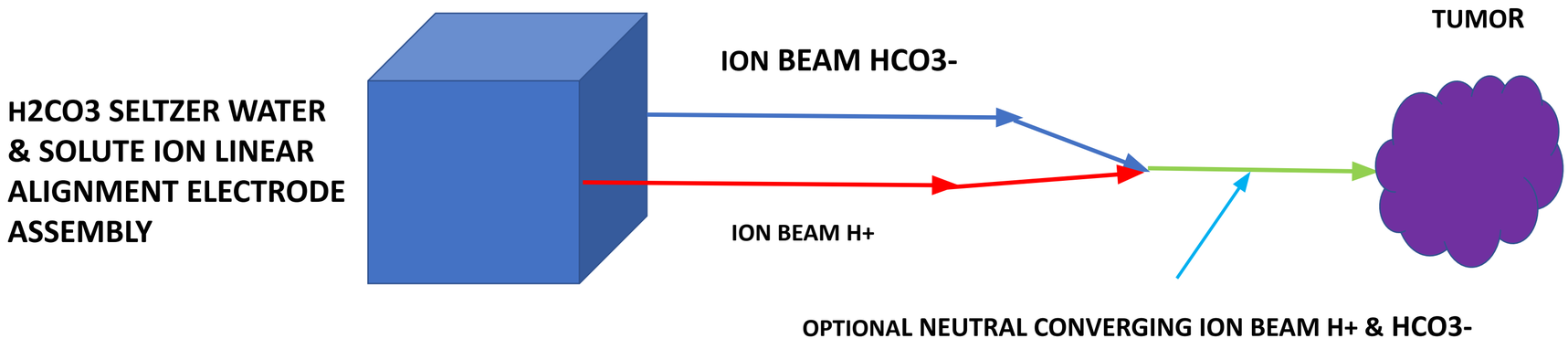
FIG. 1
HEAVY ION BEAM CANCER THERAPY EXAMPLE WITH SELTZER WATER



CHARGE ACCELERATION MODE

Solute ion heavy ion beam cancer therapy via CO2 in H2O forming H+ and HCO3- ion beams

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--Linear alignment of ions results in vector alignment of Coulomb forces to create an ion jet for particle acceleration.

--Electric Force Example provides a very dramatic illustration of Coulomb forces:
Hyperphysics.phy-astr.gsu.edu/hbase/electric/elefor.html

See http://contest.techbriefs.com/2012/entries/sustainable-technologies/2589 and http://contest.techbriefs.com/2014/entries/sustainable-technologoes/4465

--SILA should provide a very inexpensive ion beam method that may replace very expensive proton accelerators in Proton Therapy Centers and thus even rural hospitals globally may be able to use ion beams for cancer therapy.

–An abstract was accepted for PTCOG57-2018 Conference in Cincinnati, Ohio wherein sodium and chlorine ion beams could separate CO2 into carbon and oxygen ions and subsequently into ion beams.

--Dissolving CO2 into plain water H2O therefore seltzer water could create protons H+ ion beams and HCO3- ion beams which would be far heavier (HCO3- molecular weight 61, proton 1 gm/gm-atomic weight) than protons and about 4 to 5 times heavier than Carbon or Oxygen alone.

See http://contest.techbriefs.com/2020/entries/medical/10431

--Bragg Peak would be even greater thereby beneficially depositing even more energy in the tumor and not surrounding tissue.

--Since SILA produces one positive beam and one negative beam, the positive ion beam and negative ion beam can be merged for a generally neutral beam if advantageous.

--SILA beam technology may significantly facilitate applications for FLASH, mini-beams and ultra-hypofractionation and studying the effects of oxygen.

--With magnetic Wiggler, intense UltraViolet and other light for COVID-19 and mutation sterilization and potential new light-based and ion beam cancer therapies with new compounds accumulating in tumors similar to BNCT.