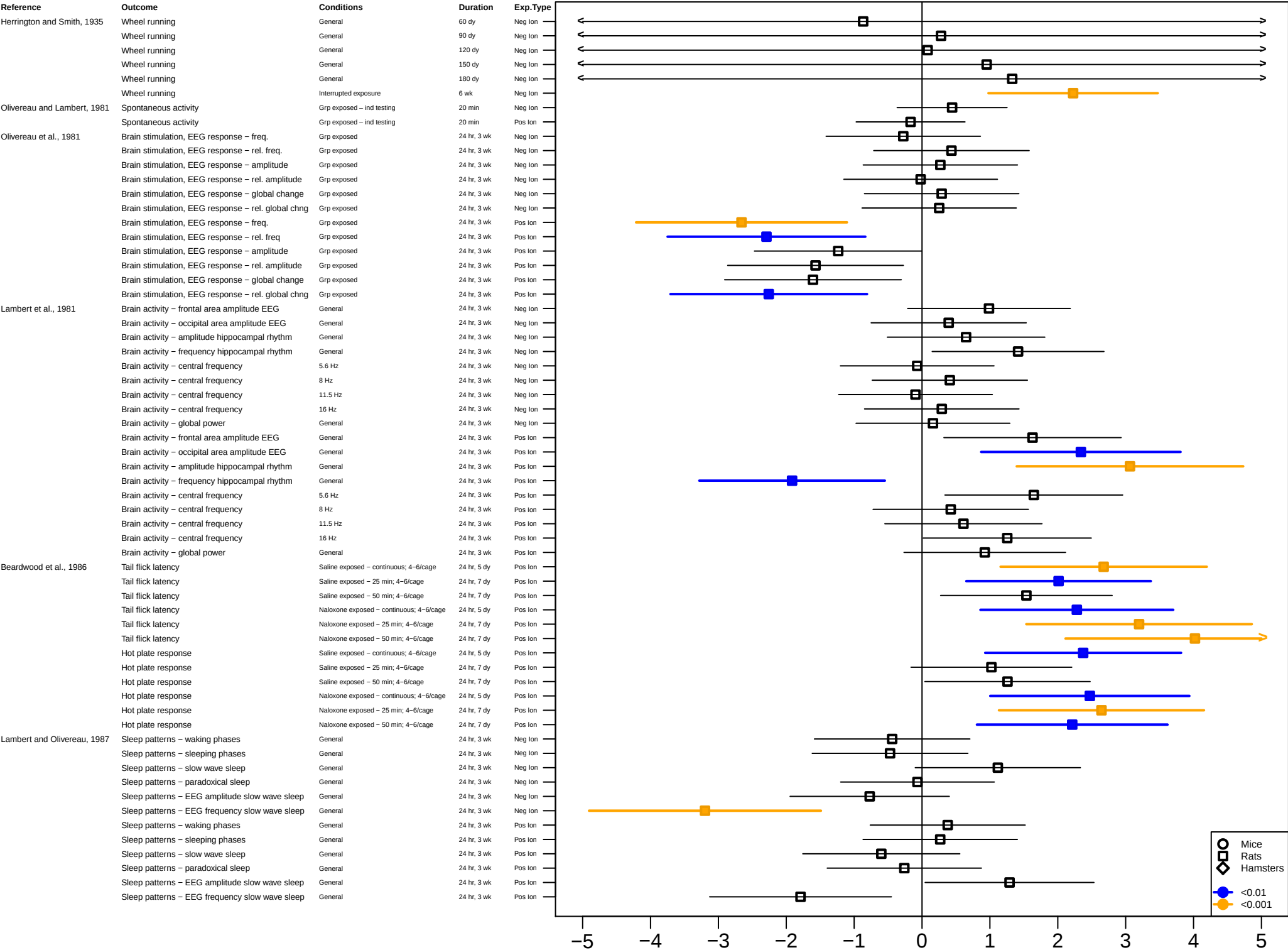


## **Additional File 2: Figures S1 – S8**

### **Quantitative differences between exposed and control groups**

|           |                                                                                     |
|-----------|-------------------------------------------------------------------------------------|
| Figure S1 | Standardized mean differences – air ion behavior studies                            |
| Figure S2 | Standardized mean differences air ion – learning and memory studies                 |
| Figure S3 | Standardized mean differences air ion – serotonin or other neurotransmitter studies |
| Figure S4 | Mean proportional differences – air ion respiratory infection studies               |
| Figure S5 | Standardized mean differences – air ion cardiovascular function studies             |
| Figure S6 | Standardized mean differences – air ion reproduction and growth studies             |
| Figure S7 | Standardized mean differences – air ion carcinogenesis studies                      |
| Figure S8 | Standardized mean differences air ion – other health endpoints studies              |

Abbreviations and notes specific to each table follow Figure S8.



