Supporting Information

Ellagitannins with Glucopyranose Cores Have Higher Affinities to Proteins than Acyclic Ellagitannins by Isothermal Titration Calorimetry

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List of Supporting Information

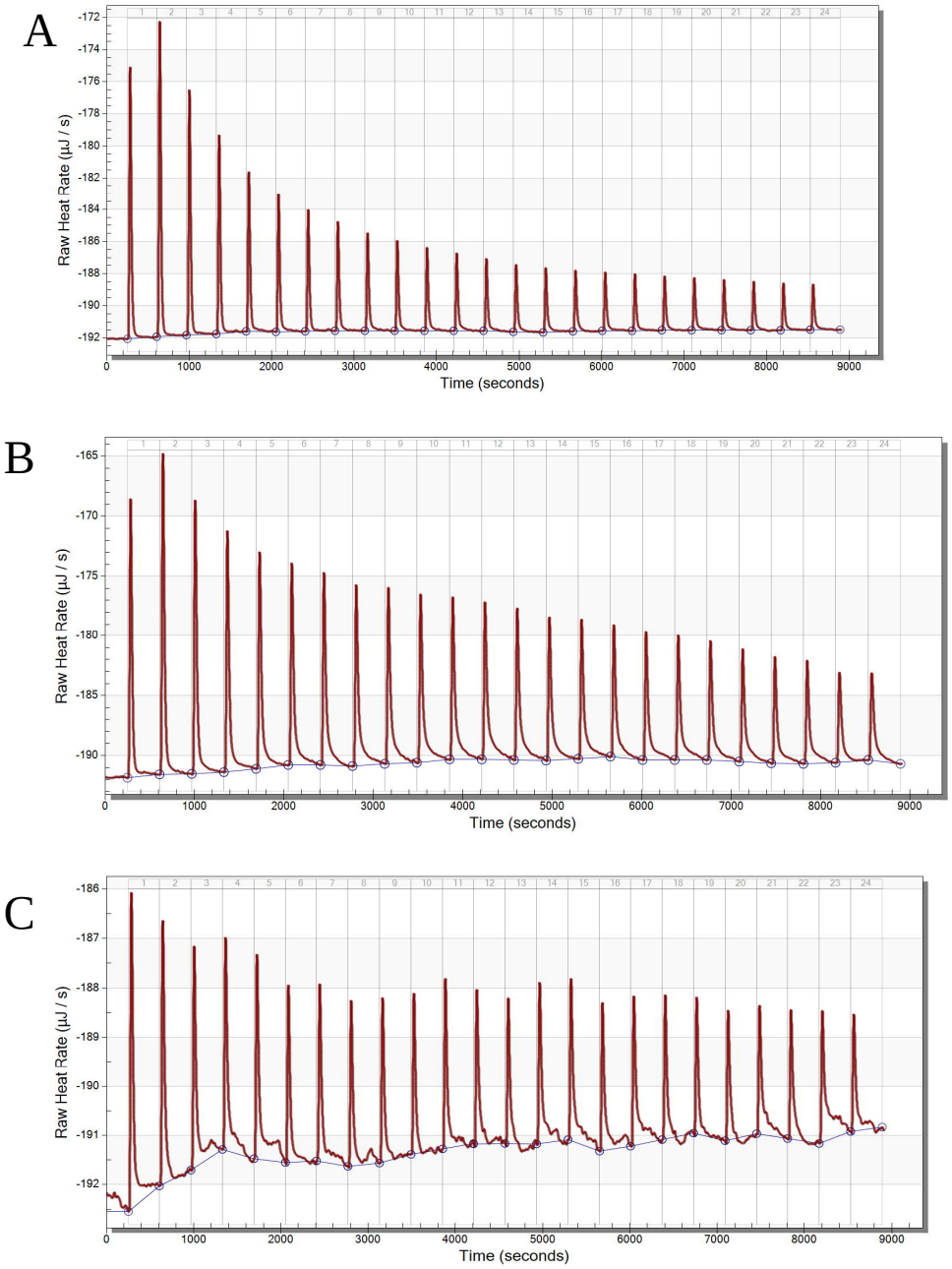

Figure S1. Examples of thermograms for the interactions of cyclic monomeric ellagitannins with BSA (raw heat data, no control experiments subtracted): A) tellimagrandin I into 30 µM BSA, B) tellimagrandin II into 30 µM BSA and C) geraniin into 40 µM BSA.

