COMPUTER ADDED DRUG DELIVERY SYSTEM

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ABSTRACT :

The development in computer Added drug delivery system (CADDS) have new approaches in the development of medicine by the help of computer . In this system computer program are used for the help in the development of drug test and also used to enhance the drug reaction and help in the improvement of drug administration ways by which the drug is delivered into the body .By the help of computer program or these pharmacokinetics techniques we easily knows the absorption of drug into the body ,the side-effects of drugs into the body and the uses or reaction of drugs into the body . It can also help to reduce the cause of any error during any drug administration or during any drug delivery to patient because by the computer program we already knows the behave of drugs into body .[1]

It is also used to release the drug into the specific are of the body or release the drug at the site of diseases . By the help of computer Added drug delivery system the development of drug is also become very and faster with less risk and more accuracy .[2]

KEYWORDS : Computer Added drug delivery system, New approaches of drug delivery into body ,Drug development.

INTRODUCTION :

Computer Added drug delivery system is the drug delivery system which is designed to how the drugs is released into the body to get the better results into the body. These is the modern method which is used with the help of ai intelligence which helps in reducing of drug error into the body and also help to save lot of time . By the help of these computer program or these tools we can also make the drug more accurate and more safer and effective.[3] These drug delivery system use the computational methods to optimise the stimulation of drug delivery into the body . It's also used to detect how the drug behave into the body ,where it absorbs,how it's absorbed,where it's goes , how it work into the body etc. These drugs technology helps very much in the drug treatment into the body by making the drug more targeted and more efficient. The drugs release by the help of CADDS can release into the particular area into the controlled ways . It's mainly used in treatment of cancer cells etc.[4], [5][6].

IMPORTANCE OF CADDS IN DRUG DELIVERY SYSTEM:

1.   OPTIMIZATION OF DRUG RELEASE:
The computer Added drug delivery system helps in the drug release to the particular site of action . It is very faster and also cheaper then the traditional method . The drugs released by the CADDS is very sustained and into the controlled ways which can reduce the cause of error of drug into the body .[7]

2.   DESIGN OF TARGETED DRUG DELIVERY :
The computer Added drug delivery is designed in very simple way in which it can only target the particular cells ,tissue or organs without effecting the other healthy cells or tissue .[8] It's can show the very faster action to specific cells

3.   REDUCTION IN DEVELOPMENT TIME AND COST:
The drug delivery or drug development process that are used in traditional time are very costly and take more time during release and drug action it can takes lengthy process and very much experience trails but with the help of CADDS these proces can be done with the help of computer program which reduces the errors and also speed up the drug delivery into the body with high accuracy .[9] .

TECHNOLOGIES USED IN CADDS :

1.   COMPUTATIONAL FLUID DYNAMICS (CFD)
It's a modern mathematical use to know the behaviour of blood, fluids , drugs barrier into the body . These CFD model also help into to know the design of drug delivery system into the body and ensuring the specific ability of drug into the body or to the bloodstream and then target the particular tissue efficiency.[10]

2. ARTIFICIAL INTELLIGENCE :

The Ai techniques are also used in the CADDS to know the behaviour of drug into the body under the various conditions . It has also alalize the various conditions from the previous clinical research and trails and also from the pre clinical trails which can help in the proper drug delivery into the body .[10]

APPLICATION OF CADDS IN DRUG DELIVERY :

There are the various applications of the drug delivery in CADDS .Some of common application of CADDS   are :

- Cancer treatment : In the treatment of cancer the CADDS is used to release the drug directly into the tumor site it can also reduce the toxicity to healthy cells . It CADDS can also ensure that the drug is released into the control manner and also shows the reducing side effects.
- GENE THERAPY : The CADDS designed in such a instrumental in the design of drug delivery system for the gene therapy. The main goal of CADDS in gene therapy is to introduce the genetic material into the cells and it can helps into delivery of DNA or RNA to the specific cells [11,12,13].

CONCLUSION :

The CADDS have started a new idea how the drug is designed and how the drug is delivered into the body with proper specifications and less errors . It can also help in to target the particular tissue of body with more faster and also speed up the development process . It can also used in development of new molecules with many scientific advances and also use to enchance the quality of the drug. CADDS have also such potential that they can study the modern medicine method and enhance the drug delivery and efficacy and reducing its side effects .[14,15,16,17].
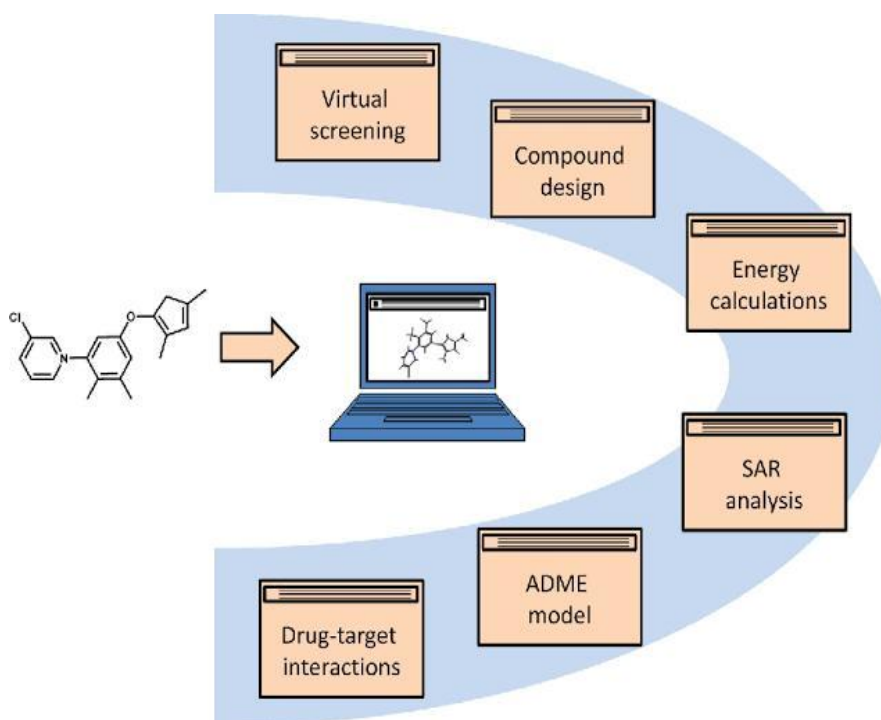
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