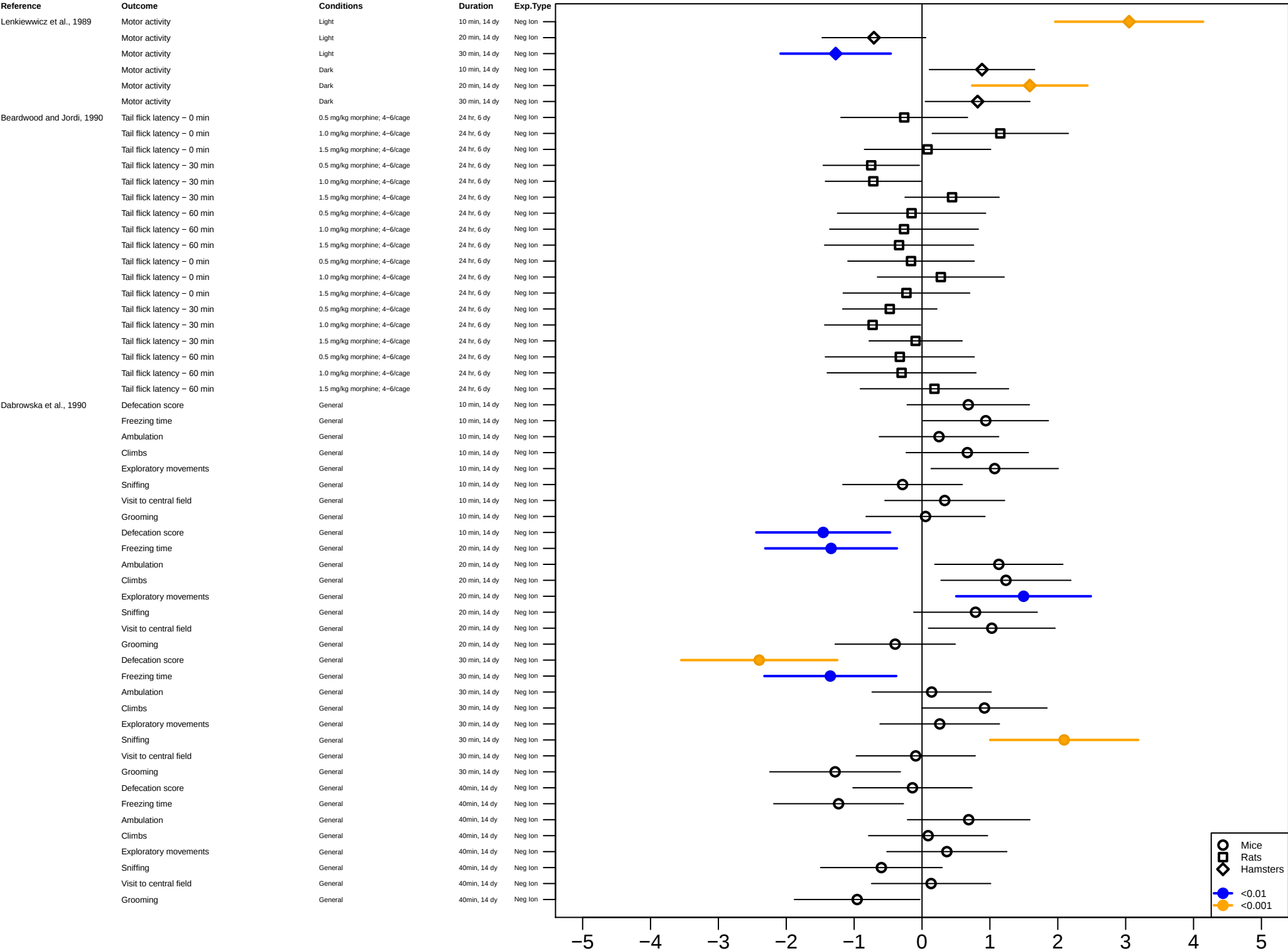
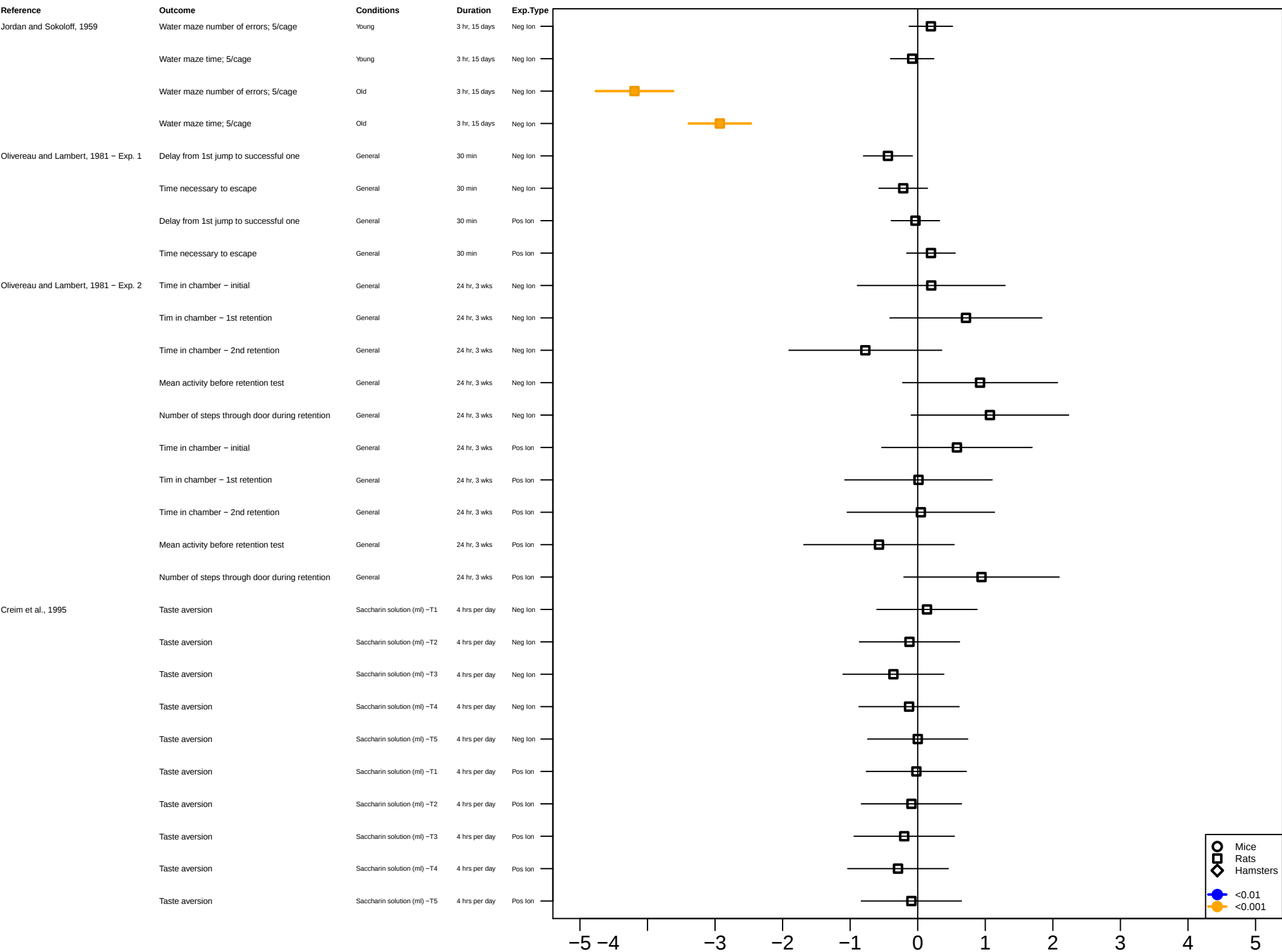


