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Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation

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Abstract

The team first screened a set of protein mimics originally designed to target Alzheimer's disease and type 2 diabetes. The results identify a mimicry of the protein that potentially isolates the mutated p53 material and prevents further protein accumulation. The researchers then showed that segregation of mutated p53 grains by protein mimicking restored the suppressive function of the p53 tumor, leading to the death of a wide range of cancer cells. Importantly, protein mimicry therapy effectively reduces tumors that contain mutated p53 while showing no significant toxins for healthy tissue, resulting in significantly longer survival. "As the prevalence of cancer increases worldwide, there is an urgent need for new cancer therapies to complement or replace existing therapies," said the study's lead author. Here we show the first successful use of a small molecule amyloid inhibitor as an anticancer agent. We believe that this will have a far-reaching impact, as it effectively bridges the gap between amyloid disease and cancer and is the basis for passing on information approaches in the design of new and robust cancer mutation therapies for the p53 mutation.

Keywords: Cancer; Cells; Tissues; Tumors; Prevention; Prognosis; Diagnosis; Imaging; Screening, Treatment; Management

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Introduction

CAR-T cell therapy is a type of immunotherapy that involves inhibiting the strength of a person's immune system by engineering their T cells to identify and kill cancer cells. The Food and Drug Administration approved the first CAR-T cell treatment for myeloma in March. Today we are working to treat another potential CAR-T cell for multiple myeloma. The CARTITUDE-1 study is a stage 1B / II clinical trial. The trial targeted B-cell maturation antigen by targeting CAR-T cell therapy in patients with multiple myeloma who had received at least three previous lines of treatment with standard drugs, including proteasome inhibitors, immunosuppressive drugs, and CD38 antibodies. Tested. Cilta-cel is made from the patient's own T cells, which is genetically engineered and is given as a single injection. The overall response rate to treatment was 97%, while the complete response rate and progression-free survival rate were 67% and 77%, respectively. The overall survival rate was 89%. Updates to this study were recently presented at the annual meeting of the American Clinical Oncology Association after our paper was accepted for publication in The Lancet. Our ASCO presentation showed a deeper response for patients receiving this treatment. These results are very impressive for patients with myeloma who have already undergone many treatment lines for their disease. It will be important to better understand the clinical features of patients who have experienced long-term recovery from this treatment and the mechanisms by which patients’ relapse. While it is not possible to formally conduct two separate single-arm studies on the idea of cells and cilia, the rate of dramatic response and progression-free survival of eyelash-treated patients is very interesting. The potential translation of this research into an individual clinical treatment requires the resolution of many logistical details, including ensuring the reliability of the transfer from production for research to a commercial product [1-567].

Results and Discussion

Ketogenic metabolic therapy (KMT) based on ketogenic diets is considered as a potential option or adjunctive therapy for disease control, brain tumor progression. This type of treatment is a non-toxic, complementary or alternative diet that uses low-carb, high-fat diets to treat a variety of malignancies, including glioblastoma. This has been important for people suffering from epilepsy. In addition to the long-term therapeutic effect of the ketogenic diet, the vital role of metabolism in the health and disease of the central nervous system and throughout the body is well known. New studies have shown that using personal metabolism to fight some tumors may be helpful. After adopting a ketogenic diet, a patient showed that he had refused treatment for his brain tumor and had developed a fatal glioblastoma tumor. Glioblastoma (GBM) is a rapidly growing brain tumor also known as grade 4 astrocytoma, which penetrates the tissues around the brain and kills approximately 15,000 people annually and is incurable. According to the researchers, the survival time after GBM has not yet increased significantly, despite changes in treatment standards and the development of new safe therapies. GBM, like malignant tumors, depends on the simultaneous restriction of fermentable fuels such as glucose and glutamine for energy synthesis and survival.

Conclusions

The cell cycle of such a subject has been thoroughly studied, yet here we are examining for the second time that we have entered a new phase; Biology always has new insights to show us. This data was amazing. This map is based on this beautiful circular pattern that we have identified as all the different stages of the cell cycle. Have a disease. When Placer and colleagues used the ccAF tool to analyze cell data for glioma tumors, we found that tumor cells were often in the G0 or G1 nerve growth state. With tumor aggression, fewer cells remain at rest in the G0 nerve state. This means
that more cells are growing and growing in the tumor.

