



Hypertension Models

Scope of application

- Hypertension is a leading cause for cardiovascular, renal disease and stroke
- We use different models to analyse the anti-hypertensive response of blood pressure medications and to analyse the impact on end-organ damage

Models

- Genetic model (rat) We use rats transgenic for the human renin and angiotensinogen gene. These rats develop very severe hypertension and die at 7 weeks of age.
- DOCA salt This model of hypertension is induced by implanting a pellet containing DOCA salt.
- Angiotensin II infusion This model of hypertension is induced by implanting an osmotic mini pump that delivers angiotensin II for 2-8 weeks s.c. Consequently, the blood pressure rises and cardiac and renal damage can be observed.
- Renal artery stenosis In this hypertensive model, a silver clip is placed around the left renal artery, what leads to an activation of the renin-angiotensin system and a subsequent rise in blood pressure.