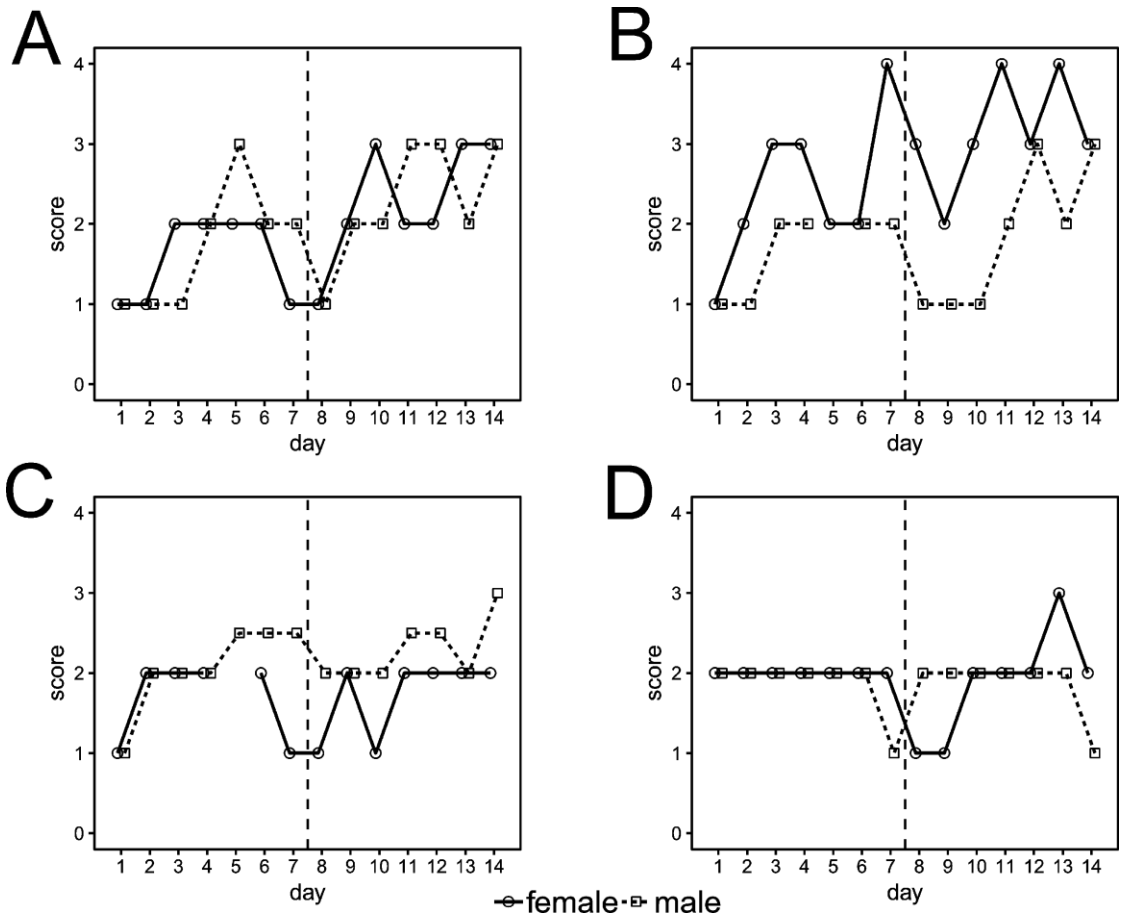
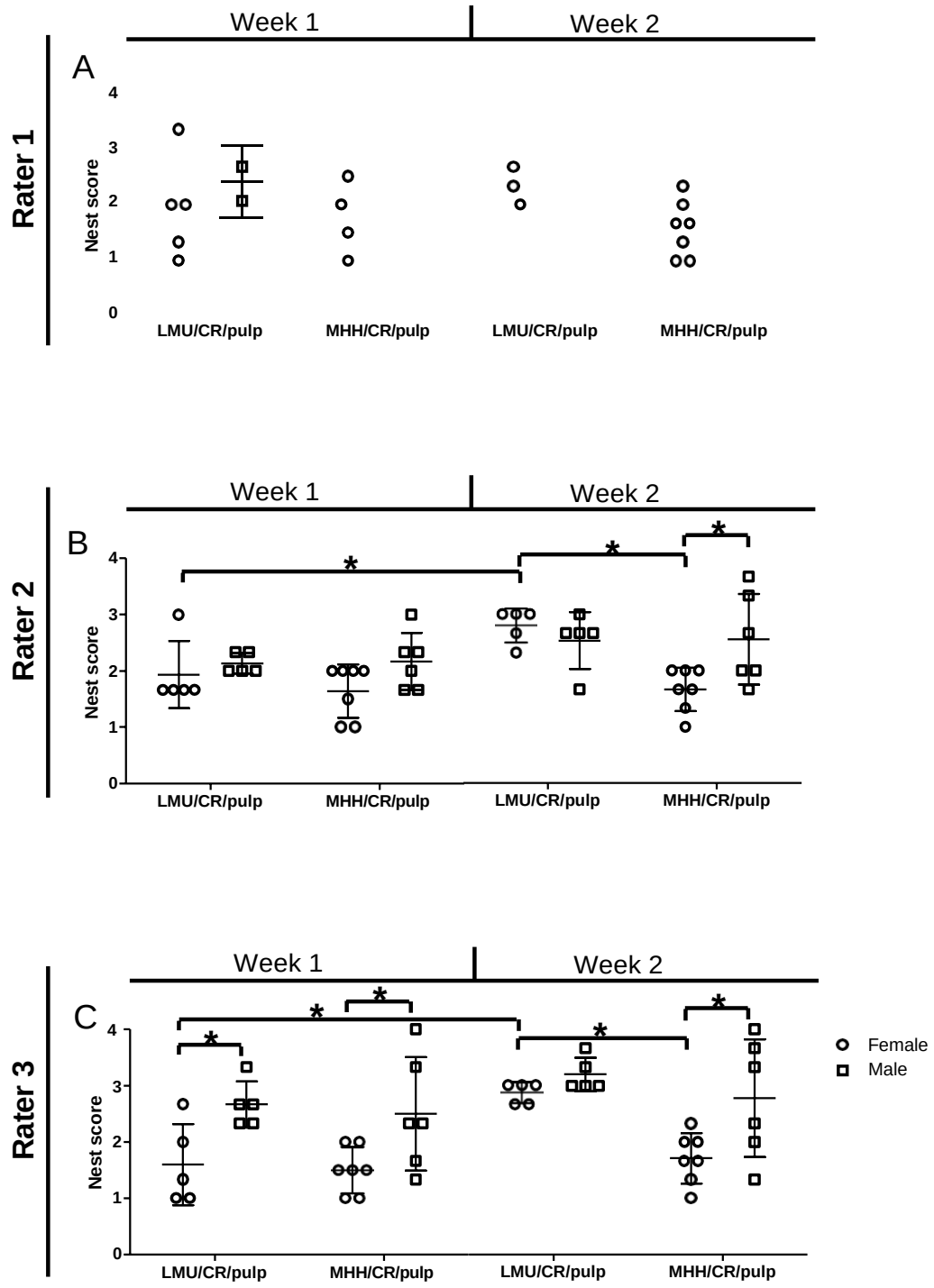