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References

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18. Heidari A. 2016. Measurement the Amount of Vitamin D2 (Ergocalciferol), Vitamin D3 (Cholecalciferol) and Absorbable Calcium (Ca2+), Iron (II) (Fe2+), Magnesium (Mg2+), Phosphate (PO4-) and Zinc (Zn2+) in Apricot Using High-Performance Liquid Chromatography (HPLC) and Spectroscopic Techniques. J Biom Biomstat. 7: 292.

19. Heidari A. 2016. Spectroscopy and Quantum Mechanics of the Helium Dimer (He2+), Neon Dimer (Ne2+), Argon Dimer (Ar2+), Krypton Dimer (Kr2+), Xenon Dimer (Xe2+), Radon Dimer (Rn2+) and Ununoctium Dimer (Uuo2+) Molecular Cations. Chem Sci J. 7: 112.


27. Heidari A. 2016. Discriminate between Antibacterial and Non-Antibacterial Drugs Artificial Neutral Networks of a Multilayer Perceptron (MLP) Type Using a Set of Topological Descriptors. J Heavy Met Toxicity Dis. 1: 2.


Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation


52. Heidari A. 2016. Graph Theoretical Analysis of Zigzag Polyhexamethylene Biguanide, Polyhexamethylene Adipamide, Polyhexamethylene Biguanide Gauze and Polyhexamethylene Biguanide Hydrochloride (PHMB) Boron Nitride Nanotubes (BNNTs), Amorphous Boron Nitride Nanotubes (a-BNNTs) and Hexagonal Boron Nitride Nanotubes (h-BNNTs). J Appl Computat Math. 5: 143.

www.raftpubs.com
Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation


69. Heidari A. 2017. Polymorphism in Nano-Sized Graphene Ligand-Induced Transformation of Au38-xAgx/xCux(SPh-tBu)24 to Au36-xAgx/xCux(SPh-tBu)24 (x = 1-12) Nanomolecules for Synthesis of Au144-xAgx/xCux[(SR)60, (SC4)60, (SC6)60, (SC12)60, (PET)60, (p-MBA)60, (F)60, (Cl)60, (Br)60, (I)60, (At)60, (Uus)60 and (SC6H13)60] Nano Clusters as Anti-Cancer Nano Drugs. J Nanomater Mol Nanotechnol. 6: 3.
Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation


82. Heidari A. 2017. Treatment of Breast Cancer Brain Metastases through a Targeted Nanomolecule Drug Delivery System Based on Dopamine Functionalized Multi-Wall Carbon Nanotubes (MWCNTs) Coated with Nano Graphene Oxide (GO) and Protonated Polyaniline (PANI) in Situ During the Polymerization of Aniline Autogenic Nanoparticles for the Delivery of Anti-Cancer Nano Drugs under Synchrotron Radiation. Br J Res. 4: 16.
90. Heidari A. 2017. Active Targeted Nanoparticles for Anti-Cancer Nano Drugs
Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation

DOI: https://doi.org/10.36811/ojrmi.2021.110024

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Delivery across the Blood-Brain Barrier for Human Brain Cancer Treatment, Multiple Sclerosis (MS) and Alzheimer's Diseases Using Chemical Modifications of Anti-Cancer Nano Drugs or Drug-Nanoparticles through Zika Virus (ZIKV) Nanocarriers under Synchrotron Radiation. J Med Chem Toxicol. 2: 1-5.


101. Heidari A. 2017. Visualizing Metabolic Changes in Probing Human Cancer Cells and Tissues Metabolism Using Vivo 1H or Proton NMR, 13C NMR, 15N NMR and 31P NMR Spectroscopy and Self-Organizing Maps under...
Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation


111. Heidari A. 2017. Vibrational Decihertz (dHz), Centihertz (cHz), Millihertz (mHz), Microhertz (μHz), Nanohertz (nHz), Picohertz (pHz), Femtohertz (fHz), Attohertz (aHz), Zeptohertz (zHz) and Yoctohertz (yHz) Imaging and Spectroscopy Comparative Study on Malignant and Benign Human Cancer Cells and Tissues under Synchrotron Radiation. International Journal of Biomedicine. 7: 335-340.


114. Heidari A. 2017. J-Spectroscopy, Exchange Spectroscopy (EXSY), Nuclear Overhauser Effect Spectroscopy (NOESY) and
Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation


116. Heidari A. 2017. Vibrational Decahertz (daHz), Hectohertz (hHz), Kilohertz (kHz), Megahertz (MHz), Gigahertz (GHz), Terahertz (THz), Petahertz (PHz), Exahertz (EHz), Zettahertz (ZHz) and Yottahertz (YHz) Imaging and Spectroscopy Comparative Study on Malignant and Benign Human Cancer Cells and Tissues under Synchrotron Radiation. Madridge J Anal Sci Instrum. 2: 41-46.


