

Table 1. Characteristics of included studies.

Class	Agent	Dose (mg/mL)	Estimated IC50 (mg/mL)	Model	Overall Findings	Author	Year
Tetracyclines	Doxycycline (10-25 µM)	0.0044-0.011	0.0076	Bovine - <i>ex vivo</i>	No chondrotoxicity	TeKoppele JM	1998 ¹⁶
	Doxycycline (10-75 µM)	0.0044-0.033	0.0089	Bovine - <i>in vitro</i>	No chondrotoxicity	Beekman	1997 ¹⁷
	Doxycycline (1-100 µM)	4x10 ⁻⁴ - 0.04	n/a	Bovine - <i>in vitro</i>	No chondrotoxicity	Steinmeyer J	1998 ¹⁸
	Doxycycline (87.5 µg/mL)	0.0875	n/a	Leporine - <i>in vivo</i>	No chondrotoxicity	Lu HT	2013 ¹⁹
	Doxycycline (1-50 µg/mL)	0.001-0.05	n/a	Human - <i>in vitro</i>	Chondrotoxicity at 0.05mg/mL (50 µg/mL)	Lu HT	2013 ¹⁹
	Doxycycline (0.39-25 mg/mL)	0.39-25	1.031	Equine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Pezzanite L	2021 ²⁰
	Doxycycline (5-10 mg)	5-10	n/a	Bovine - <i>in vivo</i>	Chondroprotective	Haerdi-Landerer	2007 ²¹
	Doxycycline (0.043-4.3 µM)	2x10 ⁻⁵ - 0.002	n/a	Equine - <i>in vitro</i>	Chondroprotective	Fortier LA	2010 ²²
	Doxycycline (1-10 µg/ml)	0.001-0.01	n/a	Human & Bovine – <i>ex vivo</i>	Chondroprotective	Yue L	2020 ²³
	Minocycline (1-100 µM)	5x10 ⁻⁴ - 0.046	0.03 for mRNA expression 0.017 for protein synthesis	Bovine - <i>in vitro</i>	No chondrotoxicity	Sadowski T	2001 ²⁴
	Minocycline (1-100 µM)	5x10 ⁻⁴ - 0.046	n/a	Bovine - <i>in vitro</i>	No chondrotoxicity	Steinmeyer J	1998 ¹⁸
	Minocycline (10-1000 nM)	0.0046-0.46	n/a	Leporine – <i>in vitro</i>	Chondroprotective	Yamamoto A	2012 ²⁵
	Minocycline (100 nM)	5x10 ⁻⁵	n/a	Leporine – <i>in vivo</i>	Chondroprotective	Yamamoto A	2012 ²⁵
Penicillins and Aminopenicillins	Amoxicillin (0.39-25 mg/mL)	0.39 - 25	14.01	Equine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Pezzanite L	2021 ²⁰
	Ampicillin-Sulbactam (0.39-25 mg/mL)	0.39-25	8.64	Canine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Newman RJ	2021 ²⁶
	Ampicillin-Sulbactam (0.39-25 mg/mL)	0.39-25	>25	Equine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Pezzanite L	2021 ²⁰
	Penicillin G (0.768-100 mg/mL)	0.768-100	n/a	Bovine - <i>in vitro</i>	Dose-dependent chondrotoxicity starting at 12.5 mg/mL	Nadig NS	2020 ²⁷
	Penicillin G (0.39-31.25 mg/mL)	0.39-31.25	11.61	Equine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Pezzanite L	2021 ²⁰
Cephalosporins	Cefazolin (0.39-25 mg/mL)	0.39-25	1.67	Canine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Newman RJ	2021 ²⁶
	Cefazolin (4.17-50 µg/µl)	4.17-50	2 for normal chondrocytes 3.33 for OA chondrocytes	Canine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Siengdee P	2017 ²⁸
	Cefazolin (0.39-25 mg/mL)	0.39-25	3.948	Equine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Pezzanite L	2021 ²⁰
