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A Perspective on Conservation Technologies for Endangered Marine Birds

Seabirds are species in a collection of avian orders that live on and feed in saltwater and include penguins; albatrosses and petrels; gannets and cormorants; and gulls, terns, and auks. They are at risk from human activities with habitat loss, fisheries bycatch, food shortages, introduced predators and pollution impact. These effects are all exacerbated by human-induced climate change. Many researchers, non-governmental organizations, communities, and governments are working to conserve endangered seabird species by developing and implementing technologies and conservation management systems to assist seabird conservation. More recently moves are afoot to ensure organizations share data and outcomes.

Research Article **Published Date:- 2023-04-12**

Comparative characterization between autologous serum and platelet lysate under different temperatures and storage times

Therapies using autologous serum and platelet lysate have shown promise among blood and biological products in the treatment of various diseases. The autologous serum has been shown to be a superior alternative to traditional eye drops in treating eye diseases in ophthalmology. Platelet lysate (PL) has recently been considered a more interesting alternative for the treatment of multiple tissues, as it does not have the unfavorable reactions seen with traditional platelet-rich plasma (PRP), making it a valuable blood derivative for use in ocular therapy. There is no definitive comparison in veterinary medicine between PL and autologous serum in terms of the content of Transforming Growth Factor beta 1 (TGF-1), which is known to have chemotactic, mitogenic, matrix formation, and angiogenesis effects on tissues, and beneficial proteins in ocular tissue. This study aimed to estimate the concentrations of TGF-1, total protein, and albumin, as well as autologous serum and platelet lysate, in horses over an 8-day storage period at temperatures of 4 °C and 37 °C.
To produce autologous serum, 63 ml of blood was collected from each animal in seven 9 ml tubes without anticoagulant. For platelet lysate, 180 ml of blood was collected in 50 tubes of 3.6 ml with 3.2% sodium citrate. The most significant findings were the positive relationship between the baseline platelet count in the blood and the final platelet concentration in PRP. Specifically, we found a correlation (R = 0.9) with a p - value of 0.005 between the average baseline platelet level of seven animals and their corresponding PRP results, both on an individual level and as a group. Additionally, there was a correlation between growth factor concentration and PRP platelets, with the highest growth factor concentration in PL. The temperature storage group exhibited higher concentrations of total protein and serum albumin, as well as the maximum amount of growth factor for both products at a temperature of 37 °C.
