NOTICE SEEKING CLEARANCE FOR A BUSINESS ACQUISITION

UNDER SECTION 66 OF THE COMMERCE ACT 1986

27 October 2021

The Registrar
Competition Branch
Commerce Commission
PO Box 2351
Wellington
New Zealand

registrar@comcom.govt.nz

Pursuant to section 66(1) of the Commerce Act 1986, notice is hereby given seeking clearance of a proposed business acquisition in which Zoetis Inc. will acquire 100% of the shares in Betrola Pty Ltd (and indirectly Jurox Pty Ltd, which includes Jurox New Zealand Limited).

EXECUTIVE SUMMARY

1. Zoetis Inc, through its wholly owned subsidiary Zoetis Australia Research & Manufacturing Pty Ltd (**Zoetis**) is proposing to directly acquire Betrola Pty Ltd (and indirectly, Jurox Pty Ltd (together, **Jurox**), which includes Jurox (UK) Private Limited and Jurox Inc, and New Zealand Limited), as well as Jurox (Canada) Inc and Jurox (Ireland) Limited under the terms of the Confidential Share Sale and Purchase Agreement (**Agreement**) entered into by the parties on 4 August 2021 (**Proposed Acquisition**).

2. Zoetis and Jurox each supply veterinary medicines for companion animals and livestock. Zoetis also supplies veterinary vaccines, diagnostic products, biodevices, and genetic products for companion animals and livestock, including fish.

3. The parties wish to complete the proposed acquisition before the first quarter of 2022.

4. Completion is conditional on the New Zealand Commerce Commission (**NZCC**) giving clearance for the proposed acquisition. Completion is also conditional on the Australian Competition and Consumer Commission (**ACCC**) not opposing the Proposed Acquisition, and the Australian Federal Treasurer issuing a letter of no-objection under the *Foreign Acquisitions and Takeovers Act (Cth)* 1975.

5. This clearance application concerns the Proposed Acquisition to the extent that it relates to, or affects, markets in New Zealand. In total, there are 12 markets where the products supplied by Zoetis and Jurox overlap in New Zealand.

6. Of those 12 markets, there are 5 markets in which the acquisition falls outside the Commerce Commission's concentration indicators and there is material aggregation:

   (a) oral penicillin for companion animals;

   (b) injectable penicillin for companion animals;

   (c) pre-anaesthetics and sedatives (opioids);

   (d) pre-anaesthetics and sedatives (non-opioids); and

   (e) antidotes for short term pre-anaesthetic sedatives.

7. There are 4 markets in which the acquisition falls outside the Commerce Commission's concentration indicators but there is no material aggregation:

   (a) cattle anthelmintics;

   (b) intramammary antibiotics for lactating cows;

   (c) teat sealants; and

   (d) nonsteroidal anti-inflammatory drugs.

8. Finally, there are 3 markets in which the acquisition does not fall outside the Commerce Commission's concentration indicators:

   (a) oral horse worming products;

   (b) intramammary antibiotics for dry cows; and

(c) sheep anthelmintics.

9. Zoetis has defined each of the affected markets based on previous decisions of the NZCC and ACCC when assessing transactions involving animals. Baron data has been used to provide estimates of market shares of suppliers in each of the affected markets. Baron data includes sales of participating companies in its reporting. It does not include non-participating companies' sales data, such as data for sales of rural reseller private label products, nor does it include many generic product sales. It also does not contain certain sales of participating companies. Jurox does not report sales revenue data to Baron. The Jurox sales data used to calculate market shares has been provided separately by Jurox but is included with the Baron data in this application for simplicity.

10. The proposed acquisition will not have the effect or likely effect of substantially lessening competition in a market, including because:

(a) **The parties' product portfolios are largely complementary**. The goods supplied by Zoetis and Jurox do overlap in some markets. However, in most cases, the acquisition either falls within the Commission's concentration indicators or does not result in material aggregation.

(b) **There is a high level of existing competition in most of the relevant markets**. Zoetis will continue to be constrained by a number of other suppliers of substitutable products. Zoetis understands that many, if not all, of those suppliers have the capacity to enter any of the relevant markets.

(c) **Zoetis will continue to be constrained post-acquisition by competition and potential competition from new entrants in the market**, for which barriers to entry are low, including because:

(i) **Jurox's product portfolio mainly comprises generic products**. The proposed acquisition will not, therefore, result in Zoetis acquiring or increasing market power because other suppliers of animal health products can readily enter or expand in the affected markets. Other suppliers will be able to undermine any unilateral attempt of Zoetis to bring about anti-competitive price and service conditions from the proposed acquisition.

(ii) **Barriers to entry and expansion are surmountable**. Most products are not meaningfully protected by patent, and the cost of reverse engineering those products is relatively low. There are a number of contract manufacturing organisations in New Zealand that have the capability to manufacture generic versions of most of the products in the relevant markets. The regulatory regime in New Zealand allows generic entrants to "piggyback" on originator company's clinical trials and other information required for registration of a product on the ACVM register, provided that the generic applicant is able to satisfy the Ministry for Primary Industries (**MPI**) that the generic product is sufficiently similar to the originator product.

(iii) **Customers have no or low switching costs**. Most customers in New Zealand already source their products from a number of suppliers, such as rural resellers, wholesalers and distributors of animal health products, either by prescription or over the counter, or both, allowing them to immediately and quickly switch between

suppliers. Customers have low or no barriers to switching between suppliers of substitutable products. Some of the relevant markets are highly commoditised.

(iv) **Customers have countervailing power**. Large corporate groups and buying groups, who are the main customers of Zoetis and Jurox products, have countervailing power.

(v) **Jurox does not have any "must have" products**. Jurox does not supply any "must have" products that could be used by Zoetis to leverage other products.

11. The proposed acquisition will not enhance coordination in the markets or raise any vertical effect issues. [ ]

12. The proposed acquisition will not have conglomerate effects. The Proposed Acquisition will enhance Zoetis' portfolio of products. However, it will not give Zoetis the incentive or ability to engage in anti-competitive bundling or tying of products. The animal health product industry in New Zealand is not marked by aggressive bundling practices. Moreover, any attempt by Zoetis to do so would likely be defeated by large competitors and wholesalers who could match or better Zoetis' bundles. For example, in the market for intramammary antibiotics and teat sealants, competitors have their own suite of antibiotics and sealants. MSD and Virbac will (or would be able to) match or better such bundles.