Figure S1 (Cont.)



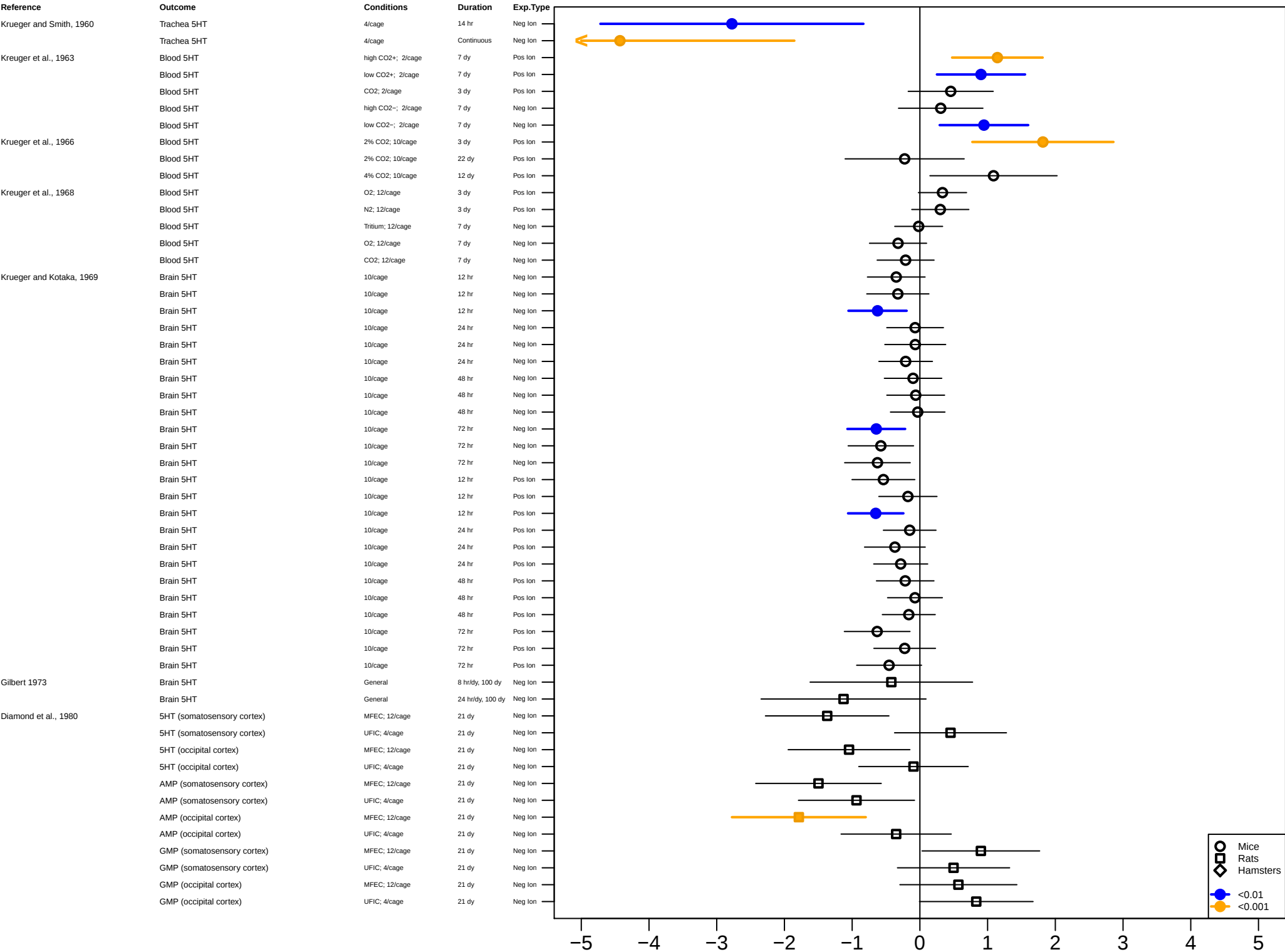
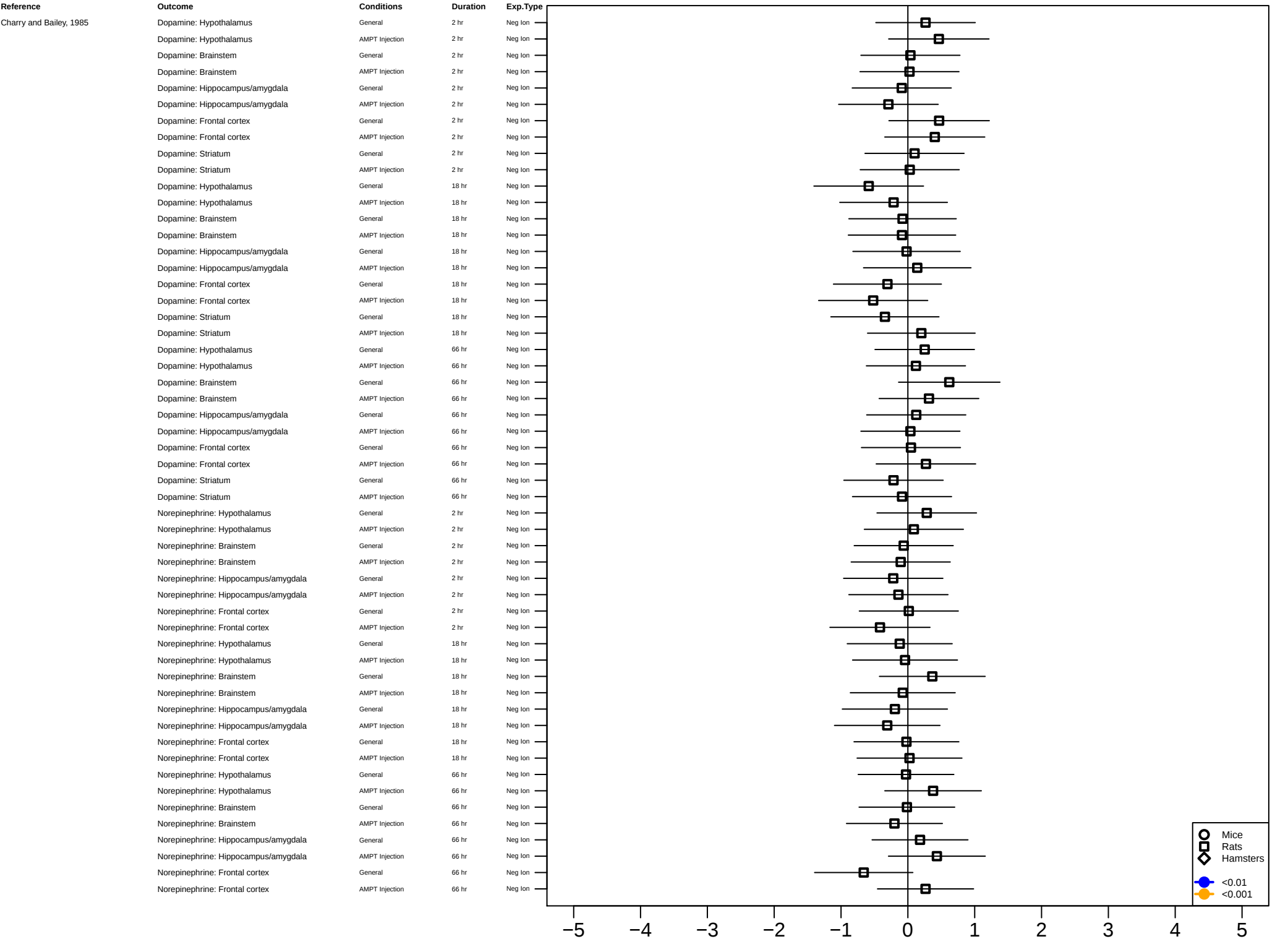