	Ceftazidime (0.39-25 mg/mL)	0.39-25	3.16	Canine- <i>in vitro</i>	Dose-dependent chondrotoxicity	Newman RJ	2021 ²⁶
	Ceftazidime (0.39-25 mg/mL)	0.39-25	3.589	Equine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Pezzanite L	2021 ²⁰
	Ceftriaxone (2cc)	Unspecified	n/a	Leporine - <i>in vivo</i>	No chondrotoxicity	Gunal I	2000 ²⁹
	Ceftriaxone (4.17-50 µg/µl)	4.17-50	10 normal chondrocytes 12.5 OA chondrocytes	Canine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Siengdee P	2017 ²⁸
Aminoglycosides	Amikacin (0.39-25 mg/mL)	0.39-25	2.74	Canine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Newman RJ	2021 ²⁶
	Amikacin (0.39-25 mg/mL)	0.39-25	<0.39	Equine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Pezzanite L	2021 ²⁰
	Amikacin Sulfate (0-25 mg/mL)	0-25	0.3132	Equine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Pezzanite	2020 ³⁰
	Amikacin (31.25-500mg/2ml)	15.63-250	n/a	Equine - <i>in vivo</i>	Dose-dependent chondrotoxicity	Pezzanite	2021 ³¹
	Gentamicin (100 mg/ml)	100	n/a	Equine - <i>in vivo</i>	No chondrotoxicity	Lescun TB	2002 ³²
	Gentamicin (115.6-332.0 µg/mL)	0.1156-0.332	n/a	Equine - <i>in vivo</i>	No chondrotoxicity	Ivester KM	2006 ³³
	Gentamicin (80 mg/L)	0.08	n/a	Human - <i>in vitro</i>	No chondrotoxicity	Goswami K	2019 ³⁴
	Gentamicin (0.39-25 mg/mL)	0.39-25	0.7083	Equine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Pezzanite L	2021 ²⁰

	Neomycin (0.39-25 mg/mL)	0.39-25	0.8219	Equine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Pezzanite L	2021 ²⁰
	Tobramycin (0-4000 µg/mL)	0-4	n/a	Murine - <i>in vitro</i>	Chondrotoxic at all doses (not dose-responsive)	Antoci V Jr	2007 ³⁵
	Tobramycin (0.39-25 mg/mL)	0.39-25	>25	Equine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Pezzanite L	2021 ²⁰
Glycopeptides	Teicoplanin (1.5-5 mg)	Unspecified	n/a	Murine - <i>in vivo</i>	No chondrotoxicity	Kuyucu E	2019 ³⁶
	Teicoplanin (64 mg/L)	0.064	n/a	Human - <i>in vitro</i>	No chondrotoxicity	Dogan M	2016 ³⁷
	Vancomycin (2.5-8.5 mg)	Unspecified	n/a	Murine - <i>in vivo</i>	No chondrotoxicity	Kuyucu E	2019 ³⁶
	Vancomycin (16 mg/L)	0.016	n/a	Human - <i>in vitro</i>	No chondrotoxicity	Dogan M	2016 ³⁷
	Vancomycin (1 g/L)	1	n/a	Human - <i>in vitro</i>	No chondrotoxicity	Goswami K	2019 ³⁴
	Vancomycin (0.39-25 mg/mL)	0.39-25	8.65	Canine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Newman RJ	2021 ²⁶
	Vancomycin (0.39-25 mg/mL)	0.39-25	7.306	Equine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Pezzanite L	2021 ²⁰
	Vancomycin (0-4000 µg/mL)	0-4	n/a	Murine - <i>in vitro</i>	Dose-dependent chondrotoxicity starting at 0.5mg/mL	Antoci V Jr	2007 ³⁵
	Vancomycin (2-10 mg/mL)	2-10	n/a	Porcine - <i>in vitro</i>	Dose-dependent chondrotoxicity starting at 5mg/mL	Shaw KA	2018 ³⁸
