Molecular mechanics and quantum chemical calculations

unveil the combating effect of baicalein on human islet amyloid polypeptide

aggregates

E. Srinivasan¹, S. Ravikumar², S. Venkataramanan³, Rituraj Purohit⁴, R. Rajasekaran^{1*}

¹Bioinformatics Lab, Department of Biotechnology, School of Bio Sciences and Technology,

Vellore institute of Technology (Deemed to be University), Vellore 632014, Tamil Nadu,

India.

²Arupadaiveedu Medical College and Hospital, Vinayaka Missions Research Foundation, Puducherry, India.

³Department of Diagnostic and Allied Health Science, Faculty of Health and Life Sciences,

Management and Science University, University drive, Seksyen 13, 40100 Shah Alam, Selangor, Malaysia.

⁴CSIR - Institute of Himalayan Bioresource Technology, Palampur, Post Box. No. 06, Palampur - 176061 (H.P.) India. *Corresponding author: rrajasekaran@vit.ac.in

Mob: 09443491789

Supplementary Information:



Fig.4 The conformational deviation of the hIAPP and hIAPP complex computed over the period of the simulation time.

Table 1: Statistical reports on mean, standard deviation (SD) and *P*-value of RMSD and RMSF values for the IAPP and IAPP complex.

Conformational	RMSD		RMSF		<i>P</i> -value (<0.05)
statistics	Mean	SD	Mean	SD	Significance
IAPP	0.91	0.11	0.34	0.14	Yes
IAPP Complex	1.11	0.22	0.43	0.15	Yes

Table 2: Statistical studies on the secondary structures of the IAPP and IAPP complex with mean, standard deviation (SD) and *P*-value.

Secondary structure	IAPP		IAPP Complex		<i>P</i> -value (<0.05)
statistics	Mean	SD	Mean	SD	Significance
Helix	0.05	0.40	0.03	0.31	No
Beta-sheets	25.43	4.13	17.31	6.19	Yes
Beta-Bridge	3.85	1.60	5.38	1.97	Yes
Bend	10.69	2.14	11.77	2.91	Yes
Turn	5.97	1.61	4.38	1.46	Yes
Coil	28	5	35.5	7.52	Yes