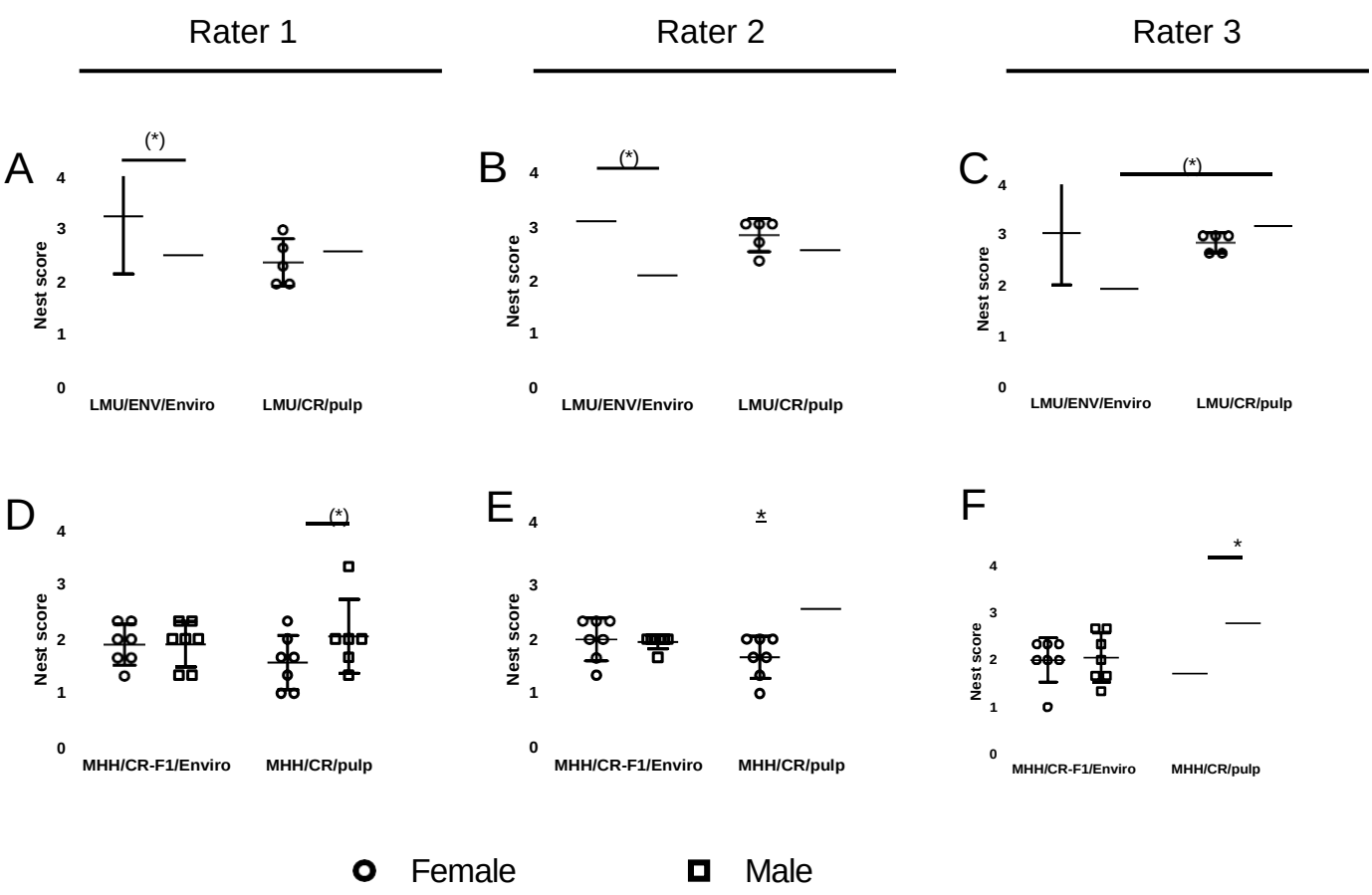
Supplemental figures:



