ANESTHESIA & ANALGESIA IN RABBITS: A RESOURCE GUIDE

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Anesthesia and Analgesia in Rabbits: A Resource Guide

Description: *Anesthesia and Analgesia in Rabbits: A Resource Guide* is a bibliography of biomedical and veterinary literature on the use of anesthesia and analgesia in rabbits covering 2011 to 2021. It contains 279 citations. This bibliography updates *A reference source for analgesia & analgesics in animals* compiled by Dr. Richard L. Crawford (AWIC Series 2000-02) published in December 2000 and archived in the National Agricultural Library Digital Collections.

Dr. Crawford subdivided the previous bibliography into twenty sections organized by individual species or species groups. The bibliography covered most vertebrate and some invertebrate animals, including commonly used laboratory species such as mice, rats, rabbits and other rodents, and primates. One section of the bibliography covered rabbits and rodents. In the twenty years since Dr. Crawford published this bibliography, the number of publications on veterinary anesthesia and analgesia has increased greatly. Because of the large amount of literature, AWIC staff members decided to compile a series of bibliographies, each one covering a particular group of animals.

- **Scope:** This guide covers peer-reviewed literature (articles in peer-reviewed journals, books, book chapters, and conference proceedings) on anesthesia and analgesia use in rabbits published between 2011 and 2021. The following databases were searched:
  - PubMed
  - Web of Science (All Databases: Web of Science Core Collection as well as Biological Abstracts, BIOSIS Citation Index, Current Contents Connect, KCI-Korean Journal Database, Russian Science Citation Index, SciELO Citation Index, and Zoological Record)
  - Scopus
  - EBSCO platform databases (Agricola, CAB Abstracts, eBook Collection (EBSCOhost), Global Health, Zoological Record, Biological Abstracts, MEDLINE)

How to Use This Resource Guide:

The bibliography is divided into the following sections. You can navigate directly to each section by clicking on the headings in the Table of Contents:

- **Preoperative Considerations:** Literature discussing preparations, premedication, and other considerations prior to anesthesia and/or operation.
- **Methods of Delivery/Administration:** Covers aspects of anesthesia and analgesia delivery and administration, such as injection sites, intranasal administration, and tracheal access.
- **Parenteral Techniques:** Literature about different types of injection anesthesia medications and techniques.
• **Inhalation Anesthesia**: Citations in this section cover types of inhalation anesthesia medications and techniques.

• **Regional Anesthesia**: Literature concerning local and regional anesthesia including epidurals, nerve blocks, and spinal anesthesia.

• **Special Anesthetic Considerations**: Citations regarding considerations such as hypnosis, anesthesia for ophthalmic and fetal surgery, and long-term anesthetic preparations.

• **Intraoperative Support and Monitoring**: Literature about monitoring and support that occur intraoperatively, including reflexes, body temperature, and cardiopulmonary parameters.

• **Postoperative Considerations**: This section covers postoperative monitoring and other considerations.

• **Analgesia and Pain Management**: Citations in this section cover pain assessment, pain management, and analgesic medications and methods.

• **Eastern Medicine**: Literature about acupuncture and electropuncture.

**Citation Order:** Citations are arranged in ascending order by the last name of the first author within each section of the bibliography.

**Keywords:** Each citation is followed by a series of selected keywords derived from the citation records of the database searched. Because this bibliography derives from multiple databases, keywords may vary in form since databases may use different controlled vocabularies and different indexing terms.

**Finding Full-Text of Articles:**

You may check the National Agricultural Library’s (NAL) online catalog, AGRICOLA, to see which books and periodicals that the library has in its holdings. Some online periodicals in NAL’s holdings are only available to USDA employees through the Digitop portal. Other articles are open access and may be downloaded for free. If you are not a USDA employee, check with your local or institutional library to see whether your library subscribes to these periodicals or can order them on interlibrary loan.

Information on how to request materials that are included in the National Agricultural Library (NAL)’s collections can be found on the Request Library Materials page. USDA employees can request books and articles through Document Delivery. All patrons are encouraged to explore local library resources first before contacting the National Agricultural Library. If you are not a USDA employee, you may visit the library during its hours of operation to request items from our circulation desk or read electronic articles on-site. You may also request items on interlibrary loan through your home library (check with your institutional, university, or public library’s loan office for further information).

**Disclaimer:** *This research guide is for informational purposes only. If you are a researcher planning to use any of the anesthesia/analgesia drugs or methods mentioned in these citations on rabbits, you should always consult a veterinarian.*
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Preoperative Considerations

49 citations


**Keywords:** LL882; rabbits; Veterinary Pharmacology and Anaesthesiology


**Keywords:** analgesia; Anesthesia, Inhalation; anesthetic agent; Anesthetics, Combined/pharmacology; Anesthetics, Inhalation; compartment model; Dexmedetomidine/administration & dosage/pharmacokinetics; drug blood level; drug concentration; drug distribution; Hypnotics and Sedatives/administration & dosage/pharmacology; Infusions, Intravenous; intravenous drug administration; IsoFlo; Isoflurane; Leporidae; limit of quantitation; mass spectrometry; mathematical model; minimum lung alveolus concentration; New Zealand White (rabbit); nonlinear regression analysis; Rabbits; Ringer lactate solution


**Keywords:** Abdomen; Conscious Sedation; controlled study; Dexmedetomidine; Drug Therapy, Combination; echography; Hypnotics and Sedatives; ketamine; midazolam; rabbits; randomized controlled trial; Time Factors; Treatment Outcome; Ultrasonography; veterinary


**Keywords:** Anesthesia; Isoflurane; Inhalation Anesthesia; Levobupivacaine; lidocaine

Keywords: adverse event; anesthesia induction; Animal Surgery and Non-drug Therapy; controlled study; drug effect; drug withdrawal; experimental rabbit; eye surgery; general anesthesia; glaucoma; inhalation anesthesia; intraocular hypertension; Intraocular Pressure; IOP; Isoflurane/adverse effects; Isoflurane; isoelectia; ketamine; ketathesia; LL860; LL882; L884; New Zealand White (rabbit); Non-Communicable Diseases and Injuries of Animals; oculoplethysmography; oxygen; premedication; pressure measurement; Rabbits; risk; Tonometry, Ocular/veterinary; veterinary medicine; Veterinary Pharmacology and Anaesthesiology; Xylazine


Keywords: Anesthesia, General/methods/standards; Anesthetics/administration & dosage; Euthanasia, Animal/methods; Intraoperative Complications/prevention & control; Intubation, Intratracheal/methods; Monitoring, Intraoperative/methods; Preanesthetic Medication; Sample Size; Species Specificity


Keywords: action potential amplitude; Analgesics, Apnea/chemically induced; Apnea/physiopathology; apnea; botzinger complex; breathing pattern; breathing rate; Control of breathing; controlled study; Enkephalin, Ala(2)-MePhe(4)-Gly(5)-/pharmacology; enkephalin[2 dextro alanine 4 methylphenylalanine 5 glycine]; Medulla Oblongata/drug effects; Medulla Oblongata/metabolism; Medullary respiratory network; Microinjections; mu opiate receptor; Naloxone/pharmacology; naloxone; Narcotic Antagonists/pharmacology; nerve cell network; Neurons; Opioid/pharmacology; Opioid-induced respiratory depression; Phrenic Nerve/drug effects; Phrenic Nerve/physiopathology; preBötzinger Complex; Rabbits; Receptors, Opioid, mu/agonists; Receptors, Opioid, mu/metabolism; respiration control; respiration depression; Respiratory Center/drug effects; Respiratory Center/metabolism; Respiratory Insufficiency/chemically induced; Respiratory Insufficiency/physiopathology; respiratory tract disease; ventral respiratory group; μ-Opioid receptor


Keywords: preBotzinger; mu-opioid; Rabbits; Opioid


Keywords: Anesthesics; Ketamine; Xylazine; Anesthesia; anesthesia induction; Anesthesia/methods/standards; Anesthetics; animal experiment; Body Weight; Body Weight/drug effects; Injections; Injections, Intramuscular; ketamine; Postoperative Period; premedication; rabbits; Reoperation; Reproducibility of Results; Saphenous Vein; Saphenous Vein/surgery; Time Factors; vein surgery; Xylazine

**Keywords:** Anesthesia, Intravenous; Cardiac Surgical Procedures; Adrenergic alpha-2 Receptor Agonists/pharmacology/therapeutic use; alpha 2 adrenergic receptor stimulating agent; Anesthetics, Intravenous/adverse effects/pharmacology; Arrhythmias, Cardiac/chemically induced/prevention & control; Bradycardia/chemically induced/prevention & control; Cardiac ischemia; Cardiac Surgical Procedures; Cardiovascular toxicity; chemically induced; drug effect; Drug Interactions; heart arrhythmia; heart surgery; Hemodynamics; Hemodynamics/drug effects; Hypnotics and Sedatives/adverse effects/pharmacology; Intraoperative Complications/chemically induced/prevention & control; intravenous anesthesia; Leporidae; Mesenchymal Stem Cell Transplantation; Mesenchymal Stem Cell Transplantation/methods; midazolam; Midazolam/adverse effects/pharmacology; myocardial ischemia reperfusion injury; Myocardial Reperfusion Injury/therapy; peroperative complication; procedures; Propofol; Propofol/adverse effects/pharmacology; Rabbits/surgery; species difference; Species Specificity; surgery


**Keywords:** Adrenal Cortex; anesthetic agent; Anesthetics, Combined; Anesthetics, Intravenous; animal; blood; controlled clinical trial; controlled study; Corticosterone; Diazepam; drug effect; Fentanyl; Hydrocortisone; intravenous anesthetic agent; ketamine; Medetomidine; physiology; rabbits; randomized controlled trial; Time Factors


**Keywords:** Anesthesia; Rabbits; Propofol; Alfaxalone; Heart Rate; Respiratory Rate


**Keywords:** anesthesia; Anesthetics/administration & dosage; experimental injection; Postoperative Care; Preoperative Care; Rabbits


**Keywords:** Anesthetics, Intravenous/administration & dosage; Hypnotics and Sedatives; Medetomidine; Midazolam/administration & dosage; Rabbits/physiology; Sufentanil/administration & dosage; Alpha-2-agonist; Anesthesia, Intravenous; anesthetic agent; Anesthetics, Combined; Anesthetics, Intravenousanimal disease; Benzodiazepine; Blood Pressure/drug effects; breathing rate; Canis familiaris; Cardiac Output/drug effects; Hypnotics and Sedatives; Hypotension; Medetomidine; methodology; midazolam; Opioid; Oryctolagus cuniculus; physiology; rabbits; Respiratory depression; Respiratory Rate/drug effects; Sufentanil; TIVA; anesthesia; Animal Physiology and Biochemistry (Excluding Nutrition); Animal Surgery and Non-drug Therapy; cardiac output; cats; dogs; Farm and Horticultural Structures; Felidae; Fissipeda; heart rate; hypotension; intravenous injection; Leporidae; LL070; LL600; LL882; LL884; mortality; muscles; New Zealand White rabbit; NN300; oxygen; pH; rabbits; reflexes; respiratory rate; surgery; Veterinary Pharmacology and Anaesthesiology

**Keywords:** anesthesia induction; Anesthetics, Combined; Anesthetics, Inhalation; Anesthetics, Intravenous; animal experiment; Animal model; Blood Glucose; Blood Pressure; Blood Proteins; bone defect; Cardiac Output; continuous infusion; controlled study; endotracheal intubation; femur condyle; glucose blood level; Hypnotics and Sedatives; Inhalation anaesthesia; intermittent positive pressure ventilation (IPPV); intravenous anaesthesia; Isoflurane; lactate blood level; Lactic Acid; maintenance drug dose; mean arterial pressure; Medetomidine; midazolam; orthopedic surgery; rabbits; Respiratory Rate; righting reflex; Stifle; Sufentanil; total intravenous anaesthesia (TIVA); anaesthesia; Animal Surgery and Non-drug Therapy; blood glucose; blood serum; carbon dioxide; femur; heart rate; intravenous injection; laboratory animals; lactic acid; Leporidae; LL860; LL882; LL884; Non-Communicable Diseases and Injuries of Animals; orthopedics; protein content; protocols; rabbits; surgery; Veterinary Pharmacology and Anaesthesiology


**Keywords:** Anesthesia; Anesthesia/veterinary; anesthetic agent; Anesthetics, Combined; Anesthetics, Combined/administration & dosage; Anesthetics, Intravenous; Anesthetics, Intravenous/administration & dosage; Ether derivative; Hypnotics and Sedatives/administration & dosage; Hysterectomy; Hysterectomy/veterinary; intravenous anesthetic agent; Medetomidine; Medetomidine/administration & dosage; Methyl Ethers/administration & dosage; midazolam; Midazolam/administration & dosage; Oryctolagus cuniculus; Ovariohysterectomy; Rabbits; randomized controlled trial; Sevoflurane; Sufentanil; Sufentanil/administration & dosage; Total intravenous anaesthesia sufentanil-midazolam; Treatment Outcome


**Keywords:** albino rabbit; analgesia; Anesthesia; animal experiment; animal tissue; breathing depth; breathing rate; controlled study; cornea reflex; Dexamethasone; histopathology; Hypnotics and Sedatives; Injections, Spinal; intraspinal drug administration; ketamine; Leporidae; mucosa; muscle relaxant agent; muscle tone; Neuromuscular Agents; Premedication; procedures; pulse rate; Rabbits; reflex; salivation; Spine; veterinary medicine; vomiting; Xylazine


**Keywords:** anesthesia; Animal Anatomy and Morphology; Animal Behaviour; Animal Nutrition (General); Animal Physiology and Biochemistry (Excluding Nutrition); Animal Surgery and Non-drug Therapy; body components; Canidae; Canis; carnivores; cats; death rate; dogs; Felidae; Felis; Fissipedia; Leporidae; LL070; LL300; LL400; LL500; LL600; LL882; LL884; preanesthetic medication; rabbits; Veterinary Pharmacology and Anaesthesiology

**Keywords:** Anesthetics, Inhalation; Anesthetics, Intravenous; blood flow; Blood Pressure; Carotid Arteries; dimethyl ether; drug effect; Heart Rate; Internal carotid artery blood flow; intravenous anesthetic agent; Leporidae; Methyl Ethers; Mouth; Oral tissue blood flow; piperidine derivative; Piperidines; Rabbits; Regional Blood Flow; Remifentanil; Sevoflurane; Vascular Resistance; vascularization


**Keywords:** animal experiment; controlled study; experimental rabbit; Hypnotics and Sedatives; Intraocular pressure; ketamine; Rabbits; sedation; tonometry; Xylazine


**Keywords:** anesthesia; Animal Surgery and Non-drug Therapy coronary diseases; death rate; Diagnosis of Animal Diseases; LL070; LL860; LL882; LL884; LL886; Non-Communicable Diseases and Injuries of Animals; preanesthetic medication; rabbits; Veterinary Pharmacology and Anaesthesiology


**Keywords:** Analgesics, Opioid/adverse effects; Analgesics, Opioid/therapeutic use; Biology; Bone Transplantation/adverse effects; Bone Transplantation/methods; Bone; Fusion; Healing; Lumbar Vertebrae/surgery; MicroCT; Narcotics; Opioids; Rabbits; Spinal Fusion/methods; Spinal Fusion/adverse effects; Spine; Transplantation, Autologous/adverse effects; Transplantation, Autologous/methods; Wound Healing/drug effects


**Keywords:** anesthesia; Health Services; Leporidae; LL882; rabbits; UU350; Veterinary Pharmacology and Anaesthesiology


**Keywords:** Anaesthesia; analgesic activity; breathing rate; clinical ; comparative study; controlled study; general anesthesia; heart rate; ketamine; Nefopam; operation duration; premedication; rectal temperature; Tramadol; xylazine

Keywords: Anesthesia; Isoflurane; Ketamine; Physiology; Rabbits


Keywords: Anesthesia; Rabbits; Temperament; Respiration


Keywords: Anesthesia; Rabbits


Keywords: animal model; Hepatocarcinoma; implantation; laparotomy; ultrasound; VX2


Keywords: anaesthesia; Anesthesia/standards/veterinaryCats; completeness; Dogs; Emergencies/veterinary; Ferrets; Hospitals, Animal/standards; paper; Rabbits; Records/standards; Referral and Consultation/standards; Retrospective Studies; Veterinary Medicine/standards


Keywords: Sedation; Anesthesia; Rabbits; Intraocular Pressure; Acepromazine


Keywords: Anesthesia; Rabbits; Picrotoxin; bicuculline; flumazenil; diazepam


Keywords: alfaxalone; Anesthesia; Anesthesia Recovery Period; Anesthesia/veterinary; anesthetic agent; anesthetic recovery; Anesthetics, Combined; Anesthetics, Combined/administration & dosage; animal disease; Blood Gas Analysis/veterinary; Blood Pressure; Blood Pressure/drug effects; breathing; breathing rate; Cross-Over Studies; crossover procedure; drug effect; Injections, Intramuscular; Injections, Intramuscular/veterinary; intramuscular drug administration; Medetomidine; Medetomidine/administration & dosage; Morphine; Morphine/administration & dosage; physiology; Pregnanediones; Pregnanediones/administration
& dosage; Rabbits/physiology; Respiration; Respiration/drug effects; Respiratory Rate; Respiratory Rate/drug effects/physiology


Keywords: administration routes; anesthesia; anestheticscarnivores; cats; Engineering and Equipment (General); Felidae; Felis; Fissipeda; Leporidae; LL070; LL882; methods; NN000; rabbits; Techniques and Methodology; Veterinary Pharmacology and Anaesthesiology; ZZ900


Keywords: Nerve Block; Anesthetics, Local/administration & dosage/blood/chemistry/pharmacokinetics; Cell Line; Disease Models, Animal; Drug Compounding; Liposomes; Motor Activity/drug effects; Pain Threshold/drug effects; Pain, Postoperative/physiopathology/prevention & control; Rabbits; Rats, Wistar; Ropivacaine/administration & dosage/blood/chemistry/pharmacokinetics; Sciatic Nerve/drug effects


Keywords: anesthesia; Animal Surgery and Non-drug Therapy; CC700; intubation; Leporidae; LL070; LL860; LL882; LL884; neutering; Non-Communicable Diseases and Injuries of Animals; Professions: Practice and Service; rabbits; traumas; Veterinary Pharmacology and Anaesthesiology


Keywords: Sedation; Anesthesia; Rabbits; Anxiety; Trazodone


Keywords: cardiomyopathy; heart; myocardium; rabbits; Anesthesia, Inhalation; Anesthetics, Inhalation/therapeutic useanimal cell; animal tissue; autopsy; bradycardia; cardiac muscle; cardiomyopathy; case report; cell structure; congenital dilated cardiomyopathy; congenital disorder; congestive cardiomyopathy; Death, Sudden, Cardiac; Death, Sudden, Cardiac/veterinary; disease severity; heart; heart disease; heart right ventricle hypertrophy; heart ventricle; Heart Ventricles/pathology; histopathology; inhalation anesthetic agent; Isoflurane; Isoflurane/therapeutic use; myocardial disease; Myocardium; Myocardium/pathology; ovariectomy; Ovariectomy; pathology; pet animal; Rabbits and hares; right ventricular free wall thinning; right ventricular myocardium fibro fatty replacement; sudden cardiac death; veterinary

Keywords: anaesthesia; anesthetic agent; Anesthetics, Combined; Anesthetics, Intravenous; breathing; Cardiovascular System; controlled study; drug effects; induction; intravenous anesthetic agent; ketamine; Propofol; Prospective Studies; prospective study; rabbits; randomized controlled trial; Respiration; single blind procedure; Single-Blind Method; Syringes; blood gases; blood pressure; dose response; heart rate; HH410; hypoxia; intravenous injection; Leporidae; lidocaine; LL600; LL882; New Zealand White rabbit; oxygen; Pesticide and Drug Resistance; rabbits; sedation; t-test; Veterinary Pharmacology and Anaesthesiology


Keywords: Anesthesia; Isoflurane; Propofol; Rabbits


Keywords: adverse reactions; anesthesia; anesthetics; CC700; drug action; LL070; LL882; mechanism of drug action; Professions: Practice and Service; rabbits; Veterinary Pharmacology and Anaesthesiology


