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Non-invasive health screening for common marmosets using blood pressure measurements

The health maintenance of primates in captivity is a key component for the well-being of each individual. Blood pressure (BP) measurements as part of a regular monitoring could therefore improve health surveillance in primates e.g. in common marmosets (*Callithrix jacchus*).

The aim of our study was to set up a protocol for clinical BP measurements to monitor the health status of a marmoset colony over 20 months. 49 individuals (23 males, 26 females, age: 13.8-202.4 months) were measured with a high-definition oscillometric device (S+B medVET GmbH).

Standardized collected BP values were 145.7 \pm 9.00 mmHg (systolic), 72.6 \pm 6.44 mmHg (diastolic) and 98.3 \pm 6.46 mmHg (mean arterial BP) with an average pulse rate of 406.5 \pm 32.0 beats/min. Diastolic and mean arterial BP increased with age ($P < 0.05$) and correlated positively with weight ($P < 0.05$). Furthermore, recommendations concerning measurement localisation and daytimes could be worked out: BP values did not differ between measurements conducted in the morning or in the afternoon ($P > 0.05$). To achieve precise data, thigh measurements should be preferred ($P < 0.05$).

These standardized collected BP values with particular regard to age and weight provide basic information about the aging process and cardiovascular changes in the common marmoset.