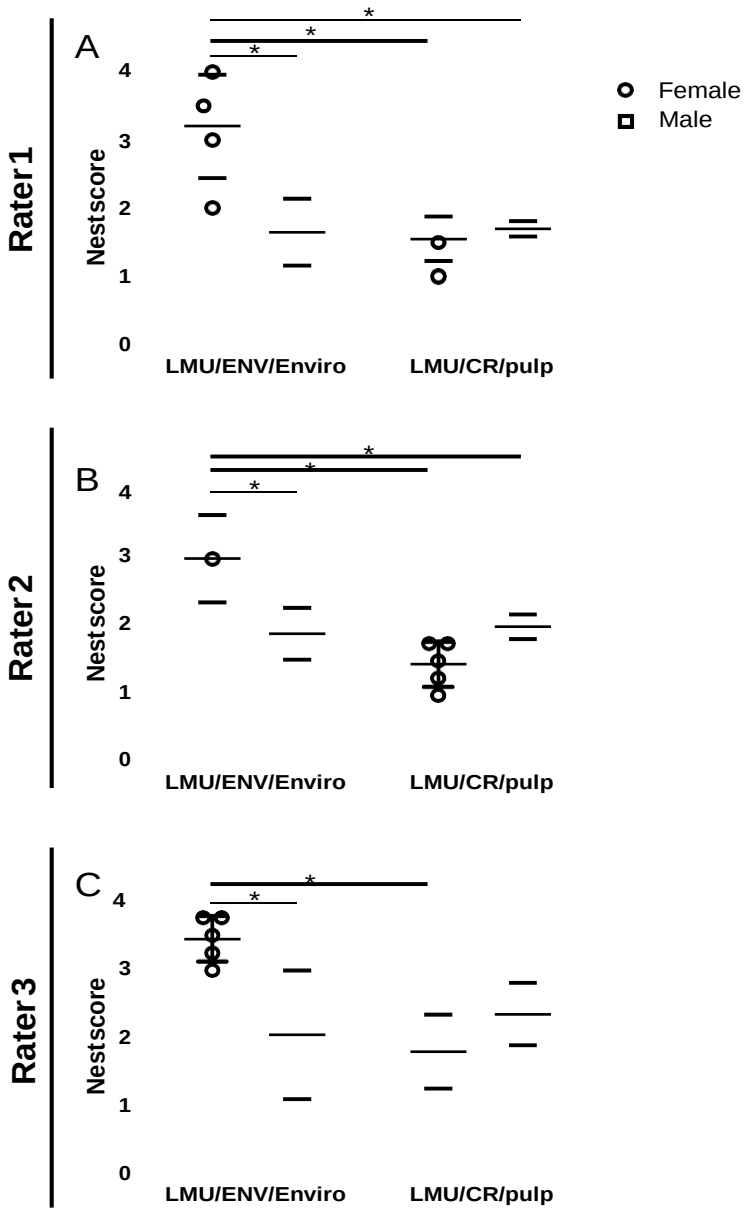
Supplemental figure 1: Timeline of the median nest scores over two weeks in Sprague Dawley rats. Vertical dashed line indicates the introduction of new nesting material. A: LMU/CR/pulp. B: LMU/ENV/Enviro. C: MHH/CR/pulp. D: MHH/CR-F1/Enviro.