Figure S3. Standardized Mean Differences Air Ion – Serotonin or Other Neurotransmitter Studies



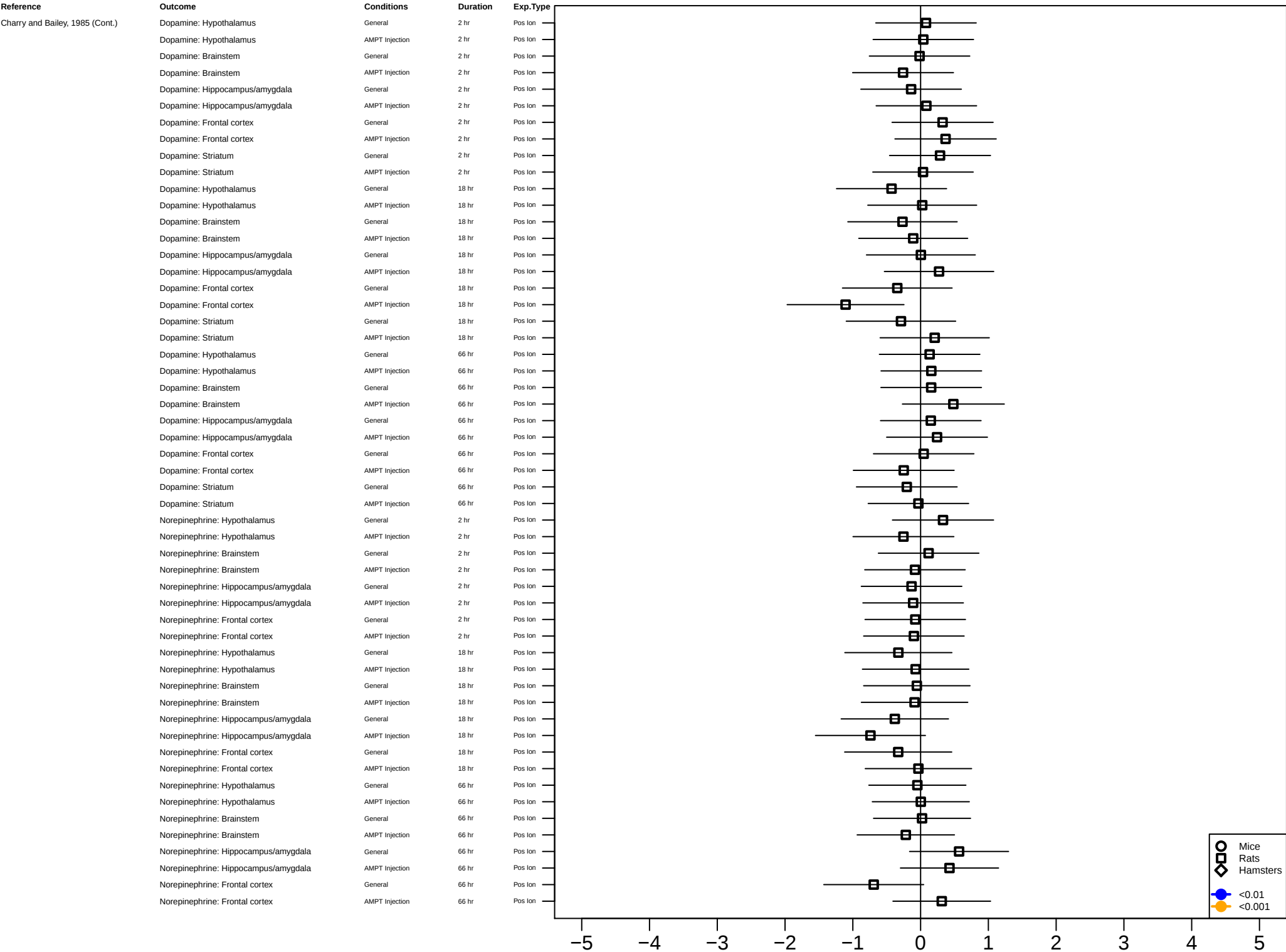