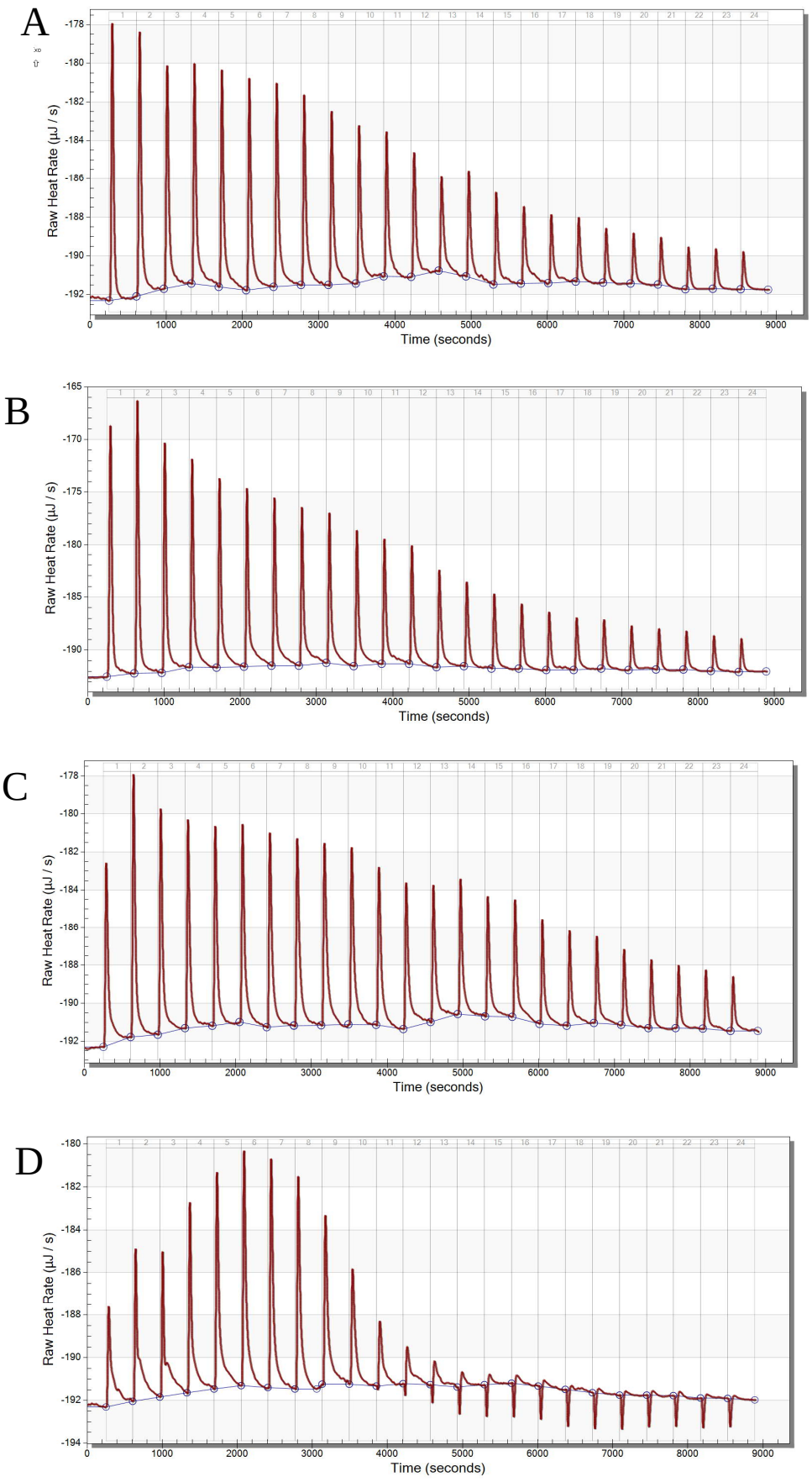

Figure S2. Examples of thermograms for the interactions of cyclic dimeric and trimeric ellagitannins with BSA (raw heat data, no control experiments subtracted): A) agrimoniin into 30 µM BSA, B) gemin A into 30 µM BSA, C) sanguiin H-6 into 30 µM BSA and D) lambertianin C into 30 µM BSA.