Keywords: adverse drug reaction; alanine aminotransferase; Alanine Transaminase; albumin; Anesthesia; Anesthesia, General; animal experiment; animal tissue; Anti-Inflammatory Agents; Aspartate Aminotransferases; blood; body temperature; cell activation; cell aggregation; Cell Aggregation; Cell Degranulation; cell infiltration; Chromatography, High Pressure Liquid; controlled study; degranulation; Diet Therapy; drug effect; Drug-Related Side Effects and Adverse Reactions; enzymology; evaluation study; high performance liquid chromatography; histopathology; immunohistochemistry; Immunohistochemistry; Iridoids; ketamine; Leporidae; leukocyte aggregation; Liver; mast cell activation; Mast Cells; mean arterial pressure; microscopy; neuromuscular blocking agent; Neuromuscular Nondepolarizing Agents; oleuropein; olive leaf extract; oxygen saturation; pathology; plant extract; Pre-Exposure Prophylaxis; procedures; pulse oximetry; Rabbits; Random Allocation; randomization; reproducibility; Reproducibility of Results; Rocuronium; Serum Albumin; tolonium chloride; tryptase; unclassified drug


Keywords: alfaxalone; anesthesia; Animal Physiology and Biochemistry (Excluding Nutrition); blood glucose; buprenorphine; Canidae; cats; circulatory system; dexmedetomidine; dogs; Felidae; ferrets; Fissipeda; glucose in blood; Leporidae; LL070; LL600; LL882; Mustelidae; pain killers; rabbits; sedation; Veterinary Pharmacology and Anaesthesiology


Keywords: Anesthetics, Inhalation/administration & dosage/pharmacology; Balanced Anesthesia; Blood Pressure/drug effects; Cardiac Output/drug effects; Fentanyl/administration &
dosage/blood/pharmacology; Heart Rate/drug effects; Isoflurane/administration & dosage/pharmacology; Rabbits; Vascular Resistance/drug effects


Keywords: Animal and in-vitro Models for Pharmaceuticals; Animal Models of Human Diseases; Animal Surgery and Non-drug Therapy; Laboratory Animal Science; Leporidae; LL040; LL860; LL882; LL884; Non-Communicable Diseases and Injuries of Animals; rabbits; Veterinary Pharmacology and Anaesthesiology; VV400; VV450


Keywords: acepromazine; anesthesia complication; anesthesia induction; anesthesia level; anesthesia mechanism; animal experiment; atropine; blood toxicity; bradycardia; calmivet; cardiotoxicity; combination chemotherapy; controlled study; disease severity; erythrocyte count; Erythrocytes; hematocrit; Intraperitoneal; leukocyte count; lung toxicity; pentobarb; pentobarbital; Pentobarbitone; rabbits; Respiratory depression; unclassified drug; xylazine


Keywords: LL860; LL882; Non-Communicable Diseases and Injuries of Animals; rabbits; Veterinary Pharmacology and Anaesthesiology


Keywords: alanine aminotransferase; alanine aminotransferase blood level; Anesthesia; Anesthetics, Inhalation; animal experiment; animal model; aortic flow; aspartate aminotransferase; aspartate aminotransferase blood level; buprenorphine; comparative study; controlled study; Disease Models, Animal; drug effect; experimental liver ischemia-reperfusion injury; galactose; heart rate; Hemodynamics; inhalation anesthesia; inhalation anesthetic agent; intravenous anesthesia; Ischemia–reperfusion; ischemic preconditioning; Ischemic Preconditioning; Japanese White (rabbit); lactate blood level; lactic acid; left liver lobe; Leporidae; Liver; liver blood flow; Liver Diseases; liver metabolism; liver perfusion; mean arterial pressure; metabolic disorder; microvascularization; pathophysiology; Preconditioning; procedures; Propofol; rabbit model; Rabbits; Reperfusion Injury; right liver lobe; Sevoflurane


Keywords: administration routes; anesthesia; anesthetics; Animal Health and Hygiene (General); animal health products; CC700; death rate; hypovolemia; Leporidae; LL070; LL800; LL882; preanesthetic medication; Professions: Practice and Service; rabbits; rehydration therapy; Techniques and Methodology; Veterinary Pharmacology and Anaesthesiology; ZZ900

**Keywords:** Electroacupuncture; Arrhythmias, Cardiac/prevention & control; Benzophenanthridines/pharmacology; Models, Animal; Myocardial Infarction/pathology; Myocardial Reperfusion Injury/metabolism/pathology/prevention & control; Myocardium/metabolism; Naloxone/pharmacology; Narcotic Antagonists; Norepinephrine/metabolism; Oxygen/metabolism; Protein Kinase C/antagonists & inhibitors; Rabbits; Signal Transduction/drug effects/physiology; Sympathetic Nervous System/physiology; Ventricular Function, Left/physiology
Methods of Delivery/Administration

8 citations


**Keywords:** anesthesia; Animal Health and Hygiene (General); Animal Surgery and Non-drug Therapy; body components; Diagnosis of Animal Diseases; intubation; Leporidae; LL070; LL800; LL860; LL882; LL884; LL886; Non-Communicable Diseases and Injuries of Animals; rabbits; supraglottic airway device; Techniques and Methodology; traumas; Veterinary Pharmacology and Anaesthesiology; ZZ900


**Keywords:** Animals; Catheters; Disease Models, Animal; Epidural Space; Rabbits; Reproducibility of Results; Spinal Cord Compression/etiology


**Keywords:** anatomic landmark; animal experiment; auricle; auricular nerves; auriculotemporal; Cadaver; controlled study; dissection; Ear Auricle/innervation; greater auricular; incidence; injection; Injections/methods/veterinary; innervation; Leporidae; mandibular nerve; Nerve Block/methods/veterinary; prospective study; rabbits; regional anesthesia; veterinary medicine


**Keywords:** Amides; Anesthetics, Local; Amides; analgesia; Anesthetics, Local; brachial plexus anesthesia; Brachial Plexus Block; Brachial Plexus Block/methods/veterinary; Brachial Plexus/diagnostic imaging; diagnostic imaging; echography; local anesthetic agent; Pain Management; procedures; rabbits; Ropivacaine; Ultrasonography; veterinary; administration routes; Animal Surgery and Non-drug Therapy; LL822; LL884; nerves; Protozoan, Helminth, Mollusc and Arthropod Parasites of Animals;


**Keywords:** animal cell; animal experiment; animal tissue; Biocompatibility; controlled study; Cytokines; Disc arthroplasty; dura mater; Epidural Space; experimental rabbit; Fibrosis; Foreign Bodies; histopathology; Immune response; immunocompetent cell; immunohistochemistry; in vivo study; Inflammation; inflammatory cell; Interleukin-1beta; Interleukin-6; intramethod comparison; Intervertebral Disc; joint prosthesis; Ketones; Materials Testing; Models, Animal; PEEK; polyetheretherketone; Polyethylene Glycols; Prostheses and Implants; quantitative analysis; Rabbits; simulator; Spine; Tumor Necrosis Factor-alpha; Wear particles

Keywords: analgesia; Anesthetics, Local; Bupivacaine; Lidocaine; rabbits; anesthesia level; animal experiment; animal model; arthro1omy; buprenorphine; carprofen; controlled study; drug effects; experimental rabbit; Femoral Nerve; fentanyl; heart rate; Intraoperative Complications/prevention & control; intraoperative period; isoflurane; local anesthesia; morphine; Nerve Block; Nociception; Nociception/drug effects; pain; pain assessment; Pain control; perineural drug administration; Peripheral nerve blockade; placebo; postoperative analgesia; postoperative pain; propofol; Rabbits and hares; randomized controlled trial; range of motion; Refinement; Sciatic Nerve; Stifle; stif1e joint arthro1omy; Stifle/surgery; surgery; Surgical Wound; systolic blood pressure; visual analog scale; Animal Surgery and Non-drug Therapy; Laboratory Animal Science; Leporidae; LL040; LL882; LL884; rabbits; Veterinary Pharmacology and Anaesthesiology


Keywords: analgesic agent; Analgesics; anesthesia; Anesthetics, Inhalation; animal experiment; compartment model; controlled study; elimination half-life; Infusions, Intravenous; inhalation anesthetic agent; intravenous drug administration; iso1o; Isoflurane; ketamine; Leporidae; limit of agreement; liquid chromatography-mass spectrometry; metabolic clearance; metabolism; minimum lung alveolus concentration; New Zealand White (rabbit); norketamine; pharmacokinetic parameters; pharmacokinetics; plasma concentration-time curve; Prospective Studies; rabbits; veterinary medicine; volume of distribution at steady-state; zetamine


Keywords: anesthesia induction; Anesthetics, Inhalation; animal experiment; Brain; controlled study; descending aorta; drug delivery system; drug effect; Emulsions; femoral vein; Femoral Vein; inhalation anesthetic agent; Isoflurane; Jugular Veins; Leporidae; Lung; metabolism; Methods; minimally invasive procedure; New Zealand White (rabbit); Partial Pressure; procedures; Rabbits; Sevoflurane; Spinal cord; Volatilization
Parenteral Techniques

30 citations


Keywords: Anesthesia; Rabbits


Keywords: alfaxalone; alfaxan; Anesthesia; Anesthesia/veterinary; anesthetic agent; Anesthetics; Anesthetics/administration & dosage/pharmacology; animal experiment; Butorphanol; butorphanol tartrate; Butorphanol/administration & dosage/pharmacology; combination drug therapy; controlled study; Cross-Over Studies; crossover procedure; Dexmedetomidine; Dexmedetomidine/administration & dosage/pharmacology; Drug Therapy, Combination; ear; FR; Heart rate; HR; Hypnotics and Sedatives; Hypnotics and Sedatives/administration & dosage/pharmacology; Intramuscular/intramuscular drug administration; laboratory; Laboratory Animal Science; Leporidae; Midazolam; Midazolam/administration & dosage/pharmacology; nociceptive stimulation; Oryctolagus cuniculus; Pregnanediones; Pregnanediones/administration & dosage/pharmacology; Rabbits; recumbency; Respiratory rate; righting reflex; sedation; stimulus response; toe; veterinary medicine


Keywords: Acepromazine; Acepromazine/administration & dosage/adverse effects/pharmacology; Anesthesia; Anesthesia Recovery Period; Anesthesia/veterinary; anesthetic agent; anesthetic recovery; Anesthetics; Anesthetics/pharmacology; Arterial Pressure/drug effects; Benzodiazepine; breathing rate; Cross-Over Studies; crossover procedure; Dexmedetomidine; Dexmedetomidine/administration & dosage/adverse effects/pharmacology; Dissociative anesthetic; Drug Combinations; Heart Rate; Heart Rate/drug effects; Hypnotics and Sedatives; Hypoxia; Injections, Intramuscular/intramuscular drug administration; laboratory; Ketamine/administration & dosage/adverse effects/pharmacology; Leporidae; Midazolam; Midazolam/administration & dosage/adverse effects/pharmacology; Phenothiazine; prospective study; Rabbits; Respiratory Rate; Respiratory Rate/drug effects; veterinary medicine; Xylazine; Xylazine/administration & dosage/adverse effects/pharmacology; α2-agonists


Keywords: Ketamine; Midazolam; Oryctolagus cuniculus; Tiletamine; Xylazine; Zolazepam

Keywords: animal experiment; controlled study; experimental rabbit; Hypnotics and Sedatives; Intraocular pressure; ketamine; Rabbits; sedation; tonometry; Xylazine


Keywords: alfaxalone; blood; Blood Pressure; breathing rate; dose response; Dose-Response Relationship, Drug; drug effect; Heart Rate; Hypnotics and Sedatives; Injections, Intramuscular; intramuscular administration; intramuscular drug administration; Leporidae; Oxygen; Pregnanediones; rabbits; Reflex, Righting; Respiratory Rate; sedation; veterinary medicine


Keywords: Anesthesia; Isoflurane; Ketamine; Physiology; Rabbits


Keywords: alfazyne; Anesthesia; animal experiment; animal model; arterial oxygen saturation; Blood gases; breathing rate; controlled study; Dexmedetomidine; diastolic blood pressure; heart rate; hematological parameters; Hemodynamic parameters; hipnodex; ketamine; Leporidae; mean arterial pressure; Reflex times; retinol; systolic blood pressure; xylazine; LL882; rabbits; Veterinary Pharmacology and Anaesthesiology


Keywords: Adrenergic alpha-2 Receptor Antagonists; alpha 2 adrenergic receptor blocking agent; alpha 2 adrenergic receptor stimulating agent; Analgesics, Opioid; anesthesia; anesthetic agent; Anesthetic mixture; Anesthetics, Combined; animal experiment; animal model; Antagonist; antagonistic effect; atipamezole; Blood pressure; breathing rate; Butorphanol; celactar; comparative study; cornea reflex; diastolic blood pressure; drug antagonism; heart rate; Hypnotics and Sedatives; imidazole derivative; Imidazoles; Injections, Intramuscular; Injections, Intravenous; intramuscular drug administration; intravenous drug administration; ketamine; Leporidae; Medetomidine; midazolam; midazolam maleate; narcotic analgesic agent; oxygen saturation; pentobarbital; Rabbits; systolic blood pressure; vetorphale; Xylazine

Keywords: Anesthesia Recovery Period; Anesthesia, Intravenous/methods/veterinary; Anesthetics, Intravenous/administration & dosage; Emulsions; Prodrugs/administration & dosage; Propofol/administration & dosage/analogs & derivatives; Rabbits; Time Factors


Keywords: Benzodiazepines/chemical synthesis; Benzodiazepines/chemistry; Benzodiazepines/pharmacology; CNS 7056 derivatives; Hypnotics and Sedatives/chemical synthesis; Hypnotics and Sedatives/chemistry; Hypnotics and Sedatives/pharmacology; Mice; Rabbits; Rats; sedation; Structure-Activity Relationship


Keywords: analgesic agent; Analgesics; anesthesia; Anesthetics, Inhalation; animal experiment; compartment model; controlled study; elimination half-life; Infusions, Intravenous; inhalation anesthetic agent; intravenous drug administration; isoflurane; ketamine; Leporidae; limit of agreement; liquid chromatography-mass spectrometry; metabolic clearance; metabolism; minimum lung alveolus concentration; New Zealand White (rabbit); norketamine; pharmacokinetic parameters; pharmacokinetics; plasma concentration-time curve; Prospective Studies; rabbits; veterinary medicine; volume of distribution at steady-state; zetamine


Keywords: Alfaxalone; alfaxan; Anaesthesia; anesthetic agent; Anesthetics; animal experiment; blood sampling; breathing rate; conscious sedation; controlled study; convalescence; Cross-Over Studies; cyanosis; deep sedation; Dexmedetomidine; drug bioavailability; drug disposition; heart arrhythmia; heart rate; high performance liquid chromatography; Hypnotics and Sedatives; Injections, Intramuscular; Injections, Intravenous; intramuscular drug administration; intravenous drug administration; Leporidae; mean residence time; monotherapy; New Zealand White (rabbit); numeric rating scale; nystagmus; Pharmacokinetics; plasma concentration-time curve; Pregnanediones; Rabbits; Random Allocation; randomization; randomized controlled trial; recumbency; sedation; single drug dose; standing; study design; treatment duration; tremor; veterinary medicine


Keywords: Anesthesia Recovery Period; Anesthesia, Intravenous; Anesthesia, Intravenous/methods/veterinary; anesthetic recovery; Anesthetics, Intravenous/administration &
dosage; animal disease; Blood Gas Analysis/veterinary; Blood Pressure; Blood Pressure/drug effects; breathing rate; comparative study; drug effect; Heart Rate; Heart Rate/drug effects; Infusions, Intravenous; Infusions, Intravenous/veterinary; Infusions, Intravenous; Infusions, Intravenous/veterinary; Injections, Intravenous; Injections, Intravenous/veterinary; Intravenous drug administration; intravenous anesthesia; intravenous anesthetic agent; intravenous drug administration; methodology; Oryctolagus cuniculus; physiology; Propofol; Propofol/administration & dosage; Rabbits/physiology; Random Allocation; randomization; Respiratory Rate; Respiratory Rate/drug effects; Time Factors


Keywords: Models, Animal; Anatomic Landmarks; Anesthetics, Local/administration & dosage; Axilla/blood supply/innervation; Axillary Artery/anatomy & histology; Brachial Plexus Block/methods/veterinary; Brachial Plexus/anatomy & histology/diagnostic imaging; Forelimb/innervation; Rabbits; Reproducibility of Results; Ultrasonography/methods


Keywords: alfaxalone; Analgesia; Anesthesia; Anesthesia/methods/veterinary; anesthetic agent; Anesthetics; Anesthetics/administration & dosage; clinical trial; Cross-Over Studies; Dose-Response Relationship, Drug; Injections, Intramuscular; Injections, Intramuscular/veterinary; intramuscular drug administration; Oryctolagus cuniculus; Pregnanediones; Pregnanediones/administration & dosage; rabbits; veterinary


Keywords: Anesthesia, Local/methods; Anesthetics, Local/administration & dosage/analysis; Bone Density/physiology; Chromatography, High Pressure Liquid; Imaging, Three-Dimensional/methods; Infiltration anesthesia.; Injections, Jawbone; Lidocaine concentration; Lidocaine/administration & dosage/analysis; Mandible/chemistry; Periosteal flap; Periosteum/surgery; Rabbits; Sodium Chloride/administration & dosage; Surgical Flaps/surgery; Therapeutic Irrigation/methods; Time Factors; X-Ray Microtomography/methods


Keywords: Anaesthesia; Analgesia; anesthetic agent; Anesthetics; body temperature; Body Temperature; drug effect; Heart Rate; ketamine; Leporidae; midazolam; pain; Pain; physiology; Rabbits; tramadol; Tramadol; Xylazine

Keywords: adverse event; Analgesia; Anesthesia, Local; Anesthesia, Local/adverse effects/veterinary; Anesthetics, Local; Anesthetics, Local/administration & dosage; animal experiment; anus sphincter; Bupivacaine; Bupivacaine/administration & dosage; coccyx; Contrast Media; contrast medium; contrast medium extravasation; controlled study; Epidural anesthesia; epidural drug administration; epidural single-bolus injection technique; Epidural single-bolus injection technique; epidural space; Extravasation of Diagnostic and Therapeutic Materials/veterinary; hindlimb; Injections, Epidural; Injections, Epidural/adverse effects/methods/veterinary; iohexol; iopaque 300; Leporidae; local anesthesia; local anesthetic agent; nociception; proprioception; rabbits; reflex; sodium chloride; Spinal Canal; tail; vertebral canal; veterinary medicine; walking


Keywords: Adrenergic alpha-1 Receptor Agonists; alpha 1 adrenergic receptor stimulating agent; Anti-Arrhythmia Agents; Arrhythmia; Arrhythmias, Cardiac; artificial ventilation; blood; blood carbon dioxide tension; Blood Gas Monitoring, Transcutaneous; chemically induced; clofilium; clofilium tosylate; controlled study; Delayed rectifier potassium current; Delayed repolarization; Electrocardiography; heart arrhythmia; heart proarrhythmia; heart repolarization; heart ventricle arrhythmia; Hyperventilation; Hypocapnia; Hypokalemia; pathophysiology; Phenylephrine; Potassium; Potassium Channel Blockers; potassium channel blocking agent; potassium current; Proarrhythmia; QT interval; Quaternary Ammonium Compounds; quaternary ammonium derivative; Rabbits and hares; Respiration, Artificial; Respiratory alkalosis; retrospective study; Torsades de pointes; transcutaneous oxygen monitoring


Keywords: Anesthesia; Sedation; Rabbits


Keywords: Rabbits; analgesic agent; Analgesics; Analgesics/administration & dosage/pharmacology; Anesthesia, Intravenous; Anesthesia, Intravenous/veterinary; Anesthetics, Intravenous; Anesthetics, Intravenous/administration & dosage/pharmacology; animal disease; Brachial Plexus; Brachial Plexus/surgery; Butorphanol; Butorphanol/administration & dosage/pharmacology; Hypnotics and Sedatives; Hypnotics and Sedatives/administration & dosage/pharmacology; Injectable anesthetics; intravenous anesthesia; ketamine; Ketamine/administration & dosage/pharmacology; Medetomidine; Medetomidine/administration & dosage/pharmacology; Propofol; Propofol/administration & dosage/pharmacology; Rabbits

**Keywords:** Acepromazine; Ketamine; Kidney; Liver; Medetomidine; rabbits; Xylazine


**Keywords:** alfaxalone; anesthetic agent; anesthetic recovery; Anesthetics; animal experiment; arterial oxygen saturation; bicarbonate; blood gas analysis; breathing rate; controlled study; Dexmedetomidine; endotracheal intubation; euthanasia; heart auscultation; heart rate; hypercapnia; Hypoventilation; hypoxemia; hypoxic respiratory drive; Leporidae; lung ventilation; mean arterial pressure; metabolic acidosis; midazolam; New Zealand rabbit; Oxygen; oxygen therapy; pain assessment; partial pressure; patient monitoring; pH; Pregnanediones; prospective study; pulse oximetry; rabbits; veterinary medicine


**Keywords:** adolescent; Analgesia; Anesthesia; Anesthesia/veterinary; animal experiment; animal model; body temperature; breathing rate; clinical trial; combination drug therapy; continuous infusion; continuous rate infusion; controlled study; CRI; Dexmedetomidine; Dexmedetomidine/administration & dosage/pharmacology; Drug Administration Schedule; drug dose increase; Drug Therapy, Combination; electrostimulation; heart rate; hospital service; Hypnotics and Sedatives; Hypnotics and Sedatives/administration & dosage/pharmacology; intravenous anesthesia; KD; ketamine; ketamine hydrochloride + dexmedetomidine hydrochloride; Ketamine/administration & dosage/pharmacology; larynx injury; larynx spasm; larynx surgery; Leporidae; Lidocaine; Lidocaine/pharmacology; Maintenance; MAP; mean arterial blood pressure; New Zealand White (rabbit); Oryctolagus cuniculus; pentobarbital; phenytoin; phonation; Rabbits/surgery; rectal temperature; sedation; surgery; trachea surgery; veterinary medicine


**Keywords:** anesthesia; anesthetics; blood glucose; glucose in blood; hematocrit; Leporidae; LL070; LL882; rabbits; thiopentone; Veterinary Pharmacology and Anaesthesiology


**Keywords:** Animal Surgery and Non-drug Therapy; LL882; LL884; rabbits; Veterinary Pharmacology and Anaesthesiology

(Oryctolagus cuniculus). Journal of the American Association for Laboratory Animal Science : JAALAS, 56(4), 436–442.