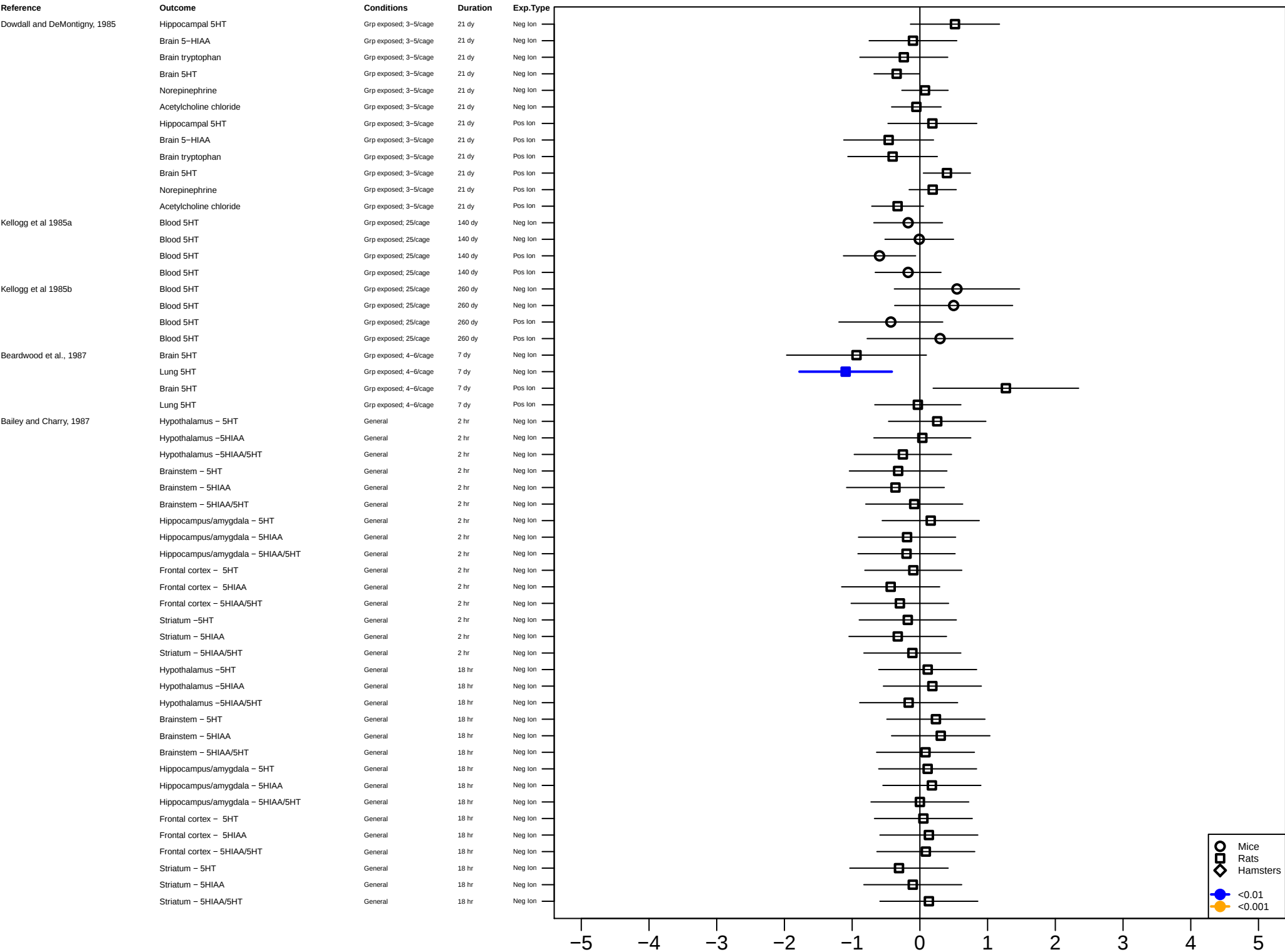
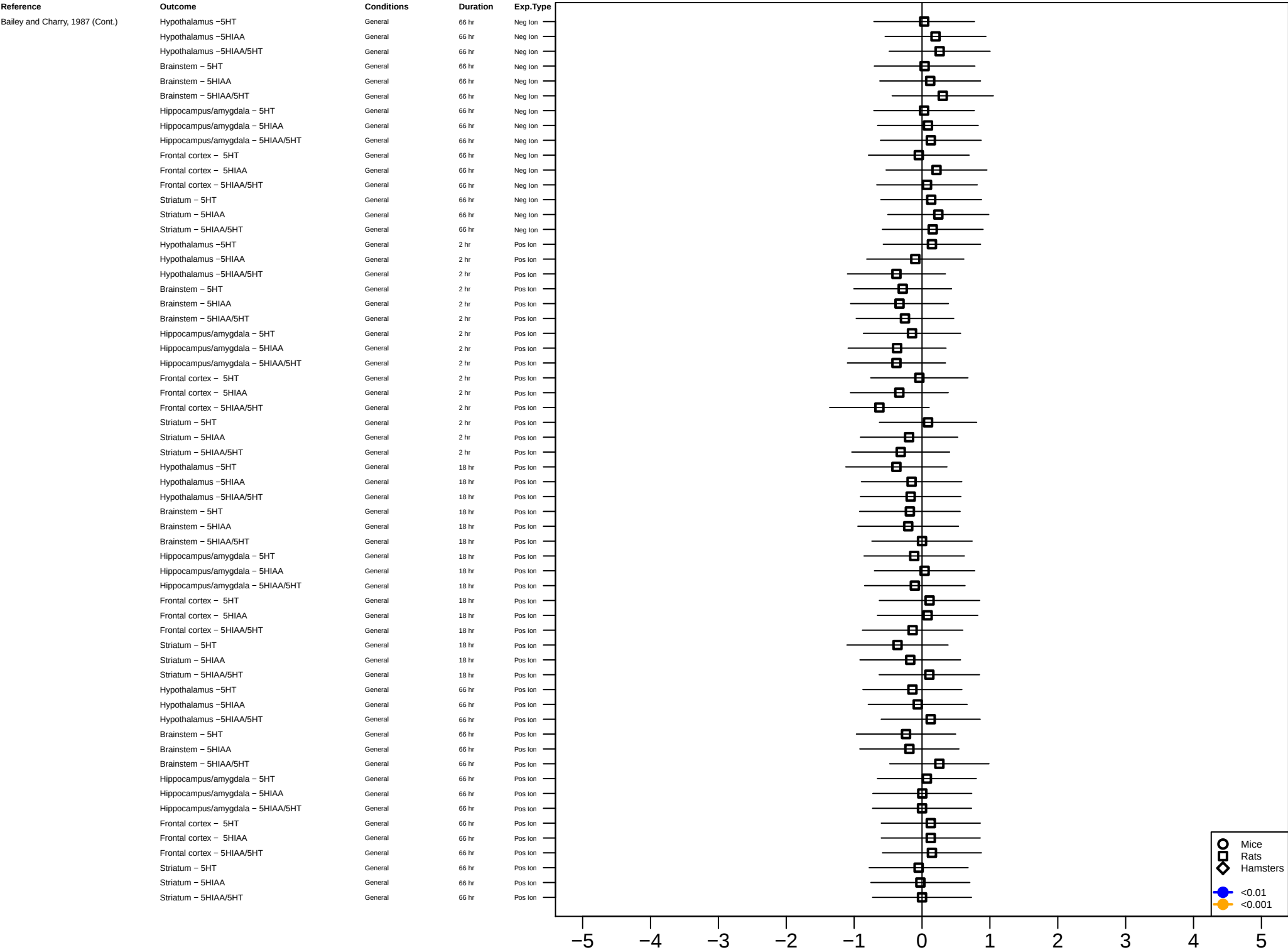
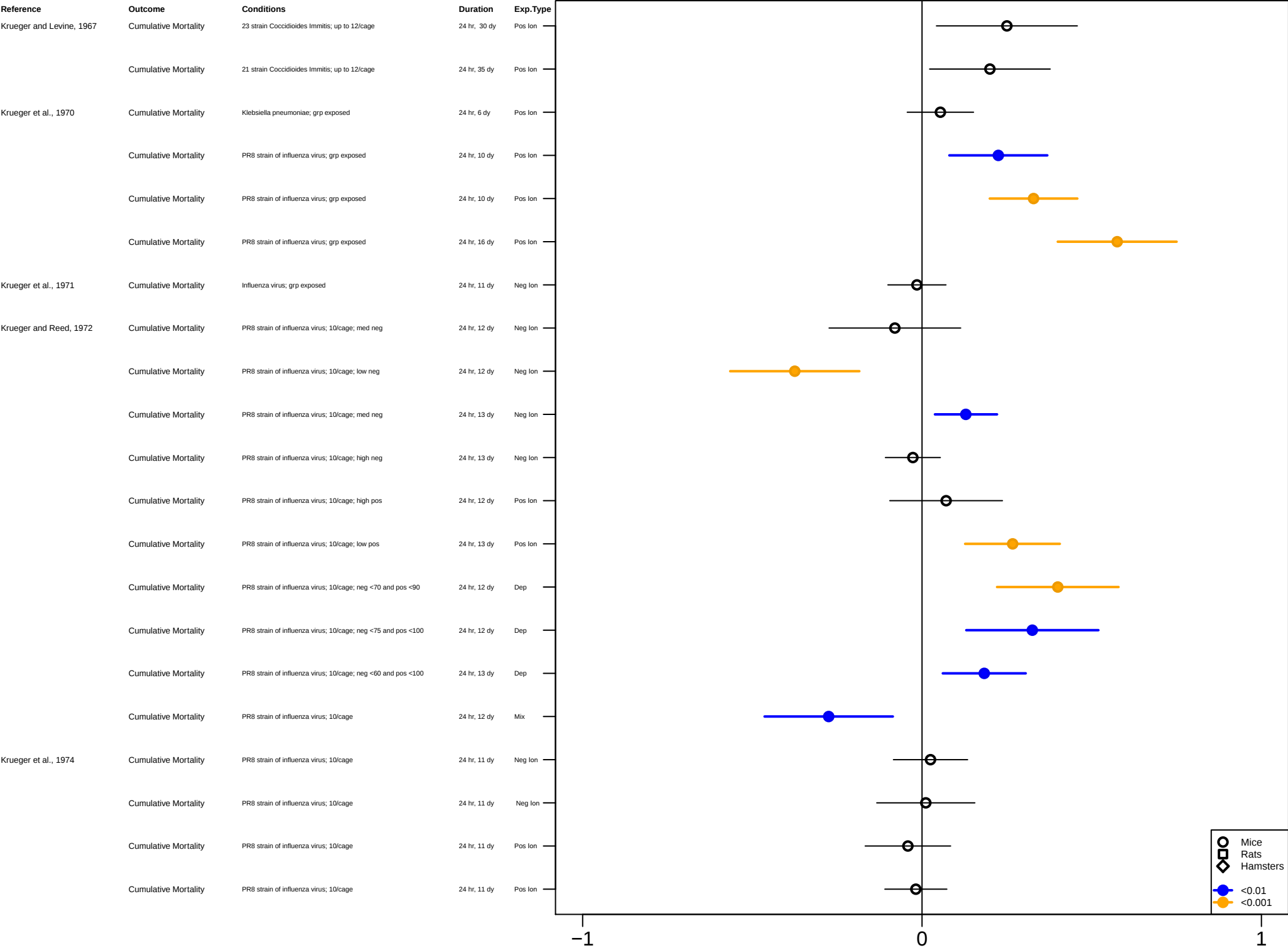


