**Microbially-mediated phenolic catabolites exert differential geno-protective activities in normal and adenocarcinoma cell lines.**

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**Supplementary Materials:**

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| **Supplementary table 1**: Comparison of geno-protective effects and gene expression in CCD 841 CoN and HT29 cells treated with either 10 μM, 50 μM or 100 μM individual phenolic; Benzoic acid (BA), 4-hydroxybenzoic acid (4HBA), 3-(3′-hydroxyphenyl)propanoic acid (3'HPPA), and 3-(phenyl)propanoic acid (3PPA). | | | | | | | | | | | | | | | | | |
|  | **CCD841 CoN Cells** | | | | | | | |  | **HT29 Cells** | | | | | | | |
|  | ***% Tail DNA*** | | ***Nrf2*** | | ***NQO1*** | | ***HO-1*** | |  | ***% Tail DNA*** | | ***Nrf2*** | | ***NQO1*** | | ***HO-1*** | |
| **BA** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Untreated* | 49.95 ± 1.38 | a | 1.00 ± 0.00 | a | 1.00 ± 0.00 | a | 1.00 ± 0.00 | a |  | 50.81 ± 1.33 | a | 1.00 ± 0.00 | a | 1.00 ± 0.00 | a | 1.00 ± 0.00 | a |
| *10 µM* | 40.34 ± 2.40 | bxy | 1.48 ± 0.07 | abx§ | 1.40 ± 0.22 | abxy | 1.44 ± 0.11 | abx |  | 43.39 ± 2.00 | aw | 1.12 ± 0.03 | abw§ | 1.33 ± 0.22 | abw | 1.50 ± 0.10 | bw |
| *50 µM* | 34.95 ± 0.48 | bxyz | 1.89 ± 0.15 | bx | 2.07 ± 0.20 | bcx | 1.71 ± 0.10 | bx |  | 34.80 ± 2.68 | bw | 1.51 ± 0.07 | bw | 1.64 ± 0.10 | bw | 1.59 ± 0.07 | bwyz |
| *100 µM* | 24.58 ± 1.26 | cx | 2.29 ± 0.22 | bx | 2.44 ± 0.14 | cxy | 2.13 ± 0.10 | cx§ |  | 26.88 ± 0.69 | bw | 2.27 ± 0.15 | cw | 2.52 ± 0.19 | cw | 3.07 ± 0.17 | cw§ |
| **4HBA** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Untreated* | 49.95 ± 1.38 | a | 1.00 ± 0.00 | a | 1.00 ± 0.00 | a | 1.00 ± 0.00 | a |  | 49.87 ± 0.19 | a | 1.00 ± 0.00 | a | 1.00 ± 0.00 | a | 1.00 ± 0.00 | a |
| *10 µM* | 31.83 ± 2.09 | bx§ | 1.99 ± 0.14 | bx | 1.20 ± 0.22 | abx§ | 1.61 ± 0.07 | bx |  | 29.87 ± 3.00 | bx§ | 2.48 ± 0.22 | bx | 1.89 ± 0.22 | bw§ | 2.32 ± 0.46 | bcw |
| *50 µM* | 32.01 ± 2.13 | bxy | 2.08 ± 0.10 | bx | 1.49 ± 0.10 | bx | 1.93 ± 0.17 | bx§ |  | 32.24 ± 2.48 | bw | 1.83 ± 0.08 | cwx | 1.91 ± 0.19 | bwx | 3.17 ± 0.15 | bx§ |
| *100 µM* | 25.07 ± 1.58 | bx§ | 2.57 ± 0.28 | bx§ | 1.51 ± 0.15 | bx§ | 2.07 ± 0.13 | bx |  | 31.70 ± 0.56 | bw§ | 1.48 ± 0.11 | acx§ | -1.43 ± 0.18 | cx§ | 2.01 ± 0.12 | cx |
| **3PPA** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Untreated* | 49.63 ± 0.82 | a | 1.00 ± 0.00 | a | 1.00 ± 0.00 | a | 1.00 ± 0.00 | a |  | 50.08 ± 0.89 | a | 1.00 ± 0.00 | a | 1.00 ± 0.00 | a | 1.00 ± 0.00 | a |
| *10 µM* | 48.05 ± 1.40 | ay | 1.37 ± 0.16 | ax§ | 1.23 ± 0.22 | aby§ | 1.30 ± 0.04 | ax§ |  | 48.43 ± 1.42 | bw | -1.48 ± 0.05 | by§ | -1.35 ± 0.22 | bx§ | -1.30 ± 0.03 | bx§ |
| *50 µM* | 30.02 ± 0.86 | by | 1.93 ± 0.10 | bx | 1.66 ± 0.14 | bcx | 1.87 ± 0.07 | bx |  | 32.23 ± 0.61 | cw | 1.71 ± 0.06 | cwx | 1.96 ± 0.05 | cx | 2.04 ± 0.12 | cy |
| *100 µM* | 24.67 ± 2.48 | bx§ | 2.05 ± 0.16 | bx§ | 2.40 ± 0.32 | cxy§ | 2.17 ± 0.10 | bx§ |  | 50.06 ± 1.54 | by§ | -1.64 ± 0.03 | by§ | -1.30 ± 0.03 | bx§ | -1.46 ± 0.09 | by§ |
| **3'HPPA** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Untreated* | 49.63 ± 0.82 | a | 1.00 ± 0.00 | a | 1.00 ± 0.00 | a | 1.00 ± 0.00 | a |  | 50.08 ± 0.89 | a | 1.00 ± 0.00 | a | 1.00 ± 0.00 | a | 1.00 ± 0.00 | a |
| *10 µM* | 42.01 ± 1.73 | bxy | 1.54 ± 0.33 | ax | 1.35 ± 0.22 | aby | 1.32 ± 0.17 | abx |  | 43.31 ± 1.03 | bw | 1.73 ± 0.09 | bz | 2.46 ± 0.22 | bw | 1.65 ± 0.18 | bw |
| *50 µM* | 39.91 ± 1.35 | bcz | 1.79 ± 0.18 | abx | 1.54 ± 0.12 | bx | 1.62 ± 0.09 | bx |  | 34.36 ± 1.86 | cw | 2.15 ± 0.24 | bx | 1.41 ± 0.07 | abw | 1.39 ± 0.07 | cz |
| *100 µM* | 22.49 ± 1.78 | cx§ | 2.26 ± 0.07 | bx§ | 3.00 ± 0.50 | cy§ | 2.28 ± 0.13 | cx§ |  | 39.34 ± 1.09 | bcx§ | 1.50 ± 0.25 | abx§ | 1.19 ± 0.11 | ay§ | 1.12 ± 0.05 | acz§ |
| *Data is presented as the mean of 3 independent experiments ± SEM. A One-way ANOVA with Dunnett’s and Tukey’s post hoc tests were used to determine significance of concentration effects within compound compared to the untreated control and other concentrations. A One-way ANOVA with Tukey's Multiple Comparisons post hoc test was used to assess significance of concentration effects between compounds. An unpaired T-test was used to compare differences in effects between cell types.*  ***Within column****, when comparing concentration effects* ***within compound****, a value with a different superscript letter (abc) denotes a significance from control.*  ***Within column****, when comparing concentrations effects* ***between compounds*** *a value with a different subscript letter (wxyz) denote significance.*  ***Within row****, when comparing effects* ***between cell types*** *a superscript symbol (*§) *denotes significance. Significance accepted at p<0.05.* | | | | | | | | | | | | | | | | | |