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PART 1: PARTY AND TRANSACTION DETAILS

Applicant's details

13. This notice is given by Zoetis New Zealand Limited.

14. Zoetis New Zealand Limited's contact details are:

    (a) Postal address:

    Zoetis New Zealand Limited c/o Zoetis Australia Pty Ltd
    PO Box 548
    West Ryde
    New South Wales 1685
    Australia

    (b) Physical address:

    Level 4
    8 Mahuhu Crescent
    Auckland, 1010
    New Zealand

    (c) Phone number: 0800 963 847

    (d) Web address: http://zoetis.co.nz

    (e) Contact person:

    Mark Worsman
    Corporate Counsel
    Zoetis Australia Pty Ltd
    +61 477 759 301

    mark.worsman@zoetis.com

15. Zoetis operates in global development, manufacture, and marketing of veterinary medicines and vaccines for companion animals and livestock.

16. Zoetis New Zealand Limited is wholly owned by Zoetis Inc, a public company, which has been listed on the New York Stock Exchange since 1 February 2013. Globally, Zoetis employs approximately 11,300 people, with 1,250 staff involved in R&D activities.

17. Zoetis' top 10 largest shareholders are all institutional investors, with the three largest being Blackrock Inc., Vanguard Group, Inc., and State Street Corporation.

18. Zoetis organises and operates its business in two segments:

    (a) the United States segment, which currently earns annual revenues of USD3,557 million, or 53% of Zoetis' total revenue for the year ended 31 December 2020; and

    (b) the international segment, which currently earns annual revenues of USD3,035 million, or 47% of Zoetis' total revenues for the year ended 31 December 2020.

19. Zoetis' operating entity in New Zealand is Zoetis New Zealand Ltd (NZBN 9429030896963), which is a wholly owned subsidiary of Zoetis Inc. Zoetis' operations in New Zealand comprise a

manufacturing business, based in Upper Hutt, and a commercial business based in Auckland that is responsible for sales, marketing and distribution of its products. The commercial business comprises four key area: commercial; services and operations; veterinary operations; and regulatory affairs and product development.

20. An ownership structure diagram for Zoetis, focusing on the ownership of Zoetis entities relevant to this application, is provided in Confidential Annexure A.

21. Zoetis's most recent annual report and audited financial statements and management accounts are available at: https://investor.zoetis.com/home/default.aspx

22. Please direct all correspondence and enquiries for Zoetis in respect of this notice to:

    Buddle Findlay
    PO Box 2694
    Wellington 6140
    Attention: Tony Dellow / Laura Green
    Telephone: 04 498 3404
    Email: tony.dellow@buddlefindlay.com / laura.green@buddlefindlay.com

Other party's details

23. The other party to the transaction is Jurox New Zealand Ltd (NZBN 9429038308680).

24. Jurox's contact details are:

    (a) Postal address:

        85 Gardiner Street
        Rutherford
        New South Wales 2320
        Australia

    (b) Physical address:

        8 Kordel Place
        East Tamaki
        Auckland 2013
        New Zealand

    (c) Phone number: 0800587696

    (d) Web address: https://www.jurox.co.nz

    (e) Contact person:

        Joe Bown – Head of Sales & Marketing
        Mobile: +61 427 587 004
        Email: joe.bown@jurox.com.au

25. Jurox is a family owned, Australia-based veterinary pharmaceutical manufacturer that offers solutions for livestock producers, veterinarians and pet owners, including proprietary and over the counter products. Jurox markets products in over 20 countries globally, out of offices in Australia, New Zealand, the United States of America and Canada. Jurox has 208 employees in total with

158 in Australia, 5 in New Zealand, 29 in the United States of America, 1 in Canada and 16 in the UK (not including 25 vacancies).

26. Jurox currently sells products through 5 regional bases to over 20 countries. Its offshore bases are located in Auckland (New Zealand), Crawley (UK), Kansas City (USA), and Vancouver Island (Canada). Those regional bases operate through a number of locally incorporated subsidiaries, including Jurox New Zealand Limited, Jurox (UK) Private Limited Company, Jurox Inc. (in the US), Jurox (Canada) Inc. and Jurox (Ireland) Private Limited Company.

27. [ ].

28. Jurox NZ is wholly owned by Bertrola Pty Limited, which itself is owned by the O'Brian Family through a trust structure. An ownership structure diagram of Jurox is provided in Confidential Annexure A.

29. Jurox NZ's account reports are provided in Confidential Annexure B.

30. Please direct all correspondence and enquiries for Jurox in respect of this notice to:

    Joe Bown
    Head of Sales, Marketing & Technical Service ANZ
    Jurox Pty Ltd
    Email: joe.bown@jurox.com.au
    Phone: +61 2 4931 8272

Overview of the proposed transaction

31. The Proposed Acquisition will occur by way of a share sale, consisting of the following steps:

    (a) Zoetis Australia Research & Manufacturing Pty Ltd will acquire all shares in the Australian holding company Betrola Investments Pty Ltd, which owns Jurox, as well as Jurox's Australian manufacturing site and assets.

    (b) Zoetis Australia Research & Manufacturing Pty Ltd will also acquire outstanding shares of Jurox's Canadian and New Zealand operating entities.

    (c) [ ].

32. The specific assets to be acquired are detailed in the Share Sale and Purchase Agreement (**Confidential Agreement**) attached as Confidential Annexure C.

33. The parties wish to complete the proposed acquisition before the first quarter of 2022.

34. As set out in clause 4.1 of the Confidential Agreement, implementation of the Proposed Acquisition is subject to a number of conditions precedent, including:

    (a) the New Zealand Commerce Commission giving clearance for the Proposed Acquisition;

    (b) the Australian Competition and Consumer Commission not opposing the Proposed Acquisition; and

    (c) the Australian Federal Treasurer issuing a letter of no objection under the *Foreign Acquisitions and Takeovers Act 1975* (Cth).

Rationale for transaction

35. The owners of Jurox wish to retire as both are over 80 years old. They have built up the business from scratch. Their children do not wish to operate the business.

36. For Zoetis, the product portfolios of Zoetis and Jurox are largely complimentary. Zoetis has a minimal presence in the market for sedatives and anaesthetics in New Zealand, which is the primary area of expertise of Jurox.

37. In particular, Zoetis believes the Proposed Acquisition will:

    (a) **Improve its companion animal portfolio by, in some cases, allowing it to offer, and in other cases, enhancing its existing offering of**:

        (i) small animal anaesthetic products;

        (ii) isoflurane products (currently manufactured by third parties);

        (iii) canine all-wormers;

        (iv) ophthalmic agents;

        (v) cardiovascular agents; and

        (vi) surgical scrub products.