Figure S3 (Cont.)







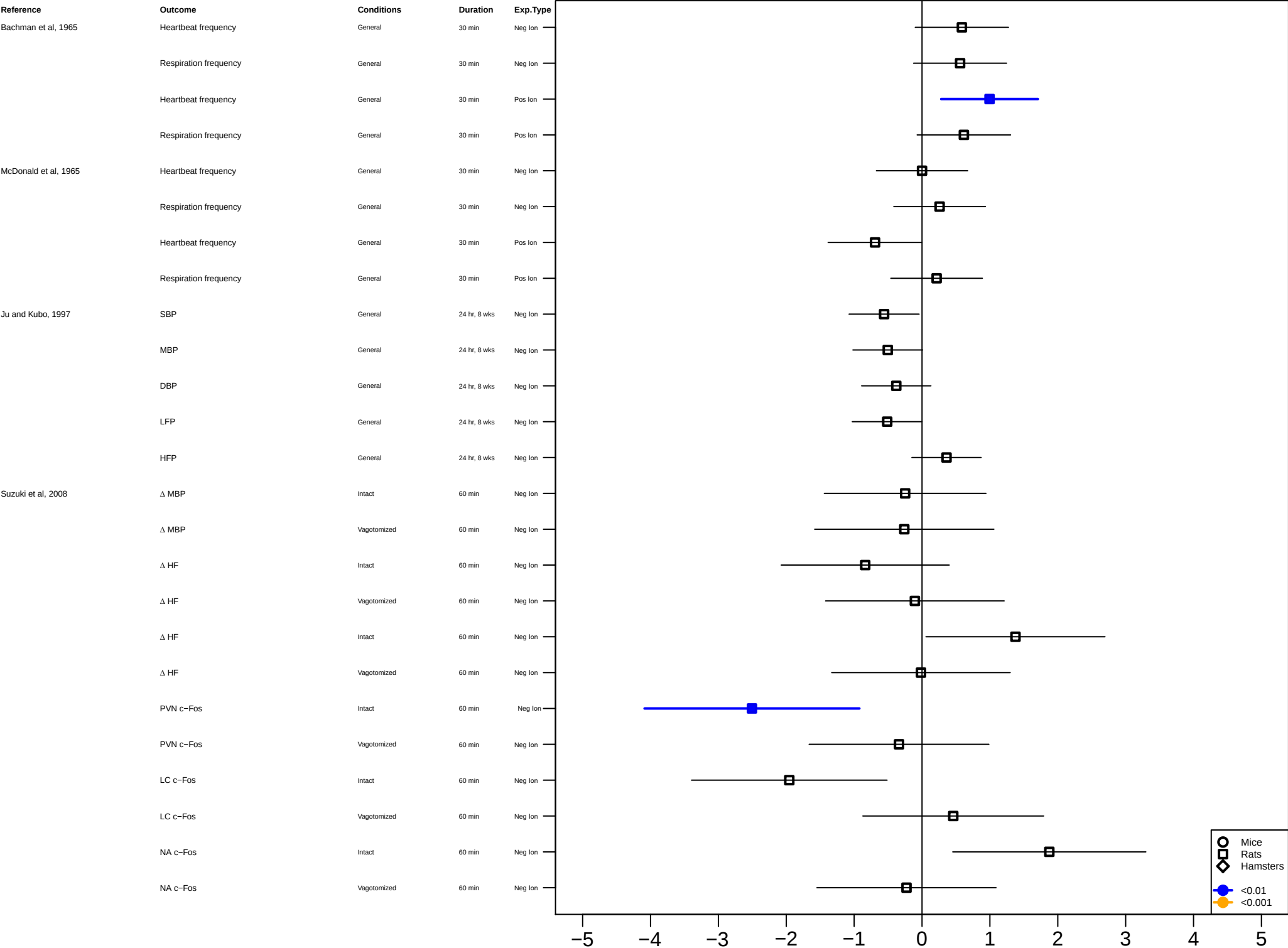
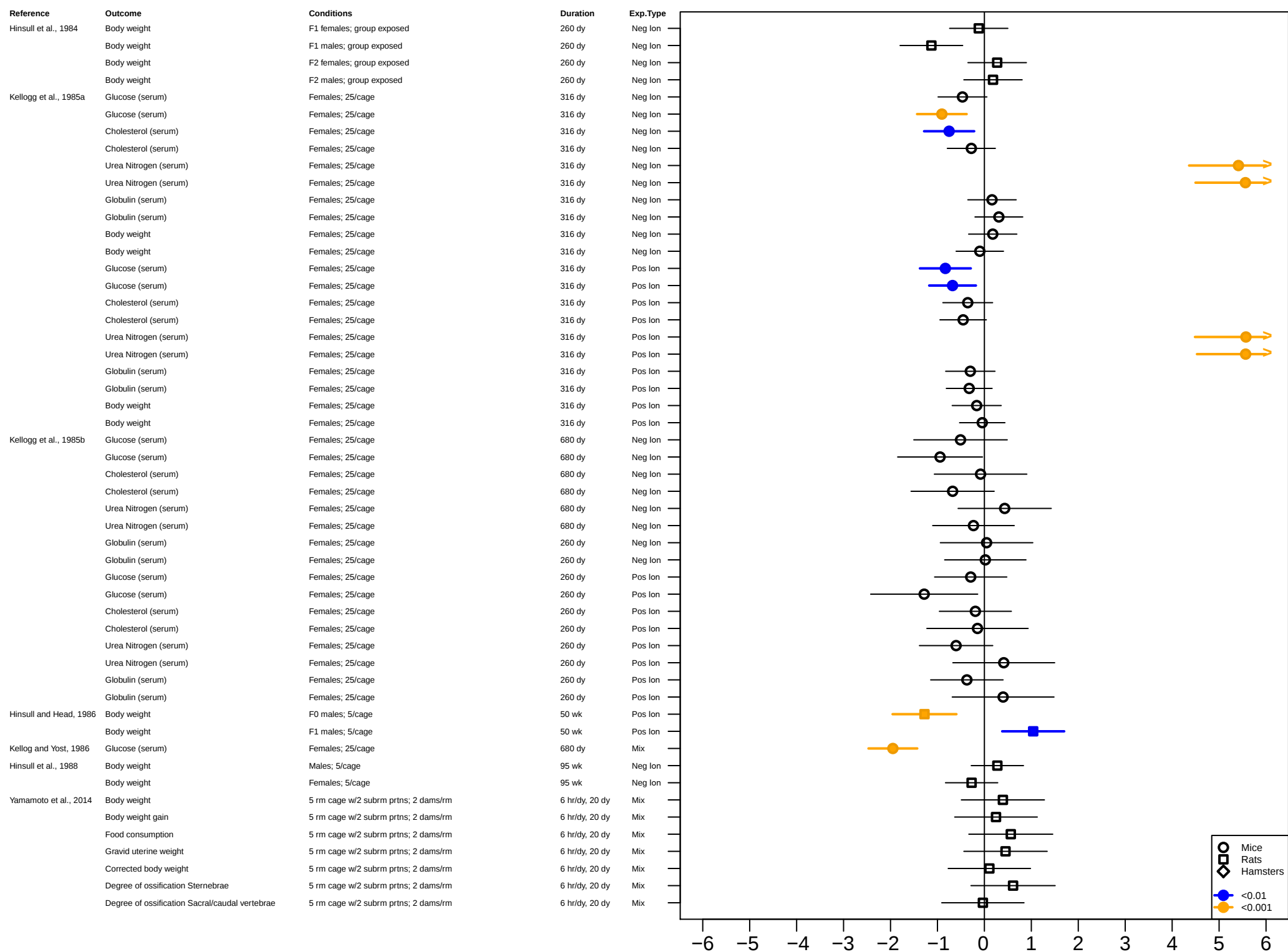
