Rabbit

Animal models are being used for experimental study in various branches of medical and dental sciences, because certain of the research areas obviously cannot be done on human beings for practical and ethical reasons. And, rabbit being an easily available and less aggressive animal is a promising model if the guidelines described are followed
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3283968/

Rabbit is the most frequently used model for intervertebral disc degeneration (28 of 50), followed by rat, pig, and dog. Sheep and goat IVDs resemble those of humans in size and in the absence of notochordal cells. Despite this advantage, there were only 2 sheep and 1 goat studies of 50 studies in this cohort. It is also unclear if a study in large animals is needed before clinical trials since some of the clinical trials proceeded without a study in large animals. No animal studies or clinical trials completely restored IVD structure. However, results suggest cause for optimism. In light of the fact that patients primarily seek medical care for back pain, attenuating local inflammation should be a priority in benchmarks for success. Clinicians generally agree that short-term back pain should be treated conservatively. When interventions are considered, the ideal therapy should also be minimally invasive and concurrent with other procedures such as discography or discectomy. Restoration of tissue structure and preservation of spinal motion are desirable [1].

The effects of three sequential injections of cisternal blood on ventricular size, cerebrospinal fluid (CSF) pressure, CSF formation rate, and CSF absorption rate were evaluated in adult rabbits. Autologous blood was injected into the cisterna magna on Days 1, 4, and 8 and ventriculocisternal perfusion was done on Day 15. Control animals received artificial CSF injection at these intervals. For each rabbit, the mean CSF pressure was higher after three injections of blood than before: 13 animals after blood injection had a mean CSF pressure of 15.59 +/- 1.15 cm H2O (mean +/- SE); before blood injection, their pressure had been 11.14 +/- 1.43 cm H2O (all figures are means +/- SE). This is a significant increase in pressure (P less than 0.01, paired t-test). Further, the 13 rabbits with cisternal blood injection had a significantly higher CSF pressure than 5 control animals: 15.59 +/- 1.15 vs. 10.50 +/- 1.06 cm H2O. The animals with cisternal blood injection all developed some degree of hydrocephalus; the ventricle to brain percentage ratio was 9.84 +/- 0.56 in blood-injected animals and 2.38 +/- 0.21 in control animals (P less than 0.01, two-tailed t-test). CSF formation and absorption rates were not significantly different after subarachnoid hemorrhage. The CSF formation rates were 9.85 +/- 1.8 microliter/minute in the experimental group and 9.53 +/- 1.9 microliter/minute in the control group; CSF absorption at the animal's opening pressure was 13.30 +/- 2.06 microliter/minute in the animals with cisternal blood injection and 9.97 +/- 2.4 microliter/minute in the control animals [2].

New Zealand rabbit.

Rabbit cranial defect model

Rabbit cranial defect model.

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Tong W, Lu Z, Qin L, Mauck RL, Smith HE, Smith LJ, Malhotra NR, Heyworth MF, Caldera F, Enomoto-Iwamoto M, Zhang Y. Cell therapy for the degenerating intervertebral disc. Transl Res. 2016 Nov 28. pii: S1931-5244(16)30403-0. doi: 10.1016/j.trsl.2016.11.008. [Epub ahead of print] Review. PubMed PMID: 27986604.
2)
Black PM, Tzouras A, Foley L. Cerebrospinal fluid dynamics and hydrocephalus after experimental subarachnoid hemorrhage. Neurosurgery. 1985 Jul;17(1):57-62. PubMed PMID: 4022288.