    (b) **Improve its production animal portfolio by, in some cases, allowing it to offer, and in other cases, enhancing its existing offering of**:

        (i) pour-on, oral, and injectable drenches;

        (ii) sheep ectoparaciticides (fly & lice), cattle flukicides & tickicides;

        (iii) white oral cattle drench;

        (iv) nutrition and supplements;

        (v) dermatological preparations and antiseptics;

        (vi) intramammary dairy products; and

        (vii) reproductive management.

    (c) **Increase its R&D and product innovation capabilities**: Zoetis does not have expertise in sedatives or anaesthetics. The Proposed Acquisition would provide Zoetis with an R&D capability in that area. That capability is of particular importance to Zoetis as registration of those products in countries outside New Zealand can depend on it.

    (d) **Increase its manufacturing capacity**: The Proposed Acquisition will allow Zoetis to own manufacturing capability for products that Jurox currently manufactures for Zoetis. In New Zealand, those products are Zoetis' Mastalone and VibraVet.

        That manufacturing capacity is expected to reduce Zoetis' costs of procuring those products and to reduce Zoetis' exposure to the risks associated with outsourced manufacturing, by providing Zoetis with greater oversight and control of the manufacturing process for the products.

    (e) [ ].

Scenario without the transaction

38. If the proposed acquisition did not occur, Zoetis and Jurox would be likely to continue to supply veterinary products as separate entities (that is, the counterfactual is the *status quo*).

39. If the proposed acquisition does not proceed, there are no expected changes to Zoetis' operating plan for New Zealand or elsewhere.

40. The sale of Jurox would most likely be made to someone else, it is not expected that there would be a management buy-out or a sale to private equity. The owners decided when they turned 80 that it was time to look for a new owner that would take care of Jurox's staff globally.

Other agencies being notified of the transaction

41. The Australian Federal Treasurer and the Australian Consumer and Competition Commission have been notified of the proposed acquisition because the transaction relates to assets in Australia.

PART 2: INDUSTRY CONTEXT AND RELEVANT MARKETS

Industry overview

42. The animal health industry develops and manufactures animal health products, including veterinary medicines, vaccines and other biological, diagnostic solutions and medicinal feed additives.

43. Those products include veterinary and OTC drugs, medicines, vaccines, serums, and medicinal chemicals, as well as diagnostic and genetics products. Animal health products cover a range of goods and services that detect, prevent or treat a range of animal-related diseases and health concerns. The industry's largest product segment by revenue is parasiticides. Other key segments by revenue include antibiotics, immunotherapy products, and nutritional and metabolism products.

44. The animal health industry comprises two main segments: production animals/livestock (including cattle, pigs, poultry sheep and fish) and companion animals or pets (including cats, dogs and horses).

Goods provided by Zoetis

45. Zoetis offers a diverse portfolio of products, services, and animal health solutions across eight core animal species. Zoetis' farm animal products and services are dedicated to cattle, poultry, sheep, pigs, and fish, and its companion animal offerings cater to cats, dogs, and horses.

46. Zoetis' major product categories are:

    (a) **vaccines**: biological preparations that help prevent diseases of the respiratory, gastrointestinal, and reproductive tracts or induce a specific immune response;

    (b) **anti-infectives**: products that prevent, kill, or slow the growth of bacteria, fungi, or protozoa;

    (c) **parasiticides**: products that prevent or eliminate external and internal parasites such as fleas, ticks, and worms;

    (d) **pain and sedation and antiemetic products**;

    (e) **reproductive products**;

    (f) **oncology products**;

    (g) **dermatology products**: products that relieve itch associated with allergic conditions and atopic dermatitis;

    (h) **medical feed additives**: products added to animal feed that provide medicines to livestock; and

    (i) **animal health diagnostics**: portable blood and urine analysis systems and point of care diagnostic products, including instruments and reagents, rapid amino ASA tests, reference laboratory kits, and the blood glucose monitors.

47. Zoetis also supplies nutritionals, as well as products and services in smaller areas, including biodevices, genetic testing, and precision livestock farming.

48. In 2020, Zoetis' top two selling products on a global basis, Apoquel® and Simparica® / Simparica Trio, contributed approximately 10% and 6% respectively of Zoetis' annual revenues, and combined

with the next three top selling products, Revolution® / Revolution Plus / Stronghold®, the Ceftiofur line, and Draxxin®, the five products contributed approximately 31% of Zoetis' revenue.

49. Zoetis' revenues for the US and key international markets, together with the percentage of revenue attributable to livestock and companion animal products in those markets, is set out in Confidential Annexure D.

50. A list of the products supplied by Zoetis in New Zealand that overlap in markets with Jurox products is provided in Annexure E. Annexure F contains a full list of all products supplied by Zoetis in New Zealand, including the manufacturer and place of manufacture.

51. [ ].

Goods provided by Jurox

52. Jurox offers over 120 products in 20 countries. It offers various over the counter and prescription products for cats, dogs, horses, beef and dairy cattle, sheep, pig and other animals, including:

(a) **anaesthetics and analgesics**: medicines that produce complete or partial loss of feeling;

(b) **antibiotics**: medicines that destroy or slow down the growth of bacteria;

(c) **antihistamines**: primarily used for the relief of allergies of allergic reactions;

(d) **anti-inflammatories**: medicines used to control pain and inflammation;

(e) **antiseptics**: antimicrobial substances that are applied to living tissue/skin to reduce the possibility of infection;

(f) **cardiorespiratory medicines**: medicines used to treat heart issues;

(g) **corticosteroids**: medicines used to reduce inflammation;

(h) **dermatological preparations**;

(i) **emetics**: medicines that induce vomiting;

(j) **endocrines**: medicines that regulate the endocrine system;

(k) **nutritional products and supplements**;

(l) **parasite control products**; and

(m) **teat sealants**: medicines that prevent bacterial infection in the teats of cows.

53. [ ].

54. Jurox's revenues, together with the percentage of revenue attributable to livestock and companion animal products, is set out in Confidential Annexure G.

55. A list of the products supplied by Jurox in New Zealand that overlap in markets with Zoetis products is provided in Annexure E. Annexure F contains a full list of all products supplied by Jurox in New Zealand, including manufacturer and place of manufacture.

56. [ ].

Relevant markets

57. This clearance application adopts market definitions that are consistent with the approach that the Commission has taken in previous decisions, as well as relevant overseas decisions relevant to the affected markets. Previous decisions that Zoetis considers relevant are included in Annexure H.