Supplemental figure 2: Comparison of week 1 and 2 of nest scoring, site and sex for all CR groups. Shown are the mean nest scores for day 4-6 of each week after receiving new nest material. A: Rater 1. B: Rater 2. C: Rater 3. Significant differences between groups are indicated by asterisks (Three-way ANOVA with post-hoc test adjusted for multiple testing using Benjamini and Hochberg*; $p<0.05$).



Supplemental figure 3: Mean nest score comparison of strains and sex only tested at specific sites at LMU (A) and at MHH (B). Shown are the mean nest scores for day 4-6 after receiving new nest material in second week of nest scoring. At the LMU rats from Envigo (LMU/ENV/Enviro) were compared to rats from Charles River (LMU/CR/pulp), at MHH rats from Charles River reared at MHH (MHH/CR-F1/Enviro) were compared to rats from Charles river (MHH/CR/pulp). A, D: Rater 1. B, E: Rater 2. C, F: Rater 3. Significant differences between groups are indicated by asterisks (Two-way ANOVA with a Bonferroni post-hoc test *; $p<0.05$).



Supplemental figure 4: Comparison of mean nest scores for day 1 - 4 after arrival at LMU Munich for male and females rats from Envigo (LMU/ENV/Enviro) and rats from Charles River (LMU/CR/pulp). A: Rater 1. B: Rater 2. C: Rater 3. Increased nest score in female LMU/ENV/Enviro as compared to all other groups are indicated by asterisks (*; Two-way ANOVA and post-hoc testing $p<0.05$).

Supplemental information

Animals

LMU:

Rats were housed in Macrolon Type IV cages (Zoonlab, Castrop-Rauxel, Germany) and received food (Ssniff Spezialdiäten GmbH, Soest, Germany) and tap water *ad libitum*. Wood chip bedding material was provided (Premium Scientific Bedding J. Rettenmaier & Söhne GmbH + Co KG, Rosenberg, Germany) and for environmental enrichment, two crawl balls were placed in each cage (Plexx B.V., Elst, Netherlands). Rats were housed under environmentally controlled conditions (22±2° C, 55±10% humidity) in a Scantainer (Scantainer classic, Scanbur A/S, Denmark) with a 12h light-dark cycle (lights on at 6:00am). Air exchange rate was 25 times per hour.

MHH:

Rats were housed in Macrolon Type IV (Techniplast, Hohenpeissenberg, Germany) and kept under controlled environmental conditions (22±2°C, 55±10% humidity) with a 14h light - 10h dark cycle (lights on at 06:00am). Animals received normal diet (1324 TPF from Altromin Spezialfutter GmbH&Co. KG, Lage, Germany) and tap water *ad libitum*. Wood chip bedding material was provided (Espentiereinstreu AB P3, AsBe-wood GmbH; Gransee, Germany). Air exchange rate was 15 times per hour.