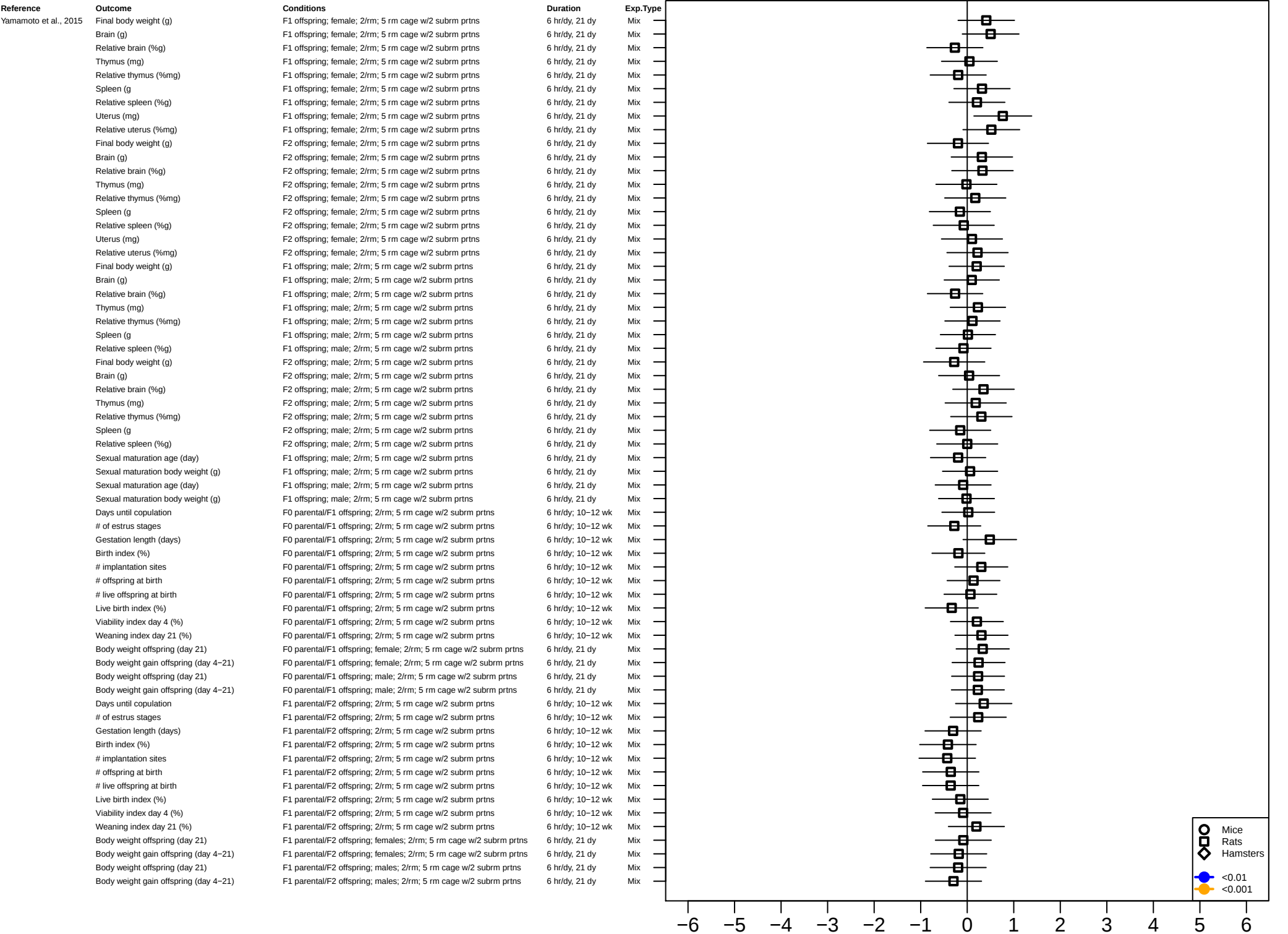
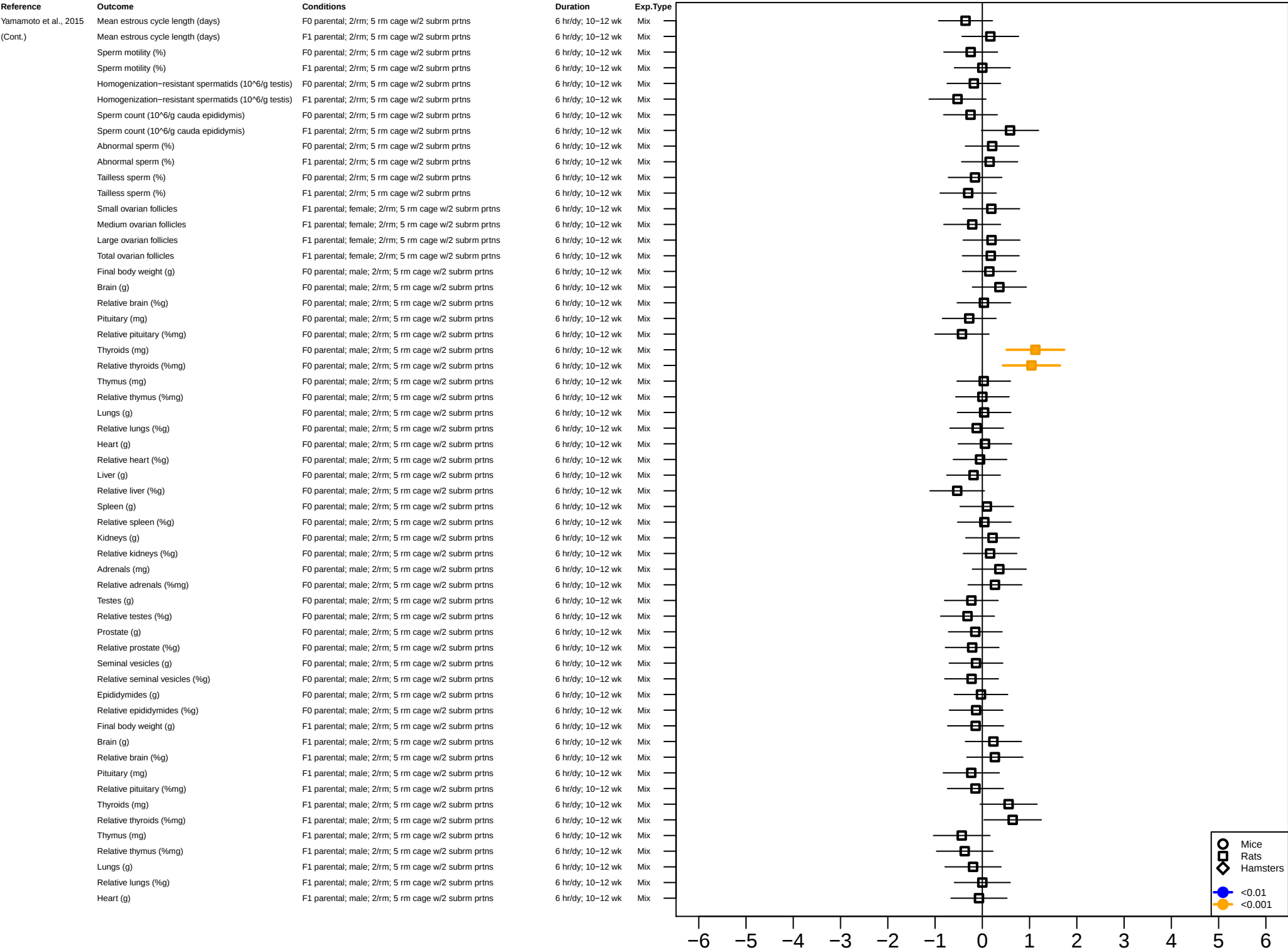
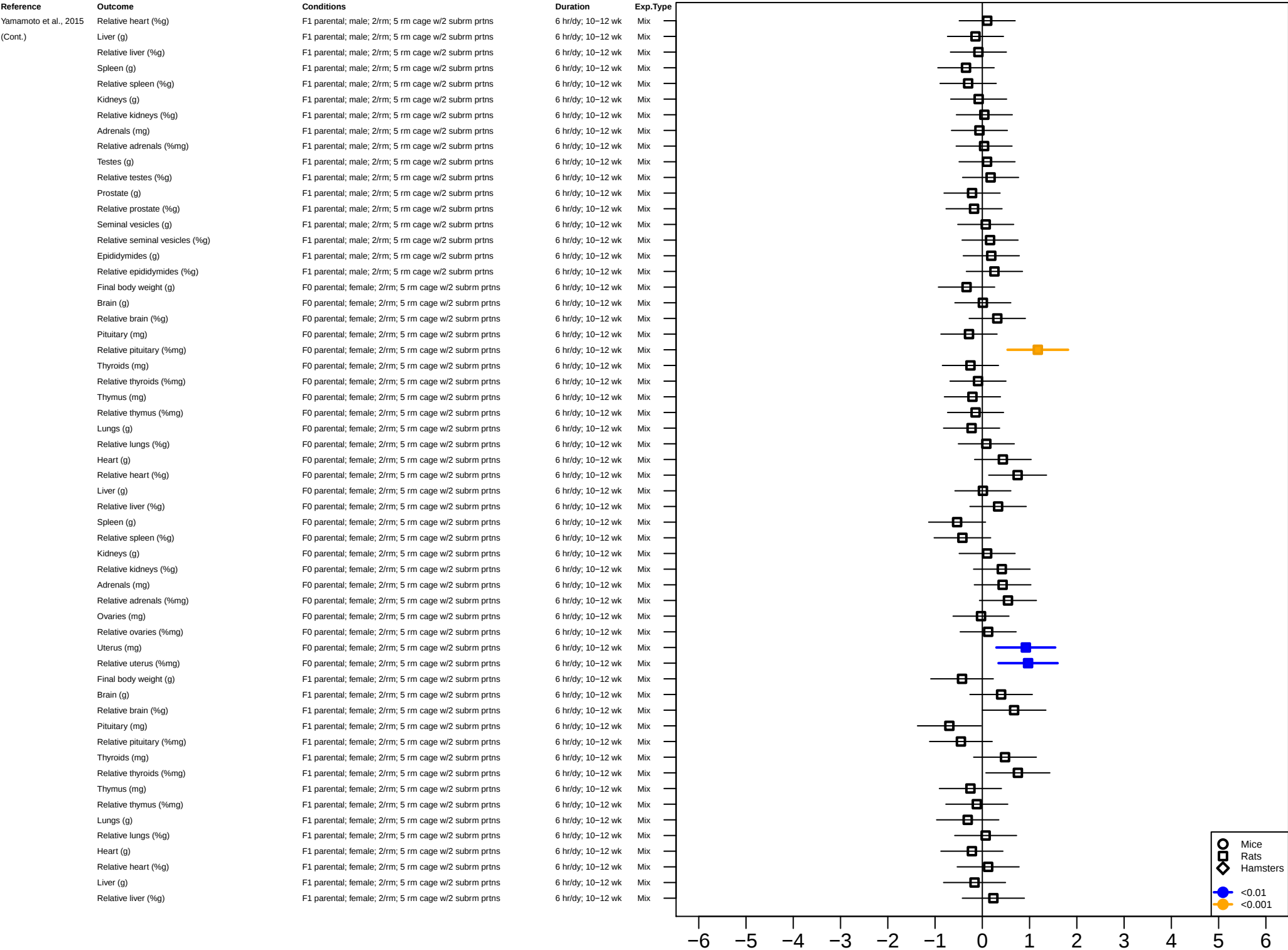


