

Colin J. Henderson, Lesley A. McLaughlin and C. Roland Wolf

Evidence that cytochrome *b*<sub>5</sub> and cytochrome *b*<sub>5</sub> Reductase can act as sole electron donors to the hepatic cytochrome P450 system

Molecular Pharmacology

Supplemental Table 1: *In vitro* activities of hepatic microsomes from WT, HBN, HRN and HBRN mice

| Substrate                | Metabolite production (pmol/min/mg) |                           |                            |                                |
|--------------------------|-------------------------------------|---------------------------|----------------------------|--------------------------------|
|                          | WT                                  | HBN                       | HRN                        | HBRN                           |
| BFC                      | 512 ± 96.6                          | 102 ± 21.6 <sup>***</sup> | 32.6 ± 3.9 <sup>***</sup>  | 5.0 ± 6.7 <sup>***/(***)</sup> |
| BQ <sup>‡</sup>          | 8.1 ± 2.4                           | 3.0 ± 1.8 <sup>**</sup>   | 4.3 ± 4.3                  | 0.35 ± 0.96 <sup>***</sup>     |
| BR                       | 20.6 ± 3.7                          | 20.8 ± 4.2                | 3.6 ± 1.3 <sup>***</sup>   | 1.9 ± 0.67 <sup>***/(*)</sup>  |
| MR                       | 42.4 ± 7.2                          | 42.9 ± 7.3                | 8.3 ± 2.7 <sup>***</sup>   | 3.4 ± 2.2 <sup>***/(*)</sup>   |
| Midazolam (1'-OH)        | 439 ± 138                           | 207 ± 78.1 <sup>*</sup>   | 170 ± 86.9 <sup>**</sup>   | 38.9 ±                         |
|                          |                                     |                           |                            | 22.8 <sup>***/(*)</sup>        |
| Midazolam (4-OH)         | 220 ± 69.7                          | 151 ± 52.4                | 109 ± 72.4 <sup>*</sup>    | 16.2 ±                         |
|                          |                                     |                           |                            | 16.9 <sup>***/(*)</sup>        |
| Bupropion                | 77.5 ± 6.2                          | 166 ± 30.3 <sup>*</sup>   | 46.3 ± 12.2 <sup>***</sup> | 25.1 ±                         |
|                          |                                     |                           |                            | 11.2 <sup>***/(*)</sup>        |
| Metoprolol (α-OH)        | 321 ± 94.8                          | 222 ± 38.4 <sup>*</sup>   | 0.12 ± 0.08 <sup>***</sup> | 0.06 ± 0.54 <sup>***</sup>     |
| Metoprolol (O-desmethyl) | 319 ± 70.9                          | 254 ± 29.7 <sup>***</sup> | 6.1 ± 3.5 <sup>***</sup>   | 4.0 ± 4.2 <sup>***</sup>       |
| Tolbutamide              | 15.5 ± 3.3                          | 6.5 ± 2.5 <sup>***</sup>  | 0.76 ± 0.47 <sup>***</sup> | 1.3 ± 1.1 <sup>***</sup>       |

<sup>‡</sup> expressed as Δ fluorescence/ min

Statistical significance - \* - is shown for HBRN, HRN or HBN compared to WT, and between HRN and HBRN (\*); <sup>\*/(\*)</sup> = p ≤ 0.05, <sup>\*\*/(\*\*)</sup> = p ≤ 0.01, <sup>\*\*\*/(\*\*\*)</sup> = p ≤ 0.001; n=5 (in triplicate) for each genotype.