Keywords: Rabbits; Administration, Oral; Anesthesia/veterinary; Heart Rate/drug effects; Heart/drug effects; Hypnotics and Sedatives/administration & dosage/adverse effects; Imidazoles/administration & dosage/adverse effects


Keywords: anesthesia induction; Anesthetics, Inhalation; animal experiment; Brain; controlled study; descending aorta; drug delivery system; drug effect; Emulsions; Femoral Vein; inhalation anesthetic agent; Isoflurane; Jugular Veins; Leporidae; Lung; metabolism; Methods; minimally invasive procedure; New Zealand White (rabbit); Partial Pressure; procedures; Rabbits; Sevoflurane; Spinal cord; Volatilization

Zhou, Y., He, M., Zou, T., & Yu, B. (2015). Morphological changes in the sciatic nerve, skeletal muscle, heart and brain of rabbits receiving continuous sciatic nerve block with 0.2% ropivacaine. INTERNATIONAL JOURNAL OF CLINICAL AND EXPERIMENTAL PATHOLOGY, 8(11), 13911–13920.

Keywords: Amides; Amides/administration & dosage/toxicity; Anesthetics, Local; Anesthetics, Local/administration & dosage/toxicity; Brain; Brain/drug effects/metabolism; cardiac muscle; Cell Shape; Cell Shape/drug effects; chemically induced; Continuous nerve block; drug effects; Edema; Edema/chemically induced/pathology; Heart; Heart/drug effects; Infusions, Parenteral; innervation; local anesthetic agent; metabolism; Morphology; Motor Activity; Motor Activity/drug effects; Muscle, Skeletal; Muscle, Skeletal/drug effects/innervation/pathology; Myocardium; Myocardium/pathology; Necrosis; Nerve Block; Nerve Block/methods; nerve degeneration; Nerve Degeneration; Neurotoxicity Syndromes; Neurotoxicity Syndromes/etiology/pathology/physiopathology; parenteral drug administration; pathology; pathophysicsology; procedures; Rabbits and hares; Ropivacaine; Sciatic Nerve; Sciatic Nerve/drug effects/pathology/physiopathology; skeletal muscle; Time Factors
Inhalation Anesthesia

40 citations


Keywords: Anesthesia; Anesthetics, Inhalation/pharmacology; Anesthetics, Intravenous/pharmacology; Brain Mapping/methods; Evoked Potentials/drug effects; Fentanyl/pharmacology; Isoflurane/pharmacology; Magnetic Resonance Imaging/methods; Neurons/drug effects; Oxygen/blood; Physical Stimulation; Rabbits; Somatosensory Cortex/anatomy & histology/drug effects; Vibrissae/drug effects/innervation


Keywords: analgesia; anesthesia; Anesthesia, Inhalation; Anesthesia, Inhalation/veterinary; anesthetic agent; Anesthetics, Combined/pharmacology; Anesthetics, Inhalation; animal experiment; compartment model; Dexmedetomidine; Dexmedetomidine/administration & dosage/pharmacokinetics; drug blood level; drug concentration; drug distribution; experimental study; Hypnotics and Sedatives; Hypnotics and Sedatives/administration & dosage/pharmacology; Infusions, Intravenous; Infusions, Intravenous/veterinary; inhalation anesthesia; inhalation anesthetic agent; intravenous drug administration; IsoFlo; Isoflurane; Leporidae; limit of quantitation; mass spectrometry; mathematical model; minimum lung alveolus concentration; New Zealand White (rabbit); nonlinear regression analysis; Rabbits; Ringer lactate solution; veterinary


Keywords: Anesthesia, Inhalation; Anesthetics, Inhalation/administration & dosage/pharmacokinetics; Anesthetics, Intravenous/administration & dosage/blood/pharmacology; Body Temperature/drug effects; Fentanyl/administration & dosage/blood/pharmacology; Isoflurane/administration & dosage/pharmacokinetics; Pulmonary Alveoli/metabolism; Rabbits


Keywords: adrenergic receptor stimulating agent; anesthesia; Anesthetics, Inhalation; animal experiment; arterial gas; blood; clinical trial; compartment model; descriptive research; Dopamine; dopamine blood level; drug blood level; drug clearance; Drug Interactions; inhalation anesthetic agent; Isoflurane; Leporidae; New Zealand White (rabbit); oxygen; prospective study; rabbits; Sympathomimetics; volume of distribution

Keywords: Anesthesia; Isoflurane; Inhalation Anesthesia; Levobupivacaine; lidocaine


Keywords: Acetylcholine; Anesthesia; animal experiment; animal tissue; Arterial Pressure; Arterial stiffness; Arteries; artery blood flow; cardio ankle vascular index; cardiovascular parameters; controlled study; diastolic blood pressure; drug effect; Heart Rate; L-NAME; Leporidae; n(g) nitroarginine methyl ester; NG-Nitroarginine Methyl Ester; Nitric oxide; physiology; pulse wave; Rabbits; regulatory mechanism; systolic blood pressure; Vascular Resistance; Vascular Stiffness

Crotaz, I. R. (2013). An observational clinical study in cats and rabbits of an anatomically designed supraglottic airway device for use in companion animal veterinary anaesthesia. *VETERINARY RECORD, 172*(23), 606-+. [https://doi.org/10.1136/vr.100668](https://doi.org/10.1136/vr.100668)

Keywords: Airway Management; Anesthesia; anesthesiology; Anesthesiology; animal disease; Cats; endotracheal intubation; equipment; histology; Intubation, Intratracheal; methodology; Oryctolagus cuniculus; physiology; pilot study; rabbits; respiration control


Keywords: Animal Surgery and Non-drug Therapy; LL882; LL884; rabbits; Veterinary Pharmacology and Anaesthesiology


Keywords: amperometry; Anesthesia; anesthesia circuits; anesthesia induction; Anesthesia/veterinary; arterial carbon dioxide tension; arterial pressure; artificial ventilation; blood carbon dioxide tension; blood gas analysis; breathing rate; Capnography; Capnography/instrumentation/veterinary; capnometry; carbon dioxide; cardiac index; comparative study; Cross-Over Studies; defibrillation; devices; echography; end tidal carbon dioxide tension; endotracheal intubation; gas exchange; heart output; heart rate; high performance liquid chromatography; infrared spectroscopy; Intubation, Intratracheal/veterinary; Leporidae; lung ventilation; mean arterial pressure; monitoring; New Zealand White (rabbit); oscillometry; oxygen saturation; prospective study; pulse oximetry; rabbits; signal noise ratio; veterinary medicine


Keywords: Leporidae; LL070; LL882; Oryctolagus cuniculus; rabbits; Techniques and Methodology; Veterinary Pharmacology and Anaesthesiology; ZZ900


Keywords: Anesthesia; Anesthesia/methods; Arterial Pressure; Arterial Pressure/drug effects; artificial ventilation; Blood Pressure; Blood Pressure/drug effects; drug effects; ether derivative; Heart Rate; Heart Rate/drug effects; Hemodynamics; Hemodynamics/drug effects; mandible; Mandible; Masseter Muscle; Masseter Muscle/metabolism; metabolism; Methyl Ethers; Methyl Ethers/administration & dosage; Nitrous Oxide; Nitrous Oxide/pharmacology; Oral tissue blood flow; piperidine derivative; Piperidines; Piperidines/pharmacology; procedures; rabbits; Remifentanil; Respiration, Artificial; Respiration, Artificial/methods; Sevoflurane; Tongue; Tongue/blood supply; Tracheotomy; vascularization


Keywords: Anesthesia; Isoflurane; Ketamine; Physiology; Rabbits


Keywords: Anesthesia/veterinary; Anesthetics, Inhalation/pharmacology; Isoflurane/pharmacology; Methyl Ethers/pharmacology; Anesthetics, Intravenous/pharmacology; Blood Pressure; Bone Marrow; Desflurane/pharmacology; Masseter Muscle; oral tissue blood flow; oral tissue oxygen tension; Oxygen; Rabbits; Regional Blood Flow; Remifentanil/pharmacology; sevoflurane; Tongue


Keywords: Anesthesiology; Anesthetics; Animal experiments; Isoflurane; Long-term safety evaluation; Neural prostheses; Prosthetics; Sevoflurane; Visual prosthesis


Keywords: airway resistance; anaphylaxis; Anesthetics, Inhalation; animal experiment; animal model; Blood Pressure; breathing mechanics; Bronchoconstriction; bronchospasm; controlled study; desflurane; drug effect; eosinophil count; experimental rabbit; Hypersensitivity; isoflurane; lung hemodynamics; midazolam; minimum lung alveolus concentration; ovalbumin; Ovalbumin; provocation test; Rabbits; sevoflurane; systolic blood pressure; Anesthetics, Inhalation/pharmacology; Blood Pressure/drug effects; Bronchoconstriction/drug effects; Hypersensitivity/physiopathology; Ovalbumin/immunology

**Keywords:** Anesthesia; Cerebral cortex; Oxygen; Oxygen/analysis; Rabbits; Somatosensory Cortex/metabolism; Vasomotion


**Keywords:** analgesic agent; Analgesics; anesthesia; Anesthetics, Inhalation; animal experiment; compartment model; controlled study; elimination half-life; Infusions, Intravenous; inhalation anesthetic agent; intravenous drug administration; isoflo; Isoflurane; ketamine; Leporidae; limit of agreement; liquid chromatography-mass spectrometry; metabolic clearance; metabolism; minimum lung alveolus concentration; New Zealand White (rabbit); norketamine; pharmacokinetic parameters; pharmacokinetics; plasma concentration-time curve; Prospective Studies; rabbits; veterinary medicine; volume of distribution at steady-state; zetamine


**Keywords:** Anesthetic; Rabbits; Sevoflurane


**Keywords:** administration routes; anesthesia; anesthetics; cats; Engineering and Equipment (General); Felidae; Fissipeda; Leporidae; LL070; LL882; methods; NN000; rabbits; Techniques and Methodology; Veterinary Pharmacology and Anaesthesiology; ZZ900


**Keywords:** alveolar bone; analogs and derivatives; Anesthetics, Inhalation; animal experiment; blood flow; blood flowmeter; bone marrow; carotid artery flow; common carotid artery; comparative study; controlled study; desflurane; diastolic blood pressure; Doppler flowmeter; drug effects; ether derivative; heart rate; hemodynamic parameters; inhalation anesthesia; inhalation anesthetic agent; Isoflurane; mandible; masseter muscle; mean arterial pressure; Methyl Ethers; minimum lung alveolus concentration; Mouth; rabbits; Regional Blood Flow; sevoflurane; systolic blood pressure; tissue blood flow; tongue; ultrasound; vascularization


**Keywords:** Animal Physiology and Biochemistry (Excluding Nutrition); LL600; LL882; rabbits; Veterinary Pharmacology and Anaesthesiology


**Keywords:** anesthesia; Animal Surgery and Non-drug Therapy; CC700; intubation; Leporidae; LL070; LL860; LL882; LL884; neutering; Non-Communicable Diseases and Injuries of Animals;
Professions: Practice and Service; rabbits; traumas; Veterinary Pharmacology and Anaesthesiology


**Keywords:** analgesia; animal experiment; antinociception; arterial pressure; butorphanol; capnometry; cardiovascular disease; controlled study; dexmedetomidine; drug absorption; drug activity; drug administration route; drug blood level; heart rate; hypotension; maximum plasma concentration; midazolam; oxygen; pulse oximetry; rabbits; rectum temperature; respiration depression; respiratory tract disease; righting reflex; sedative effect; surgical technique; time to maximum plasma concentration; transnasal drug administration; withdrawal reflex


**Keywords:** Administration, Intranasal; Blood Pressure; Butorphanol; cardiovascular system; Cardiovascular System; deep sedation; Deep Sedation; Dexmedetomidine; drug effects; hypnotic sedative agent; Hypnotics and Sedatives; intranasal drug administration; midazolam; Nasal; rabbits; respiratory system; Respiratory System


**Keywords:** alveolar bone; Anesthetics, Inhalation; Anesthetics, Intravenous; animal experiment; animal model; artificial ventilation; blood flow; Blood Pressure; bone blood flow; Bone Marrow; carotid artery flow; Carotid Artery, Common; continuous infusion; controlled study; Dexmedetomidine; diastolic blood pressure; Dose-Response Relationship, Drug; drug activity; general anesthesia; Heart Rate; hemodynamics; Hypnotics and Sedatives; Laser-Doppler Flowmetry; mandible; Mandible; masseter muscle; Masseter Muscle; mean arterial pressure; Methyl Ethers; Mouth; Mouth Mucosa; muscle blood flow; Propofol; Pulmonary Alveoli; rabbits; Regional Blood Flow; Respiration, Artificial; sevoflurane; systolic blood pressure; tongue; Tongue; Tracheotomy; Vascular Resistance


**Keywords:** Anesthetics, Inhalation/administration & dosage/pharmacokinetics; Anesthetics, Local/administration & dosage/blood/pharmacology/Balanced Anesthesia/methods/veterinary; Blood Pressure/drug effects; Chromatography, Liquid; Cross-Over Studies; Dose-Response Relationship, Drug; Heart Rate/drug effects; Infusions, Intravenous/veterinary; Isoflurane/administration & dosage/pharmacokinetics; Lidocaine/administration & dosage/blood/pharmacology; Mass Spectrometry; Rabbits

**Keywords:** anesthesia; anesthetics; LL070; LL882; mechanism of drug action; methods; rabbits; Techniques and Methodology; Veterinary Pharmacology and Anaesthesiology; ZZ900


**Keywords:** General anaesthesia; Intraocular pressure; Oleuropein; rabbits; Rocuronium


**Keywords:** Anesthetics, Inhalation/administration & dosage/pharmacology; Balanced Anesthesia; Blood Pressure/dose effects; Cardiac Output/dose effects; Fentanyl/administration & dosage/blood/pharmacology; Heart Rate/dose effects; Isoflurane/administration & dosage/pharmacology; Rabbits; Vascular Resistance/dose effects


**Keywords:** adrenergic stimulation; Anesthesia, General; Anaesthesiology; animal experiment; animal model; Blood pressure; Cobra PLA; comparative study; devices; electrocardiogram; electrocardiography; Electrocardiography; Endotracheal intubation; equipment design; Equipment Design; general anesthesia; heart muscle ischemia; Heart Rate; hemodynamic parameters; Hemodynamic response; Hemodynamics; Intubation, Intratracheal; Laryngeal mask airways; Laryngeal Masks; mean arterial pressure; Models, Animal; QTc interval; rabbits; Respiratory therapy; supraglottic airway device; V-gel Rabbit


**Keywords:** Animal and in-vitro Models for Pharmaceuticals; Animal Models of Human Diseases; Animal Surgery and Non-drug Therapy; Laboratory Animal Science; Leporidae; LL040; LL860; LL882; LL884; rabbits; Veterinary Pharmacology and Anaesthesiology; VV400; VV450


**Keywords:** adrenergic receptor stimulating agent; Anesthesia; anesthesia induction; Anesthesia/veterinary; animal experiment; animal model; blood; blood carbon dioxide tension; blood oxygen tension; blood pressure; buprenorphine; Carbon Monoxide; Carbon Monoxide/blood; cardiovascular effect; Cardiovascular System; Cardiovascular System/drug effects; continuous infusion; controlled study; diastolic blood pressure; dose response; Dose-Response Relationship, Drug; drug dose increase; drug effect; drug megadose; drug withdrawal; electrolyte; experimental study; flumazenil; heart output; heart rate; hemoglobin; hypotension; Hypotension; Hypotension/drug therapy; intermittent positive pressure ventilation; Isoflurane;
lactic acid; Leporidae; lithium; low drug dose; mean arterial pressure; midazolam; noradrenalin; Norepinephrine; Norepinephrine/administration & dosage/pharmacology/therapeutic use; peak inspiratory pressure; propofol; prospective study; pulse oximetry; rabbits; Sympathomimetics; Sympathomimetics/administration & dosage/pharmacology/therapeutic use; systolic blood pressure; vetergesic; veterinary medicine


Keywords: adverse effects; Ambu device; anesthesia; Anesthesia, Endotracheal/veterinary; Anesthesia, Intratracheal; animal experimentation; arterial blood; arterial pH; artificial ventilation; assisted ventilation; Blood Gas Analysis; carbon dioxide tension; CobraPLA; comparative study; controlled study; cyanosis; devices; end tidal carbon dioxide tension; endotracheal intubation; equipment design; Equipment Design; evaluation study; Hydrogen-Ion Concentration; Intratracheal; intubation; Intubation; Intubation, Intratracheal; Intubation, Intratracheal/adverse effects/instrumentation/veterinary; Laryngeal Masks; laryngoscopy; operation duration; oxygen tension; oxygenation; pH; postoperative complication; rabbits; Reference Values; Reproducibility of Results; respiration control; Respiration, Artificial; Respiration, Artificial/adverse effects/instrumentation/veterinary; supraglottic airway device; Time Factors; veterinary


Keywords: Administration, Intranasal; Administration, Intranasal/methods; Adrenergic alpha-2 Receptor Agonists; Adrenergic alpha-2 Receptor Agonists/administration & dosage/adverse effects; alpha 2 adrenergic receptor stimulating agent; Anesthesia; Anesthesia/methods/veterinary; anesthetic agent; Anesthetics, Combined; Anesthetics, Combined/administration & dosage/adverse effects; Anesthetics, Inhalation; Anesthetics, Inhalation/administration & dosage/adverse effects; Buprenorphine; Buprenorphine/administration & dosage; clinical trial; comparative study; controlled study; endotracheal intubation; Heart Rate; inhalation anesthetic agent; intranasal; intranasal drug administration; Isoflurane; ketamine; Ketamine/administration & dosage/adverse effects; Leporidae; Medetomidine; Medetomidine/administration & dosage/adverse effects; multicenter study; Narcotic Antagonists; Narcotic Antagonists/administration & dosage; Patient Positioning; Patient Positioning/adverse effects/veterinary; Prospective Studies; rabbits; randomized controlled trial; S(+)-ketamine; veterinary


Keywords: Anesthesia; Anesthesia/veterinary; apnea; artificial ventilation; breathing rate; capnograph; comparative study; computer assisted tomography; controlled study; Cross-Over Studies; cyanosis; devices; endotracheal intubation; evaluation study; facemask; Hypnotics and Sedatives/administration & dosage; intravenous catheter; Intubation, Intratracheal/instrumentation/veterinary; Laryngeal Masks; larynx; Leporidae; lidocaine; maximal inspiratory pressure; New Zealand White (rabbit); procedures; Propofol/administration & dosage; Prospective Studies; pulse oximetry; rabbits; Random Allocation; randomization; randomized controlled trial; Respiration, Artificial; rocuronium; spirometer; supraglottic airway device; Tidal Volume; upper respiratory tract obstruction; v-gel; veterinary
Regional Anesthesia

77 citations


Keywords: adhesion barrier gel antagonists and inhibitors; Biocompatible Materials; Biomaterials; Cicatrix; Collagen; comparative study; Disease Models, Animal; Dura Mater; Epidural fibrosis; Epidural Space; evaluation study; Fibrosis; Laminectomy; Leporidae; metabolism; Organic Chemicals; organic compound; pathology; Peptide Fragments; Rabbits; scar; TGF-beta1 type III receptor (730-743), human; TGF-β; Tissue Adhesions


