pharmaceutics

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Supplementary Materials

Retinal Protection of New Nutraceutical Formulation

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Data reported as supplementary material:

- **Table S1.** Combination index (*CI*) calculation for single ingredients when mixed in the Epicolin formulation.
- **Figure S1.** 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide tetrazolium **(**MTT) assay on Human Moorfields/Institute of Ophthamology-Müller 1 (MIO-M1) treated with Epicolin, Formulation G (FG) and Formulation N (FN) in normoxic and hypoxic conditions.

Table S1. Combination index (*CI*) calculation for single ingredients when mixed in the Epicolin formulation. (a) All effects observed in the in vitro neuprotection assay were reported as percentage with respect to control (CTRL). Each value (E_i) was normalized to the maximum (E_{Max}) and minimum (E_{Min}) effect values, as described in **(b)**, to obtain the normalized effect (E_{Ni}). The expected effect (E_e) of the mixture of the single ingredients was calculated as detailed in **(c)** and used to calculate the *CI*, as outlined in **(d)**, where the observed effect (E_o) represents the normalized effect of Epicolin.

(a)

	% Mean *vs* CTRL (E_i)	**Δ% Mean *vs* CTRL ***	**Normalized value (E_{Ni}) (0 - 1)**
Citicoline	104,680	4,680	0,038
Homotaurine	99,983	-0,017	0,000
EGCG	188,181	88,181	0,710
Forskohlii	109,573	9,573	0,077
Vit. B1	104,294	4,294	0,035
Vit. B2	108,489	8,489	0,068
Vit. B3	100,282	0,282	0,002
Vit. B6	101,952	1,952	0,016
Vit. B9	110,308	10,308	0,083
Vit. E	102,378	2,378	0,019
Epicolin	224,212	124,212	1,000

** values as shown in the Figure 2 of the main text of the paper*

(b) $E_{N_i} = \frac{E_i - E_{Min}}{E_{Max} - E_{Min}}$

(c) $E_e = 1 - \prod_{i=1}^{n}(1 - E_{N_i})$

(d) $CI = \frac{E_e}{E_o}$

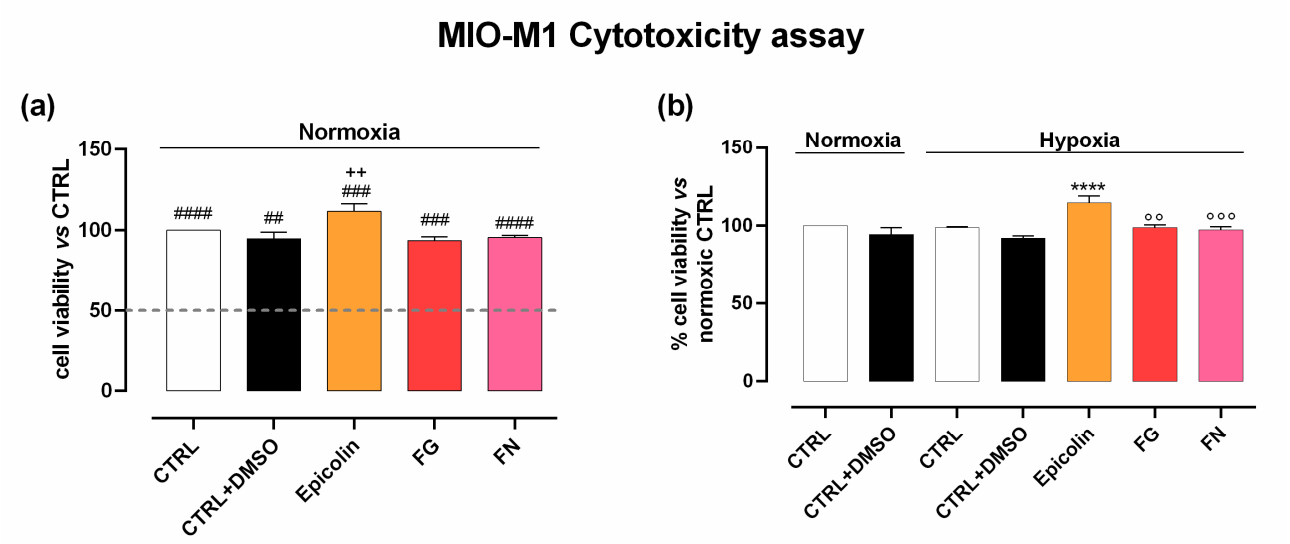


Figure S1. Citotoxicity assay on Human Moorfields/Institute of Ophthamology-Müller 1 (MIO-M1) treated with Epicolin, Formulation G (FG) and Formulation N (FN) in normoxic and hypoxic conditions. **(a)** MIO-M1 cells were treated with Epicolin, FG and FN formulations for 6h and then MTT assay was carried out. **(b)** MIO-M1 cells were pre-treated in normoxic condition for 2 hours with Epicolin, FG and FN and then exposed to hypoxia damage for 4 hours and then MTT was carried out. Data are represented as percentage compared to normoxic condition control (CTRL). Values are reported as mean ± SEM of n = 4. Statistical analysis was performed by One-way ANOVA plus Tukey's post-hoc test to compare treatment groups and by One sample t-test to compare treatment groups with the 50% cut-off.
$p \leq 0.01$, ### $p \leq 0.001$, #### $p \leq 0.0001$ vs 50% cut-off; **** $p \leq 0.0001$ vs hypoxic CTRL+DMSO; ++ $p \leq 0.01$ vs normoxic CTRL+DMSO, °° $p \leq 0.01$, °°° $p \leq 0.001$ vs Epicolin.