FY26 POTENT ANTICANCER: A NEW DRUG APPROACH IN CANCER TREATMENT

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ABSTRACT
The main aim of the anticancer drugs is to eradicate the presence of malignant cells. The anticancer drugs are classified on the bases of their site of action on a point of biosynthesis pathway of important biomolecules. These classified as follows Alkylating agents, cytotoxic antibiotics, Anti metabolites, Microtubules inhibitors, and one of the advanced agents is the Osmium compounds. FY-26 is the extremely potent anticancer drug which acts as shutdown the cancer cells by exploiting weakness inherent in their energy generation. On the bases of research activity the parameters recorded that anticancer activity of FY-26 is 49 times more potent than that of cisplatin. The results (Data) were obtained by National Cancer Institute USA in a test conducted on 60 cell lines. Cancer cells are able to use their defective mitochondria for metabolic activity in their cytoplasm to generate energy, but the potent drug FY-26 inhibits their activity of generating energy, which causes the cancer cells to die. Mitochondria are the mini-power house for the cells. The power house of the cell (mitochondria) in cancer cells is mostly defective and as such they cannot produce sufficient energy for their growth.

KEYWORDS: The main aim more potent than that of cisplatin.

INTRODUCTION
Anticancer drugs defined as the drugs used to treatment the uncontrolled cells known as cancerous cells.
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FY-26 is the extremely potent anticancer drug which acts as shutdown the cancer cells by exploiting weakness inherent in their energy generation.

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Normally the cancer cells use the mitochondria to generate the energy which is necessary to functioning of the cells, these cells contains defective mitochondria that are incapable of sustaining the cells energy requirements.

Cancer cells are able to use their defective mitochondria for metabolic activity in their cytoplasm to generate energy, but the potent drug FY-26 inhibits their activity of generating energy, which causes the cancer cells to die.

FY-26 is placed on the top with high potency because the cancer therapy acts as platinum based which used in nearly 50% of all chemotherapeutic regimens and exert their activity by destruction DNA, but the platinum based drugs can’t select between cancerous and non-cancerous cells and acts as side effect to killing normal cells results as decreasing the energy generating level of body.

This can lead a wide range of side effects and the platinum based treatment often is less effective after their first course, while the osmium compounds having different mechanism of action remains active against cancer cells.

**CHEMISTRY**

Osmium compounds are silver in color have a solid state. FY-26 is solid silver color powder at the room temperature (20-27°C) which show physical characteristic of the drug.
FY-26 is the water soluble properties as its physical characteristics. Fy-26 is a potent anticancer drug which is the osmium family drug.

FY-26 acts as shut the cancer cell by the exploiting weakness inherent in their energy generation.

OSMIUM FY-26 COMPOUND
Molecular weight: 1658 gm/mol
Melting point: 3127°C
Boiling point: 5303°C
Solubility: FY-26 is the silver color crystalline powder and soluble in DMSO.

CHEMICAL STRUCTURE

![Chemical structure of FY-26](image)

CHEMICAL PROPERTIES
Appearance- FY26 show solid powder in its appearance with silver colour.

Purity- The purity of FY26 is approximately 98%.

Solubility- FY26 is mostly soluble in DMSO (di-methyl-sulfoxide), but is insoluble in water.

Shelf-life- The shelf life of this drug is approximately 20 years, if it is stored properly.

Drug formulation- The drug may be formulated mostly in DMSO.

Stock solution storage- It can be stored at 0-4C for days to week and -20C for long term i.e for months to years.

PHARMACODYNAMICS/MECHANISM OF ACTION
As per therapeutic report of Cisplatin it proved that the Cisplatin is a successful cancer treatment drug, but it does not work as treatment for all types of cancer and other hand it also
offers a very toxic treatment, which one can result in many common side effects and with treatment time, cells can also become resistant to the primary ingredient of the drug platinum.

There is great potential in osmium compounds as a cancer treatment drug that is to its unique chemical properties. Another greater advantage of using osmium compound drug (FY-26) very cheaper compared to platinum, meaning is FY-26 cancer treatment drug is going to be affordable for the general public.

Mitochondria are the mini-power house for the cells. The power house of the cell (mitochondria) in cancer cells is mostly defective and as such they cannot produce sufficient energy for their growth. FY26 has registered as significant success in cancer treatment by practical reports by National Cancer Institute USA in tests conducted on 60 cell lines facts that forces the cancer cells to source their energy from mitochondria but the mitochondria in cancer cells are defective and cannot produce energy, because FY-26 shutdown the energy generation by the affected cancer cells and cancer cells no choice other than to die.

Medicinal uses
Anticancer
FY-26 is one of the most potent anticancer drugs (Agent) which acts as the shut down the cancer cells by exploiting weakness inherent in their energy generation results to die the cancer cell.

Finger printing Detection
FY-26 is also used for finger printing detection which acts as increases detection efficacy for finger printing process.

Fatty Tissue Staining
FY-26 drug (compound) is used to the staining the fatty tissue which enhances the working efficacy of TEM.

Pacemaker & Heart valve Replacement
The anticancer agent FY-26 used in heart valve replacement and development of pacemaker.

Side effects
FY-26 has some following common side effects.
- Renal failure
• Vomiting
• Ototoxicity
• Nausea
• Neurotoxicity
• Lung congestion
• Eye damage

REFERENCES