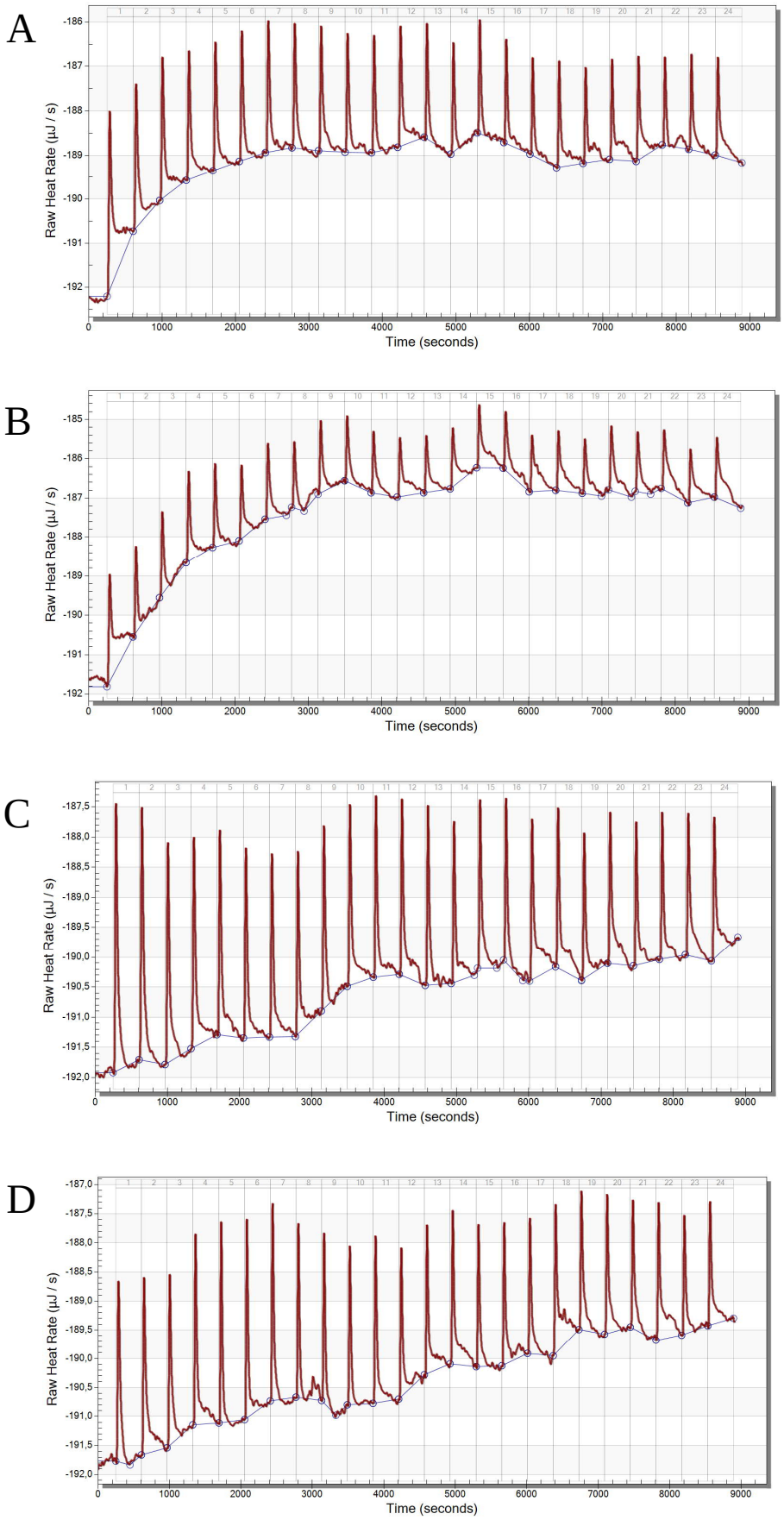

Figure S3. Examples of thermograms for the interactions of acyclic monomeric ellagitannins with BSA (raw heat data, no control experiments subtracted): A) castalagin into 30 µM BSA, B) vescalagin into 30 µM BSA, C) castavaloninic acid into 30 µM BSA and D) vescavaloninic acid into 30 µM BSA.

