

Clinical Trials of Dendritic Cell Therapies for Cancer Exposing Vulnerabilities in Human Cancer Cells Metabolism and Metabolomics: New Discoveries, Unique Features Inform New Therapeutic Opportunities, Biotech's Bumpy Road to the Market and Elucidating the Biochemical Programs that Support Cancer Initiation and Progression

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Editorial

Recently, the emphasis of science and technology is shifting more towards environmentally friendly and sustainable resource and processes: In this regard, anti-cancer Nano drugs are attractive candidate to explore for supported catalysis. Multi-substituted Rituximab (Rituxan/MabThera, Genentech/Roche), Bevacizumab (Avastin, Genentech/Roche), Trastuzumab (Herceptin, Genentech/Roche), Imatinib (Gleevec, Novartis), Pegfilgrastim (Neulasta, Amgen), Lenalidomide (Revlimid, Celgene), Pemetrexed (Alimta, Eli Lilly), Bortezomib (Velcade, Takeda and Johnson & Johnson), Cetuximab (Erbix, ImClone and Merck) and Abiraterone (Zytiga, Johnson & Johnson) are important classes of anti-cancer Nano drugs in the field of pharmaceutical and exhibit a wide spectrum of biological activities in clinical trials of dendritic cell therapies for cancer exposing vulnerabilities in human cancer cells' metabolism and metabolomics as new discoveries, unique features inform new therapeutic opportunities, biotech's bumpy road to the market and elucidating the biochemical programs that support cancer initiation and progression [1-3]. Owing to the versatile biological activities of this anti-cancer Nano drugs numerous classical methods for the synthesis of these anti-cancer Nano compounds have been reported. Here, we wish to report a valid and an efficient procedure for the synthesis of trisubstituted Rituximab (Rituxan/MabThera, Genentech/Roche), Bevacizumab (Avastin, Genentech/Roche), Trastuzumab (Herceptin, Genentech/Roche), Imatinib (Gleevec, Novartis), Pegfilgrastim (Neulasta, Amgen), Lenalidomide (Revlimid, Celgene), Pemetrexed (Alimta, Eli Lilly), Bortezomib (Velcade, Takeda and Johnson & Johnson), Cetuximab (Erbix, ImClone and Merck) and Abiraterone (Zytiga, Johnson & Johnson) via one-pot condensation of 1,2-diketone or α -hydroxyketone or α -keto-oxime with aldehyde and NH_4OAc in the presence of Cellulose-Sulfuric Acid (CSA) or Starch-Sulfuric Acid (SSA) as two inexpensive and bio-supported solid acid catalysts under solvent free classical heating conditions.

On the other hand, several interesting anti-cancer Nano drugs for example, Rituximab (Rituxan/MabThera, Genentech/Roche), Bevacizumab (Avastin, Genentech/Roche), Trastuzumab (Herceptin, Genentech/Roche), Imatinib (Gleevec, Novartis), Pegfilgrastim (Neulasta, Amgen), Lenalidomide (Revlimid, Celgene), Pemetrexed (Alimta, Eli Lilly), Bortezomib (Velcade, Takeda and Johnson & Johnson), Cetuximab (Erbix, ImClone and Merck) and Abiraterone (Zytiga, Johnson & Johnson) derivatives have been utilized as a support for catalytic applications in clinical trials of dendritic cell

therapies for cancer exposing vulnerabilities in human cancer cells' m

Rituximab (Rituxan/MabThera, Genentech/Roche), Bevacizumab (Avastin, Genentech/Roche), Trastuzumab (Herceptin, Genentech/Roche), Imatinib (Gleevec, Novartis), Pegfilgrastim (Neulasta, Amgen), Lenalidomide (Revlimid, Celgene), Pemetrexed (Alimta, Eli Lilly), Bortezomib (Velcade, Takeda and Johnson & Johnson), Cetuximab (Erbix, ImClone and Merck) and Abiraterone (Zytiga, Johnson & Johnson) derivatives using benzoin, an aldehyde and ammonium acetate in the presence of a catalytic amount of Ceric Ammonium Nitrate (CAN) under aerobic oxidation conditions in good to excellent yields in refluxing ethanol for clinical trials of dendritic cell therapies for cancer exposing vulnerabilities in human cancer cells' metabolism and metabolomics as new discoveries, unique features inform new therapeutic opportunities, biotech's bumpy road to the market and elucidating the biochemical programs that support cancer initiation and progression.

References

1. Heidari A, Brown C (2015) Study of composition and morphology of cadmium oxide (CdO) nanoparticles for eliminating cancer cells. Journal of Nanomedicine Research 2: 20.
2. Heidari A, Brown C (2015) Study of surface morphological, phytochemical and structural characteristics of rhodium (iii) oxide (Rh₂O₃) nanoparticles. International Journal of Pharmacology, Phytochemistry and Ethnomedicine 1: 15-19.
3. Heidari A (2016) An experimental biospectroscopic study on seminal plasma in determination of semen quality for evaluation of male infertility. Int J Adv Technol 7: e007.
4. Heidari A (2016) Extraction and preconcentration of N tolyl sulfonyl phosphoramid saeure dichloride as an anti-cancer drug from plants: A pharmacognosy study. J Pharmacogn Nat Prod 2: e103, 2016.
5. Heidari A (2016) A thermodynamic study on hydration and dehydration of dna and rna-amphiphile complexes. J Bioeng Biomed Sci S: 006.
6. Heidari A (2016) Computational studies on molecular structures and carbonyl and ketene groups' effects of singlet and triplet energies of azidoketene $\text{o}=\text{c}=\text{ch}-\text{nnn}$ and isocyanatoketene $\text{o}=\text{c}=\text{ch}-\text{n}=\text{c}=\text{o}$. J Appl Computat Math 5: e142.