58. Zoetis and Jurox both supply products in a number of markets in New Zealand. A relevant horizontal overlap arises in 12 markets in New Zealand. The relevant markets are as follows:

Antibiotics

(a) oral penicillin for companion animals;

(b) injectable penicillin for companion animals;

(c) intramammary antibiotics for lactating cows;

(d) intramammary antibiotics for dry cows;

Teat sealants

Wormers

(e) oral horse worming products;

Parasiticides/anthelmintics

(f) sheep anthelmintics;

(g) cattle anthelmintics;

Anti-inflammatories

(h) nonsteroidal anti-inflammatory drugs;

Anaesthetics

(i) pre-anaesthetics and sedatives (opioids);

(j) pre-anaesthetics and sedatives (non-opioids); and

(k) antidotes for short term pre-anaesthetic sedatives.

59. A description of each relevant market is included in Annexure I.

Competitors of Zoetis and Jurox

How different products from different suppliers compete with those from Zoetis and Jurox

60. The first factor relevant to competition is the ACVM registration status of products as either over-the-counter (**OTC**) or prescription products (Restricted Veterinary Medicines, RVMs). RVMs may only be supplied by supply companies to veterinarians. OTC products may be supplied to any channel, veterinarian, or rural reseller, depending on the commercial preference of the supply company. Whereas most parasiticides are OTC, all antibiotics, anti-inflammatories, analgesics, anaesthetics, and endocrine treatments are RVMs and can only be prescribed and dispensed by vets. All supply companies compete across all categories and across both RVM and OTM channels.

61. Within each market, there are generally a range of different products from different suppliers. From a customer's perspective, there are a number of criteria to inform their decision including, broadly, the commercial offering, the technical differentiation of the product, their relationship with the supply company and their whole service offering, as well as company reputation for reliability of supply, product quality, and technical services.

62. For RVM products, such as injectable or oral antibiotics, the prescribing veterinarian makes the decision primarily based on the clinical condition. The veterinarian will typically have a range of antibiotic families at their disposal, and a range of presentations (injectable, tablet, liquid), and they will use of prescribe the product that will result in the best outcome for the animal. Secondary considerations do come into their decision, including pet owner compliance (eg. with tablets), and the categorisation of the antibiotic in relation to antimicrobial resistance. In the case of antibiotics to treat mastitis, vets will prescribe the one most appropriate for the farmer based on their knowledge of the mastitis status of the farm. There are generally multiple generic alternatives available for the vet to use or prescribe.

63. As in all commercial sectors, some companies compete on price, others on innovation, quality and services. Supply companies also compete in certain markets with direct to consumer advertising and marketing, with the exception of antibiotics. That type of competition tends to be greater for OTC products such as parasiticides, where there is comparatively less veterinary influence on the purchasing decision by the end user. [ ].

Relationship between vet-only and OTC-only products

64. A supply company can choose to provide OTC products exclusively through the OTC channel, exclusively through the vet channel, or through both. That decision will be driven by their evaluation of where they can achieve the best commercial success. BI and Alleva have achieved high market shares in the vet channel through a vet-only approach with their OTC drenches. [ ].

65. Companies that supply RVM products to veterinarians are likely to find it easier to supply their products through vet channels, compared with companies that do not supply RVM products. A number of companies supply brands exclusively through the OTC channel because they have no relationship with vets. Conversely, a company may struggle to get support for a product in the rural reseller channel because those resellers have house brands, or favoured brands, supplied by companies such as Donaghys and OTC-only companies, which would not be made available to vets.

66. In terms of other relevant factors, veterinary recommendations carry weight, but that influence is greater in relation to RVM products compared to OTC products. Separately, vet-only products may miss out on sales to customers whose preference is to support their local rural retail store rather than vets.

Strong competition from global manufacturers

67. There are a number of global manufacturers who develop and supply a wide portfolio of both companion and production animal healthcare treatments. In New Zealand, those manufacturers include:

    (a) **Boehringer Ingelheim** (**BI**) is a German family-owned pharmaceutical company. The group's animal health unit is the second largest in the world with 10,000 employees and

operations in 150 countries including 18 manufacturing facilities and 20 R&D sites.[1] BI is the global leader in vaccines and parasiticides. Key products in relation to this application include BI's Matrix sheep anthelmintic products and BI's Eclipse cattle anthelmintic products. BI has announced its decision to cease the manufacture of locally-produced livestock ruminant products in New Zealand from its Auckland production site by late 2022.[2] The release states that from December 2022, BI will deliver a more targeted range of cattle and sheep products.

(b) **MSD** is among the world's largest animal health businesses. MSD is ultimately part of the US-based pharmaceutical giant Merck & Co Inc.[3] Merck became significantly involved in the industry through its merger with Schering-Plough in 2009. Key products relevant to this application include Cepravin, which is a leading intramammary antibiotic for dry cows and Alliance and Scanda, which are significant sheep anthelmintics products. [ ].

(c) **Norbrook** is a large, family-owned veterinary pharmaceutical company with a portfolio of animal health products that are distributed in more than 100 countries through its Regional Sales Team and network of longstanding distribution partners. Norbrook aims to be the first to market with generic veterinary pharmaceutical products with differentiators or enhancements in comparison to pioneer products. Norbrook manufactures several pharmaceutical drugs, the most well-known of which are the antibiotic drugs Noroclav and Betamox, NSAIDs such as Carprieve, Loxicom and Flunixin.[4] Key products relevant to this application also include Norbrook's Teat Sealants Sureseal, Dryseal and Duraseal. Norbrook also has significant sales in the market for intramammary antibiotics for dry cows, as set out below.

(d) **Virbac** is one of the ten largest animal health specialists in the world. Virbac operates production sites in 10 countries.[5] The group derives 43% of sales from products manufactured at its French, US and Australian sites. On a global scale, the group derives 58% of its sales from companion animal products, with production animals accounting for the remainder. Key products relevant to this application include Virbac's Dryzen, which is a leading teat sealant product, as well as Virbac's intramammary antibiotics for lactating cows, Intracillin and Penclox.

(e) **Elanco** is a leading global animal health company that develops, manufactures, and markets products. In 2020, Elanco reported annual revenues of USD 3.3bn and annual growth of 7%. In July 2020, Elanco acquired Bayer's animal health business. If Bayer's revenues for the year are added to Elanco's, the combined annual revenue is USD 4.4bn. Elanco's strategy is to expand its portfolio, capabilities and access.[6] Key products relevant to this application include Elanco's Ultramox, a leading oral horse worming product.

