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(54) Title: METHOD AND SYSTEM FOR ISOLATING AND PROFILING OF ONCOSOMES FOR EARLY DETECTION AND
MONITORING OF ALL HUMAN CANCERS FROM PERIPHERAL BLOOD

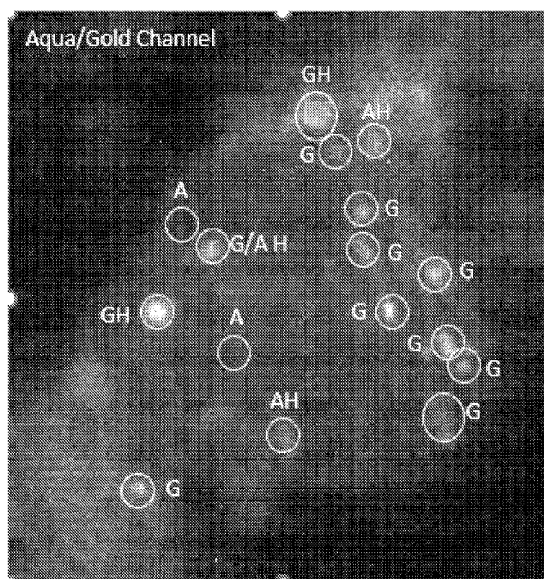


FIG. 2b

(57) Abstract: A rapid non-invasive method for isolating Oncosomes, the extra cellular vesicles produced by the cancer cells, from human plasma is disclosed. Additionally, a multiplex fluorescent DNA labeling scheme for profiling the Oncosomes to detect aneuploidy is revealed. Finally, an ultra-fast *in situ* hybridization protocol with specialized buffers is made-known. By combining the efficient isolation of the Oncosomes from the plasma, with rapid hybridization of the fluorescent DNA probes with multiplex labeling scheme, it is possible to detect the presence of any human cancer from a liquid biopsy, using aneuploidy the hallmark of the human cancer.

[Continued on next page]

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