119. Heidari A. 2018. Infrared Photo Dissociation Spectroscopy and Infrared Correlation Table Spectroscopy Comparative Study on Malignant and Benign Human Cancer Cells and Tissues under Synchrotron Radiation with the Passage of Time. Austin Pharmacol Pharm. 3: 1011.


Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation

DOI: https://doi.org/10.36811/ojrmi.2021.110024

OJRMI: December-2021: Page No: 182-222

129. Heidari A. 2018. Heteronuclear Correlation Experiments such as Heteronuclear Single-Quantum Correlation Spectroscopy (HSQC), Heteronuclear Multiple-Quantum Correlation Spectroscopy (HMQC) and Heteronuclear Multiple-Bond Correlation Spectroscopy (HMBC) Comparative Study on Malignant and Benign Human Endocrinology and Thyroid Cancer Cells and Tissues under Synchrotron Radiation. J Endocrinol Thyroid Res. 3: 555603.


151. Heidari A. 2018. Niobium, Technetium, Ruthenium, Rhodium, Hafnium, Rhenium,
Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation

DOI: https://doi.org/10.36811/ojrmi.2021.11002

Osmium and Iridium Ions Incorporation into the Nano Polymeric Matrix (NPM) by Immersion of the Nano Polymeric Modified Electrode (NPME) as Molecular Enzymes and Drug Targets for Human Cancer Cells, Tissues and Tumors Treatment under Synchrotron and Synchrocyclotron Radiations. Nanomed Nanotechnol, 3: 138.


160. Heidari A. 2018. Heteronuclear Single-Quantum Correlation Spectroscopy (HSQC) and Heteronuclear Multiple-Bond Correlation Spectroscopy (HMBC) Comparative Study on Malignant and Benign Human Cancer Cells, Tissues and Tumors under Synchrotron and
Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation


170. Heidari A. 2018. Uranocene (U(C8H8)2) and Bis (Cyclooctatetraene)Iron (Fe(C8H8)2 or Fe (COT)2)-Enhanced Precatalyst Preparation Stabilization and Initiation (EPPSI) Nano Molecules”, Chemistry Reports. 1: 1-16.


175. Heidari A. 2018. A Clinical and Molecular Pathology Investigation of Correlation Spectroscopy (COSY), Exclusive Correlation Spectroscopy (ECOSY), Total Correlation Spectroscopy (TOCSY), Heteronuclear Single-
Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation

Quantum Correlation Spectroscopy (HSQC) and Heteronuclear Multiple-Bond Correlation Spectroscopy (HMBC) Comparative Study on Malignant and Benign Human Cancer Cells, Tissues and Tumors under Synchrotron and Synchrocyclotron Radiations Using Cyclotron versus Synchrotron, Synchrocyclotron and the Large Hadron Collider (LHC) for Delivery of Proton and Helium Ion (Charged Particle) Beams for Oncology Radiotherapy. European Journal of Advances in Engineering and Technology. 5: 414-426.


186. Heidari A. 2018. Fucitol, Pterodactyladiene, DEAD or DEADCAT (DiEthyl AzoDiCArboxylaTe), Skatole, the NanoPutians, Thebacon, Pikachurin, Tie Fighter, Spermidine and Mirasorvone Nano Molecules Incorporation into the Nano Polymeric Matrix (NPM) by Immersion of the Nano Polymeric Modified Electrode (NPME) as Molecular Enzymes and Drug Targets for Human Cancer Cells, Tissues and Tumors Treatment under Synchrotron and Synchrocyclotron Radiations. Madridge J Nov Drug Res. 2: 68-74.