	Vancomycin (3.125-50 mg/ml)	3.125-50	n/a	Human - <i>in vitro</i>	Dose-dependent chondrotoxicity starting at 6.125 mg/ml	Röhner E	2021 ³⁹
Fluoroquinolones	Ciprofloxacin (10-160 µg/ml)	0.01-0.16	n/a	Equine & Canine - <i>in vitro</i>	No chondrotoxicity	Egerbacher	2001 ⁴⁰
	Ciprofloxacin (10 µg/ml)	0.01	n/a	Leporine - <i>in vitro</i>	No chondrotoxicity	Thuong-Guyot	1994 ⁴¹
	Ciprofloxacin (0-250 µg/mL)	0-0.25	n/a	Murine - <i>in vitro</i>	Chondrotoxicity at 0.2mg/mL	Antoci V Jr	2007 ³⁵
	Ofloxacin (10 µg/ml)	0.01	n/a	Leporine - <i>in vitro</i>	No chondrotoxicity	Thuong-Guyot	1994 ⁴¹
	Ofloxacin (10 µg/ml)	0.01	n/a	Leporine - <i>in vitro</i>	Chondrotoxic	Sheng	2013 ⁴²
	Ofloxacin (0–20 µg/ml)	0-0.02	n/a	Leporine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Sheng Z	2008 ⁴³
	Ofloxacin (20-100 µg/mL)	0.02-0.1	n/a	Canine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Zhang FT	2014 ⁴⁴
	Pefloxacin (1-100 µg/ml)	0.001-0.1	n/a	Leporine - <i>in vitro</i>	No chondrotoxicity	Thuong-Guyot	1994 ⁴¹
Miscellaneous Antibiotics	Chloramphenicol (2cc)	Unspecified	n/a	Leporine - <i>in vivo</i>	No chondrotoxicity	Gunal I	2000 ²⁹
	Chloramphenicol (25-100µg/mL)	0.025-0.1	n/a	Leporine - <i>in vivo</i>	No chondrotoxicity	Wu X	2019 ⁴⁵
	Chloramphenicol (100 µg/mL)	0.1	n/a	Human - <i>in vitro</i>	No chondrotoxicity	Wu X	2019 ⁴⁵
	Imipenem (0.39-25 mg/mL)	0.39-25	>25	Equine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Pezzanite L	2021 ²⁰
	Linezolid (32 mg/L)	0.032	n/a	Human - <i>in vitro</i>	No chondrotoxicity	Dogan M	2016 ³⁷
	Polymyxin and Bacitracin (500,000 U/L and 50,000 U/L)	0.05 Polymyxin 1.3 Bacitracin	n/a	Human - <i>in vitro</i>	No chondrotoxicity	Goswami K	2019 ³⁴
Antiseptics	Chlorhexidine (2cc)	Unspecified	n/a	Leporine - <i>in vivo</i>	No chondrotoxicity	Gunal I	2000 ²⁹
	Chlorhexidine (0.05%)	0.05%	n/a	Canine - <i>in vivo</i>	No chondrotoxicity	Anderson	1993 ⁴⁶
	Chlorhexidine (0.05%)	0.05%	n/a	Human - <i>in vitro</i>	Chondrotoxic	Goswami K	2019 ³⁴
	Povidone Iodine (2cc)	Unspecified	n/a	Leporine - <i>in vivo</i>	No chondrotoxicity	Gunal I	2000 ²⁹
	Povidone-Iodine (PVP-I) (0.5-1%)	0.5-1%	n/a	Bovine - <i>in vitro</i>	No chondrotoxicity	Müller G	2005 ⁴⁷
	Povidone-Iodine (PVP-I) (1-10%)	1-10%	n/a	Bovine – <i>ex vivo</i>	No chondrotoxicity	Kramer A	2002 ⁴⁸
	Povidone-iodine (0.3%)	0.30%	n/a	Human - <i>in vitro</i>	No chondrotoxicity	Goswami K	2019 ³⁴
	Povidone-Iodine (PVP-I) (100 mg/ml)	Unspecified	n/a	Murine - <i>in vitro</i>	Chondrotoxic	Bulstra SK	1994 ⁴⁹
	Povidone–Iodine (0.35-5%)	0.35-5%	n/a	Bovine - <i>in vitro</i>	Dose-dependent chondrotoxicity	Von Keudell A	2013 ⁵⁰
	Povidone–Iodine (0.00781-1%)	0.00781-1%	n/a	Murine - <i>in vivo</i>	Dose-dependent chondrotoxicity starting at 0.0625%	Kataoka M	2006 ⁵¹