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Shark hunting

Sharks, which have dominated the oceans for more than 400 million years, have now become the most valuable and vulnerable species. Presently, the shark fins are the world's most precious commodities fetching as much as $700 per kilogram in Asia, making big sharks worth thousands of dollars. Surprisingly, more than 125 countries around the world now trade in shark products, contributing to an uncontrollable surge in the number of sharks taken from the oceans.

Klaus Jost

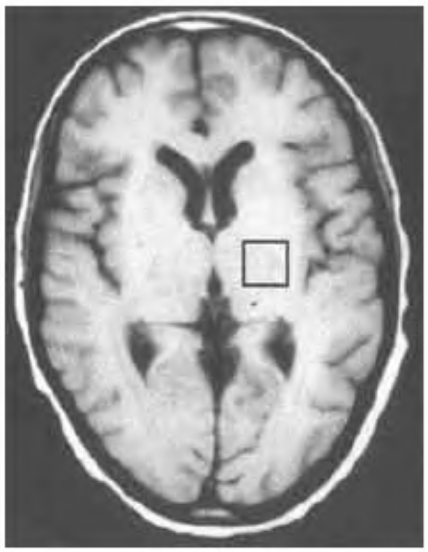
Currently more than 100 million sharks have been taken from the seas each year. If this trend continues then it could be anticipated that by 2017, more than 20 species of shark could become extinct. Annual shark production in India was around 45,500 tonnes. Shark fin export in India reached its peak in the year 1995 with 303 tonnes, while a second peak was in 2001. Being aware of the expanding trade prospects and consequent threat to the shark survival, the Government of India prohibited fishing of all the elasmobranches. This trend needs to be followed by other shark-trading nations. Recently developed DNA-based forensic techniques could be the most useful tools to identify the sharks, from the fins earmarked for export, thereby helping implementation of control measures to this unscrupulous trade and save the stocks under depletion. See page **1078**.

Homogenous production of recombinant glycoproteins

M. Devasahayam reports (**page 1087**) the effect of a primary amino acid structure on the post-translational modification of N-glycosylation. This is of immense importance in the production of recombinant glycoproteins in an *in vitro* system. The author has described the homogenous expression of a glycoprotein Thy-1 by mutating specific N-glycosylation site Asn residues to Ser. Thy-1 has 3 N-glycosylation sites at Asn 23, 74 and 98 in rat resulting in variable site occupancy. When Asn 74 was removed, heterogeneity in expressed product was not observed in COS-7 cells. Hence by the careful manipulation of N-glycosylation sequons, heterogeneity in expressed glycoproteins can be avoided. The work is of immense importance in the expression of recombinant glycoproteins.

Molecular imaging

Molecular imaging is relatively a new diverse methodology that revolutionized the field of medicine from early diagnosis and staging and to monitoring the assessment of disease response to various drugs. The method provides disease-specific molecular information through diagnostic imaging techniques like positron emission tomography (PET), computed tomography (CT), single photon emission computed tomography (SPECT), ultrasound, optical imaging and magnetic resonance imaging (MRI). Molecular imaging is aimed at detecting the origins of disease-related pathways and targets by combining the use of molecular biomarkers and probes. It is expected to improve the accuracy



of identifying disease targets and develop specific molecular imaging probes that bind to those targets. They also facilitate and speed up the drug development process like drug discovery and pre-clinical studies to clinical research and daily practice. It also gives visualization of specific molecular drugs or entire pathways and cells in experimental systems (animals) and ultimately in humans. Current molecular imaging techniques allow us to detect the disease much earlier and also help to stage cancer and other diseases more accurately and non-invasively. N. R. Jagannathan discusses (**page 1061**) the various MI methods that are in use today followed by applications.