**SUPPLEMENTARY MATERIAL**

**Characterization and Potential Antidiabetic Activity of Proanthocyanidins from the Barks of *Acacia mangium* and *Larix gmelinii***

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**Abstract**

Proanthocyanidins in ethanol extracts from the barks of *Acacia mangium* and *Larix gmelinii* were analyzed by gel permeation chromatography, MALDI-TOF/TOF MS, and HPLC/MS. The inhibitory effects of proanthocyanidins and acid-catalyzed hydrolysis of proanthocyanidins against carbolytic enzymes were also tested. A significant relationship between carbolytic enzymes inhibition and degree of polymerization was established showing that the degree of polymerization is a major contributor to the biological activity of the proanthocyanidins from both types of woody plant bark. The results indicate that proanthocyanidins from the barks of *A. mangium* and *L. gmelinii* have potential antidiabetic properties.













 Figures S1: Mass spectram of oligomeric proanthocyanidins from LBE under different retention time.











 Figures S2: Mass spectram of oligomeric proanthocyanidins from ABE under different retention time.

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Figures S3: MALDI-TOF positive reflectron mode mass spectra of ABE.

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Figures S4: MALDI-TOF positive reflectron mode mass spectra of LBE