Supporting Information

Caffeoylquinic Acids from *Aster tataricus* Leaves Inhibit Aldose Reductase and Attenuate Hyaloid-Retinal Vasodilation in a Zebrafish Model of Hyperglycemia

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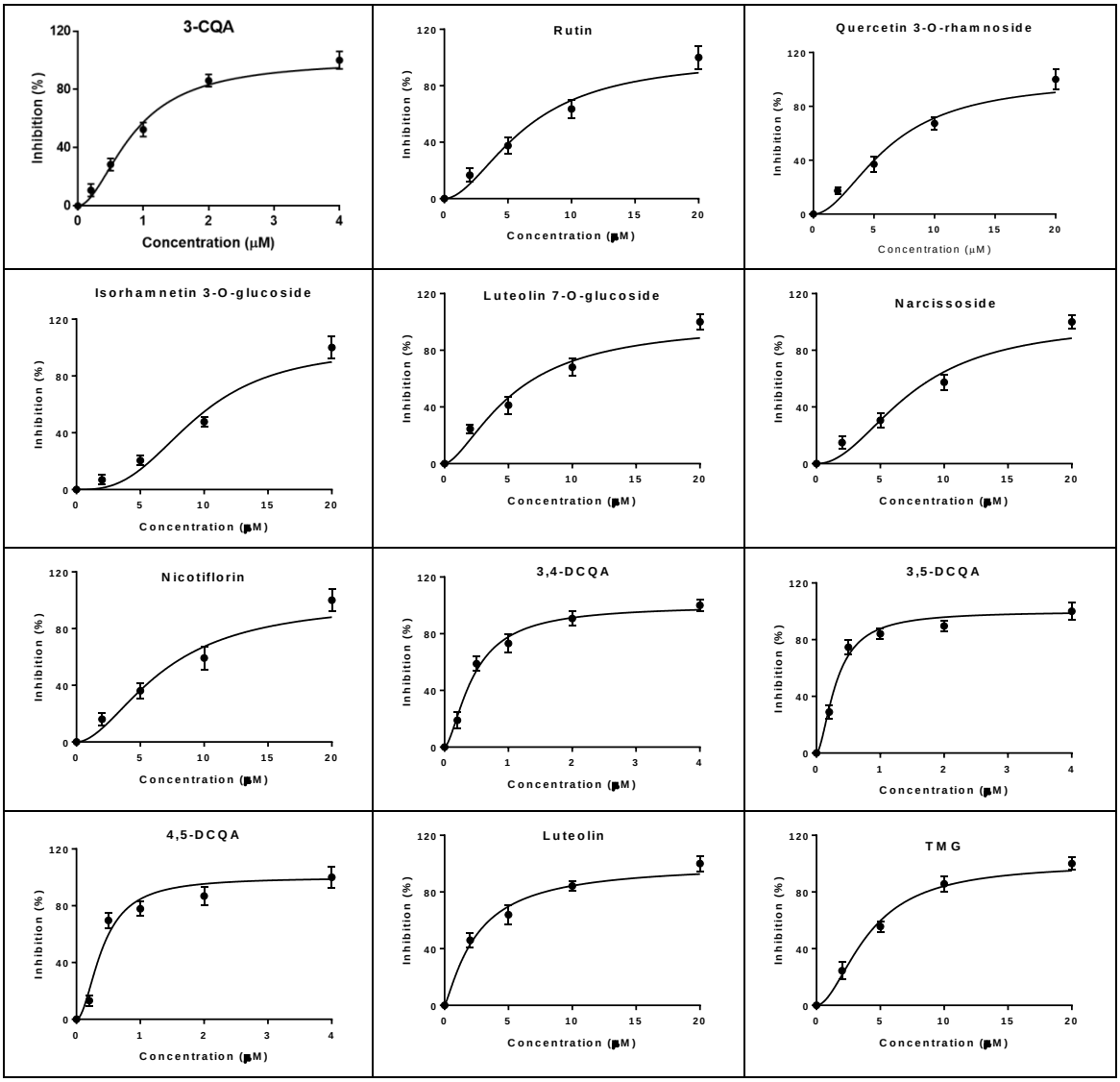