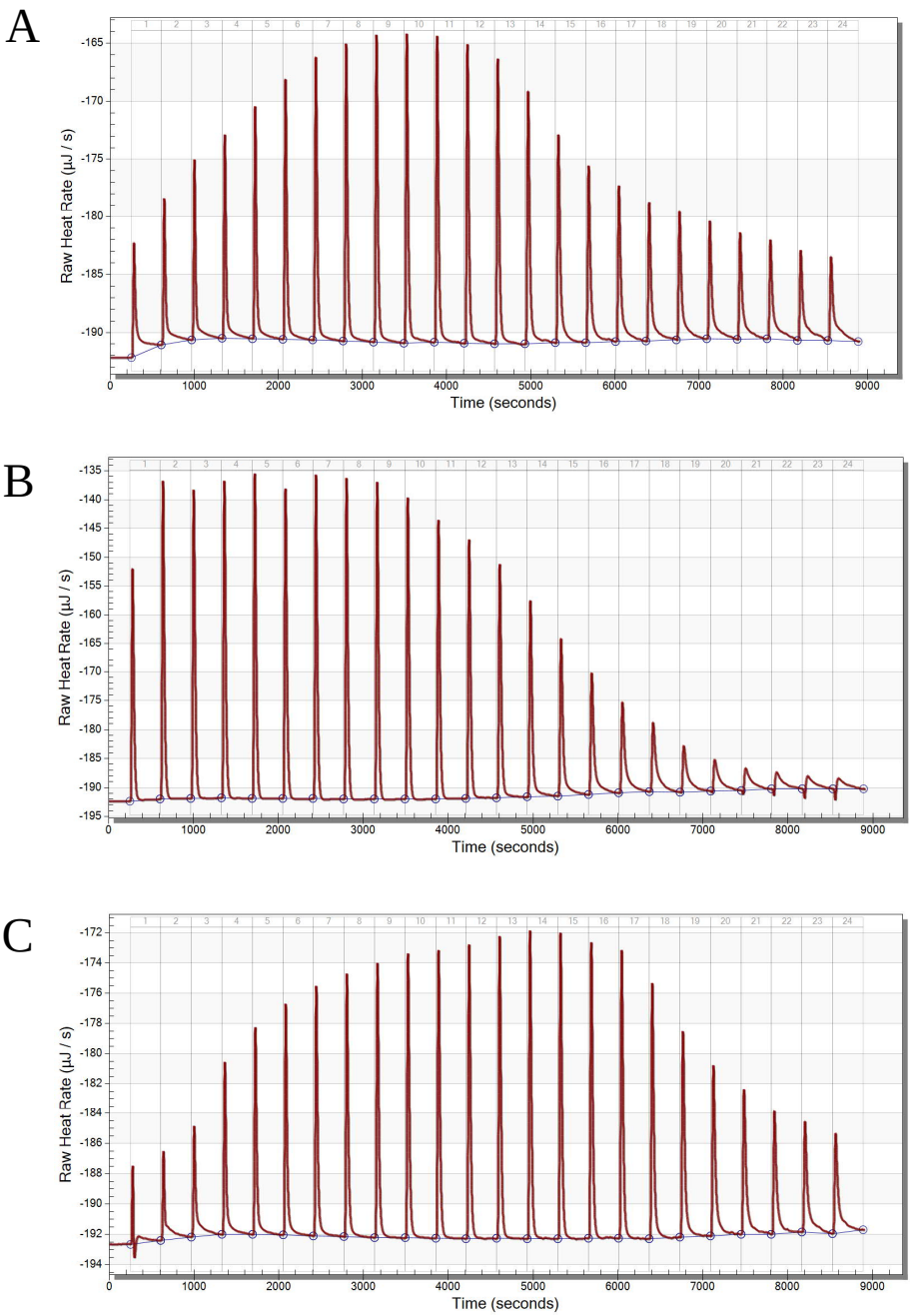

Figure S4. Examples of thermograms for the interactions of cyclic monomeric ellagitannins with gelatin (raw heat data, no control experiments subtracted): A) tellimagrandin I into 15 µM gelatin, B) tellimagrandin II into 20 µM gelatin and C) geraniin into 20 µM gelatin.