(f) **Ceva** is based in France and operates in New Zealand through its Australian subsidiary Ceva Animal Health Pty Ltd. In total, the Ceva group has operations in 45 countries with 25

[1] https://www.boehringer-ingelheim.com.au/about-us
[2] Drench company to cease NZ production in 2022 (ruralnewsgroup.co.nz)
[3] https://www.msd-newzealand.com/about-us/
[4] https://www.norbrook.com/our-company.
[5] https://nz.virbac.com/about-us/
[6] https://www.elanco.com/about-us/about-elanco

production sites, 12 R&D centres and 5700 employees.[7] Its sales surpassed the 1 billion euros mark in 2017, making it the sixth-largest animal health company in global terms.

(g) **Dechra** is an international specialist veterinary pharmaceuticals and related products business. Dechra sold its veterinary services business to a US firm, Patterson Companies, in July 2013 in order to focus on its higher margin manufacturing business. In 2016, Dechra purchased Apex Laboratories for AU $55 million, a privately owned veterinary pharmaceutical company which manufactures, markets, and sells branded non-proprietary prescription and other related companion animal products in Australia and New Zealand.[8]

68. The names and contact details of the main global competitors of Zoetis and Jurox are set out in Confidential Annexure J.

Strong competition from local and regional players

69. There are also a number of suppliers who develop and/or manufacture animal healthcare products but who have a more limited portfolio of treatments or smaller coverage area than the manufacturers listed above. There are also a number of New Zealand-based suppliers who distribute both patented and off-patent animal healthcare treatments. Those suppliers that are relevant to this application include:

(a) **Vetoquinol** is a multinational company headquartered in France, with 2,500 employees, 100 distributors and a direct presence in 24 countries, including New Zealand. Vetoquinol produces innovative veterinary products and veterinary services. It produces a wide and comprehensive range of products to help combat infections, pain and inflammation, urinary incontinence, and heart and kidney failure, as well as products focussed on advancing genetic gain and improving reproductive outcomes.

(b) **Troy** is based in Australia and has over 120 prescription products and over the counter products available on the Australian market. It partners with agents and distributors in 15 countries across the Middle East and Asia to facilitate export of prescription-only, and OTC pet and equine products.[9] Key products relevant to this application include Troy's Illium Butorgesic product, which competes in the market for pre-anaesthetics and sedatives (opioids).

(c) **Randlab** provides generic cost-effective veterinary medicines and supplements for equine veterinarians and horse owners.[10] They are a family-owned business with offices in Australia, Belgium, China, Dubai, New Zealand, Singapore, and most recently, the USA.

(d) **Alleva** is a New Zealand-based animal health company specialising in the development and marketing of novel animal health products.[11] It commenced operations in early 2011 and its range has grown to include an array of treatments for production animals. Key products relevant to this application include Alleva's Boss, which is a leading cattle anthelmintic product. Alleva has significant products in both the cattle and sheep anthelmintics markets.

[7] https://www.ceva.com/en/who-are-we/company-overview
[8] https://www.dechra.com/about
[9] https://troylab.com.au/about-troylabs/
[10] https://www.randlab.com/
[11] https://www.alleva.co.nz/about_us.html

(e) **Ravensdown** is a cooperative company that is 100% owned by farmers.[12] It previously distributed a wide range of generic animal health products under its own branding, including a number of Jurox products, such as Abamectin cattle anthelmintics products. On 31 March 2021, Ravensdown discontinued its animal health business in New Zealand.[13] However, Ravensdown products, including those supplied by Jurox, are still included in the application, as it relies on 2020 Baron data. Further detail is provided in the relevant sections below.

(f) **Donaghys** is a New Zealand company that has traded continuously for 140 years. It offers a range of animal health products, with a focus on production animals.[14] It supplies animal health products for cattle and sheep, as well as cropping and horticulture products and is focused on being New Zealand's best locally owned animal health company that adapts to meet customer demands.

(g) **Nexan** was founded in 2011 and its founders have more than 60 years of animal health experience between them.[15] Nexan is a leading animal health developer, manufacturer, and marketer, and offers a comprehensive product range that includes pour-on and oral treatments for cattle, deer, and sheep.

(h) **Horizon Agresources** was founded in 2016 to bring an innovative approach to rural supply in New Zealand. Its initial range of animal health products includes mineral supplements and parasite control products.[16]

70. The names and contact details of the main local and regional competitors of Zoetis and Jurox are set out in Confidential Annexure J.

Strong competition from generics

71. As discussed below, in the case of products where the active ingredient (or combinations of active ingredients or product formulation) is off-patent, it is usually relatively straightforward for third parties to manufacture their own version of that product or engage toll manufacturers to manufacture on their behalf. As a result, there are a number of generic manufacturers that are effective competitors to both parties. For example, BI has developed generics of Zoetis' Cydectin LA injection and Horizon Agresources has developed Moxisure, a generic of it too.

72. As a result, across all product areas where the parties overlap, there are a large number of well-resourced multinational and local competitors that currently supply in New Zealand.

73. The Zoetis products relevant to the consideration of the Proposed Acquisition do not contain any active ingredients that are subject to patent protection. As such, they face competition from products that contain these active ingredients (and those that contain other active ingredients), including potential competition from firms that could supply in New Zealand if market conditions (including prices) were to change.

[12] https://www.ravensdown.co.nz/our-company/our-business
[13] https://www.ravensdown.co.nz/expertise/ravensdown-exits-animal-health-but-continues-with-supplements
[14] https://donaghys.com/about-us/
[15] https://www.nexan.co.nz/about/
[16] https://horizonagresources.co.nz/about-us/

Customers of Zoetis and Jurox

74. The names and contact details for the key customers of Zoetis and Jurox are set out in Confidential Annexures D and G respectively. The key suppliers to Zoetis and Jurox in New Zealand are also set out in those Annexures.

75. A significant proportion (based on sales value) of Zoetis and Jurox products are prescription products that are predominantly sold to veterinarians, veterinarian buying groups or veterinarian pharmacies.

76. That said, both companies' parasiticides ranges, which include lower value products, are supplied in high volumes and, in the case of production animals, are predominantly sold over the counter by rural resellers. Many livestock vaccines are OTC or over the counter products.

