

**P018** Biosynthesis of the cell wall matrix: a pectin-xyloglucan complex formed in the Golgi apparatus in pea  
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Golgi membranes from etiolated pea epicotyls were used for *in vitro* synthesis of 1,4-β-[U-<sup>14</sup>C]galactan using UDP-[U-<sup>14</sup>C]galactose. The products were characterised by enzymic degradation, size-exclusion and anion-exchange chromatography. Evidence was obtained for the formation of 1,4-β-[<sup>14</sup>C]galactan chains attached to a pectic backbone containing polygalacturonic acid and rhamnogalacturonan I. This nascent pectin bound strongly to paper, and was partially degraded by digestion with xyloglucan-specific endoglucanase, indicating that it was present as a complex with xyloglucan.

Newly-deposited acidic cell-wall polysaccharides prepared from the same tissue also contained both pectin and xyloglucan, indicating that the linkage between the two persists in the cell wall. This pectin-xyloglucan complex may be similar to those reported in the cell wall in rose cells and cauliflower stem. Current studies aim to clarify the arrangement of pectin and xyloglucan domains within the biosynthetic complex.