Laterite baby

An infant human baby skull, the 'Laterite baby', of estimated age below 5 months, was discovered by Rajendran et al. (page 754) that is entombed by secondary laterite, 'turrrecte'. The entire alluvial matrix is dug out to perform non-destructive testing on the fossil specimen.

Anthocyanin elicitors

elicitor(n): one that elicits [Webster’s]

Elicitors, usually mycelial extracts and media filtrate preparations from fungal cultures, are commonly used in plant cell culture systems to over-produce specific metabolites. Participation of calcium ions and channels during production of plant metabolites, and the inhibition of these activities by channel blockers, have been documented in several culture systems. Sudha and Ravi Shankar (page 775) report the effect of elicitors from Aspergillus niger during production of anthocyanin in cultured cells of Daucus carota. 3-day-old cultured cells yielded more anthocyanin in presence of fungal elicitors, and a further treatment with calcium ionophore gave higher yield on the 21st day of the culture, that cannot be obtained by elicitors alone. Addition of channel blockers reduced the yield of anthocyanin and callus mass. The results speak of the involvement of calcium channels during elicitation of anthocyanin in cultured plant cells.

Gold nano-particles

Ghosh et al. (page 791) have successfully employed a simple and reproducible UV-activation technique to obtain well-defined gold nanoparticles from HAgCl₄ in solution. They also repeat a conductometric study to estimate macroscopic properties of nano-particles.

Diversity in Savanadurga

Savanadurga State Forest, about 60 km from the city of Bangalore, in the Bangalore Rural district, sits atop a massive piece of granite that is formally part of the Deccan Plateau. Arkavathi and Kavana rivers run through the region enriching the forest with silty soils and sandy loam. The climate in the forest is classified as dry tropical savanna type with four seasons and free of extremes. Murali et al. (page 808) conduct a survey of the plant life in this forest, and find a rich and diverse spatial heterogeneity despite a small acreage.

Seedless watermelon

Seedless fruits offer better economic value and wider consumer acceptance. However, propagation and maintenance of such plants through the normal route of germination is difficult. A similar situation exists in the wild in fruits that carry either under-developed or chaffy seeds. Such seeds are abortive in nature, as they fail to mature into the next generation. Often such failures are associated with the lack of supportive tissues like cotyledon.

Seedless watermelon is a phenotype conferred by triploidy, usually obtained by a genetic cross between a tetraploid and diploid variety. Thomas et al. (page 813) describe a triploid watermelon obtained by crossing tetraploid female and diploid male varieties of 'Arka Manik'. The triploids produce soft seeds and abortive papery seeds in addition to the normal black seeds. Thomas et al. then attempt the regeneration of an entire plant, bypassing the stages of natural germination, by culturing the underdeveloped seeds in vitro.

Thomas et al. are successful in culturing in Murashige and Skoog medium supplemented with other growth regulators. The abortive embryos salvaged from mature fruits grow into an autotriploid seedless type. This tissue culture method will find use in rescuing genotype that might not generate viable plants during the natural process of germination.

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