Countervailing power of distributors and retail outlets

77. Animal health products are sold through a number of different rural retailers, distributors, veterinary clinics and retail shops (such as pet and pet product stores). Many customers are large, well-resourced players that have significant bargaining power vis-à-vis manufacturers and wholesalers. Farmer-owned cooperatives, such as Farmlands, are incentivised to ensure prices for their members are as low as possible. There are also online vendors that sell animal health products (including prescription products).

78. Veterinarians can exercise some degree of market power. The Commission stated in its determination in *Schering-Plough/Organon* that many veterinarians are "relatively large and sophisticated buyers, due to a trend of rationalisation in the veterinary industry".[17] Although it is acknowledged that, in its determination in *Elanco/Bayer*, the Commission found that even if a chain of vet clinics, or vet buying groups, did have a degree of buyer power in their dealings with the merged entity, this alone would be insufficient to constrain the merged entity's market power.[18]

79. Key customer/distributors with countervailing power include:

    (a) **Rural retailers:** Approximately 15% of prescription and animal health products are distributed through rural resellers in New Zealand.[19]

        (i) **PGG Wrightson** (**PGGW**) is a major supplier to the agricultural sector in New Zealand. It provides a full service offering including animal health products, farming equipment, and agricultural supplies. It has a nationwide retail network of 94 stores with approximately 570 staff throughout New Zealand. PGGW stocks a wide range of animal health products, and accordingly has significant buyer power vis-à-vis suppliers. PGGW's operating revenue for FY2020 was $788,036,000.[20]

        (ii) **Farmlands** is New Zealand's largest farmer-owned cooperative, with over 64,000 shareholders. It was established with the aim of providing competition in the retail farm supply industry to reduce farmers' input costs. It has an extensive nation-wide

[17] Commerce Commission, Determination, *Schering-Plough Corporation/Organon Biosciences N.V,* Decision 621, 4 October 2007, at [303], https://comcom.govt.nz/__data/assets/pdf_file/0019/75340/Public-version-written-reasons-Schering-Plough.pdf
[18] Commerce Commission, Determination, Elanco Animal Health Inc / Bayer AG's animal health business [2020] NZCC 14, at [156]. https://comcom.govt.nz/__data/assets/pdf_file/0015/236031/2020-NZCC-14-Elanco-Animal-Health-Inc-and-Bayer-AGs-animal-health-business-Clearance-determination-9-July-2020.pdf
[19] Percentage based on Zoetis figures for 2021 YTD.
[20] PGGW 2020 Annual Report, p.19.

network. With its focus on reducing shareholders' costs, and its significant buying power, Farmlands represents a significant constraint on pricing at the wholesale level. Farmlands' operating revenue for FY2020 was $1,105,487,000.[21]

(iii) **Farmsource** is the retail branch of Fonterra and provides both farming supplies and support.[22] Farmsource has 68 stores nationwide, with over 90% of Fonterra's farms within 25km of a local branch, and also operates online. Farmsource brings together the various benefits of being part of the Fonterra co-operative, and offers exclusive discounts and benefits. Farmsource also provides farming support services, such as financial toolboxes.

(b) **Wholesalers**: Approximately 69% of prescription and over the counter animal health products are distributed through animal health wholesalers, including veterinary wholesalers in the case of companion and livestock prescription product.[23] New Zealand's main wholesalers include:

(i) **Provet**, a subsidiary of Covetrus, is the leading animal health distribution company in Australasia. Established over 30 years ago, it now employs approximately 400 people and has 7 warehouses across Australia and 3 in New Zealand.[24] Provet is partnered with approximately 800 veterinary suppliers to offer over 17,400 products and is positioned to provide the broadest selection of veterinary products to over 3,750 veterinary practices in Australia and New Zealand.

(ii) **SVS**, which is a large distributor to the vet channel. It was founded in 1987 and has grown from a small Christchurch-based supplier to a nation-wide business that offers veterinary supplies, consumables, equipment, and instruments.[25] SVS uses its buying power and investment in technology to consistently deliver quality products at prices that represent great value.

(iii) **Fortis** is a large supplier of wholesale veterinary products to veterinary clinics nationwide. It is owned by a network of veterinarians and has strong relationships with veterinary clinics. As a result, it is committed to providing a large range of companion and production animal products at low prices.

(iv) **Kahuvet** is a veterinary wholesaler, distributing veterinary supplies to clinics throughout New Zealand. Kahuvet has an extensive range that includes consumables, equipment, instruments and some pharmaceuticals. Kahuvet maintains strong relationships with manufacturers and suppliers, which means it can offer higher quality veterinary products for low prices.

(c) **Veterinarians and buyer groups**: veterinarians deal with both companion and production animals and represent another significant customer of veterinary product manufacturers. In the case of products aimed at intensively farmed animals, products are typically supplied directly to vets that are employed by the agribusinesses involved with such animals. While

[21] Farmlands 2020 Annual Statement, p,28.
[22] https://nzfarmsource.co.nz
[23] Percentage based on Zoetis figures for 2021 YTD. In addition to the key wholesalers listed, the figure includes Ecopharm, a small wholesaler of swine products in New Zealand.
[24] https://www.provet.co.nz/about-us/
[25] https://svs.co.nz/about/

independent vets are able to source veterinary pharmaceutical products either directly from the manufacturer or through wholesalers, they typically join veterinary buyer groups that increase their bargaining power and ability to source products more cost effectively. Veterinary buyer groups allow independent veterinary practitioners to group together to negotiate and receive preferential rates or discounts on veterinary pharmaceutical products. Large incorporated practices and vet buyer groups include:

(i) **VetPartners** started in Australia in 2016 with 32 community practices and has now expanded into New Zealand. Its network includes 4,500 staff members in over 240 practices.

(ii) **Quantum Vets** specialises in the procurement of animal health products, industry market research, development of sales and marketing penetration strategies and works with veterinarian businesses across Australia and New Zealand. In New Zealand, Quantum Vets' focus is the provision of veterinary services and the retailing of veterinary products. Its principles have interests in Fortis, which is a veterinary wholesaler and Agilis, a pharmaceutical importer and distributer. Agilis is connected with Hipra and Norbrook and that relationship includes sole distribution rights for some of those companies' products, such as Hiprabovis, Duraseal and Duraclox, among others.

(iii) **Animates Vetcare** is a veterinary service associated with Animates, New Zealand's leading pet retail store. Animates Vetcare has 17 locations across New Zealand, and offers a wide range of animal health services, including consultations, vaccinations, surgery, and dentistry. Animates itself is 50% owned by Greencross Limited, Australasia's largest integrated consumer facing pet care company.

