The main conclusions to be drawn from the experimental work on Karaffs (Apium graveolens) and Parseley (Apium petroselinum) seeds described in the thesis are:

A. Karaffs Seeds (Apium graveolens):

1. Karaffs seeds and husk (Indian equivalent of English Celery-Apium graveolens) both carry the same two glycosides m.p. 250-51°C and m.p. 214-16°C. Being new glycosides they have been named Graviobioside A and Graviobioside B.

2. The two glycosides carry the same sugars, apiose and glucose. These sugars occur as a disaccharide.

3. The position of the attachment of the sugar residue in both the glycosides has been determined (position 7).

4. The aglycone obtained from Graviobioside A has been identified as 5,7,3',4'-tetra-hydroxy flavone (luteolin) and that from Graviobioside B as 5,7,4'-trihydroxy-3'-methoxy flavone (Chrysoeriol).

5. Graviobioside A has been shown to be luteolin-7-apiosyl-glucoside while Graviobioside B as chrysoeriol-7-apiosyl-glucoside
6. Two glucosides m.p.256-57° and m.p.234-35° have been obtained on the controlled hydrolysis of the graviobioside A and Graviobioside B respectively. The Glucoside m.p.256-57° has been identified as 7-glucoside of luteolin. The Glucoside m.p.234-35° which is a new one has been characterized as 7-glucoside of chrysoeriol.

7. Chrysoeriol and Luteolin have been synthesised by new routes also.

B. Parsley Seeds (Apium petroselinum):

1. The glycosidic fraction on paper chromatographic examination showed it to be made up of at least three components.

2. The melting point 236-37° of the glycoside named apiin (in literature) is considerably higher than the melting points recorded for it. (von Gerichten292,291 m.p.228°; Gupta and Seshadri294, m.p.230-32°; Nakaoki et al295, m.p.232-33°).

3. Two of the above components have been tentatively identified as Apigenin-7-apiosyl-glucoside and diosmetin-7-apiosyl-glucoside.

4. Both the above glycosides carry the same two sugars, apirose and glucose, and like the case of Karaff Glycosides carry the sugars in the form of disaccharides.