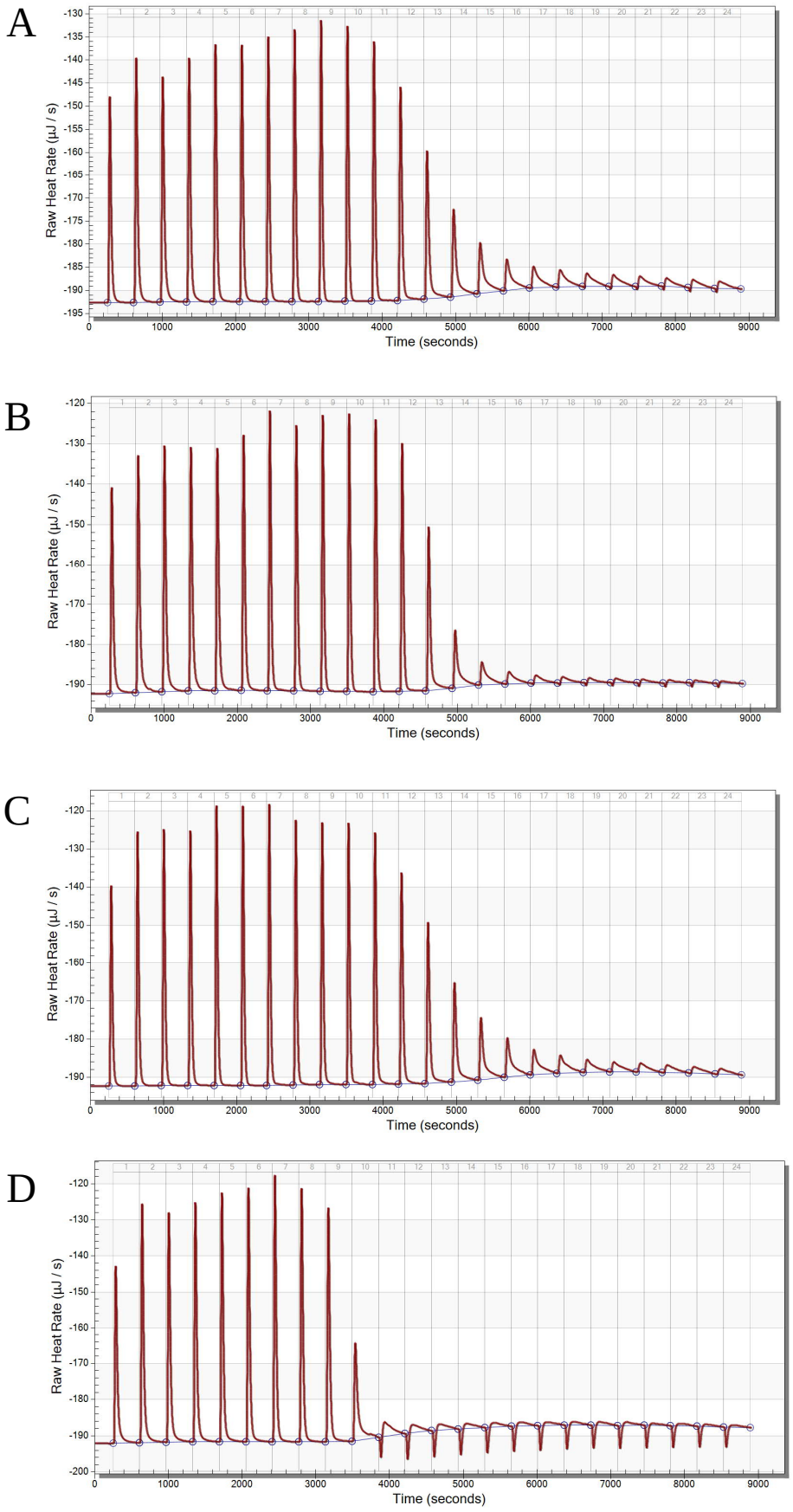

Figure S5. Examples of thermograms for the interactions of cyclic dimeric and trimeric ellagitannins with gelatin (raw heat data, no control experiments subtracted): A) agrimoniin into 30 µM gelatin, B) gemin A into 30 µM gelatin, C) sanguiin H-6 into 30 µM gelatin and D) lambertianin C into 30 µM gelatin.