Fig. 1S. Dose-response curves for the RLAR inhibitory activity of compounds

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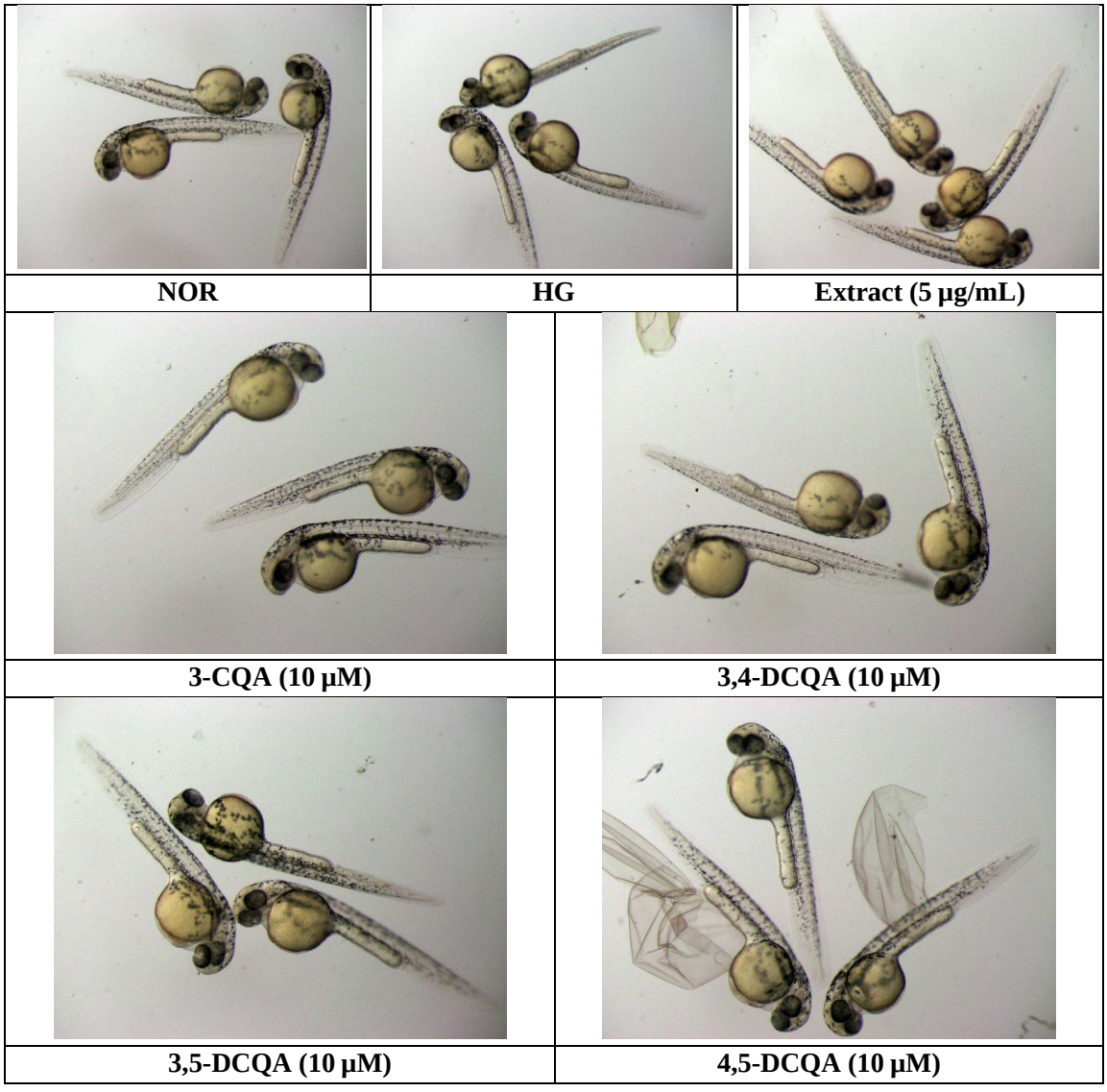

Fig. 2S. Morphological assessment of zebrafish larvae exposed to extract/compound

Representative images of zebrafish larvae at 27 hpf treated with the indicated concentration of extract/compound. Larvae display normal development without any observable phenotypic changes.

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Table 1S. Statistical comparison of RLAR inhibitory activities (IC_{50}) between 3-CQA and dicaffeoylquinic acids (DCQAs).[a]

Comparison	Mean Difference (µM)	p-adj	Significance
3-CQA vs. 3,4-DCQA	0.40	< 0.001	Yes
3-CQA vs. 3,5-DCQA	0.54	< 0.001	Yes
3-CQA vs. 4,5-DCQA	0.45	< 0.001	Yes

[a]The analysis was performed using a one-way ANOVA followed by Tukey's *post hoc* test. A p-value < 0.05 was considered statistically significant.

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Table 2S. Pairwise comparison of caffeoylquinic acid derivative content using Tukey's *post hoc* test.[a]

Comparison	Mean Difference (µM)	p-adj	Significance
3-CQA vs. 3,4-DCQA	-40.93	< 0.001	Yes
3-CQA vs. 3,5-DCQA	10.33	< 0.001	Yes
3-CQA vs. 4,5-DCQA	-33.33	< 0.001	Yes
3,4-DCQA vs. 3,5-DCQA	51.27	< 0.001	Yes
3,4-DCQA vs. 4,5-DCQA	7.60	< 0.001	Yes
3,5-DCQA vs. 4,5-DCQA	-43.67	< 0.001	Yes

[a]The analysis was performed using a one-way ANOVA followed by Tukey's *post hoc* test. A p-value < 0.05 was considered statistically significant.

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