**Supplementary Material**

**Insulinotropic and β-cell protective action of cuminaldehyde, cuminol and an inhibitor isolated from *Cuminum cyminum* in streptozotocin induced diabetic rats**

**Swapnil B. Patil1, Shreehari S. Takalikar1, Madhav M. Joglekar1**, **Vivek S. Haldavnekar2, Akalpita U. Arvindekar1\***

1Department of Biochemistry, Shivaji University, Kolhapur 416 004, India

2Ayurveda Clinic, Kolhapur 416008, India

Running title - Insulinotropic action of *Cuminum cyminum*

**Supplementary Figure 1.** A) GC-MS analysis of fraction 15th (sub-fraction 3rd of gradient 60:40) and B) Fragmentation pattern of major compound at RT 15.6

A)



B)



**Supplementary Figure 2.** FTIR spectra of fraction 15th (sub-fraction 3rd of gradient 60:40)

****

**Supplementary Figure 3. H1 NMR analysis of fraction 15th**



**H8, H11**

**H7**

**H2, H6**

**H3, H5**

**H9**

**Supplementary Figure 4.** A) GC-MS analysis of fraction 17th and B) Fragmentation pattern of major compound at RT 17.0 min.

A)



B)



**Supplementary Figure 5**. FTIR spectra of fraction 17th

****

**Supplementary Figure 6**. 1H NMR analysis of fraction 17th



**H10, H11**

**H8**

**H7**

**H3**

**Supplementary Figure 7**. Dose dependent effect of cuminaldehyde and cuminol on insulin secretion.

 Results are mean ± S.D.; n=6. \**p*<0.05 and †*p*<0.001 significant from 11.8 mM glucose control.

**Supplementary Figure 8.** A) GC-MS of insulin secretion inhibitory compound from fraction 100:0 (Sub fraction 2) and B) Mass fragmentation pattern of insulin secretion inhibitory compound from fraction 100:0 (Sub fraction 2) at RT 27.199

**A)**



Time [min]

B)

