B-125: Plant development through organogenesis from callus of *Musa spp.* (banana and plantains)

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Plant development, especially under in *vitro* conditions, can be through organogenesis or somatic embryogenesis. It is also known that plants can be developed from callus through either of these processes. The objective of this study was to obtain plants from callus of banana and to study their development pattern.

Callus cultures of Musa, ABB, cv. Bluggoe, were established from the uppermost part of in vitro proliferating buds on basic Murashige & Skoog (MS) semi-solid medium (1962) supplemented with 2,4-D (1.5 mg l^{-1}). Upon transfer of the callus to the MS basic medium with BAP (2mg l^{-1}) and IAA (2.5 mg l^{-1}), shoots were produced. Roots were developed after transfer to MS medium with half strength macro nutrients and supplemented with IBA (1.5 mg l^{-1}). About 4-5 plants were developed from a piece of callus (2 x 2 cm^2). Histological studies of the development process confirmed that plants were developed through organogenesis and not via somatic embryogenesis.

Although a large number of plants could be obtained through this technique, it is not suitable for clonal propagation as a callus stage is involved. However, for biochemical, physiological and some other studies of the banana, in vitro plant development would be useful.