(iv) **Vet Alliance** is a large buying group made up of 21 independent rural veterinary practices focused on leveraging their size to improve buying price.[26]

(v) **IndieVets** is a buying group focused on companion animal products.[27]

(vi) **United Vets Group** is an Australian-owned subsidiary of VetPartners that is operating as a buying group.[28]

(vii) **Vetclubs** are predominantly rural practices with a special tax designation and farmer boards focused on reducing input costs for their farmer customers.

80. In general, the high purchasing volume of all key rural, farming cooperative, and vet customers means that they can demand particular supply terms from manufacturers. [ ].

Entry and expansion requirements

Applicable regulatory requirements

81. Animal health products are regulated in New Zealand by the Ministry for Primary Industries (**MPI**) under the Agricultural Compounds and Veterinary Medicines (**ACVM**) Act 1997. In *Elanco / Bayer*

[26] http://www.vetalliance.co.nz/
[27] https://indievets.co.nz/
[28] https://www.unitedvetsgroup.com.au/

(2020), the Commission outlined the regulatory requirements for animal health products in New Zealand.[29]

82. As the Commission summarised, prior to any animal healthcare product being distributed in New Zealand, the supplier of the product has to complete two main steps: first, the necessary research and development and second, obtaining regulatory approval in accordance with the ACVM.[30] Developing and then registering new animal healthcare products can be both lengthy and costly, although the Commission acknowledged that the cost and time it takes depends on how novel the product is and the extent to which similar products are already registered in New Zealand.

83. Once a product is registered under the ACVM, it can (among other things) be legally sold in New Zealand. How the product is sold to end customers depends on several factors, including whether it can be purchased with or without a prescription. The following methods of purchase apply to the relevant markets for this application:

    (a) **Prescription-only**: oral and injectable penicillin for companion animals; pre-anaesthetics and sedatives; antidotes for pre-anaesthetics and sedatives; intramammary antibiotics for dry and lactating cows; and non-steroidal anti-inflammatory drugs.

    (b) **OTC or over the counter**: cattle and sheep anthelmintics; oral horse worming products; and teat sealants, although Zoetis sells its teat sealants as vet-only rather than over-the-counter to try to ensure that the farmer is properly educated on the need to completely remove the teat sealant when the cow starts lactating.

Generics

84. There is a specific application process for the registration of an equivalent generic product, that is a product with the same active ingredient and use pattern as a product already in the New Zealand market. As above, the regime is operated under the ACVM Act and regulations and administered by MPI.

85. New copies of existing products must fulfil the same basic requirements, in terms of quality, as the original product. However, if the applicant can demonstrate that the formulation of the new copy is the same or very similar to the pioneer product, the data requirements (together with the underlying clinical and field trials that generate that data) are significantly reduced as compared with an application for registration of 'innovator' or 'pioneer' products.

Barriers to entry and expansion

86. Zoetis submits that barriers to entry and expansion are relatively low and reduced further once a product is off-patent. Market conditions are such that incumbents are generally constrained by the threat of new entry, including because it is usually possible to outsource all or part of the manufacturing, distribution, and marketing of products to independent third parties, and in many cases the key products and formulations are off-patent.

87. R&D costs are significantly lower in the animal health industry than for human pharmaceuticals, meaning that a wide range of companies can invest in R&D. In the case of products where active

[29] Commerce Commission, Determination, *Elanco Animal Health Inc / Bayer AG* [2020] NZCC 14 https://comcom.govt.nz/__data/assets/pdf_file/0015/236031/2020-NZCC-14-Elanco-Animal-Health-Inc-and-Bayer-AGs-animal-health-business-Clearance-determination-9-July-2020.pdf
[30] See https://www.mpi.govt.nz/agriculture/agricultural-compounds-vet-medicines/authorisation-of-acvm/

ingredients are off-patent, R&D costs and time are significantly reduced and in some cases eliminated entirely.

88. The regulatory processes associated with registering a generic product as a new product on the market are relatively straightforward, as set out above. The ACVM also contains arrangements for harmonised registrations with Australia for companion animal products. If the product is registered in Australia, the applicant can consent to the Australian Pesticides and Veterinary Medicines Authority (**APVMA**) providing its assessments documents to MPI for its assessment. This streamlines the application process in New Zealand.

89. As a result of the above, generics present a significant competitive constraint on the merging parties and can gain market share quickly. There is a well-established history of new entrants into New Zealand undertaking this work and gaining registration where innovator products have succeeded and come off-patent. For example:

    (a) in the market for cattle anthelmintics, since Zoetis' Dectomax product came off-patent, other doramectin products have entered the market, including Horizon Agresources' Doraject and Nexan Corporation Ltd's Vetmed Doramectin Pour On.

    (b) in the market for teat sealants, Zoetis had the pioneer product, Teatseal. Norbrook subsequently entered the market with its products Sureseal, Dryseal and Duraseal and captured a significant share of the market in a relatively short period of time after entering. Norbrook is now a vigorous and effective competitor in the market, with its three products generating sales revenue of $3,219,600 in New Zealand 2020, again demonstrating the relative ease with which a generic company can enter a market.

Pipeline products

90. [ ].

91. [ ].

92. In terms of Zoetis' global portfolio, there are no other products in the affected markets, or markets in which only Jurox currently competes in New Zealand, in which Zoetis plans to introduce products in the foreseeable future.

Trade and industry associations

93. Relevant trade or industry associations that the parties are involved with are set out in Confidential Annexure J.

PART 3: COMPETITION ANALYSIS

Market definition

94. Annexure H summarises previous decisions of the Commerce Commission and other competition law regulators when assessing transactions involving animal health products. Zoetis has defined the markets relevant to this application (**Relevant Markets**) based on those decisions.

Market share data

95. The Baron data used to provide the estimates of market shares does not include non-participating companies' sales data (such as sales information from non-reported products listed in Annexure K) or data for sales of rural reseller private label products. It also does not contain certain sales of participating companies. Accordingly, the estimated market shares are, in almost all cases, likely to be overstated.

96. In New Zealand, only the following companies participate in Baron data on an at least partial basis: Boehringer Ingelheim, Elanco, MSD, Norbrook, Ravensdown, Troy, Virbac, and Zoetis.

97. In some cases, there are ACVM product registrations and active ingredient approvals for products for which no sales appear in the Baron data. This means that those manufacturers have already met a requirement for entry and provide an immediate constraint on the merged entity.

98. The estimated market shares in this application are on the basis of sales value. While useful, it is not representative of the prescribing habits of veterinarians, which a volume-based measure of market share may provide. For example, certain competitors of the parties may have lower-priced brands, which means they sell more units of the product than a value-based measure would suggest.

