



Fig. 3. Some of the proposed metabolic pathways responsible for the formation of inositol lipids or inositol phosphates. The lipids are formed by inositol lipid kinases (open arrows) whereas the inositol phosphates can be derived in two ways, either by phosphodiesteratic cleavage of a corresponding lipid or through the action of inositol phosphate kinases (thick closed arrows). Since the precise order in which phosphates are added to the inositol ring is unclear, the proposed sequence is based on current information concerning the structure of the major inositol phosphates which have been identified in animal cells. For simplicity the phosphatases which reverse all these kinase reactions have been omitted. The two lipids shown within the brackets are purely theoretical but are potential precursors of Ins P<sub>5</sub> and Ins P<sub>6</sub>. Ins P<sub>4</sub>, which is the most likely precursor of Ins 1,3,4P<sub>3</sub>, may be derived either by hydrolysing PIP<sub>3</sub> or by phosphorylating Ins 1,4,5P<sub>3</sub>.