| Animal | Habituation phase      | FCM (ng/g) | S.E.M. |
|--------|------------------------|------------|--------|
| Rat1   | Pre-handling           | 84.455     | 0.2    |
| Rat2   | Pre-handling           | 88.80367   | 1.2    |
| Rat3   | Pre-handling           | 96.00333   | 0.8    |
| Rat4   | Pre-handling           | 95.60933   | 0.2    |
| Rat5   | Pre-handling           | 95.467     | 1.4    |
| Rat6   | Pre-handling           | 94.195     | 1.4    |
| Rat1   | Handling acute         | 70.84333   | 0.3    |
| Rat2   | Handling acute         | 67.918     | 1.2    |
| Rat3   | Handling acute         | 61.697     | 0.1    |
| Rat4   | Handling acute         | 67.99967   | 0.8    |
| Rat5   | Handling acute         | 76.713     | 0.3    |
| Rat6   | Handling acute         | 72.629     | 1.2    |
| Rat1   | Handling chronic       | 73.56      | 0.3    |
| Rat2   | Handling chronic       | 61.732     | 0.4    |
| Rat3   | Handling chronic       | 61.843     | 1.3    |
| Rat4   | Handling chronic       | 60.50467   | 0.1    |
| Rat5   | Handling chronic       | 62.12367   | 0.8    |
| Rat6   | Handling chronic       | 70.68967   | 0.4    |
| Rat1   | Body restraint acute   | 89.27      | 0.6    |
| Rat2   | Body restraint acute   | 92.17833   | 0.8    |
| Rat3   | Body restraint acute   | 99.70133   | 1.5    |
| Rat4   | Body restraint acute   | 101.877    | 0.7    |
| Rat5   | Body restraint acute   | 92.14667   | 0.3    |
| Rat6   | Body restraint acute   | 96.79167   | 1.2    |
| Rat1   | Body restraint chronic | 35.74533   | 0.3    |
| Rat2   | Body restraint chronic | 38.42167   | 0.4    |
| Rat3   | Body restraint chronic | 43.032     | 0.7    |
| Rat4   | Body restraint chronic | 41.17267   | 0.8    |
| Rat5   | Body restraint chronic | 44.58133   | 1.2    |
| Rat6   | Body restraint chronic | 38.714     | 0.4    |
| Rat1   | Darkness acute         | 116.5777   | 2.4    |
| Rat2   | Darkness acute         | 101.752    | 0.6    |
| Rat3   | Darkness acute         | 118.453    | 2.5    |
| Rat4   | Darkness acute         | 105.649    | 0.6    |
| Rat5   | Darkness acute         | 121.8613   | 2.6    |
| Rat6   | Darkness acute         | 107.2447   | 0.8    |
| Rat1   | Darkness chronic       | 44.27633   | 0.5    |
| Rat2   | Darkness chronic       | 48.58433   | 0.8    |
| Rat3   | Darkness chronic       | 50.49767   | 1.0    |
| Rat4   | Darkness chronic       | 48.49133   | 0.8    |
| Rat5   | Darkness chronic       | 47.87567   | 0.6    |
| Rat6   | Darkness chronic       | 43.43633   | 0.9    |
|     | MRI noise acute |         |       | MRI noise chronic |         |       | MRI acquisition acute |         |       | MRI acquisition chronic |         |       |
|-----|----------------|---------|-------|------------------|---------|-------|-----------------------|---------|-------|------------------------|---------|-------|
| Rat1| 44.2400        | 2.2     |       | 40.0300          | 0.5     |       | 56.1333               | 1.6     |       | 37.6127                | 3.5     |       |
| Rat2| 43.7400        | 0.5     |       | 24.7913          | 0.2     |       | 40.7733               | 1.2     |       | 33.4767                | 2.9     |       |
| Rat3| 42.9490        | 1.3     |       | 31.5060          | 0.1     |       | 37.1000               | 1.3     |       | 49.8667                | 1.5     |       |
| Rat4| 40.1307        | 0.7     |       | 27.0750          | 0.4     |       | 69.2333               | 3.8     |       | 63.1800                | 3.2     |       |
| Rat5| 41.7900        | 0.7     |       | 27.4450          | 0.8     |       | 36.6067               | 0.8     |       | 26.5573                | 1.4     |       |
| Rat6| 31.5023        | 0.1     |       | 30.1740          | 0.1     |       | 71.1210               | 0.5     |       | 75.5097                | 0.6     |       |

**Supplementary Table 2**

Corticosterone levels were monitored by analyzing fecal corticosterone metabolite (FCM) concentrations of the stress hormone. The table reports the FCM levels in ng/g ± standard error of the mean (S.E.M) for each individual rat during all stages of habituation. Values are rounded up to two decimal places. The conditions reported in the table correspond to the timeline reported in Figure 1A.