Keywords: Administration, Buccal; Anesthesia, Local/methods; Anesthetics, Local/administration & dosage/pharmacokinetics; Carticaine/administration & dosage/pharmacokinetics; Chromatography, High Pressure Liquid; Lidocaine/administration & dosage/pharmacokinetics; Palate, Hard/metabolism; Rabbits


Keywords: Analgesics, Opioid; Analgesics, Opioid/administration & dosage/pharmacology; Anesthesia; Anesthesia/veterinary; Anesthetics, Local; Anesthetics, Local/administration & dosage/pharmacology; Blood pressure; Epidural anesthesia; epidural drug administration; Hindlimb/surgery; Injections, Epidural; Intraoperative pain; ketamine; Keta mine/administration & dosage/pharmacology; Leporidae; Lidocaine; Lidocaine/administration & dosage/pharmacology; local anesthetic agent; Medetomidine; Medetomidine/administration & dosage/pharmacology; Morphine; Morphine/administration & dosage/pharmacology; narcotic analgesic agent; Pain, Postoperative; Pain, Postoperative/prevention & control/veterinary; Rabbits; surgery; veterinary medicine


Keywords: animal tissue; bupigel; bupivacaine; controlled study; drug formulation; electromyography; granuloma; hindlimb; histopathology; hydrogel; lidocaine; liposomal delivery; Liposomes; Long acting local anesthetic; motor nerve; muscle action potential; Nerve conduction study; nerve conduction velocity test; nerve potential; nervous system electrophysiology; Neurotoxicity; New Zealand White (NZW) rabbits; New Zealand White (rabbit); perineural drug administration; retention time; sciatic nerve; sensory nerve; sodium chloride; sural nerve; validity

Keywords: Animal Models of Human Diseases; Animal Surgery and Non-drug Therapylaminectomy; Leporidae; LL860; LL884; Non-Communicable Diseases and Injuries of Animals; rabbits; surgical techniques; Techniques and Methodology; VV400; ZZ900


Keywords: acridine orange; Anesthetics, Local; animal cellannulus fibrosus; Bupivacaine; cathepsin D; cell culture; Cell Death; cell membrane permeability; cell permeabilization; Cell Survival; cell swelling; cell viability; Cells, Cultured; chemically induced; chondrocyte; controlled study; cytolysis; cytosol; cytotoxicity; drug effect; immunofluorescence; immunohistochemistry; in vitro study; inhibition kinetics; Intervertebral Disc; intervertebral disc cell; intervertebral disk; Leporidae; lipocortin 5; LMP; local anesthetic agent; lysosome membrane; Lysosomes; membrane rupture; metabolism; n (3 propylcarbamoyloxirane 2 carbonyl)isoleucylproline; necroptosis; necrosis; Necrosis; nucleus pulposus; pathology; peptatin; Permeability; pharmacological blocking; propidium iodide; Rabbits; reactive oxygen metabolite; Reactive Oxygen Species; ROS; staining; transmission electron microscopy


Keywords: acetylcysteine; Amides; Anesthetics, Local; animal cell; animal experimentannulus fibrosus; apoptosis; Apoptosis; Blotting, Western; Bupivacaine; cartilage cell; caspase 3; Caspase 3; caspase 9; Caspase 9; caspase 9; cell assay; cell counting kit 8 assay; cell culture; Cell Death; cell nucleus; cell structure; Cells, Cultured; Chondrocytes; concentration response; controlled study; cytology; cytotoxicity; dichlorodihydrofluorescein diacetate; Down-Regulation; drug effects; drug mechanism; enzyme activation; enzyme activity; flow cytometry; genetics; hoe 33342; in vitro study; In Vitro Techniques; Intervertebral Disc; intervertebral disk; intracellular signaling; Japanese White (rabbit); lipocortin 5; local anesthetic agent; Membrane Potential; Mitochondrial; messenger RNA; metabolism; Mitochondria; mitochondrial membrane potential; mitochondrion; oxidative stress; protein Bax; protein bel 2; protein expression; Proto-Oncogene Proteins c-bel-2; rabbits; reactive oxygen metabolite; Reactive Oxygen Species; Real-Time Polymerase Chain Reaction; Ropivacaine; sodium chloride; staining; upregulation; Western blotting


Keywords: Amides; Anesthetics, Local; Apoptosis; Bupivacaine; cartilage cell; cell culture; Cell Death; Cell Survival; Cells, Cultured; Chondrocytes; comparative study; cytology; dose response; Dose-Response Relationship, Drug; drug effects; in vitro study; In Vitro Techniques; Intervertebral Disc; Lidocaine; local anesthetic agent; Models, Animal; Necrosis; rabbits; Ropivacaine; Time Factors

Keywords: Analysis of Variance; Anesthesia, Local; Anesthesia, Local/methods; Anesthetics, Local/adverse effects/blood; blood; chemically induced disorder; comparative study; End Stage Liver Disease/chemically induced/complications; Lidocaine; Lidocaine/adverse effects/blood; Mandible; methodology; Rabbits


Keywords: animal tissue; controlled study; drug retention; Fluoroscopy; Injections Epidural; Lumbar Vertebrae; Models Animal; New Zealand White (rabbit); Pain; quantitative analysis; rabbit model; Rabbits; Spine; Steroids


Keywords: Absorbable Implants; Anesthetics, local/chemistry/pharmacokinetics/pharmacology; Biodegradable nanofiber; Body Weight/drug effects; Delayed-Action Preparations/chemistry/pharmacokinetics/pharmacology; Drinking/drug effects; Drug Liberation; Eating/drug effects; Femoral Fractures/physiopathology/surgery; Lidocaine/chemistry/pharmacokinetics/pharmacology; Membranes, Artificial; Microscopy, Electron, Scanning; Nanofibers/chemistry/ultrastructure; Nerve Block/methods; Pain, Postoperative/prevention & control; Periosteal block; Periosteum/innervation; Rabbits; Spectroscopy, Fourier Transform Infrared; Sustainable release of lidocaine; Time Factors; Treatment Outcome


Keywords: Autonomic Nerve Block; Anesthetics, Local/administration & dosage; Basilar Artery/diagnostic imaging; Bupivacaine/administration & dosage; Disease Models, Animal; Neurologic Examination; Nitric Oxide Synthase/blood/cerebrospinal fluid; Nitric Oxide/blood/cerebrospinal fluid; Rabbits; Radiography; Random Allocation; Subarachnoid Hemorrhage/complications; Vasopasm, Intracranial/etiology/therapy


Keywords: anesthetic recovery; animal experiment; arterial pressure; ataxic gait; atipamezole; bupivacaine; buprenorphine; dermatome; dexmedetomidine; eardrum; electrocardiography; enrofloxacin; extubation; global positioning system; heart rate; infraorbital nerve; intraocular pressure; isoflurane; ketamine; lidocaine; maxillary nerve; medetomidine; midazolam; mortality rate; nerve block; *Oryctolagus cuniculus*; pain intensity; pulse oximetry; retrospective study; tiletamine; tooth extraction


**Keywords:** Animals; Catheters; Disease Models, Animal; Epidural Space; Rabbits; Reproducibility of Results; Spinal Cord Compression/etiology


**Keywords:** anatomic landmark; animal experiment; auricle; auricular nerves; auriculotemporal; breed; Cadaver; controlled study; dissection; Ear Auricle; Ear Auricle/innervation; greater auricular; incidence; injection; Injections/methods/veterinary; innervation; Leporidae; mandibular nerve; Nerve Block; Nerve Block/methods/veterinary; procedures; prospective study; rabbits; regional anesthesia; veterinary medicine


**Keywords:** animal experiment; Bupivacaine; controlled study; Intraocular pressure; Leporidae; Lidocaine; lignodig; Proparacaine; proxymetacaine; Tetracaine; LL860; LL882; Non-Communicable Diseases and Injuries of Animals; rabbits; Veterinary Pharmacology and Anaesthesiology


**Keywords:** Anesthesia, Local; Administration, Topical; Anesthetics, Local/administration & dosage/pharmacokinetics; Biological Availability; Cornea/drug effects/metabolism; Models, Animal; Ophthalmic Solutions; Rabbits; Tetracaine/administration & dosage/pharmacokinetics


**Keywords:** Anti-inflammatory; Leporids; Neurotoxicity; Spinal cord


**Keywords:** Amides; analgesia; Anesthetics, Local; brachial plexus anesthesia; Brachial Plexus Block; Brachial Plexus Block/methods/veterinary; Brachial Plexus/diagnostic imaging; diagnostic imaging; echography; local anesthetic agent; Pain Management; procedures; rabbits; Ropivacaine; Ultrasonography; veterinary; administration routes; Animal Surgery and Non-drug Therapy; LL822; LL884; nerves; Protozoan, Helminth, Mollusc and Arthropod Parasites of Animals

**Keywords:** Anesthetics, Local/pharmacology; Bupivacaine/pharmacology; Muscle, Skeletal/drug effects; Muscle, Skeletal/surgery; Rabbits; Rotator Cuff/drug effects; Rotator Cuff/pathology; Rotator Cuff/surgery; Wound Healing/drug effects


**Keywords;** animal model; animal tissue; antiapoptotic effect; antioxidant activity; Apoptosis; blood sampling; caspase 3; controlled study; DADLE; drug effect; enkephalin[2 dextro alanine 5 dextro leucine]; enzyme blood level; enzyme inhibition; glutathione peroxidase blood level; immunohistochemistry; Ischemia-reperfusion injury; lumbar spinal cord; malonaldehyde; nervous tissue; neuroprotection; New Zealand White (rabbit); nitric oxide; Oxidative stress; protein expression; protein p53; Rabbit models; randomized controlled trial; sham procedure; Spinal cord; spinal cord injury; spinal cord ischemia; superoxide dismutase; superoxide dismutase blood level


**Keywords: alfaxalone; analgesia; Anesthesia, Conduction/veterinary; Anesthetics, Local; animal experiment; animal model; arterial oxygen saturation; auricle; auricular nerve block; auriculotemporal nerve block; body weight; breathing rate; Bupivacaine; butorphanol; cervical vertebra; chlorhexidine; controlled study; Cross-Over Studies; dog; drug effect; drug substitution; drug withdrawal; ear surgery; eardrum; fatal plus; fecal output; feces analysis; flumazenil; food intake; Frey syndrome; general anesthesia; greater auricular; hay; heart rate; intraocular pressure; isoflurane; Leporidae; local anesthetic agent; Mandibular Nerve/drug effects; meloxicam; midazolam; Nerve Block; Nerve Block/methods/veterinary; nociception; operation duration; pentobarbital; pilot study; Prospective Studies; rabbits; randomized controlled trial; recumbency; regional anesthesia; rhythm; sensorcaine mpf; Time Factors; veterinary medicine


**Keywords: Autonomic Nerve Block/methods; Electrophysiologic Techniques, Cardiac; Ventricular Function; Action Potentials; Anesthetics, Local; Arrhythmias, Cardiac/etiology/physiopathology/prevention & control; Bupivacaine; Disease Models, Animal; Endocardium/pathology/physiopathology; Heart Ventricles/innervation/pathology/physiopathology; Myocardial Infarction/complications/pathology/physiopathology; Myocardium/pathology; Pericardium/pathology/physiopathology; Rabbits; Refractory Period, Electrophysiological; Stellate Ganglion/physiopathology; Time Factors

**Keywords:** Anesthesia, Epidural; Anesthesia, Epidural/methods/veterinary; Anesthetics, Combined; Anesthetics, Combined/administration & dosage/pharmacology; animal experiment; arterial gas; blood sampling; Body Temperature; Body Temperature/drug effects; Concentration; controlled study; drug absorption; drug blood level; Drug Interactions; epidural space; Fentanyl; Fentanyl/administration & dosage/pharmacology; general anesthesia; Heart Rate; Heart Rate/drug effects; Injections, Epidural; Lidocaine; Lidocaine/administration & dosage/blood/pharmacokinetics; lidokain; morfin klorid; Morphine; Morphine/administration & dosage/pharmacology; Narcotics; Narcotics/administration & dosage/pharmacology; Oryctolagus cuniculus; rabbits; Serum; unclassified drug; vasodilatation; adjuvants; analgesia


**Keywords:** animal cell; animal experiment; animal tissue; Biocompatibility; controlled study; Cytokines; Disc arthroplasty; dura mater; Epidural Space; experimental rabbit; Fibrosis; Foreign Bodies; histopathology; Immune response; immunocompetent cell; immunohistochemistry; in vivo study; Inflammation; inflammatory cell; Interleukin-1beta; Interleukin-6; intermethod comparison; Intervertebral Disc; joint prosthesis; Ketones; Materials Testing; Models, Animal; PEEK; polyetheretherketone; Polyethylene Glycols; Prostheses and Implants; quantitative analysis; Rabbits; simulator; Spine; Tumor Necrosis Factor-alpha; Wear particles


**Keywords:** Anesthetics, Local; animal experiment; animal tissue; Bupivacaine; controlled study; drug effect; extracocular muscle; Immunohistochemistry; Injections, Intramuscular; intramuscular drug administration; Leporidae; local anesthetic agent; metabolism; microscopy; Muscle Fibers, Skeletal; myosin antibody; Myosin Type I; New Zealand White (rabbit); Oculomotor Muscles; Orbit; pathology; rabbits; skeletal muscle


**Keywords:** animal experiment; animal model; aorta occlusion; Aorta, Abdominal; body temperature; Body Temperature Regulation; Catheters; controlled study; Disease Models, Animal; epidural catheter; Epidural Space; Equipment Design; Fogarty catheter; hypothermia; Hypothermia, Induced; Ligation; metabolic stress; Motor Activity; Paraplegia; rabbits; randomized controlled trial; Recovery of Function; Reperfusion Injury; Spinal Cord; spinal cord injury; Spinal Cord Ischemia; TAA; thoracoabdominal aortic aneurysm; Time Factors

**Keywords:** LL860; LL882; Non-Communicable Diseases and Injuries of Animals; rabbits; Veterinary Pharmacology and Anaesthesiology


**Keywords:** 1' [3 (diethylamino)propyl] 3,4 dihydrospiro[naphthalene 1(2h),3' pyrrolidine] 2',5' dione; Anesthetics, Local; animal cell; animal experiment; animal tissue; binding site; Bupivacaine; Cardiotoxicity; cell isolation; cell size; concentration response; Contractility; controlled study; dose response; drug potency; drug receptor binding; Enantioselectivity; Heart Conduction System; heart muscle cell; heart muscle conduction disturbance; heart muscle contractility; heart muscle relaxation; heart perfusion; heart ventricle contractility; heart ventricle pressure; hydrophobicity; ionization; isolated heart; Lidocaine; Myocardial Contraction; myocardial disease; Myocytes, Cardiac; Naphthalenes; pharmacodynamics; Pyrrolidinones; QRS complex; rabbits; Ryanodine; ryanodine receptor; Sarcoplasmic Reticulum; stereochemistry; velocity; cardiomyocytes; local anesthetics; models; toxicity


**Keywords:** Stellate Ganglion; Anesthetics, Local/administration & dosage; Blood Pressure/drug effects; Carotid Artery, Common/drug effects; Chin/innervation; Heart Rate/drug effects; Injections, Spinal/methods; Lidocaine/administration & dosage; Mandibular Nerve/drug effects; Nerve Block/methods; Oxygen Consumption/drug effects; Rabbits; Regional Blood Flow/drug effects; Tongue/blood supply


**Keywords:** analgesic activity; Analgesics; animal cell; animal experiment; animal tissue; Blinking; Blotting, Western; cell migration; cell motility; Cell Movement; Cells, Cultured; Chromatography, High Pressure Liquid; controlled study; Cornea; Corneal wound healing; cytotoxicity; cytotoxicity assay; Disease Models, Animal; dose response; Eye Injuries; gene expression; Gene Expression Regulation; high performance liquid chromatography; histology; Immunohistochemistry; Neurotensin; neurotensin derivative; neurotensin receptor; NT71 peptide; NT72 peptide; ophthalmic esthesiometer; Ophthalmic Solutions; Peptides; photorefractive keratectomy; polyacrylamide gel electrophoresis; polymerase chain reaction; proxymetacaine; rabbits; Receptors, Neurotensin; RNA, Messenger; slit lamp; sodium channel blocking agent; tetracaine; Topical analgesia; Trigeminal Ganglion; unclassified drug; Western blotting; Wound Healing

Keywords: analgesia; Anesthetics, Local; Bupivacaine; Lidocaine; rabbits; anesthesia level; animal experiment; animal model; arthrotomy; buprenorphine; carprofen; controlled study; drug effects; experimental rabbit; femoral nerve; Femoral Nerve; fentanyl; heart rate; Intraoperative Complications; Intraoperative Complications/prevention & control; intraoperative period; isoflurane; local anesthesia; local anesthetic agent; morphine; Nerve Block; Nociception; Nociception/drug effects; pain; pain assessment; Pain control; perineural drug administration; Peripheral nerve blockade; placebo; postoperative analgesia; postoperative pain; propofol; Rabbits and hares; randomized controlled trial; range of motion; Refinement; Sciatic Nerve; stifle; Stifle; stifle joint arthropathy; Stifle/surgery; surgery; surgical wound; Surgical Wound; systolic blood pressure; visual analog scale; Animal Surgery and Non-drug Therapy; Laboratory Animal Science; Leporidae; LL040; LL882; LL884; rabbits; Veterinary Pharmacology and Anaesthesiology


Keywords: Anesthesia, Obstetrical; Nerve Block; Rabbits; Tattooing


Keywords; breathing; carbon dioxide tension; controlled study; drug mechanism; epidural injection; evoked somatosensory response; heart rate; hemodynamics; lidocaine; magnesium; magnesium sulfate; mean arterial pressure; motor blockade; nerve block; rabbits; sensory blockade; sodium chloride; somatosensory evoked potentials


Keywords: animal tissue; axon; bupivacaine; controlled study; epineurium; extrafascicular; histopathology; injection; intrafascicular; intraneural puncture; Leporidae; myelin sheath; nerve degeneration; nerve fiber; nerve function; nerve injury; New Zealand White (rabbit); peroneus nerve; prospective study; rabbits; sciatic nerve; sodium chloride; tibial nerve; ultrastructure; Animal Surgery and Non-drug Therapy; fibers; LL860; LL882; LL884; nerve cells; nerves; neurones; neuropathy; Non-Communicable Diseases and Injuries of Animals; rabbits; salt water; sight; Veterinary Pharmacology and Anaesthesiology; White New Zealand


Keywords: action potential duration; Action Potentials; Anesthetics, Local; animal cell antagonists and inhibitors; Bupivacaine; Cardiotoxicity; controlled study; depolarization; Disease Models, Animal; drug effects; Electrophysiological parameters; electrophysiology; Emulsions; heart muscle conduction disturbance; heart muscle potential; heart repolarization; lipid emulsion; local anesthetic agent; long chain triacylglycerol; Long-chain triglyceride lipid emulsion; membrane
steady potential; nerve block; Purkinje Cells; Purkinje fiber; rabbits; Random Allocation; randomization; triacylglycerol; Triglycerides


Keywords: animal experiment; animal model; Biocompatible Materials; biomaterial; Cell Count; cell density; cell migration; Chitosan; controlled study; Disease Models, Animal; disease severity; drug effect; dura mater; Epidural fibrosis; Epidural Space; Failed back surgery syndrome; Fibroblasts; Fibrosis; Foreign-Body Reaction; Laminctomy; ligamentum flavum; Magnetic Resonance Imaging; metabolism; MRI; New Zealand White (rabbit); nuclear magnetic resonance imaging; nuclear magnetic resonance scanner; pathology; Poly (l-glutamic acid)/chitosan; polyglutamic acid; Polyglutamic Acid; postoperative complication; prophylaxis; Prostheses and Implants; prostheses and orthoses; rabbit model; Rabbits; radiological parameters; scar; spinal epidural adhesion; spinal epidural fibrosis; static electricity; Tissue Adhesions


Keywords: Anesthesia, Epidural; Anesthesia, Epidural/methods; Anesthetics, Inhalation; Anesthetics, Inhalation/administration & dosage/chemistry/pharmacology; Anesthetics, Local; Anesthetics, Local/administration & dosage/chemistry/pharmacology; animalchemistry; Chemistry, Pharmaceutical; comparative study; consciousness; Consciousness; Consciousness/drug effects; dose response; Dose-Response Relationship, Drug; Drug Carriers; Drug Carriers/chemistry; drug effects; Emulsified halothane; emulsified isoflurane; Emulsified isoflurane; emulsion; Emulsions; Emulsions/chemistry; Epidural anesthesia; Halothane; Halothane/administration & dosage/chemistry/pharmacology; inhalation anesthetic agent; Isoflurane; Isoflurane/pharmacology; Lidocaine; Lidocaine/pharmacology; local anesthetic agent; medicinal chemistry; Motor Activity; Motor Activity/drug effects; Pain Threshold; Pain Threshold/drug effects; Phospholipids; Phospholipids/chemistry; procedures; rabbits; Soybean Oil; soybean oil, phospholipid emulsion; Soybean Oil/chemistry; Time Factors