Figure S5. Standardized Mean Differences – Air Ion Cardiovascular Function Studies

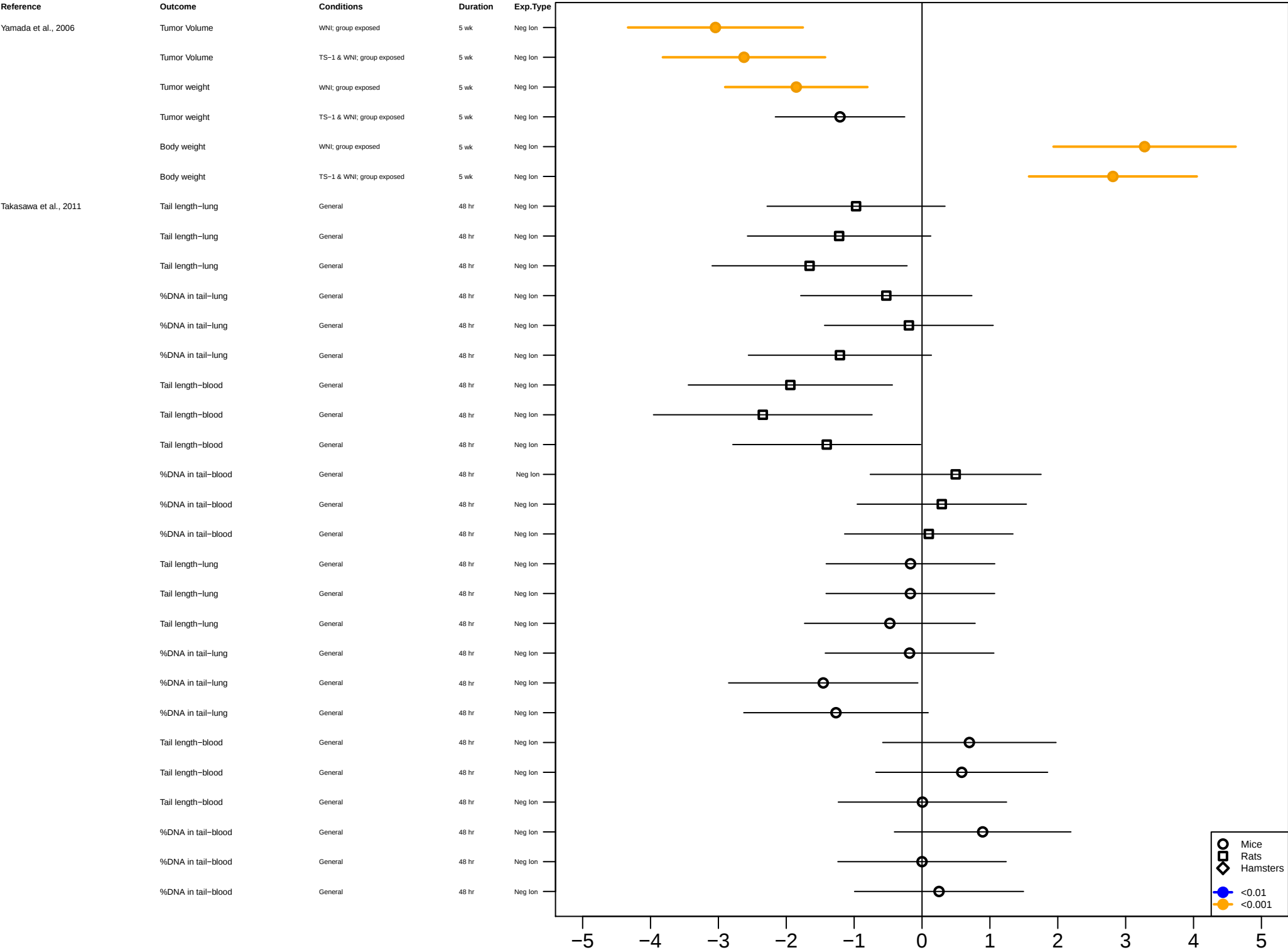












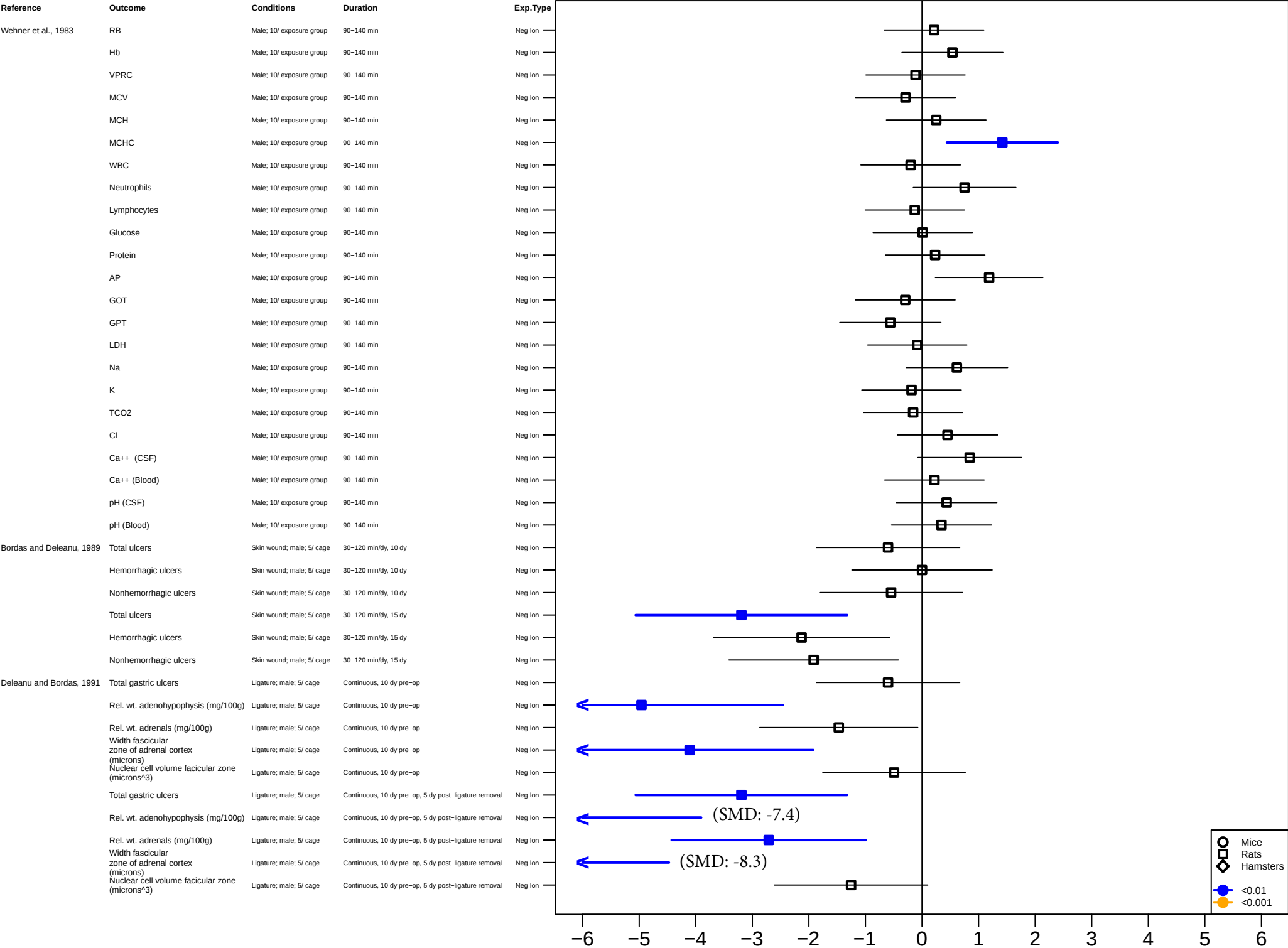


Figure S8. Standardized Mean Differences Air Ion – Other Health Endpoints Studies

## Additional files 2: Abbreviations and notes

### Figure S1      Standardized mean differences - air ion behavior studies

Abbreviations: dy, day; Hz, Hertz; hr, hours; kg, kilograms; mg, milligrams; min, minutes; neg, negative; pos, positive; wks, weeks. Excluded: SMDs could not be calculated for: Beardwood et al., 1987 [58]; Bailey and Charry, 1986 [57]; Creim et al., 1993 [59] and Livanova et al., 1999 [609].

### Figure S2      Standardized mean differences - air ion learning and memory studies

Abbreviations: hrs, hours; ml, milliliter; min, minutes; neg, negative; pos, positive; wks, weeks. Excluded: SMDs could not be calculated for Bauer, 1955 [65]; Duffee and Koontz, 1965 [66]; Frey, 1967 [67]; Nazzario et al., 1967 [68]; Terry et al., 1969 [69]; and Falkenberg and Kirk, 1977 [70]. Data from Creim et al., 1995 [64] extracted from study figures.

### Figure S3      Standardized mean differences - air ion serotonin or other neurotransmitter studies

Abbreviations: 5HT, 5-hydroxytryptamine (serotonin); 5HIAA, 5-hydroxyindoleacetic acid; AMP, adenosine 3', 5'-monophosphate; AMPT, d,1 a-methyl-p-tyrosine methyl ester; CI, confidence interval; CO<sub>2</sub>, carbon dioxide; GMP, guanosine 3', 5'-monophosphate; hr, hours; MFEC, multifamily enriched condition; N<sub>2</sub>, nitrogen; neg, negative; O<sub>2</sub>, oxygen; pos, positive; UFIC, unifamily impoverished condition. Data for calculation extracted from study figures in Krueger and Kotaka, 1969 [75]; Diamond et al., 1980 [76]; Dowdall and DeMontigny, 1985 [79].

### Figure S4      Mean proportional differences - air ion respiratory infection studies

Abbreviations: dep, depleted of ions; hrs, hours; mix, mixture of pos and neg ions; neg, negative; pos, positive. Data for all studies were extracted from study figures.

### Figure S5      Standardized mean differences - air ion cardiovascular function studies

Abbreviations: Amb, nucleus ambiguous; DBP, diastolic blood pressure; HF, high-frequency component in the power spectrum of HRV; HR, heart rate; LC, locus coeruleus; LFP, low-frequency power; MBP, mean blood pressure; neg, negative; pos, positive; PVN, paraventricular nucleus of the hypothalamus; SBP, systolic blood pressure. Data from Ju and Kubo 1997 [108]; Suzuki et al., 2008 [109] extracted from study figures.

### Figure S6      Standardized mean differences - air ion reproduction and growth studies

Abbreviations: dy, day; hrs, hours; F<sub>0</sub>, initial breeding stock; F<sub>1</sub>, first generation; F<sub>2</sub>, second generation; neg, negative; ptrns, partitions; pos, positive; rm, room; subrm, subroom; wks, weeks, w/2, with 2. Excluded: SMDs could not be calculated for Herrington and Smith, 1935 [47]; Hinsull et al., 1981 [117]; Hinsull et al., 1983 [118].

### Figure S7      Standardized mean differences - air ion carcinogenesis studies

Abbreviations: DNA, deoxyribonucleic acid; hr, hours; WNI, water-generated negative ions; neg, negative; pos, positive; TS-1, titanium silicate.

Figure S8      Standardized mean differences - other health endpoints studies

Abbreviations: Ca, calcium; CSF, cerebrospinal fluid; GOT, glutamic oxaloacetic transaminase; GPT, glutamic pyruvic transaminase; MC, mean corpuscular; MCH, mean corpuscular hemoglobin; min, minutes neg, negative; pH, potential of hydrogen; pos, positive; VPRC, volume of packed red blood cells. Excluded: SMDs could not be calculated for Jaśkowski and Myśliwski, 1986 [126].