



alternative subcutaneous approach for the treatment of diabetic patients. Transdermal delivery systems are designed to stop insulin degradation and gives controlled and sustained release of insulin which may be advantageous for patients and will perform better adherence and increased glycemic outcomes. A major challenge for transdermal delivery of insulin is inefficiency of absorption of passive insulin through skin. It is due to its larger molecular weight of protein drugs. In this review article our focus is on various techniques of insulin delivery via transdermal route and their advantages and limitations.

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AN OVERVIEW: RECENT TRENDS IN WOUND HEALING

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Modern concept of wound healing are based on the fact that an optimum environment is required for the epithelial cells for the treatment of wounds. The main objective of wound treatment is to provide rapid healing at minimal cost and patient convenience. Wound healing proceeds through interconnected and dependent stages in which different varieties of cellular matrix components acts together to reestablish the integrity of damaged tissue. This review article emphasizes on use of different polymers like hydrocolloids, alginates, collagen, polyurethane, chitosan, pectin, hyaluronic acid for chronic wound treatment and skin grafting. Pharmacological agents such as vitamins, growth factor, antibiotics takes major part in wound healing process. Here, we review different therapeutic agents and formulations with desirable and improved properties for effective drug delivery for wound healing. A new generation of medicated dressing have some effect over topical pharmacological agent. These systems have more potential towards tissue repair & regeneration. Replacement of damaged skin tissue with the cell laden scaffold helps to improve proper function of skin at wound site. Here it is the most outstanding effective technique to prevent wound healing & also it is convenient to the patients.

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CADD AND SYNTHESIS OF IMIDAZOTHIADIAZOLE DERIVATIVES AS SELECTIVE PFDHODH INHIBITORS FOR ANTI-MALARIAL ACTIVITY

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Malaria remains a globally prevalent infectious disease that leads to significant morbidity and mortality. 1 While there are a number of drugs approved for its treatment, drug resistance has compromised most of them, making the development of new drugs for the treatment and prevention of malaria essential. The de novo pyrimidine biosynthetic pathway of *P. falciparum* is very important for parasite survival and the dihydroorotate dehydrogenase (PfDHODH) has emerged as a new target for drug discovery. 2 On the basis of Ligand based drug design a novel class of imidazothiadiazoles is discovered which is specific towards PfDHODH inhibition. Using molecular docking, out of the nearly 600 designed molecules, nearly 20 molecules which show binding interaction same as of clinical candidate DSM2653 were taken up for synthesis. Further, synthesis of these molecules was carried out successfully. Synthesized molecules were characterized by using spectroscopic tools such as NMR, ESI-MS, HRMS and FTIR.

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COUNTERING BACTERIAL RESISTANCE BY INHIBITING QUORUM SENSING

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One of the most significant limitations in treatment of infectious diseases is the development of resistance against the antibiotics. There are many strategies being envisaged upon to counter this menace, one very interesting approach is quorum sensing (QS). It is the ability to detect to cell population density and subsequently respond by gene regulation. Quorum sensing thus basically allows bacterial cross talk by using extracellular signaling molecule. Biofilm formation is a



very significant change brought about the manipulated genetic expressions and contributes to antibiotic resistance as mature biofilms display high levels of tolerance towards antibiotics and the immune response. Autoinducing peptides (AIPs) are used by gram-positive bacteria whereas, gram-negative bacteria correspond using Acyl-homoserine lactones (AHLs). Some bioactive molecules produced by prokaryotic and eukaryotic organisms have been found to ameliorate the formation of biofilms, chiefly by quenching the QS system. This stalling of QS induced biofilm formation is called quorum quenching. This opens up a new avenue in which disruption of QS and related biofilms may enhance the clinical efficiency of antibiotics.

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CHIMERAPLASTY: A NEW TECHNIQUE OF GENE THERAPY

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Chimeraplasty is new technique of gene therapy. It is an attractive approach in treatment of inherited diseases, viz.; Angleman Syndrome, Huntington's disease, Sickle cell anemia, Hemophilia B, Crigler-Najjar syndrome and many more. In this technique the chimeric RNA-DNA oligonucleotide, i.e., chimeraplast is used rather than the classical RNA-RNA, DNA-DNA oligonucleotide. Other type of gene therapy required plasmid or viral vectors, which can susceptible to host immune response. Selecting the vectors is problematic, based on the type of cell that has to infect as efficiency of infection and invasion may vary depending on the type of viruses. So, the chimeraplasty have drawn considerable attention to the researchers for the last few years. It is evident that the use of chimeraplasts and single-stranded oligonucleotides to achieve genetic correction at pathologically significant loci is still a technique of enormous promise, and one which will be of benefit in cases of disease that cannot be effectively managed by conventional gene augmentation therapy. There are clearly organs, such as the liver, which are more amenable to its use than others. This may limit the applicability of the technique, but as the controversial issues surrounding it are discussed openly, the mythology will inevitably be replaced by facts that will allow chimeraplasts and single-stranded oligonucleotides to reach their true potential.

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CELIAC DISEASE: A REVIEW ON PATHOGENESIS AND MODERN TREATMENTS

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Celiac disease is a chronic immune mediated enteropathy precipitated by ingestion of gluten in genetically predisposed individuals. Normally it starts in the small intestine but spreads to other organ of the body. In paediatric patients the main treatment for this disease is "Gluten-free diet" which is practically impossible. Now a days various novel approaches are being introduced to treat celiac disease. Several drugs for example AMG 714 which blocks intraleukin 15 which acts as a mediator in celiac disease. Here we review on certain new approaches that are providing patient compliant treatment for celiac diseases. Treatment involves immune based strategies that prevent T cell activation or innate and adaptive immune response ALV003, arecombinant gluten specific proteases when given through oral route, reduces the small intestinal mucous injury. Larazotide acetate, an oral peptide which modulates intestinal tight junctions, reduces symptoms of celiac disease.

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DESIGN, SYNTHESIS AND EVALUATION OF PHENYL PYRIMIDINE BRIDGED CHALCONE DERIVATIVES AS PUTATIVE ANTICANCER AGENTS

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Cancer is second leading cause of death after the heart diseases across the world. Various cancer therapies like chemotherapy, radiotherapy and surgery are used and have harmful adverse effects to the normal cells that limit their use. Now a days, compounds targeting specific enzymes or protein that are required for the growth of