Keywords: Anesthetics, Local; animal; blood; Buffers; Bupivacaine; capillary electrophoresis; chemistry; Computer Simulation; Cyclodextrins; drug structure; Electric Conductivity; Electrochemistry; Electrophoresis, Capillary; enantiomer; Hydrogen-Ion Concentration; injection; Injections, Intravenous; intravenous drug administration; isolation and purification; local anesthetic agent; pH; process optimization; rabbits; stereoisomerism; Stereoisomerism


Keywords: abdominal aorta; animal experiment; animal model; aorta occlusion; Aorta, Abdominal; assessment of humans; blood flow; blood pressure monitoring; catheterization; Catheterization, Peripheral; controlled study; core temperature; Disease Models, Animal; dose response; Dose-Response Relationship, Drug; drug effects; Enkephalin, Leucine-2-Alanine;

**Keywords:** Disease Models, Animal; Ethanol/metabolism; Injections; Nerve Block/methods; Peripheral Nerves/physiopathology; Rabbits


**Keywords:** Anesthesia; Epidural; Fibrosis; Rabbits


**Keywords:** Applied anatomy; rabbits; Regional anesthesia; Skull


**Keywords:** Nerve Block; Action Potentials; Action Potentials/drug effects/physiology; alcohol; central depressant agent; Central Nervous System Depressants; Central Nervous System Depressants/administration & dosage; CMAP; dose response; Dose-Response Relationship; Dose-Response Relationship, Drug; drug effect; Ethanol; Ethanol Neurolysis; Ethanol/administration & dosage; injection; Models, Animal; Nerve Block; pathology; pathophysiology; physiology; rabbits; Tibial Nerve; Tibial Nerve/drug effects/pathology/physiopathology


**Keywords:** Animal Models of Human Diseases; Non-drug Therapy and Prophylaxis of Humans; rabbits; VV400; VV710


**Keywords:** Anesthesia, Local; Analgesics/pharmacology; Anesthetics, Local/pharmacologyColoring Agents/chemistry; Diffusion; Electric Conductivity; Emulsions/chemistry; Ex vivo drug retention studies; Goats; Hydrogen-Ion Concentration; lidocaine-TPP-complex; Lidocaine/pharmacology; Local anaesthetic; Microemulsion; Particle Size; Phase Transition; Polyphosphates/pharmacology; Rabbits; Radiant heat tail-flick test; Rats, Wistar; Skin Irritancy Tests; Skin/drug effects; Static Electricity; Sustained drug release; Thermodynamics; Viscosity

**Keywords:** anaesthesia; analgesia; animal experiment; bupivacaine; buprecare; buprenorphine; domtor; elective surgery; epidural; epidural anesthesia; follow up; hysterectomy; interventional ultrasonography; isoflo; isoflurane; ketamine; lidocaine; lumbosacral region; marcain polyamp; medetomidine; meloxicam; metoclopramide; midazolam; midazolam normon; morfina serra; morphine; Oryctolagus cuniculus; ovariecctomy; ovariohysterectomy; postoperative care; postoperative pain; premedication; propofol; rabbits; ranitidine; sedation; x-ray computed tomography


**Keywords:** Analgesia; In situ forming gel; Injections; Local anesthetics; Lyotropic liquid crystal; Phase transition; Postoperative analgesia; Postoperative Care; Biocompatible Materials/chemistry; Bupivacaine/blood/pharmacokinetics; Drug Liberation; Gels/chemistry; Liquid Crystals/chemistry; Nanostructures/chemistry; Phase Transition; Rabbits; Rats, Sprague-Dawley; Rheology; Solutions


**Keywords:** Models, Animal; Anatomic Landmarks; Anesthetics, Local/administration & dosage; Axilla/blood supply/innervation; Axillary Artery/anatomy & histology; Brachial Plexus Block/methods/veterinary; Brachial Plexus/anatomy & histology/diagnostic imaging; Forelimb/innervation; Rabbits; Reproducibility of Results; Ultrasonography/methods


**Keywords:** Anesthesia; Intraocular Pressure; Blood Pressure; Rabbits; Retrobulbar Block


**Keywords:** anesthesia; Animal Anatomy and Morphology; Canidae; Canis; carnivores; cats; companion animals; dogs; Felidae; Felis; Fissipeda; Leporidae; LL070; LL400; LL860; Non-Communicable Diseases and Injuries of Animals; rabbits; traumas; vertebrates


**Keywords:** anesthesia; Anesthesia/veterinary; Anesthetics, Local/administration & dosage; eye; Eye/diagnostic imaging/innervation; Injections, Intraocular/veterinary; Lidocaine/administration & dosage; Nerve Block/veterinary; Oculomotor Muscles/innervation; Ophthalmodynamometry/veterinary; periconal blockade; Prospective Studies; rabbits; Ultrasonography, Interventional/veterinary; ultrasound

**Keywords:** Anesthesia, Epidural; Fluid Therapy/adverse effects; Anastomosis, Surgical/methods; Anastomotic leak; Anastomotic Leak/epidemiology/physiopathology; Colloid; Colon; Colon/surgery; Colonic anastomoses; Crystalloid; Epidural; Euvolemia; Fluid balance; Fluid overload; Intraoperative Period; Models, Animal; Rabbits; Risk Factors; Sympathetic block; Wound Healing/physiology


**Keywords:** adverse effects; animal experiment; animal model; animal tissue; Cicatrix; disease model; Disease Models, Animal; Epidural Space; interlaminotomy; laminectomy; lower extremity paresis; microsurgery; Microsurgery; model; neurologic disease; New Zealand White (rabbit); New Zealand white rabbits; operation duration; paraplegia; paresis; procedures; rabbits; scar; spine surgery; standards; surgery; surgical microscope


**Keywords:** adverse event; Analgesia; Anesthesia, Local; Anesthesia, Local/adverse effects/veterinary; Anesthetics, Local; Anesthetics, Local/administration & dosage; animal experiment; animal model; animal tissue; Bupivacaine; Bupivacaine/administration & dosage; coccyx; Contrast Media; contrast medium; contrast medium extravasation; controlled study; Epidural anesthesia; epidural drug administration; epidural single-bolus injection technique; Epidural single-bolus injection technique; epidural space; Extravasation of Diagnostic and Therapeutic Materials; Extravasation of Diagnostic and Therapeutic Materials/veterinary; hindlimb; Injections, Epidural; Injections, Epidural/adverse effects/methods/veterinary; iohexol; Lepridae; local anesthesia; local anesthetic agent; nociception; procedures; proprioception; rabbits; reflex; sodium chloride; Spinal Canal; tail; vertebral canal; veterinary medicine; walking


**Keywords:** Anesthesia, Epidural; abdominal aorta; adverse effects; Anesthesia, Epidural; Anaesthesiology; Local; Anaesthesiology, Local/administration & dosage; animal experiment; animal model; animal tissue; aorta clamping; aorta occlusion; Aorta, Abdominal; Aorta, Abdominal/surgery; biochemical marker; biological marker; Biomarkers; Biomarkers/blood; blood; blood flow; bolus injection; Constriction; continuous infusion; controlled study; Disease Models, Animal; drug effects; epidural anesthesia; epidural catheter; experimental rabbit; histopathology; injury severity; Interleukin-6; Interleukin-6/blood; intestine epithelium cell; intestine villus; ischemia-modified albumin; Lidocaine; Lidocaine/administration & dosage; ligation; local anesthetic agent; Malondialdehyde; Malondialdehyde/metabolism; Mesenteric Arteries; Mesenteric Arteries/drug effects/metabolism/pathology/physiopathology; mesenteric injury; Mesenteric Ischemia; Mesenteric...
Ischemia/blood/pathology/physiopathology/prevention & control; metabolism; pathology; pathophysiology; Rabbits and hares; Regional Blood Flow; Reperfusion Injury; Reperfusion Injury/blood/pathology/physiopathology/prevention & control; Serum Albumin; Serum Albumin, Human; splanchnic blood flow; Splanchnic Circulation/drug effects; superoxide dismutase; Superoxide Dismutase; Superoxide Dismutase/metabolism; supracoeliac aortic occlusion; surgery; Time Factors; vascular clamp; vascular surgery; Vascular Surgical Procedures; Vascular Surgical Procedures/adverse effects


Keywords: Electrical Impedance; Nerve Block; Nerve Injury; Sciatic Nerve Block; Sciatic Nerve/diagnostic imaging; Ultrasound-Guided Nerve Block; diagnostic imaging; Electrical Impedance; impedance; interventional ultrasonography; Leporidae; needle; Needles; Nerve Block; Nerve Injury; Rabbits; Sciatic Nerve; Sciatic Nerve Block; Ultrasonography, Interventional


Keywords: Anesthesia, Epidural; Anesthesia, Epidural/veterinary; back; Canis familiaris; Contrast Media; Contrast Media/administration & dosage/pharmacology; controlled study; Electric Stimulation; Electric Stimulation/instrumentation; epidural space; evoked muscle response; hindlimb; Injections, Epidural; Injections, Epidural/veterinary; Iohexol; Iohexol/administration & dosage/pharmacology; leg muscle; ligament; Lumbosacral Region; Lumbosacral Region/physiology; lumbosacral spine; Muscle Contraction; Muscle, Skeletal; Muscle, Skeletal/physiology; needle; nerve stimulation; Oryctolagus cuniculus; perceptive threshold; Rabbits/physiology; spine radiography; tail; HH410; LL070; LL600; LL822; rabbits; ZZ900


Keywords: abscess drainage; animal experiment; articaine; articaine plus epinephrine; debridement; dexmedetomidine; dye; food intake; head movement; immunosuppressive treatment; injection; ketamine; Leporidae; Maxillary Nerve; Nerve Block; nociception; numeric rating scale; Oryctolagus cuniculus; phase 1 clinical trial; phase 2 clinical trial; polyacrylamide gel electrophoresis; rabbit model; Rabbits; sodium chloride; veterinary medicine; visual analog scale; analgesics; drug injection; epinephrine; LL882; local anesthetics; Maxillary Nerve; Nerve Block/veterinary; nerve tissue; New Zealand White rabbit; sedation; sensory neurons; ZZ900


Keywords: Anesthetics, Local/administration & dosage/blood/chemistry/pharmacokinetics; Cell Line; Disease Models, Animal; Drug Compounding; Liposomes; Motor Activity/drug effects; Nerve Block; Pain Threshold/drug effects; Pain, Postoperative/physiopathology/prevention & control; Rabbits; Rats, Wistar; Ropivacaine/administration & dosage/blood/chemistry/pharmacokinetics; Sciatic Nerve/drug effects

**Keywords:** Anesthesia; Bupivacaine; Nerve Block; Rabbits; Dogs; EXPAREL


**Keywords:** peridural; rabbits; regional anesthesia; α2-agonists; LL860; LL882; Non-Communicable Diseases and Injuries of Animals; Veterinary Pharmacology and Anaesthesiology


**Keywords:** Administration, Ophthalmic; Administration, Topical; Anesthesia, Local/methodsChemistry, Pharmaceutical; Drug Evaluation, Preclinical/methods; Lidocaine/administration & dosage/chemical synthesis/metabolism; Ocular Absorption/drug effects/physiology; Rabbits


**Keywords:** Anesthesia; Pharmacokinetics; Ropivacaine; Femoral Nerve Block; Rabbits


**Keywords:** Anesthesia; Pharmacokinetics; Ropivacaine; Femoral Nerve Block; Rabbits


**Keywords:** animal model; bupivacaine; cell death; confocal laser scanning microscopy; controlled study; degenerative changes; discoblock; drug efficacy; extracellular matrix; histology; in vivo study; intervertebral disk degeneration; Leporidae; lidocaine; local anesthetics; organ culture; sodium chloride; TUNEL assay


**Keywords:** anesthesia induction; anesthesia mechanism; animal experiment; controlled study; drug dose comparison; drug effect; drug megadose; drug potency; Lidocaine; local anesthesia; Local anesthetics; low drug dose; nose mucosa; rabbits; Reflex movements of nostrils; Reversible loss of sensory perception; Ropivacaine; sensitivity analysis; sneezing

**Keywords:** analgesic agent; Analgesics, Non-Narcotic; Analgesics, Non-Narcotic/administration & dosage/adverse effects; Anesthetics, Local; Anesthetics, Local/administration & dosage/adverse effects; animal experiment; animal tissue; concentration response; controlled study; demyelination; Dexmedetomidine; Dexmedetomidine/administration & dosage/adverse effects; dose response; Dose-Response Relationship, Drug; drug effect; electron microscopy; Femoral Nerve; femoral nerve block; Femoral Nerve/drug effects; histopathology; Leporidae; local anesthetic agent; myelin sheath; Nerve Block; Nerve Block/methods; Neurotoxicity Syndromes/etiology/pathology; New Zealand rabbit; pathology; perineural drug administration; procedures; quantitative analysis; rabbit model; Rabbits; Ropivacaine; Ropivacaine/administration & dosage/adverse effects; scoring system; sensorimotor function; sodium chloride; toxicity and intoxication


**Keywords:** Anesthesia; animal experiment; animal tissue; blood analysis; bronchoalveolar lavage fluid; controlled study; enzyme linked immunosorbent assay; Epidural; experimental acute lung injury; histology; hypoxia; hypoxia induced acute lung injury; Inflammation; interleukin 10; interleukin 6; interleukin 8; lung parenchyma; lung surfactant; messenger RNA; phosphatidylcholine; phospholipid; protein; Pulmonary surfactants; rabbits; Respiratory distress syndrome; sevoflurane; thorax epidural anesthesia; transmission electron microscopy


**Keywords:** Animal model; Degenerative disc disease; Local anesthesia; Percutaneous posterolateral disc puncturing


**Keywords:** adipose derived stem cell; animal cell; animal experiment; apoptosis; apoptosis rate; beta1 integrin; bupivacaine; cell culture; cell differentiation; cell maturation; cell structure; cell viability; chondrogenesis; Chondrogenic differentiation; collagen type 1; collagen type 3; controlled study; cytotoxicity; Cytotoxicity; fibrocartilage; flow cytometry; gene expression; gene sequence; genetic analysis; glycosaminoglycan; in vitro study; Leporidae; lidocaine; local anesthetic agent; Local anesthetics; mepivacaine; mesenchymal stem cell; Mesenchymal stem cells; metabolic activity assay; mRNA expression level; MTS assay; protein expression; real time polymerase chain reaction; reverse transcription polymerase chain reaction; ropivacaine; transcription factor Sox9


**Keywords:** adverse effects; anesthesia; Anesthesia, Local; Anesthesia, Local/adverse effects/methods; Anesthetics, Local; Anesthetics, Local/administration & dosage/adverse effects; animal; blindness; Blindness; Blindness/chemically induced/physiopathology; Bupivacaine;
Bupivacaine/administration & dosage/adverse effects; chemically induced; child; controlled study; drug effects; drug toxicity; electrophysiology; Evoked Potentials, Visual; Evoked Potentials, Visual/drug effects; Injections, Intracocular; intracocular drug administration; Lidocaine; Lidocaine/administration & dosage/adverse effects; local anesthesia; local anesthetic agent; Nerve Block; Nerve Block/adverse effects/methods; Ophthalmic anesthesia; pathophysiology; procedures; pupil reflex; Rabbits and hares; rat; Reflex, Pupillary; Reflex, Pupillary/drug effects; sub-tenon’s anesthesia; Tenon Capsule; visual evoked potential; visual potential; Veterinary ophthalmology


**Keywords:** anesthesia; anesthetics; Animal Models of Human Diseases; bupivacaine; medical sciences; nerve cells; nerves; neurones; Protozoan, Helminth and Arthropod Parasites of Humans; rabbits; tropical countries; tropical zones; VV220; VV400

Xu, J., Chen, Y., Yue, Y., Sun, J., & Cui, L. (2012). Reconstruction of epidural fat with engineered adipose tissue from adipose derived stem cells and PLGA in the rabbit dorsal laminectomy model. *Biomaterials, 33*(29), 6965–6973. [https://doi.org/10.1016/j.biomaterials.2012.06.010](https://doi.org/10.1016/j.biomaterials.2012.06.010)

**Keywords:** Adipocytes; adipogenesis; Adipose derived stem cells; Adipose Tissue; animal cell; animal experiment; animal tissue; autologous stem cell transplantation; Brain; cell differentiation; cell growth; cell isolation; cell labeling; cell structure; controlled study; Defects; dura mater; Dura mater; enzyme activity; epidural fat; Epidural fibrosis; Epidural Space; experimental model; experimental rabbit; Failed back surgery syndromes; Fibrosis; glycerol 3 phosphate dehydrogenase; Glycerolphosphate Dehydrogenase; High density; Histological observations; histology; in vivo study; In-vitro; Lactic Acid; Lactic-co-glycolic acid; Laminectomy; Laminectomy site; magnetic nanop; Magnetic nanoparticles; Magnetic Resonance Imaging; Magnetics; Nanoparticles; nuclear magnetic resonance imaging; Oryctolagus cuniculus; PLGA scaffolds; polyglactin; Polyglycolic Acid; porosity; postoperative complication; postoperative period; Rabbits; Restoration; Scaffolds (biology); scanning electron microscopy; scar; Scar tissues; Spinal cords; spine radiography; Spine surgery; staining; Stem Cells; Subcutaneous fat; Surgery; thoracolumbar spine; Time Factors; Tissue; Tissue Engineering; tissue scaffold


**Keywords:** arterial pressure; bupivacaine; cardiotoxicity; drug blood level; drug effect; electrocardiogram; endotracheal intubation; general anesthesia; heart conduction; heart massage; heart muscle contractility; insulin; insulin treatment; QRS complex; rabbits; resuscitation; return of spontaneous circulation; shock; sinus rhythm; sternotomy


**Keywords:** Microinjections; Needles; Administration, Cutaneous; Anesthesia, Local; Anesthetics, Local/administration & dosage; Dissolving microneedles; Drug loading ratio; Guinea Pigs; Lidocaine hydrochloride; Lidocaine/administration & dosage; Local anesthesia; Rabbits; Rats; Skin/metabolism

**Keywords:** Amides; Amides/administration & dosage/toxicity; Anesthetics, Local; Anesthetics, Local/administration & dosage/toxicity; Brain; Brain/drug effects/metabolism; cardiac muscle; Cell Shape; Cell Shape/drug effects; chemically induced; Continuous nerve block; drug effects; Edema; Edema/chemically induced/pathology; Heart; Heart/drug effects; Infusions, Parenteral; innervation; local anesthetic agent; metabolism; Morphology; Motor Activity; Motor Activity/drug effects; Muscle, Skeletal; Muscle, Skeletal/drug effects/innervation/pathology; Myocardium; Myocardium/pathology; necrosis; Necrosis; Nerve Block; Nerve Block/methods; Nerve Degeneration; Neurotoxicity Syndromes; Neurotoxicity Syndromes/etiology/pathology/physiopathology; parenteral drug administration; pathology; pathophysiology; procedures; Rabbits and hares; Ropivacaine; Sciatic Nerve; Sciatic Nerve/drug effects/pathology/physiopathology; skeletal muscle; Time Factors
Special Anesthetic Considerations

21 citations

Adami, C., Sanchez, R. F., & Monticelli, P. (2019). Use of atracurium and its reversal with neostigmine in 14 pet rabbits undergoing ophthalmic surgery: A retrospective study. The Veterinary Record, 184(14), 443. https://doi.org/10.1136/vr.105266

Keywords: cardiovascular anaesthetic complications; cataract surgery; neuromuscular blocking agents; pet rabbits; Anesthesia/veterinary; Atracurium/administration & dosage; Cholinesterase Inhibitors/administration & dosage; Neostigmine/administration & dosage; Neuromuscular Nondepolarizing Agents/administration & dosage; Ophthalmologic Surgical Procedures/methods/veterinary; Rabbits/surgery; Retrospective Studies


Keywords: animal experiment; animal model; animal tissue; Bupivacaine; cell infiltration; controlled study; drug effects; experimental rabbit; extraocular muscle; histopathology; inflammatory cell; injection; muscle atrophy; muscle cell; muscle necrosis; muscle regeneration; Oculomotor Muscles; rabbits; Regeneration; scar formation; Strabismus


Keywords: Anesthesia; Anesthesia/methods; blood flow; carotid artery obstruction; Carotid Artery, External; Carotid Artery, External/physiopathology; Carotid Artery, Internal; Carotid Artery, Internal/physiopathology; external carotid artery; eye; Eye; Eye/blood supply; internal carotid artery; Ischemia; Ischemia/diagnosis/physiopathology; laser Doppler flowmetry; Laser-Doppler Flowmetry; Leporidae; pathophysiology; procedures; Rabbits; Regional Blood Flow; vascularization


