

S002 Endocytic and intracellular trafficking pathways:
molecules and mechanisms

George Banting

Department of Biochemistry, University of Bristol, Bristol, UK

Just as there is more than one way to skin a cat, there is more than one way for macromolecules to enter eukaryotic cells. Cells internalise a range of molecules (growth factors, hormones, nutrients etc.) as part of their normal metabolism and deliver those internalised molecules to a range of different, yet specific, intracellular locations. The fact that eukaryotic cells use a range of endocytic mechanisms has been known for some time. In recent years the molecular players that underlie some of these mechanisms have been identified and characterised (in some cases at atomic resolution) as have components that serve to define and to regulate intracellular trafficking pathways. This has led to a significant increase in our understanding of how certain endocytic processes and intracellular trafficking pathways might operate at the molecular level. I have been asked to provide an overview of current understanding of endocytic and intracellular trafficking pathways at the molecular level and will attempt to do so using data from my own lab and elsewhere.