187. Dadvar E, Heidari A. 2018. A Review on Separation Techniques of Graphene Oxide (GO)/Base on Hybrid Polymer Membranes for Eradication of Dyes and Oil Compounds: Recent Progress in Graphene Oxide (GO)/Base
Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation


188. Heidari A, Gobato R. 2018. First-Time Simulation of Deoxyuridine Monophosphate (dUMP) (Deoxyuridyllic Acid or Deoxuryridylate) and Vomitoxin (Deoxynivalenol (DON)) ((3α,7α)-3,7,15-Trihydroxy-12,13-Epoxytrichothe-9-En-8-One)-Enhanced Precatalyst Preparation Stabilization and Initiation (EPPSI) Nano Molecules Incorporation into the Nano Polymeric Matrix (NPM) by Immersion of the Nano Polymeric Modified Electrode (NPME) as Molecular Enzymes and Drug Targets for Human Cancer Cells, Tissues and Tumors Treatment under Synchrotron and Synchrocyclotron Radiations. Parana Journal of Science and Education. 4: 46-67.
189. Heidari A. 2018. Buckminsterfullerene (Fullerene), Bullvalene, Dickite and Josiphos Ligands Nano Molecules Incorporation into the Nano Polymeric Matrix (NPM) by Immersion of the Nano Polymeric Modified Electrode (NPME) as Molecular Enzymes and Drug Targets for Human Hematology and Thromboembolic Diseases Prevention, Diagnosis and Treatment under Synchrotron and Synchrocyclotron Radiations. Glob Imaging Insights. 3: 1-7.


204. Heidari A. 2018. 2-Amino-9-((1S, 3R, 4R)-4-Hydroxy-3-(Hydroxymethyl)-2-Methylene cyclopentyl)-1H-Purin-6(9H)-One, 2-Amino-9-((1R, 3R, 4S)-4-Hydroxy-3-(Hydroxymethyl)-2-Methylene cyclopentyl)-1H-Purin-6(9H)-One, 2-Amino-9-((1R, 3R, 4S)-4-Hydroxy-3-(Hydroxymethyl)-2-Methylene cyclopentyl)-1H-Purin-6(9H)-One and 2-Amino-9-((1S, 3R, 4S)-4-Hydroxy-3-(Hydroxymethyl)-2-Methylene cyclopentyl)-1H-Purin-6(9H)-One-Enhanced Precatalyst Preparation Stabilization and Initiation Nano Molecules. Glob Imaging Insights. 3: 1-9.


Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation

DOI: https://doi.org/10.36811/ojrmi.2021.110024


221. Heidari A. 2019. The Hydrolysis Constants of Copper (I) (Cu⁺) and Copper (II) (Cu²⁺) in Aqueous Solution as a Function of pH Using a Combination of pH Measurement and Biospectroscopic Methods and Techniques. Glob Imaging Insights. 4: 1-8.

Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation


Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation


238. Heidari A. 2019. The Importance of the Power in CMOS Inverter Circuit of Synchrotron and Synchrocyclotron Radiations Using 50 (nm) and 100 (nm) Technologies and Reducing the Voltage of Power Supply. Radiother Oncol Int. 1: 1002-1015.


Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation

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Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation


J Civil Environ Eng. 9: 4.
Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation


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Oxide (RuO₂) and Ruthenium (VIII) Oxide (RuO4) Nanoparticles Loaded with Cetuximab and Decorated with Somatostatin Analogue to Colon Cancer under Synchrotron and Synchrocyclotron Radiations. Parana Journal of Science and Education (PJSE). 7: 52-88.
483 Heidari A, Hotz M, MacDonald N, et al. 2021 Rhodium (III) Oxide or Rhodium Sesquioxide (Rh2O3) and Rhodium (IV) Oxide (RhO2) Effect on the Stop Growth of Cancer Cells, Tissues and Tumors under Synchrotron and Synchrocyclotron Radiations. Int J Hematol Oncol. 4: 106-149.
Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation

DOI: https://doi.org/10.36811/ojrmi.2021.11002

OJRMI: December-2021: Page No: 182-222

Prognosis, Diagnosis, Imaging, Screening, Treatment and Management and its Role and Application in Overcoming Drug Resistance under Synchrotron and Synchrocyclotron Radiations. International Journal of Advanced Chemistry. 9: 80-98.

488. Heidari A, Hotz M, MacDonald N, et al. 2021 Active Targeting of Rhenium (IV) Oxide (ReO2), Rhenium Trioxide (ReO3) and Rhenium (VII) Oxide (Re2O7) Nanoparticles as Cancer Therapeutics Swell-up to Kill Cancer Cells under Synchrotron and Synchrocyclotron Radiations. International Journal of Advanced Chemistry. 9: 103-121.


Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation

DOI: https://doi.org/10.36811/ojrmi.2021.11002

Cancer Diagnosis and Prognosis. Int J Hemat Oncol. 4: 458-500.
Identification of a Mimicry of the Protein that Potentially Isolates the Mutated p53 Material and Prevents Further Protein Accumulation

DOI: https://doi.org/10.36811/ojrmi.2021.11002

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