Keywords: Administration, Oral; Anesthetics, Local; animal experiment; animal model; animal structures; animal tissue; Bupivacaine; controlled study; drug effect; experimental rabbit; Extraocular muscle; histopathology; Hypertrophy; Injections, Intramuscular; Isosorbide Dinitrate; Muscle Contraction; muscle excitation; Muscle Fibers, Skeletal; muscle hypertrophy; muscle tone; muscle twitch; myofibrosis; Nitric oxide; Nitric Oxide Donors; Oculomotor Muscles; Rabbits; superior rectus muscle; tetanic muscle tension


Keywords: adverse event; anesthesia induction; Anesthesia, General; Anesthesia, General/adverse effects/veterinary; animal experiment; animal model; controlled study; drug effect; drug
withdrawal; experimental rabbit; eye surgery; general anesthesia; glaucoma; inhalation anesthesia; inhalation anesthetic agent; intraocular hypertension; Intraocular Pressure; IOP; Isoflurane; isothia; ketamine; ketathesia; Leporidae; New Zealand White (rabbit); oculoplethysmography; oxygen; premedication; pressure measurement; Rabbits; risk; Tonometry, Ocular/veterinary; veterinary medicine; Xylazine


Keywords: Anesthesia; animal experiment; animal tissue; auditory stimulation; barbituric acid; barbituric acid derivative; cell synchronization; cochlea prosthesis; Cochlear implant; electrophysiology; electrostimulation; etacrynic acid; evoked brain stem auditory response; histology; Inferior colliculus; kanamycin; ketamine; latent period; methohexital; nerve cell membrane potential; nerve potential; pentobarbital; single unit activity; spike wave; Temporal coding; urethan; wakefulness; xylazine; Acoustic Stimulation/methods; Action Potentials/physiology; Anesthesia/methods; Anesthetics, Intravenous/administration & dosage; Auditory Perception/physiology; Auditory Perception/drug effects; cochlear implant; Cochlear Implants; Electric Stimulation/methods; Mesencephalon/physiology; Mesencephalon/drug effects; Rabbits; temporal coding; Wakefulness/physiology; Wakefulness/drug effects


Keywords: Ketamine; Midazolam; Oryctolagus cuniculus; Tiletamine; Xylazine; Zolazepam


Keywords: Anesthesia; anesthesia induction; Anesthesia-induced neurotoxicity; animal cell; animal experiment; animal tissue; body weight; Brain; brain region; cell density; cell proliferation; controlled study; fetus; fetus development; laparotomy; Neonatal; nerve cell differentiation; Neuronal density; New Zealand rabbit; newborn; postnatal care; Pregnancy; progeny; Sevoflurane; survival rate; synapse; Xenon


Keywords: age distribution; amplitude of low frequency fluctuation; animal experiment behavior disorder; BOLD signal; brain function; cingulate gyrus; classical conditioning; cognitive defect; conditioning; connectivity; controlled study; developmental disorder; drug exposure; Dutch belted (rabbit); eyelid classical conditioning; fractional amplitude of low frequency fluctuation; functional connectivity; functional magnetic resonance imaging; general anesthesia; hippocampus; isoflurane; learning disorder; nerve cell network; nervous system parameters; neurotoxicity; newborn; perinatal period; radiological parameters; regional homogeneity; resting state fMRI; somatosensory cortex; task performance; thalamocortical tract; thalamus

**Keywords:** Anesthesia; animal experiment; animal model; aqueous humor outflow; atlantooccipital joint; clinical assessment; clinical evaluation; comparative study; controlled study; demizolam; endotracheal intubation; epiglottis; extubation; eye surgery; Intraocular pressure; ketamine; ketasol; mastication; Medetomidine; midazolam; newborn care; postoperative complication; Propofol; rabbits; rabbit model; Sevoflurane


**Keywords:** animal experiment; controlled study; experimental rabbit; Hypnotics and Sedatives; Intraocular pressure; ketamine; Rabbits; sedation; tonometry; Xylazine


**Keywords:** Anesthesia; Intraocular; Rabbits


**Keywords:** Sedation; Anesthesia; Rabbits; Intraocular Pressure; Acepromazine


**Keywords:** Anesthesia; Intraocular Pressure; Blood Pressure; Rabbits; Retrolbulbar Block


**Keywords:** anesthesia; Anesthesia/veterinary; Anesthetics, Local/administration & dosage; Eye/diagnostic imaging/inervation; Injections, Intraocular/veterinary; Lidocaine/administration & dosage; Nerve Block/veterinary; Oculomotor Muscles/inervation; Ophthalmodynamometry/veterinary; periconal blockade; Prospective Studies; rabbits; Ultrasonography, Interventional/veterinary; ultrasound


**Keywords:** Anesthesia; Isoflurane; Inhalation anesthesia; rabbits; uterine; fetal; cardiac activity

**Keywords:** anesthesia; animal behavior; Animal Behaviour; Animal Reproduction and Embryology; animal rights; Animal Welfare; behavior; coitus; LL070; LL250; LL300; LL810; Oryctolagus cuniculus; rabbits; White New Zealand


**Keywords:** Animal Surgery and Non-drug Therapy; Diagnosis of Animal Diseases; Leporidae; LL070; LL860; LL882; LL884; LL886; Non-Communicable Diseases and Injuries of Animals; rabbits; Southern Veterinary Pharmacology and Anaesthesiology


**Keywords:** Analgesia; Rabbit; Fetus


**Keywords:** brain; cognition; development; Fetal Development; fetus; general anesthesia; long term; maternal surgery; motor; neurobehavior; pregnancy; rabbits; Anesthesia, General/methods; Anesthetics, Inhalation/pharmacology; Anesthetics, Intravenous/pharmacology Blood Gas Analysis; Brain/drug effects/embryology/metabolism/pathology; Cell Count; Laparotomy/methods; Models, Animal; Neurons/drug effects/pathology; Pregnancy; Prenatal Exposure Delayed Effects; Propofol/pharmacology; Rabbits; Random Allocation; Sevoflurane/pharmacology; Synaptophysin/metabolism


**Keywords:** adverse effects; anesthesia; Anesthesia, Local; Anesthesia, Local/adverse effects/methods; Anesthetics, Local; Anesthetics, Local/administration & dosage/adverse effects; animal; blindness; Blindness; Blindness/chemically induced/physiopathology; Bupivacaine; Bupivacaine/administration & dosage/adverse effects; chemically induced; child; controlled study; drug effects; drug toxicity; electrophysiology; Evoked Potentials, Visual; Evoked Potentials, Visual/drug effects; Injections, Intracocular; intraocular drug administration; Lidocaine; Lidocaine/administration & dosage/adverse effects; local anesthesia; local anesthetic agent; Nerve Block; Nerve Block/adverse effects/methods; Ophthalmic anesthesia; pathophysiology; procedures; pupil reflex; Rabbits and hares; rat; Reflex, Pupillary; Reflex, Pupillary/drug effects; sub-tenon’s anesthesia; Tenon Capsule; visual evoked potential; visual potential; Veterinary ophthalmology
Intraoperative Support and Monitoring

24 citations


Keywords: cardiovascular anaesthetic complications; cataract surgery; neuromuscular blocking agents; pet rabbits; Anesthesia/veterinary Atracurium/administration & dosage; Cholinesterase Inhibitors/administration & dosage; Neostigmine/administration & dosage; Neuromuscular Nondepolarizing Agents/administration & dosage; Ophthalmologic Surgical Procedures/methods/veterinary; Rabbits/surgery; Retrospective Studies


Keywords: Adenosine Triphosphate/pharmacology; Carotid Body/physiology; Hypoxia/physiopathology; Nerve Block; Nicotine/pharmacology; Rabbits; Respiration/drug effects; Sodium Cyanide/pharmacology


Keywords: LL070; LL882; Veterinary Pharmacology and Anaesthesiology


Keywords: anesthesia; anesthetics; Animal Physiology and Biochemistry (Excluding Nutrition); LL070; LL600; LL882; Oryctolagus cuniculus; rabbits; Veterinary Pharmacology and Anaesthesiology


Keywords: Acid-Base Equilibrium/physiology; Anesthesia, General; Anesthesia, General/veterinary; anesthetic agent; Anesthesiology, Combined; Anesthesiology, General; Anesthesiology, General/administration & dosage; animal disease; blood; Blood Gas Analysis; Blood Gas Analysis/methods/veterinary; breathing rate; butyrophenone derivative; Butyrophenones; Butyrophenones/administration & dosage; drug effect; Fentanyl; Fentanyl/administration & dosage; fluanisone; general anesthesia; Lung; Lung/physiology; methodology; midazolam; Midazolam/administration & dosage; Monitoring, Physiologic; Monitoring, Physiologic/veterinary; Oryctolagus cuniculus; Oxygen; Oxygen/blood; physiologic monitoring; physiology; Rabbits/blood/physiology; Respiratory Rate; Respiratory Rate/drug effects

Keywords: Anesthesia; Anesthesia/methods; blood flow; carotid artery obstruction; Carotid Artery, External; Carotid Artery, External/physiopathology; Carotid Artery, Internal; Carotid Artery, Internal/physiopathology; Carotid Stenosis; Carotid Stenosis/diagnosis/physiopathology; external carotid artery; Eye; Eye/blood supply; internal carotid artery; Ischämie Ischämiatheorie; Ischämie/physiopathology; Laser-Doppler Flowmetry; Leporidae; pathophysiology; procedures; Rabbits; Regional Blood Flow; vascularization


Keywords: Acetylcholine; Anesthesia; animal experiment; animal tissue; Arterial Pressure; Arterial stiffness; Arteries; artery blood flow; cardio ankle vascular index; cardiovascular parameters; controlled study; diastolic blood pressure; drug effect; Heart Rate; L-NAME; Leporidae; Ng nitroarginine methyl ester; Nitric oxide; physiology; pulse wave; Rabbits; regulatory mechanism; systolic blood pressure; Vascular Resistance; Vascular Stiffness


Keywords: Anesthesia, General/methods/standards; Anesthetics/administration & dosage; Euthanasia, Animal/methods; Intraoperative Complications/prevention & control; Intubation, Intratracheal/methods; Monitoring, Intraoperative/methods; Preanesthetic Medication; Sample Size; Species Specificity


Keywords: Airway Resistance; heliox; Heliox; helium; Helium; Inspiratory flow limitation; Leporidae; Obstructive sleep apnea and hypopnea; Oxygen; Rabbits; Tidal Volume; Upper airways


Keywords: adverse reactions; anesthesia; drug action; Leporidae; LL070; LL882; mechanism of drug action; rabbits; Veterinary Pharmacology and Anaesthesiology


Keywords: anesthesia; Animal Surgery and Non-drug Therapy; Britain; Leporidae; LL070; LL882; LL884; rabbits; therapeutics; Veterinary Pharmacology and Anaesthesiology

Keywords: analgesia; Anesthetics, Local; Bupivacaine; Lidocaine; rabbits; anesthesia level; animal experiment; animal model; arthrotomy; buprenorphine; carprofen; controlled study; drug effects; experimental rabbit; femoral nerve; Femoral Nerve; fentanyl; heart rate; Intraoperative Complications; Intraoperative Complications/prevention & control; intraoperative period; isoflurane; local anesthesia; local anesthetic agent; morphine; Nerve Block; Nociception; Nociception/drug effects; pain; pain assessment; Pain control; perineural drug administration; Peripheral nerve blockade; placebo; postoperative analgesia; postoperative pain; propofol; Rabbits and hares; randomized controlled trial; range of motion; Refinement; Sciatic Nerve; Stifle; stifle joint arthrotomy; Stifle/surgery; surgery; Surgical Wound; systolic blood pressure; visual analog scale; Animal Surgery and Non-drug Therapy; Laboratory Animal Science; Leporidae; LL040; LL882; LL884; rabbits; Veterinary Pharmacology and Anaesthesiology


Keywords: acepromazine; alfaxalone; Anesthesia; Anesthesia, General; Anesthesia, General/mortality/veterinary; Anesthesia/mortality/veterinary; animal experiment; body weight; buprenorphine; butorphanol; capnometry; carprofen; cohort analysis; Deep Sedation; Deep Sedation/mortality/veterinary; Doppler echocardiography; electrocardiography; endotracheal intubation; feces analysis; fentadon; fentanyl; food intake; gastrointestinal complications; Gastrointestinal Diseases; Gastrointestinal Diseases/etiology/veterinary; gastrointestinal symptom; general anesthesia; Incidence; isoflurane; lanthanum; Leporidae; medetomidine; meloxicam; metoclopramide; midazolam; midazolam maleate; morphine; mortality; mortality rate; Oryctolagus cuniculus; peri-anaesthetic mortality; pet rabbit; propofol; pulse oximetry; Rabbits; ranitidine; Retrospective Studies; retrospective study; Risk Factors; sedation; sevoflurane; torphasol; vetergesic; veterinary medicine


Keywords: Anesthesia; Rabbits; Rodents


Keywords: airway obstruction; Anaesthesia; Analgesia; anesthetic agent; animal experiment; arterial gas; arterial partial pressure of carbon dioxide; arterial partial pressure of oxygen; blood pressure monitoring; blood sampling; bone defect; buprenorphine; calvaria; Calvarial bone; capnometry; controlled study; Craniotomy; dexmedetomidine; duplocillin; end tidal carbon dioxide tension; esconarkon; grimace scale; isoflurane; ketamine; lidocaine; mean arterial pressure; meloxicam; New Zealand White (rabbit); operation duration; orthopedic surgery; Pain; pain assessment; Pain score; pentobarbital; perioperative period; postoperative analgesia; postoperative pain; pulse oximetry; pulse rate; Rabbit grimace; Rabbits; rectal temperature; respiration control; respiratory tract parameters; V-gel®; water temperature; xylazine

Keywords: Anaesthetics; anesthesia level; Anesthesia, Intravenous; Anesthesia, Intravenous/methods; Anesthetics, Intravenous; Anesthetics, Intravenous/pharmacology; animal experiment; animal tissue; artificial ventilation; assisted ventilation; blood gas analyzer; breathing; breathing mechanics; clinical evaluation; computer; continuous infusion; controlled study; cornea reflex; drug dose increase; endotracheal tube; eyelid reflex; heart rate; histopathology; infusion pump; infusion rate; Intravenous; intravenous anesthesia; intravenous anesthetic agent; Leporidae; locomotion; lung parenchyma; mean arterial pressure; monitoring; neonatal ventilator; neuromuscular blocking agent; neuromuscular blocking agents; Neuromuscular blocking Agents; New Zealand White (rabbit); patient monitor; positive end expiratory pressure; pressure controlled ventilation; procedures; Propofol; Propofol/pharmacology; rabbits; Refinement; respiration control; Respiration, Artificial; Respiration, Artificial/methods; Sufentanil; Sufentanil/pharmacology; withdrawal reflex


Keywords: alfaxalone; anesthesia; animal experiment; blood pressure; blood pressure monitoring; body weight; breathing rate; buprenorphine; butorphanol; diastolic blood pressure; embutramide; experimental study; high definition oscillometry; high-definition oscillometry; isoflurane; ketamine; mean arterial pressure; mebezonium iodide; medetomidine; midazolam; oscillometry; oxygen saturation; positive end expiratory pressure ventilation; pressure measurement; prospective study; pulse oximetry; rabbits; tetracaine; veterinary medicine; analgesia; face masks; intravenous injection; oxygen; standard deviation; systolic blood pressure


Keywords: anesthesia level; anesthetic agent; Anesthetics; animal experiment; Animals, Laboratory; bispectral index; controlled study; Electroencephalography; etomidate; Isoflurane; New Zealand white (rabbit); perfusion; Propofol; Rabbits


Keywords: Anaesthesia; Isoflurane; Propofol; Rabbits


Keywords: Arterial sample; Blood gas analysis; Oxygen saturation; rabbits; Respiration, Artificial; Respiratory Rate; Sample timing; Venous sample; Anasthesia, General; Arteries; Biomarkers/blood; Blood Gas Analysis; Blood Specimen Collection/methods; Carbon Dioxide/blood; Oxygen/blood; Rabbits; Veins

**Keywords:** adrenalin; Anesthesia, General; Anesthetics, Inhalation; animal; blood flow; Blood Pressure; Carotid Artery, Common; comparative study; drug effect; Epinephrine; Artery; flow kinetics; general anesthesia; Heart Rate; Infusions, Intravenous; inhalation anesthetic agent; instrumentation; intravenous drug administration; Isoflurane; Masseter Muscle; Muscle, Skeletal; quadriceps femoris muscle; Quadriceps Muscle; rabbits; Random Allocation; randomization; Regional Blood Flow; Rheology; skeletal muscle; vascularization; Vasoconstrictor Agents


**Keywords:** adrenergic stimulation; Anesthesia, General; Anesthesiology; animal experiment; animal model; Blood pressure; Cobra PLA; comparative study; devices; electrocardiogram; electrocardiography; Electrocardiography; Endotracheal intubation; Equipment Design; general anesthesia; heart muscle ischemia; Heart Rate; hemodynamic parameters; Hemodynamic response; Hemodynamics; Intubation, Intratracheal; Laryngeal mask airways; Laryngeal Masks; mean arterial pressure; Models, Animal; QTc; QTc interval; rabbits; Respiratory therapy; Supraglottic airway; supraglottic airway device; V-gel Rabbit


**Keywords:** Rabbits; Adjuvants, Anesthesia; Adjuvants, Anesthesia/administration & dosage/adverse effects; Administration, Intravenous; Administration, Intravenous/veterinary; alfaxalone; Anesthesia; Anesthesia/adverse effects/methods/veterinary; anesthetic agent; Anesthetics; Anesthetics, Combined; Anesthetics, Combined/administration & dosage/adverse effects; Anesthetics, Intravenous; Anesthetics, Intravenous/administration & dosage/adverse effects; Anesthetics/adverse effects; Anoxia; breathing rate; central depressant agent; chemically induced; Droperidol; Droperidol/administration & dosage/adverse effects; drug effects; Fentanyl; Fentanyl/administration & dosage/adverse effects; Heart Rate; Heart Rate/drug effects; Hypoxia/chemically induced/veterinary; intravenous anesthetic agent; intravenous drug administration; Preanesthetic Medication; Preanesthetic Medication/adverse effects/veterinary; Pregnanediones; Pregnanediones/administration & dosage/adverse effects; premedication; rabbits; Respiratory Rate; Respiratory Rate/drug effects; veterinary

Yin, H., Chen, W. M., & Zhao, P. (2013). Cerebral state index may reflect electrical brain activity during propofol or isoflurane anaesthesia in rabbits. *VETERINARY RECORD, 172*(7), 184-+. [https://doi.org/10.1136/vr.100600](https://doi.org/10.1136/vr.100600)

**Keywords:** Anesthesia; Anesthesia/veterinary; animal disease; Brain; Brain/drug effects/physiology; drug effect; Isoflurane; Isoflurane/pharmacology; physiology; Propofol; Propofol/pharmacology; Rabbits
Postoperative Considerations

23 citations


Keywords: alanine aminotransferase; alkaline phosphatase; anesthesia; animal tissue; apoptosis; aspartate aminotransferase; biochemistry; blood carbon dioxide tension; blood gas analysis; blood oxygen tension; brain tissue; breathing rate; cell destruction; clinical evaluation; controlled study; creatine kinase; drug effect; gamma glutamyltransferase; glucose; heart rate; heart tissue; histology; histopathology; Isoflurane; ketamine; lactate dehydrogenase; liver tissue; midazolam; protein; systemic effects; troponin; urea nitrogen blood level; LL860; LL882; LL886; Non-Communicable Diseases and Injuries of Animals; rabbits; Veterinary Pharmacology and Anaesthesiology


Keywords: Administration, Oral; Anesthetics, Local; animal experiment; animal model; animal structures; animal tissue; Bupivacaine; controlled study; drug effect; experimental rabbit; extraocular muscle; Extraocular muscle; histopathology; Hypertrophy; Injections, Intramuscular; Isosorbide Dinitrate; Muscle Contraction; muscle excitation; Muscle Fibers, Skeletal; muscle hypertrophy; muscle tone; muscle twitch; myofibrosis; Nitric oxide; Nitric Oxide Donors; Oculomotor Muscles; Rabbits; superior rectus muscle; tetanic muscle tension


