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Editorial

Enzyme engineering is the application of modifying an enzyme's structure (and, thus, its function) or modifying the catalytic activity of isolated enzymes to produce new metabolites, to allow new (catalyzed) pathways for reactions to occur, or to convert from some certain compounds into others (biotransformation). These products are useful as chemicals, pharmaceuticals, fuel, food, or agricultural additives. An enzyme reactor consists of a vessel containing a reaction medium that is used to perform a desired conversion by enzymatic means. Enzymes used in this process are free in the solution. Enzymes are known as biocatalysts that are unique in their function because of their vast diversity and structural complexity.

Enzyme engineering journal deals with the applications of engineering tools to modify the structure of the enzymes and their functions which are required for various industrial processes. This Enzyme Engineering Journal incorporates extensive variety of fields, for example, drug resistance, catalyst portrayal, chemical energy, and protein collaboration. This Enzyme Engineering Journal with high effect component offers an open access stage to the creators in the scholarly world and industry to distribute their novel exploration. It serves the International Scientific Community with its standard examination productions.

Research by Rehab M Mahmoud Eldesoukey and co-workers:

The authors studied bacterial contaminations of selected traditional and modern products. Pathogenic microbial contamination of cosmetic products may lead to spoilage the product and couse serious health risk for consumers. The research shows clear description of issues caused due to the contamination of cosmetics i.e neonatal death from talcum powder containing Clostridium tetani. Microorganisms that can be found in cosmetic preparations such as Staphylococcus aureus, Escherichia coli, Candida albicans, Pseudomonas aeruginosa, Klebsiella pneumoniae, Salmonella spp, Clostridium spp, Pseudomonas spp, Serratia spp. and Enterobacter spp should be limited and mentioned. For example; 500 CFU/g in cosmetics that are used for eye area, 1000 CFU/g in other cosmetics in 1 g or 1 mL of the preparation . Due to this reason it is important to investigate the microbial content of the cosmetic preparations, firstly the total aerobic microorganism count in 1 g or 1 mL of the sample, secondly the existence of some specific microorganisms such as S. aureus, P. aeruginosa, and C. albicans. This study highlighted the important of taking control measures to inhibit the microbial growth and to stabilize the cosmetic products, and maintaining the good manufacturing practice (GMP) in production process to limit microbial contamination.The manuscript is well-written and provides the reader a brief overview of the topic.

Research by Sana Sarfaraz and co-workers:

The authors considered and examined the potential application of carrot juice as a non-pharmacological therapy in hypertensive patients due to its diuretic activity. Indeed, carrot juice exerts diuretic activity due to presence of vitamins, minerals and antioxidants agents. Diuretic agents reduce morbidity and mortality related to stroke and congestive heart failure in hypertensive patients. In addition, carrot (Daucus carota) contains high content of carotenoids, especially β-carotene. β-carotene has been reported to inhibit cancers, formation of free radical scavengers, and act as an anti-mutagenic and immune-enhancers. Caratol is another compound present in the carrot and act as an antifungal agent. The authors demonstrate that diuretic activity of 1 mL of standard furosemide drug can be compensated by administrating carrot juice at a dosage of 400 mg/kg in mice. They also conducted the comprehensive survey for assessing the awareness of health benefits of carrot among the selected community in Karachi, Pakistan. The Findings suggested the potential utilization of carrot as a diuretic agent for reducing risk of hypertension.

Research by Burlot Anne-Sophie and coworkers:

Red macroalga Solieria chordalis is one of the largely unexploited organisms, which has high potential for biotechnological development. Indeed, polymers extracted from S. chordalis have immunological, haemagglutinic, and antiviral activities. Given that, the presence of large quantities of various interconnected polysaccharides and their bonding with proteins reduces the efficiency of the standard extraction methods, which are being used to extract bioactive compounds from macroalga including S. chordalis. The authors presented very interesting and comprehensive study on developing efficient method name as "enzyme-assisted extraction" for extracting antivirals compounds from S. chordalis. Authors successfully deployed statistical approach (Box-Behnken design) to optimize the extraction parameters. Indeed, the enzyme-assisted newly optimized method increases extraction of water-soluble compounds from S. chordalis by 30% relative to the control conditions. Authors showed that the best anti-therapeutic activity was obtained with the extract after the action of a type of proteases with an EC50 of 86.0 $\mu g.mL^{-1}$. They also demonstrated the positive correlation between sulfated polysaccharides and the antiviral activity of extracts. This paper indeed has a high impact for developing S. chordalis as a novel organism for biotechnological applications, and utilization of newly developed enzyme-extracted method for efficient and effective extraction of bioactive compounds from macroalgae.

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