

## Materials and Methods

While the detailed information on can be found in the manuscript (Warren et al., 2024), the materials and methods are outlined as follows:

- **Tests with the tails of cadaver rats.** Twelve tails dissected from rat cadavers were tested in this study on four testing stations of the same setup. Therefore, the tests were conducted on three days with four tails each day. The static force applied on each tail was 2 N. On each day, the four tails were first expose to sinusoidal vibration at each of the 1/3 octave bands from 40 to 1000 Hz. The vibration magnitude was at rms value of 1.0 g (9.8 m/s<sup>2</sup>). The vibration exposure and measurement at each frequency lasted 10 seconds. Two trials were performed for each frequency treatment. Then, a 4-hour exposure was used to examine the effect of exposure time on the biodynamic responses of the tails. The input and response accelerations were simultaneously measured for 5 seconds at the time points of 0, 3, 6, 9, 12, 15, 20, 30, 40, 50, 60, 90, 120, 150, 180, 210, 240 minutes. For this purpose, two frequencies (63 and 200 Hz) were used. Eight tails were used in the test at 200 Hz, with four on Test Day 1 and four on Test Day 2. Because of the availability of the tails, only four tails were used for the test at 63 Hz, which were performed on Test Day 3.
- **Tests with the tails of living rats.** Six living rats were used in these tests on the same four testing stations. To examine the effect of testing stations on the biodynamic responses, the full experiment lasted for four days so that each tail could be exposed at each of the four testing stations. The other testing conditions (applied 2 N static force and testing stations) were the same as those used in the cadaver tests. The procedures for measuring the biodynamic responses were also the same as those in the cadaver tail tests. On each testing day, the vibration exposure was still sinusoidal excitation, but from 20 to 1000 Hz at each of the 1/3 octave bands, and the input vibration magnitude was 0.5 g rms. Unlike the time dependency test for cadaver tails, the time dependency of the biodynamic responses of living rat tails was examined by repeatedly measuring the frequency responses in the entire frequency range (20 to 1,000 Hz) for 21 rounds, which lasted for one hour. After the one-hour exposure was completed on each testing day, the rats were returned to their home cages until the following day.