Keywords: abdominal radiography; Anesthesia; anesthesia induction; Anesthesia/methods/veterinary; anesthetic agent; Anesthesics, Combined; Anesthesics, Combined; pharmacology; animal experiment; atipamezole; barium sulfate; controlled study; Cross-Over Studies; crossover procedure; drug effect; drug feces level; drug intestine level; drug tissue level; gastrointestinal; gastrointestinal stasis; Gastrointestinal Transit; Gastrointestinal Transit/digestion; intestinal transit time; Isoflurane; Isoflurane/administration & dosage; ketamine; Ketamine/pharmacology; Leporidae; Medetomidine; Medetomidine/pharmacology; midazolam; Midazolam/pharmacology; New Zealand White (rabbit); nimetek; procedures; rabbits; risk assessment; single blind procedure; Single-Blind Method; veterinary medicine; vetflurane; wakefulness


Keywords: Stress, Physiological; adrenalin blood level; Adrenocorticotropic Hormone; Adrenocorticotropic Hormone/blood; Anesthesia; animal cell; animal experiment; blood; C-Reactive Protein; C-Reactive Protein/metabolism; clinical evaluation; comparative study;
corticotropin; Epinephrine; Epinephrine/blood; hydrocortisone; Hydrocortisone; hydrocortisone blood level; Hydrocortisone/blood; Hysterectomy; Hysterectomy/adverse effects/methods; inflammation; Interleukin-6; Interleukin-6/blood; laparoscopic surgery; Laparoscopy; Laparoscopy/adverse effects; Leporidae; lidocaine; local anesthesia; metabolism; neuroendocrine disease; noradrenalin; Norepinephrine; Norepinephrine/blood; open surgery; Ovariectomy; Ovariectomy/adverse effects/methods; ovariohysterectomy; physiological stress; postoperative care; postoperative period; procedures; rabbits; skin incision; Stress, Physiological; surgical stress; surgical stress response; surgical technique; total ovariohysterectomy; Necrosis Factor-alpha; Tumor Necrosis Factor-alpha/blood


Keywords: Analgesics, Opioid; Buprenorphine; controlled study; delayed release formulation; Delayed-Action Preparations; narcotic analgesic agent; Pain Measurement; Pain, Postoperative; physiology; Prostheses and Implants; prostheses and orthoses; Rabbits and hares; randomized controlled trial; Safety; single blind procedure; Single-Blind Method; surgery; Tibia; veterinary


Keywords: Analgesia; Analgesics, Opioid; Anesthetics, Local; animal experiment; animal model; Anti-Inflammatory Agents, Non-Steroidal; Body Weight; Bupivacaine; Buprenorphine; Corticosterone; Drug Therapy, Combination; Feces; Glucocorticoids; ketamine; low drug dose; meloxicam; metabolite; Pain, Postoperative; rabbits; Surgical Procedures, Minimally Invasive; surgical technique; Thiazines; Thiazoles; xylazine; Pharmacology; Veterinary Pharmacology and Anaesthesiology; VV400; VV730


Keywords: anesthesia; anesthetic agent; Animals, Laboratory; experimental animal; injection; Leporidae; Postoperative Care; Preoperative Care; Rabbits


Keywords: 2 (2 methoxy 1,4 benzodioxan 2 yl) 2 imidazoline; Adrenergic alpha-2 Receptor Antagonists; allyl isothiocyanate; alpha 2 adrenergic receptor; alpha 2 adrenergic receptor blocking agentanimal tissuearterial pressure; cardiovascular parameters; conditioning; controlled study; Descending inhibition; DNIC; electrostimulation; evoked response; facilitation; gastrocnemius muscle; Hindlimb; innervation; metabolism; metatarsophalangeal joint; Mustard oil; nerve cell inhibition; Neural Inhibition; neuromodulation; Noiception; nociceptive stimulation; noradrenergic system; physiology; Rabbits and hares; Receptors, Adrenergic, alpha-2; Reflex; RX 821002; semitendinous muscle; serotonin; Spinal cord; tibialis anterior muscle; withdrawal reflex

**Keywords:** anesthesia; Animal Surgery and Non-drug Therapy; coronary diseases; death rate; Diagnosis of Animal Diseases; LL070; LL860; LL882; LL884; LL886; Non-Communicable Diseases and Injuries of Animals; preanesthetic medication; rabbits; Veterinary Pharmacology and Anaesthesiology


**Keywords:** Analgesics, Opioid/adverse effects; Analgesics, Opioid/therapeutic use; Biology; Bone Transplantation/adverse effects; Bone Transplantation/methods; Bone; Fusion; Healing; Lumbar Vertebrae/surgery; MicroCT; Narcotics; Opioids; Rabbits; Spinal Fusion/methods; Spinal Fusion/adverse effects; Spine; Transplantation, Autologous/adverse effects; Transplantation, Autologous/methods; Wound Healing/drug effects


**Keywords:** anesthesia; Animal Surgery and Non-drug Therapy; Britain; Leporidae; LL070; LL882; LL884; rabbits; therapeutics; Veterinary Pharmacology and Anaesthesiology


**Keywords:** analgesia; Anesthetics, Local; Bupivacaine; Lidocaine; rabbits; anesthesia level; animal experiment; animal model; arthrotomy; buprenorphine; carprofen; controlled study; drug effects; experimental rabbit; Femoral Nerve; fentanyl; heart rate; Intraoperative Complications; Intraoperative Complications/prevention & control; intraoperative period; isoflurane; local anesthesia; local anesthetic agent; morphine; Nerve Block; Nociception; Nociception/drug effects; pain; pain assessment; Pain control; perineural drug administration; Peripheral nerve blockade; placebo; postoperative analgesia; postoperative pain; propofol; Rabbits and hares; randomized controlled trial; range of motion; Refinement; Sciatic Nerve; Stifle; stifle joint arthrotomy; Stifle/surgery; surgery; surgical wound; Surgical Wound; systolic blood pressure; visual analog scale; Animal Surgery and Non-drug Therapy; Laboratory Animal Science; Leporidae; LL040; LL882; LL884; rabbits; Veterinary Pharmacology and Anaesthesiology


**Keywords:** animal experiment; animal model; Biocompatible Materials; biomaterial; Cell Count; cell density; cell migration; Chitosan; controlled study; Disease Models, Animal; disease severity; drug effect; dura mater; Epidural fibrosis; Epidural Space; Failed back surgery syndrome; Fibroblasts; Fibrosis; Foreign-Body Reaction; Laminectomy; ligamentum flavum; Magnetic Resonance Imaging; metabolism; MRI; New Zealand White (rabbit); nuclear magnetic resonance imaging; nuclear magnetic resonance scanner; pathology; Poly (l-glutamic acid)/chitosan;
polyglutamic acid; Polyglutamic Acid; postoperative complication; prophylaxis; Prostheses and Implants; prostheses and orthoses; rabbit model; Rabbits; radiological parameters; scar; spinal epidural adhesion; spinal epidural fibrosis; static electricity; Tissue Adhesions


Keywords: anesthesia level; anesthetic postconditioning; animal experiment; animal tissue; blood sampling; cardiac muscle; Cardiopulmonary resuscitation; controlled study; down regulation; enzyme linked immunosorbent assay; experimental rabbit; heart arrest; Hypothermia; inflammation; interleukin 10; interleukin 8; myocardial ultrastructure; resuscitation; Sevoflurane; transmission electron microscopy; upregulation


Keywords: Analgesia; In situ forming gel; Injections; Local anesthetics; Lyotropic liquid crystal; Phase transition; Postoperative analgesia; Postoperative Care; Biocompatible Materials/chemistry; Bupivacaine/blood/pharmacokinetics; Drug Liberation; Gels/chemistry; Liquid Crystals/chemistry; Nanostructures/chemistry; Phase Transition; Rabbits; Rats, Sprague-Dawley; Rheology; Solutions


Keywords: analgesia; animal experiment; controlled study; drug blood level; enzyme linked immunosorbent assay; erythema; eye ointment; fentanyl; inner ear; medetomidine; midazolam; New Zealand White (rabbit); Postoperative analgesia; postoperative pain; prospective study; rabbits; Refinement; Transdermal fentanyl patch


Keywords: abdominal wall; Acupuncture Analgesia; Acupuncture Analgesia/adverse effects/instrumentation/methods; analgesia; animal experiment; clinical research; controlled study; electroacupuncture; Electroacupuncture; electroacupuncture analgesia; Electroacupuncture analgesia; Electroacupuncture/adverse effects/instrumentation/methods; homeostasis; Hysterectomy; Hysterectomy/methods; neuroleptanalgesia; Neuroleptanalgesia; New Zealand white (rabbit); operation duration; Ovariectomy; Ovariectomy/methods; Ovariohysterectomy/postoperative analgesia; Postoperative Complications; rabbits; Research Design; stimulation; thermoregulation; veterinary clinic


Keywords: Analgesia/methodsDisease Models, Animal; Orthopedic Procedures/adverse effects; Orthopedics/trends; Pain Management/methods; Pain Measurement/methods; Pain, Postoperative/diagnosis/drug therapy/physiopathology; Rabbits; Pain, Postoperative/drug therapy; Pain, Postoperative/diagnosis; Pain, Postoperative/physiopathology
Keywords: airway obstruction; Anaesthesia; Analgesia; anesthetic agent; animal experiment; arterial gas; arterial partial pressure of carbon dioxide; arterial partial pressure of oxygen; blood pressure monitoring; blood sampling; bone defect; buprenorphine; calvaria; Calvarial bone; capnometry; controlled study; Craniotomy; dexmedetomidine; duplocillin; end tidal carbon dioxide tension; esconarkon; grimace scale; isoflurane; ketamine; lidocaine; mean arterial pressure; meloxicam; New Zealand White (rabbit); operation duration; orthopedic surgery; Pain; pain assessment; Pain score; pentobarbital; perioperative period; postoperative analgesia; postoperative pain; pulse oximetry; pulse rate; Rabbit grimace; Rabbits; rectal temperature; respiration control; respiratory tract parameters; V-gel®; water temperature; xylazine


Keywords: Animal Surgery and Non-drug Therapy; CC700; LL070; LL882; LL884; Oryctolagus cuniculus; Professions: Practice and Service; rabbits; Veterinary Pharmacology and Anaesthesiology


Keywords: Anesthesia Recovery Period; Operative Time; Tears/chemistry/drug effects/metabolism; Anesthesia, General/adverse effects/veterinary; Anesthetics/pharmacology/antioxidant activity of tears; Biomarkers/analysis; corneal erosion; dry eye syndrome; Dry Eye Syndromes/chemically induced/metabolism/pathology; general anesthesia; Perioperative Period; Rabbits; Recovery of Function/drug effects; Time Factors; Water-Electrolyte Balance/drug effects


Keywords: Anesthesia/adverse effects; Antioxidants; Dry Eye Syndromes/drug therapy/etiology; Mitochondria/metabolism; Plastoquinone/analogs & derivatives/pharmacology/therapeutic use


Keywords: Anesthesia, General/adverse effects/Antioxidants/metabolism; Dry Eye Syndromes/enzymology/etiology; Glutathione Peroxidase/metabolism; Glutathione Reductase/metabolism; Glutathione Transferase/metabolism; Rabbits; Superoxide Dismutase/metabolism; Tears/enzymology/metabolism
Analgesia and Pain Management

49 citations


Keywords: Analgesics, Opioid; Analgesics, Opioid/administration & dosage/pharmacology; Anesthesia; Anesthesia/veterinary; Anesthetics, Local; Anesthetics, Local/administration & dosage/pharmacology; Blood Pressure; Epidural anesthesia; epidural drug administration; Hindlimb/surgery; Injections, Epidural; Intraoperative pain; ketamine; Ketamine/administration & dosage/pharmacology; Leporidae; Lidocaine; Lidocaine/administration & dosage/pharmacology; local anesthetic agent; Medetomidine; Medetomidine/administration & dosage/pharmacology; Morphine; Morphine/administration & dosage/pharmacology; narcotic analgesic agent; Pain, Postoperative; Pain, Postoperative/prevention & control/veterinary; Rabbits; surgery; veterinary medicine


Keywords: acclimatization; analgesic activity; Analgesics; animal behavior; animal experiment; animal model; bladder; controlled study; Drug Evaluation, Preclinical; electrical equipment; experimental rabbit; false negative result; false positive result; Hot Temperature; Morphine; Pain Measurement; pain threshold; Rabbits; Sensory Thresholds; sham procedure; skin; sodium chloride; temperature measurement; thermal pain threshold; Thermosensing; thorax


Keywords: Analgesia; Rabbits


Keywords: abscess; age distribution; aggression; amantadine; Analgesia; Analgesia/veterinary; analgesic agent; animal behavior; animal welfare; automutilation; behavioural indicators; body position; body temperature; body weight loss; breathing rate; bruxism; buprenorphine; butorphanol; carprofen; castration; clinical competence; clinical trial; cystotomy; descriptive research; dexmedetomidine; drinking; drug cost; drug efficacy; drug safety; drug use; elective surgery; elevated blood pressure; experience; exploratory laparotomy; fentanyl; flunixin meglumine; food intake; gabapentin; gynecologic surgery; health care survey; Health Care Surveys; heart rate; hospital discharge; intermethod comparison; ketamine; ketoprofen; knowledge; laparotomy; Leporidae; licensing; lidocaine plus prilocaine; lumpectomy; medetomidine; meloxicam; methadone; mobilization; morphine; nonsteroid antiinflammatory
agent; online system; opiate; orthopedic surgery; ovariohysterectomy; pain; pain assessment; Pain Management; Pain Management/veterinary; Pain Measurement; Pain Measurement/veterinary; pain scale; pain severity; perioperative pain; perioperative period; perioperative complication; Pets; physician attitude; policy; postgraduate education; postoperative pain; prescription; professional practice; questionnaire; Rabbit Grimace Scale; rabbits; rating scale; reliability; Review; shuffling gait; Surgery, Veterinary; surgical drainage; tiletamine plus zolazepam; tooth disease; tooth extraction; tramadol; treatment duration; trend study; veterinary care; veterinary clinic; veterinary medicine; veterinary surgeon; veterinary surgery; vocalization; xylazine


Keywords: acetylsalicylic acid; acupuncture; analgesia; analgesic activity; Analgesics, Opioid; Analgesics, Opioid/therapeutic use; Animal Anti-Inflammatory Agents, Non-Steroidal; Anti-Inflammatory Agents, Non-Steroidal/therapeutic use; behavior change; bupivacaine; buprenorphine; butorphanol; butyrophenone; carprofen; Castration; Castration/veterinary; cesarean section; cryotherapy; facial expression; fentanyl; flunisolide; flunixin meglumine; hypnorn; hypotension; ketoprofen; Leporidae; lidocaine plus prilocaine; local anesthesia; meloxicam; methadone; morphine; narcotic analgesic agent; nonsteroid antiinflammatory agent; opiate; orchiectomy; oxymorphone; pain; pain amelioration; pain assessment; pain intensity; Pain Management; Pain Management/veterinary; Pain Measurement; Pain Measurement/veterinary; Pain, Postoperative; Pain, Postoperative/drug therapy/veterinary; paracetamol; postoperative pain; Rabbits/surgery; Review; surgery; tattooing; thermotherapy; tissue injury; tramadol; veterinary drug; Veterinary Drugs; Veterinary Drugs/therapeutic use; veterinary medicine


Keywords: antinociceptive properties; Laboratory Animal Science; Leporidae; LL040; LL860; LL882; Non-Communicable Diseases and Injuries of Animals; NSAIDS; pain management; rabbits; Veterinary Pharmacology and Anaesthesiology


Keywords: analgesic agent; Analgesics; comparative study; Cryoablation; Cryosurgery; Leporidae; mental nerve; Neuralgia; neuropathic pain; procedures; Pulsed Radiofrequency Treatment; Rabbits; Rats; Sprague Dawley rat; Treatment Outcome

Keywords: Analgesics, Opioid; Buprenorphine; controlled study; delayed release formulation; Delayed-Action Preparations; narcotic analgesic agent; Pain Measurement; Pain, Postoperative; physiology; Prostheses and Implants; prostheses and orthoses; Rabbits and hares; randomized controlled trial; Safety; single blind procedure; Single-Blind Method; surgery; Tibia; veterinary


Keywords: Disease Models, Animal; Electroacupuncture/methods; Lung Injury/therapy; Melatonin/metabolism/pharmacology; Rabbits; Reperfusion; Reperfusion Injury/metabolism/therapy; Tumor Necrosis Factor-alpha/metabolism


Keywords: Analgesia; Analgesia/methods/veterinary; Analgesics/administration & dosage; Guinea pig; Mouse; Pain assessment; Pain Management/veterinary; Pain Measurement/veterinary; Pain/drug therapy/veterinary; Rabbits; Rat; Rodentia; Rodents


Keywords: Opioid; Pain; rabbits; Sevoflurane; Tapentadol


Keywords: Caviidae; CC700; ferrets; Fissipeda; guinea pigs; Leporidae; LL070; LL860; LL882; mice; Muridae; Mustelidae; Non-Communicable Diseases and Injuries of Animals; pain killers; pain management; pathophysiology; Professions: Practice and Service; rabbits; rats; rodents; Veterinary Pharmacology and Anaesthesiology


Keywords: Analgesia/veterinary; Analgesics, Opioid/administration & dosage/adverse effects; Anesthetics, Local/administration & dosage; Anti-Inflammatory Agents, Non-Steroidal/administration & dosage/adverse effects; Body Weight/drug effects; Bupivacaine/administration & dosage; Buprenorphine/administration & dosage/adverse effects; Corticosterone/metabolism; Drug Therapy, Combination; Feces; Glucocorticoids/metabolism; Meloxicam; Minimally Invasive Surgical Procedures/veterinary; Pain, Postoperative/drug
therapy/metabolism/veterinary; Rabbits; Thiazines/administration & dosage/adverse effects; Thiazoles/administration & dosage/adverse effects


Keywords: Anesthesia, Epidural; Anesthesia, Epidural/methods/veterinary; Anesthetics, Combined; Anesthetics, Combined/administration & dosage/pharmacology; animal experiment; arterial gas; blood sampling; Body Temperature; Body Temperature/drug effects; Concentration; controlled study; drug absorption; drug blood level; Drug Interactions; epidural space; Fentanyl; Fentanyl/administration & dosage/pharmacology; general anesthesia; Heart Rate; Heart Rate/drug effects; Injections, Epidural; Lidocaine; Lidocaine/administration & dosage/blood/pharmacokinetics; lidokain; morfin klorid; Morphine; Morphine/administration & dosage/pharmacology; Narcotics; Narcotics/administration & dosage/pharmacology; Oryctolagus cuniculus; rabbits; Serum; unclassified drug; vasodilatation; adjuvants; analgesia


Keywords: ACUPUNCTURE; Acupuncture Points; Acupuncture Therapy; beta-Endorphin/metabolism; beta-Endorphin/blood; beta-Endorphin/cerebrospinal fluid; Enkephalins/metabolism; Enkephalins/blood; Enkephalins/cerebrospinal fluid; Facial Pain/therapy; Ganglia, Spinal/metabolism; Muscle, Skeletal/metabolism; MYOFASCIAL PAIN; Pain Management; PAIN RESEARCH; Rabbits; Trigger Points


Keywords: Analgesics, Opioid/adverse effects; Analgesics, Opioid/therapeutic use; Biology; Bone Transplantation/adverse effects; Bone Transplantation/methods; Bone; Fusion; Healing; Lumbar Vertebrae/surgery; MicroCT; Narcotics; Opioids; Rabbits; Spinal Fusion/methods; Spinal Fusion/adverse effects; Spine; Transplantation, Autologous/adverse effects; Transplantation, Autologous/methods; Wound Healing/drug effects


Keywords: analgesic activity; Analgesics; animal cell; animal experiment; animal tissue; Blinking; Blotting, Western; cell migration; cell motility; Cell Movement; Cells, Cultured; Chromatography, High Pressure Liquid; controlled study; Cornea; Corneal wound healing; cytotoxicity; cytotoxicity assay; Disease Models, Animal; dose response; Eye Injuries; gene expression; Gene Expression

**Keywords:** Acupuncture Analgesia; Meridians; Catecholamines/metabolism; Medicine, Chinese Traditional; Muscle, Skeletal/innervation; Pain Threshold; Phenylephrine/pharmacology; Rats; Rats, Wistar; Signal Transduction/physiology

Mans, C. (2020). Insights into pain assessment and management in rabbits. The Veterinary Record, 186(18), 600–602. https://doi.org/10.1136/vr.m2265

**Keywords:** Rabbits; Pain Management/veterinary; Pain Measurement/veterinary; Pain/veterinary


**Keywords:** administration routes; analgesia; anesthesia; HH405; inhaled anesthetics; injectable anesthetics; Leporidae; LL070; LL882; LL950; NSAIDS; Pesticides and Drugs; rabbits; rodents; Toxicology and Poisoning of Animals; Veterinary Pharmacology and Anaesthesiology