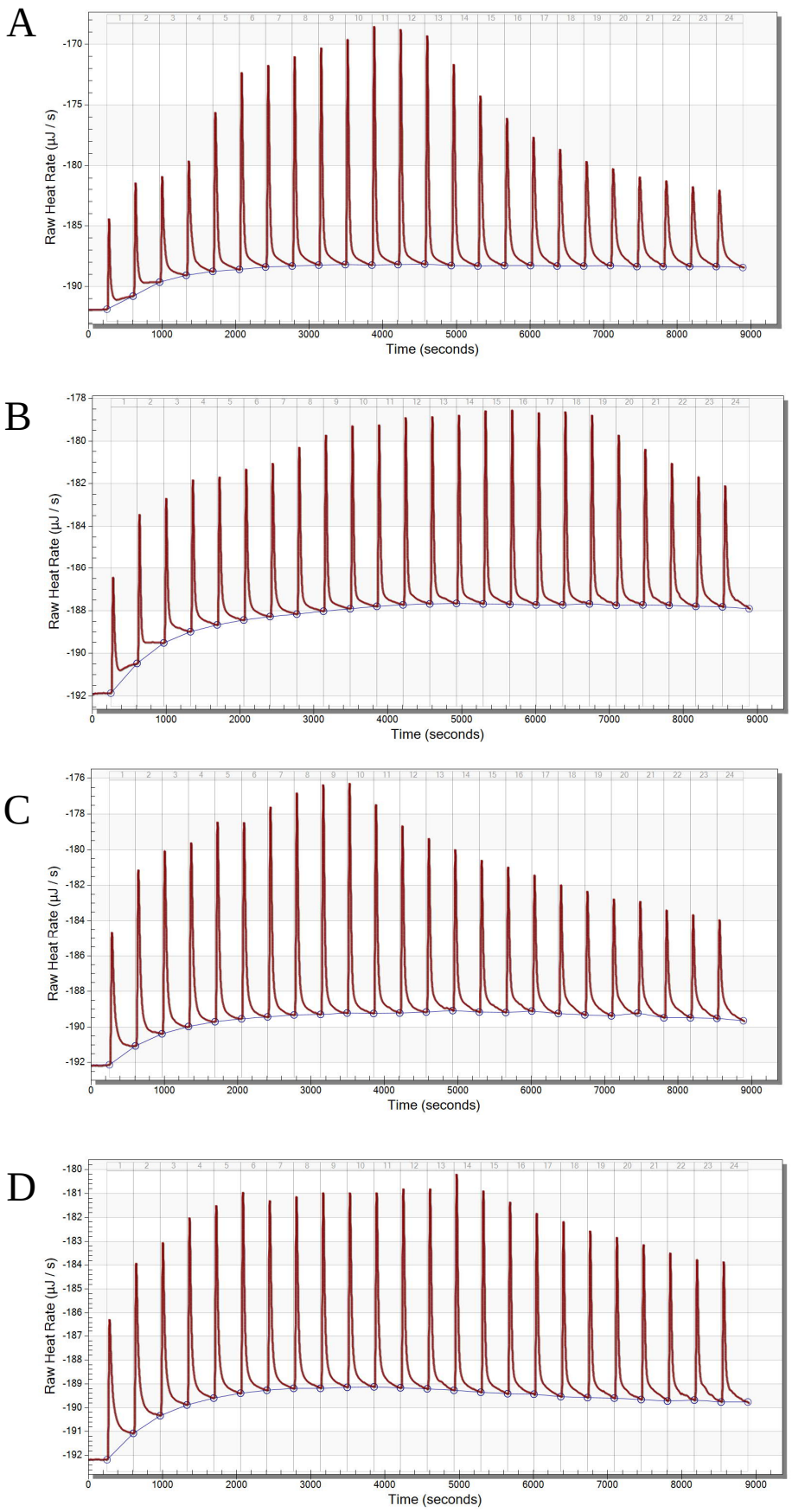

Figure S6. Examples of thermograms for the interactions of acyclic monomeric ellagitannins with gelatin (raw heat data, no control experiments subtracted): A) castalagin into 20 µM gelatin, B) vescalagin into 20 µM gelatin, C) castavaloninic acid into 20 µM gelatin and D) vescavaloninic acid into 20 µM gelatin.

Table S1. Estimated Entropies for the Interactions of Ellagitannins with BSA and Gelatin Fitted by Two-Site and One-Site Binding Models

	Tellimagrandin I	Tellimagrandin II	Agrimoniin	Gemin A	Sanguiin H-6	Roshenin C	Lambertianin C
BSA							
Two-Site							
ΔS_1 (J mol^{-1} K^{-1})	15 ± 14	-38 ± 22	26 ± 17	-45 ± 2	28 ± 4		16 ± 7
ΔS_2 (J mol^{-1} K^{-1})	18 ± 22	-64 ± 23	28 ± 4	29 ± 7	38 ± 7		46 ± 13
One-Site							
ΔS_1 (J mol^{-1} K^{-1})	2 ± 24	-52 ± 25	1 ± 18	-73 ± 14	-8 ± 10		4 ± 7
Gelatin							
Two-Site							
ΔS_1 (J mol^{-1} K^{-1})	53 ± 10	-93 ± 1	-117 ± 17	-99 ± 8	-108 ± 14	-2 ± 13	-185 ± 22
ΔS_2 (J mol^{-1} K^{-1})	55 ± 8	64 ± 2	44 ± 7	32 ± 4	49 ± 2	31 ± 4	-28 ± 34
One-Site							
ΔS_1 (J mol^{-1} K^{-1})	-57 ± 30	-103 ± 7	-163 ± 17	-165 ± 5	-170 ± 9	-112 ± 27	-194 ± 18