Exploring Nano Biotechnology for detecting specific disease in Medical diagnosis and Therapeutic

M. Thangamani$^1$, S. Kavitha Bharathi$^2$ and N. Suresh Kumar$^3$

$^1$Associate Professor, Information Technology, Kongu Engineering College, Tamilnadu, India
$^2$Associate Professor, Computer Technology, Kongu Engineering College, Tamilnadu
$^3$Assistant Professor (SL.GR), Information Technology, Sri Ramakrishna Engineering College, Tamilnadu

E-mail: manithangamani2@gmail.com

Abstract. Nanobiotechnology connects the scientific openings between chemistry, physics and biology on the nanoscale. These guides to a lot of modern techniques help and create good result in medical-therapeutic appliances. Now a day nanoparticles good aspirants for drug discovery and new therapeutic applications. It consists of the nanotechnology and biotechnology. Nanobiotechnology will help the combination of therapeutics with diagnostics and make easy to improve the specific medicine suitability for an individual and prevent the immune system from side effect drugs delivery. This article explores the nano biotechnology for detecting specific disease in medical field.

Keywords: Nanobiotechnology, Nanomaterial, Nanotechnology, Medical diagnosis and Therapeutic

1. Graphical abstract
Nanobiotechnology mainly contains materials such as nanoparticle, nanoemulsions, nanocomposites and nonostructured materials and products of delivery, formulation and packaging. Nanosensors and nanotracers are used for safety purposed. Manufacturing side after processing the materials and get products from industry. The physical chemistry and surface science are essential for fabrication of structure in carbon, silicon and inorganic materials. Nanobiotechnology combines medical diagnosis and Medical therapeutic to improve the patient health and its shown by Figure 1 and figure 2.
2. Introduction

Nanotechnology is exploitation of substance on atomic, molecular and supramolecular range. It has wide collection of research in medicine and health care and drug delivery, molecular biology, chemical sensing, materials, transportation and clinically significant in surgical instrument, orthopedic surgery and drug therapy. Nanotechnology recovers the patients from diseases and prevent by early diagnosis along with treatment.

Normal polypeptides contain 20 amino acids and four similar nucleotides structures with the nucleic acids. Nanotechnology can divided into interphase, protein-based nanostructures, DNA (deoxyribonucleic acid) -based nanostructure and nanoanalytics. DNA-based nanostructure is main usage of manufacturing and constructing of nano devices and nanostructures. It reduces the requirement of biosensors, probes optical device and biological electronics [1, 2]. The protein-based nanostructures are functional adaptability and price valuable and sustainable production techniques offer powerful incentive for promote the fabrication in this way.

3. Related Works

Due to the increasing expenses of nanocharacterization and nanoprototyping, modeling and simulation is vital role in nanotechnology advancement [3]. Essential photons are biophotonics and neurophotonics in biotechnology, biology, medicine and engineering. For developing new technologies, need transformative engineering with fundamental research and science. The optical waveguides, optoelectronics and lasers fabricate medical therapies and diagnostics. The authors inspects Quantum outcome of microscopic and macroscopic devices [4]. For disease modeling and drug development, focused organ-on-a-chip approach [5]. The authors proposed mathematical technique [6-8] for capturing the dynamical characters of physics relations among biomolecules and nanopore due to electrostatic potential variation, ion screening effects, nanopore membranes surface
variations and creation of DNA fluctuations. The result of nanodevice usages are enormous significant. Various nanotheranostic techniques [9,10] unique characteristics and some intelligences task compare to sensitivity, biocompatibility, biodegradability, solubility in conventional medicines. It reduce the partial physical dimensions and increase the performance of the biological properties and physic-chemical characteristics. Divagar Murugan et. Al [11] investigated fiber-optic absorbance biosensor to confine the spread of the COVID-19 disease at low cost and nanobiotechnologies applied in [12].

Diabetes disease [13] primarily grouped into Type 1 and Type 2. Along type 1 and type2, gestational diabetes take place when pregnancy. The protected cells of our body are accountable for harass the foreign particles. Nano biotechnology utilizes the improved surface properties, catalytic, catalytic and nanoparticle to identify monitors and takes care of a disease. The viral anoparticles are treated as bio-nomaterials used in biomedical imaging field [14, 15]. Top down and bottom approach are suggested for nano particle fabrication. Genome sequence [16] improves the area of therapeutics and diagnostics. Nanotechnologies enhance the health care through hearing aids and remote device. Manufacturing the testing kits and Molecularly imprinted polymer technique is presented [17] to identify the taste found in tea. Machine learning algorithm applied [18,19] for predicting drugs and disease. Emily M. Miller et al.[20] nanoparticle-based therapies are used to rectify the ovarian cancer drug resistance for women. Elisabete Fernandes et al. [21] applied magnetic resistance of biosensor for stroke patients and diagnosis, therapeutric , immunization and vaccine production discussed [22]. Hong Wang et al. [23] proposed tumor immunosuppression technique to suppress the tumor development and provide a good nanostand with well-known immunosuppression-relieving ability for helpful cancer therapy. Raquel et al.[24] suggested new vascular system of nanobiotechnological advances for patient safety. The mechanical and biological way tissue engineering problems are solved by [25]. Magnetic nanoparticles [26] are broadly worn for diagnostic, therapeutic and drug delivery. Implantable vascular interface device [27,28] applied for vascular tissues. Iron-based nanozymes [29] are scientific inorganic nanoparticles for virus analysis and cure. Joloudari et al. [30] used nanobiomaterial device to handling coronary diseases.

4. Conclusion
This article exploited the nanobiotechnology usage and enhancement in this area. It illustrated the diagnosis and therapeutic in medical can be attain to greatest with least side effects by ways of the under tissue-specific clinical involvement. The selection of nano size, integration with device and molecules biocompatibility are very challenging one. In future can be need careful clinical traits for successful completion of medical diagnosis.

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