**Keywords:** Analgesia; In situ forming gel; Injections; Local anesthetics; Lyotropic liquid crystal; Phase transition; Postoperative analgesia; Postoperative CareBiocompatible Materials/chemistry; Bupivacaine/blood/pharmacokinetics; Drug Liberation; Gels/chemistry; Liquid Crystals/chemistry; Nanostructures/chemistry; Phase Transition; Rabbits; Sprague-Dawley; Rheology; Solutions


**Keywords:** Analgesia; opioids; rabbits; respiration

Keywords: Analgesia; opioids; rabbits; respiration


Keywords: Analgesia; opioids; rabbits; respiration


Keywords: analgesia; animal experiment; controlled study; drug blood level; enzyme linked immunosorbent assay; erythema; eye ointment; fentanyl; inner ear; medetomidine; midazolam; New Zealand White (rabbit); Postoperative analgesia; postoperative pain; prospective study; rabbits; Refinement; Transdermal fentanyl patch

Nield, K., & Govendir, M. (2019). Comparison of 0.2 mg/kg vs. 1.0 mg/kg of oral meloxicam for safe and effective analgesia in domestic rabbits. Veterinary Evidence, 4(2). CAB Abstracts. https://doi.org/10.18849/ve.v4i2.215

Keywords: analgaesia; Animal Health and Hygiene (General); animal rights; Animal Welfare; LL800; LL810; LL882; meloxicam; pain killers; pain relief; rabbits; Veterinary Pharmacology and Anaesthesiology


Keywords: LL070; LL882; rabbits; Veterinary Pharmacology and Anaesthesiology


Keywords: Anaesthesia; Analgesia; Anesthetics; Body Temperature; drug effect; Heart Rate; ketamine; Leporidae; midazolam; pain; Pain; physiology; Rabbits; Tramadol; Xylazine


Keywords: Opioid; Rabbits


Keywords: abdominal wall; Acupuncture Analgesia; Acupuncture Analgesia/adverse effects/instrumentation/methods; analgesia; animal experiment; clinical research; controlled study;
electroacupuncture; Electroacupuncture; Electroacupuncture analgesia; Electroacupuncture/adverse effects/instrumentation/methods; homeostasis; Hysterectomy; Hysterectomy/methods; Neuroleptanalgesia; New Zealand white (rabbit); operation duration; Ovariectomy; Ovariectomy/methods; Ovariohysterectomy; postoperative analgesia; Postoperative Complications; rabbits; Research Design; stimulation; thermoregulation; veterinary clinic


Keywords: Acupuncture Analgesia; Electroacupuncture; Pain Management; adrenocorticotropic hormone (ACTH); Adrenocorticotropic hormone (ACTH); Adrenocorticotropic Hormone/blood; analgesia; animal experiment; animal model; blood sampling; corticotropin; cortisol; Cortisol; electroacupuncture; electroacupuncture analgesia (EAA); Electroacupuncture analgesia (EAA); experimental rabbit; glucose blood level; Glucose/metabolism; glycemia; Glycemia; hydrocortisone; hydrocortisone blood level; Hydrocortisone/blood; hypothalamus hypophysis adrenal system; hysterectomy; operation duration; Ovariectomy; Ovariohysterectomy; Ovary/surgery; Pituitary-Adrenal System/metabolism; Rabbits; stress


Keywords: Electroacupuncture (EA); Needles; neuroleptanalgesia (NLA); rabbits; Skin Temperature/radiation effects; Skin/injuries; thermal changes; tissue defect; Vasocostriction/radiation effects


Keywords: Electroacupuncture (EA); healing process; Inflammation/therapy; Neuroleptanalgesia; rabbits; Skin/injuries/pathology/radiation effects; soft tissue; Wound Healing/radiation effects


Keywords: Analgesia/methods; Disease Models, Animal; Orthopedic Procedures/adverse effects; Orthopedics/trends; Pain Management/methods; Pain Measurement/methods; Pain, Postoperative/diagnosis/drug therapy/physiopathology; Rabbits; Pain, Postoperative/drug therapy; Pain, Postoperative/diagnosis; Pain, Postoperative/physiopathology


Keywords: airway obstruction; Anaesthesia; Analgesia; anesthetic agent; animal experiment; arterial gas; arterial partial pressure of carbon dioxide; arterial partial pressure of oxygen; blood pressure monitoring; blood sampling; bone defect; buprenorphine; calvaria; Calvarial bone;
capnometry; controlled study; Craniotomy; dexmedetomidine; duplocillin; end tidal carbon dioxide tension; esconarkon; grimace scale; isoflurane; ketamine; lidocaine; mean arterial pressure; meloxicam; New Zealand White (rabbit); operation duration; orthopedic surgery; Pain; pain assessment; Pain score; pentobarbital; perioperative period; postoperative analgesia; postoperative pain; pulse oximetry; pulse rate; Rabbit grimace; Rabbits; rectal temperature; respiration control; respiratory tract parameters; V-gel®; water temperature; xylazine


Keywords: Analgesia; body mass; body temperature; Dose response; drug; experimental study; Oryctolagus cuniculus; Physiological effects; rabbits; rodent; saliva; Sedation; skin; Xylazine


Keywords: Acupuncture Therapy; Electroacupuncture; Pain Management; acupuncture; acupuncture point; Acupuncture Therapy; analgesiaanimal cell; animal experiment; animal model; animal tissuearthralgia; articular cartilage; biceps femoris muscle; Biomechanical Phenomena; biomechanics; cartilage degeneration; cartilage matrix; Cartilage viscoelasticity; Cartilage, Articular; Cartilage, Articular/pathology; celecoxib; chondrocyte; collagen type 2; controlled study; electroacupuncture; Electroacupuncture; flexor muscle; gait; hindlimb; immobilization; inflammation; Inflammation; Inflammation/metabolism; joint function; joint swelling; knee function; knee osteoarthritis; Knee osteoarthritis; knee pain; Leporidae; metabolism; muscle atrophy; muscle function; Muscle modulus of elasticity; nuclear size; Osteoarthritis, Knee; Osteoarthritis, Knee/therapy; pain; Pain; Pain Management; Pain/etiology; pathology; rabbit model; Rabbits; Type II collagen; viscoelasticity


Keywords: Aging; Analgesics, Opioid; analogs and derivatives; animal experiment; animal model; artificial ventilation; breathing pattern; breathing rate; chemically induced; Conference Paper; controlled study; Enkephalin, Ala(2)-MePhe(4)-Gly(5)-; enkephalin[2 dextro alanine 4 methylphenylalanine 5 glycine]; homocysteic acid; homocysteine; Homocysteine; in vivo study; metabolism; naloxone; Naloxone; narcotic analgesic agent; narcotic antagonist; Narcotic Antagonists; nerve cell; Neurons; New Zealand White (rabbit); opiate; pathophysiology; physiology; prebotzinger complex; rabbits; remifentanil; respiration depression; respiratory failure; Respiratory Insufficiency; respiratory nerve cell


Keywords: analgesia; Sedation; PreBotzinger; Opioid

Keywords: Acetaminophen; Acetaminophen/metabolism/pharmacology; AM404; Analgesia; Analgesics, Non-Narcotic/metabolism/pharmacology; Arachidonic Acids/metabolism/pharmacology; Benzoquinones/metabolism; Capsaicin/pharmacology; Ganglia, Spinal/cytology/drug effects; HEK293 Cells; Imines/metabolism; Mice, Inbred C57BL; NAPQI; Neurons/drug effects/metabolism; Neurotoxicity; Rabbits; Rats, Sprague-Dawley; Sensory System Agents/pharmacology; TRPV Cation Channels/metabolism; TRPV1


Keywords: Animal Welfare; Laboratory Animal Science; Veterinarians; analgesia; Analgesia/ethics/veterinary; Analgesics; Attitude of Health Personnel; laboratory animals; Pain Management/ethics/veterinary; pain measurement; Pain Measurement/ethics/veterinary; Pain/drug therapy/veterinary; Prospective Studies; rats; survey; Surveys and Questionnaires


Keywords: Analgesia; Morphine; Rabbits


Keywords: Animal and in-vitro Models for Pharmaceuticals; Animal Models of Human Diseases; Animal Surgery and Non-drug Therapy; Laboratory Animal Science; Leporidae; LL040; LL860; LL882; LL884; Non-Communicable Diseases and Injuries of Animals; rabbits; Veterinary Pharmacology and Anaesthesiology; VV400; VV450


Keywords: animal model; bupivacaine; cell death; confocal laser scanning microscopy; controlled study; degenerative changes; discoblock; drug efficacy; extracellular matrix; histology; in vivo study; intervertebral disk degeneration; Leporidae; lidocaine; local anesthetics; organ culture; sodium chloride; TUNEL assay


Keywords: Analgesia; Rabbit; Fetus


Keywords: LL882; rabbits; Veterinary Pharmacology and Anaesthesiology


Keywords: Anesthesia; Canis familiaris; Lagomorphs; Monitoring; Oryctolagus cuniculus; Pain management; Perioperative care; Rodentia; Rodents; inflammatory drugs; Canidae; cats; dogs; exotic pets; Felidae; Fissipeda; Leporidae; LL070: LL882; medicines; NSAIDS; pain killers; pharmaceuticals; rabbits; rodents; surveillance systems; Veterinary Pharmacology and Anaesthesiology; veterinary surgeons


Keywords: adverse event; Analgesia, Epidural; Analgesia, Epidural/adverse effects; analgesic activity; animal cell; animal experiment; animal model; cell count; cell motion; Cell Movement; constipation; continuous infusion; controlled study; cytology; down regulation; drug effect; epidural analgesia; Epidural infusion; Gastrointestinal interstitial cells of Cajal in rabbits; gastrointestinal motility; Interstitial Cells of Cajal; Interstitial Cells of Cajal/cytology; drug effects/metabolism; Leporidae; metabolism; Morphine; Morphine/administration & dosage/adverse effects/pharmacology; Naloxone; Naloxone/administration & dosage/adverse effects/pharmacology; New Zealand rabbit; Pain Measurement; Pain Measurement/drug effects; Rabbits; risk reduction; Small-dose naloxone; visual analog scale


Keywords: administration routes; anesthesia; anesthetics; Animal Health and Hygiene (General); animal health products; CC700; death rate; hypovolemia; Leporidae; LL070; LL800; LL882; preanaesthetic medication; Professions: Practice and Service; rabbits; rehydration therapy; Techniques and Methodology; Veterinary Pharmacology and Anaesthesiology; ZZ900
Eastern Medicine: Acupuncture/Electroacupuncture

25 Citations


Keywords: Dry Eye Syndromes/therapy; Electroacupuncture/methods; Inflammation/therapy; NF-kappa B/metabolism; Rabbits; Signal Transduction


Keywords: Disease Models, Animal; Electroacupuncture/methods; Lung Injury/therapy; Melatonin/metabolism/pharmacology; Rabbits; Reperfusion; Reperfusion Injury/metabolism/therapy; Tumor Necrosis Factor-alpha/metabolism


Keywords: Electroacupuncture; Ischemia; Lung injury; p38 MAPK pathway; Reperfusion; Acute Lung Injury/immunology/pathology/prevention & control; Disease Models, Animal; Extremities/blood supply; Femoral Artery/surgery; Heme Oxygenase-1/metabolism; Imidazoles/pharmacology; Inflammation Mediators/immunology/metabolism; MAP Kinase Signaling System/drug effects/immunology; NF-E2-Related Factor 2/metabolism; Oxidative Stress/drug effects/immunology; p38 Mitogen-Activated Protein Kinases/antagonists & inhibitors/metabolism; Pyridines/pharmacology; Rabbits; Reperfusion Injury/complications/immunology/therapy; Treatment Outcome


Keywords: Bone Density; Electroacupuncture; Acupuncture; Estradiol/metabolism; Osteoporosis Arthritis; Osteoporosis, Postmenopausal/genetics/metabolism/physiopathology/therapy; Ovariectomy/adverse effects; Rabbits; RANK Ligand genetics/metabolism; Therapeutics


Keywords: ACUPUNCTURE; Acupuncture Points; Acupuncture Therapy; beta-Endorphin/metabolism; beta-Endorphin/blood; beta-Endorphin/cerebrospinal fluid; Enkephalins/metabolism; Enkephalins/blood; Enkephalins/cerebrospinal fluid; Facial
Pain/therapy; Ganglia, Spinal/metabolism; Muscle, Skeletal/metabolism; MYOFASCIAL PAIN; Pain Management; PAIN RESEARCH; Rabbits; Trigger Points


Keywords: Electroacupuncture; Arrhythmias, Cardiac/physiopathology/prevention & control/therapy; Rabbits


Keywords: ElectroacupunctureAntigens, CD34/metabolism; Back Muscles/blood supply/metabolism; Fibroblast Growth Factor 2/metabolism; Lumbar Vertebrae/pathology; Neovascularization, Physiologic; Rabbits; Syndrome


Keywords: Acupuncture Analgesia; Meridians; Catecholamines/metabolism; Medicine, Chinese Traditional; Muscle, Skeletal/innervation; Pain Threshold; Phenylephrine/pharmacology; Rats; Rats, Wistar; Signal Transduction/physiology


Keywords: Acupuncture Points; Electrophysiological Phenomena; Acetylcholinesterase/metabolism; Agrin/metabolism; Contusions/drug therapy/metabolism/physiopathology; Electroacupuncture/methods; Electromyography; Muscle, Skeletal/physiology; Neuromuscular Junction/metabolism; Rabbits


Keywords: abdominal wall; Acupuncture Analgesia; Acupuncture Analgesia/adverse effects/instrumentation/methods; analgesia; animal experiment; clinical research; controlled study; electroacupuncture; Electroacupuncture; electroacupuncture analgesia; Electroacupuncture analgesia; Electroacupuncture/adverse effects/instrumentation/methods; homeostasis; Hysterectomy; Hysterectomy/methods; neuroleptanalgesia; Neuroleptanalgesia; New Zealand white (rabbit); operation duration; Ovariectomy; Ovariectomy/methods; Ovariohysterectomy; postoperative analgesia; Postoperative Complications; rabbits; Research Design; stimulation; thermoregulation; veterinary clinic

Keywords: Acupuncture Analgesia; Electroacupuncture; Pain Management; Adrenocorticotropic hormone (ACTH); Adrenocorticotropic Hormone/blood; analgesia; animal experiment; animal model; blood sampling; corticotropin; Cortisol; Electroacupuncture analgesia (EAA); experimental rabbit; glucose blood level; Glucose/metabolism; glycemia; Glycemia; hydrocortisone; hydrocortisone blood level; Hydrocortisone/blood; hypothalamus hypophysis adrenal system; hysterectomy; operation duration; Ovariectomy; Ovariohysterectomy; Ovary/surgery; Pituitary-Adrenal System/metabolism; Rabbits; stress


Keywords: Electroacupuncture (EA); Needles; Neuroleptanalgesia (NLA); rabbits; Skin Temperature/radiation effects; Skin/injuries; thermal changes; tissue defect; Vasoconstriction/radiation effects


Keywords: Electroacupuncture (EA); healing process; Inflammation/therapy; Neuroleptanalgesia; rabbits; Skin/injuries/pathology/radiation effects; soft tissue; Wound Healing/radiation effects


Keywords: Body Weight; Cartilage, Articular/metabolism; Disease Models, Animal; Electroacupuncture/methods; Estrogens/metabolism; Matrix Metalloproteinase 13/metabolism; Osteoarthritis/metabolism/therapy; Ovariectomy; Rabbits; Random Allocation


Keywords: Electroacupuncture; Cardiotonic Agents/blood; Dialysis; Hindlimb/blood supply; In Vitro Techniques; Ischemia; Ischemic Preconditioning, Myocardial/methods; Myocardial Infarction/prevention & control; Myocardial Reperfusion Injury/prevention & control; Perfusion; Rabbits; Reperfusion Injury


Keywords: Apoptosis; Electroacupuncture; MAP Kinase Signaling System; ACUPUNCTURE; Caspase 3/metabolism; Chromones/pharmacology; Cytochromes c/metabolism; Flavonoids/pharmacology; Mitogen-Activated Protein Kinase 1/metabolism; Mitogen-Activated Protein Kinase 3/metabolism; Morpholines/pharmacology; Protein Kinase Inhibitors/pharmacology; Proto-Oncogene Proteins c-akt/metabolism; Rabbits; Random
Allocation; Signal Transduction; Spinal Cord Injuries/metabolism/therapy; Spinal Cord/cytology/metabolism


Keywords: Acupuncture Therapy; Pain Management; acupuncture; acupuncture point; analgesia; animal cell; animal experiment; animal model; animal tissue; articular cartilage; biceps femoris muscle; Biomechanical Phenomena; biomechanics; cartilage degeneration; cartilage matrix; Cartilage viscoelasticity; Cartilage, Articular; Cartilage, Articular/pathology; celecoxib; chondrocyte; collagen type 2; controlled study; Electroacupuncture; flexor muscle; gait; hindlimb; immobilization; Inflammation; Inflammation/metabolism; joint function; joint swelling; knee function; Knee osteoarthritis; knee pain; Leporidae; metabolism; muscle atrophy; muscle function; Muscle modulus of elasticity; nuclear size; Osteoarthritis, Knee; Osteoarthritis, Knee/therapy; Pain; Pain Management; Pain/etiology; pathology; rabbit model; Rabbits; Type II collagen; viscoelasticity


Keywords: Electroacupuncture; Electrophysiological Phenomena; Electromyography; Evoked Potentials/physiology; Lumbar Vertebrae/physiopathology; Motor Neurons/physiology; Muscles/physiopathology; Neural Conduction/physiology; Rabbits; Radiculopathy/physiopathology/therapy


Keywords: Electroacupuncture; Signal Transduction/cartilage; Cartilage, Articular/pathology; Chondrocytes/pathology/ultrastructure; cytokines; electroacupuncture; I-kappa B Kinase/metabolism; Interleukin-1beta/metabolism; Interleukin-6/metabolism; Matrix Metalloproteinase 3/metabolism; NF-kappa B/metabolism; NF-KappaB Inhibitor alpha/metabolism; nuclear factor-κB signaling pathway; osteoarthritis; Rabbits; synovial fluid; Synovial Fluid/metabolism; Transcription Factor RelA/metabolism; Tumor Necrosis Factor-alpha/metabolism


Keywords: Antioxidant Response Elements; Electroacupuncture; Acute Lung Injury/etiology/physiopathology/prevention & control; Disease Models, Animal; Heme Oxygenase-1/metabolism; Interleukin-6/blood; Lung/pathology/physiopathology; Malondialdehyde/metabolism; NF-E2-Related Factor 2/genetics/metabolism; Rabbits; RNA, Messenger/genetics/metabolism; Shock, Septic/complications/physiopathology/therapy; Signal Transduction; Superoxide Dismutase/metabolism; Tumor Necrosis Factor-alpha/blood

Keywords: Acute Kidney Injury/etiology/metabolism/prevention & control; Cell Line; Disease Models, Animal; Electroacupuncture/methods; Heme Oxygenase-1/metabolism; Lipopolysaccharides/adverse effects; NF-E2-Related Factor 2/metabolism; Oxidative Stress; Phosphatidylinositol 3-Kinases/metabolism; Rabbits; Signal Transduction; Up-Regulation


Keywords: Acupuncture Therapy; Electroacupuncture; Ethology; Morphological and microscopic findings; Osteoarthritis, knee; Cartilage/pathology; Disease Models, Animal; Gait; Osteoarthritis, Knee/pathology/physiopathology/therapy; Rabbits


Keywords: Analysis of Variance; Blotting, Western; DNA Primers; Electroacupuncture/methods; Gene Expression Regulation, Enzymologic/physiology; Heme Oxygenase-1/metabolism; Histological Techniques; Lipopolysaccharides/adverse effects; Lung/enzymology/pathology; MAP Kinase Signaling System/physiology; Polymerase Chain Reaction; Rabbits; Shock, Septic/chemically induced/therapy; Superoxide Dismutase/blood; Tumor Necrosis Factor-alpha/blood


Keywords: Electroacupuncture; Arrhythmias, Cardiac/prevention & control; Benzophenanthridines/pharmacology; Models, Animal; Myocardial Infarction/pathology; Myocardial Reperfusion Injury/metabolism/pathology/prevention & control; Myocardium/metabolism; Naloxone/pharmacology; Narcotic Antagonists; Norepinephrine/metabolism; Oxygen/metabolism; Protein Kinase C/antagonists & inhibitors; Rabbits; Signal Transduction/drug effects/physiology; Sympathetic Nervous System/physiology; Ventricular Function, Left/physiology


Keywords: Acupuncture Points; Blood Pressure; Bradycardia/diagnosis/etiology/physiopathology/therapy; Cell Count; Cell Degranulation/immunology; Disease Models, Animal; Electroacupuncture; Electrocardiography; Heart Rate; Mast Cells/immunology/metabolism/pathology; Pituitary Hormones, Posterior/adverse effects; Rabbits