99. Volume-based data is not readily obtainable because products often are indicated for different species and animals of various ages, and because dosage will often depend on the species and age or weight of the animal.

100. Baron data cannot reliably be used to assess the extent of a product's prevalence in a market. That said, the data can be used for a relatively high degree of confidence by assessing doses in a product averaged for a typical animal for which the product would be used.

101. To assist the Commission's analysis, Zoetis has provided rough estimates of the total size of the markets including those products not reported to Baron. Those estimates are provided for each market in the relevant sections below. Zoetis cannot provide reliable estimates, the numbers provided are intended as a rough guide for the Commission.

Market analysis

102. Zoetis and Jurox both supply products in 12 Relevant Markets in New Zealand. Of those 12 markets, there are 5 in which the acquisition falls outside the Commission's concentration indicators and there is material aggregation:

    (a) oral penicillin for companion animals;

    (b) injectable penicillin for companion animals;

(c) pre-anaesthetics and sedatives (opioids);

(d) pre-anaesthetics and sedatives (non-opioids); and

(e) antidotes for short term pre-anaesthetic sedatives.

103. There are 4 markets in which the acquisition falls outside the concentration indicators but there is no material aggregation:

(a) cattle anthelmintics;

(b) intramammary antibiotics for lactating cows;

(c) teat sealants; and

(d) nonsteroidal anti-inflammatory drugs.

104. Finally, there are 3 markets in which the acquisition does not fall outside the concentration indicators:

(a) oral horse worming products;

(b) intramammary antibiotics for dry cows; and

(c) sheep anthelmintics.

105. Detailed analysis for each Relevant Market is set out below.

106. Market shares are calculated using the Baron data for 2020. Zoetis considers that the 2020 sales revenue data may overestimate the normal market shares because Zoetis was better able to cope with Covid 19 freight disruptions than smaller participants in the Relevant Markets. Zoetis Global Logistics signed a Blocked Space Agreement with its freight forwarders, so Zoetis had reserved space weekly on flights into Australia and New Zealand and paid even if it wasn't used. Although smaller participants could commit to Blocked Space Agreements with airlines, the associated costs with blocking unused capacity would likely discourage them.

Markets in which the acquisition falls outside the Commerce Commission's indicators and there is material aggregation

A. Oral penicillin for companion animals

107. Penicillin is commonly used to treat or prevent local or systemic infections caused by bacteria. Penicillin works by killing susceptible bacteria by inhibiting the proteins which cross-link peptidoglycans in their cell walls and preventing them from building functional cell walls when they reproduce.

108. Penicillin products are only available by prescription. The products in this product market are administered orally and are all off-patent.

Existing competition in the market

109. Zoetis will be constrained post-acquisition by existing competitors in the market for oral penicillin for companion animals. According to the Baron data, both Le Vet Beheer B.V and Norbrook currently compete in the market with Clavubactin and Noroclav tablets respectively. However, sales data is not available for Clavubactin. A description of the oral penicillin for companion animal products counted in the Baron data is included in Annexure E.

110. Other competitors exist in the market selling Amoxycillin and Amoxiclav, but sales data is not available for them. Based on information available on the ACVM register, those products are understood to be Ethical Agents' Vetamox tablets and Vetoquinol's Clavaseptin Palatable Tables. Further detail about those products is provided in Annexure K.

111. Penicillin products are easily genericised and there are likely to be significant sales that are not reported in the Baron data. Suppliers can easily import generic products that compete in this market.

112. Human equivalent amoxycillin and penicillin products are also being used to treat companion animals.

Estimated market shares

113. Based on the Baron data, the table below sets out the estimated market shares of suppliers of oral Penicillin for companion animals in New Zealand, excluding non-reporting generic manufacturers and sales of the human equivalents used to treat companion animals.

Supplier	Products	Annual revenue	Market share
Zoetis	Clavulox tablets	[ ]	58.43%
Jurox	Juroclav	[ ]	17.08%
Norbrook	Noroclav tablets	[ ]	24.49%
Le Vet Beheer B.V.	Clavubactin	Unknown	Unknown
Ethical Agents	Vetamox tablets	Unknown	Unknown
Vetoquinol	Clavaseptin	Unknown	Unknown

114. [ ]. Zoetis provides the rough estimate that the total market size including products not reported to Baron would be approximately $2,000,000.

115. Following completion of the Proposed Acquisition, excluding sales of unreported products, Zoetis will account for approximately 75.51% of the market for oral penicillin for companion animals. However, the market shares are likely to be overstated due to sales by companies that do not report their data, and by the extent of generic products in the market.

116. To the extent that Zoetis' Clavulox product has a "closest" competitor (and in this market it probably does not have a "closest" competitor due to its originator status and pricing), it would not be Jurox's Juroclav for the following reasons:

    (a) Whilst Zoetis' Clavulox is the originator brand and Jurox's Juroclav is a generic version, there are many other generics available for veterinarians to choose from. A veterinarian will either wish to support an originator and pay a premium (Clavulox sells at a premium price), or select one of the many cheaper generics that tend to compete amongst themselves based purely on price.

    (b) Jurox's Juroclav will have closer competition in generic brands.

117. [ ].

118. The active ingredients of the products in this market, amoxicillin and clavulanic acid, are well-established, meaning they are easily and cheaply manufactured, as well as easily imported into New Zealand.

119. Oral and injectable penicillin products can be used as substitutes in some settings. Accordingly, the potential for price increases is constrained in this market, as customers can often switch to another form of penicillin. That increases competition in the market and would make it difficult for Zoetis to increase its prices.

120. Zoetis is not an aggressive competitor in the market and is not looking to grow its market share. Zoetis New Zealand is reducing its focus on antibiotics and no longer offers rebates, discounts, free goods, or bundle offers on red light antibiotics in New Zealand, as described out below. That is because Zoetis New Zealand takes an ethical stance that it will not promote the use of antibiotics to mitigate poor hygiene practices and animal management.[31]

121. The industry is shifting in relation to antibiotics, at both the national and global levels. The New Zealand Veterinary Association (**NZVA**) has the goal that, by 2030, New Zealand will not need antibiotics for the maintenance of animal health and wellness, as it considers the rise of antimicrobial resistance will be a central challenge of the 21st century.[32] To that end, NZVA has created a traffic light system that ranks antimicrobials.

122. Concurrently, the Ministry of Health and the Ministry for Primary Industries are reviewing the regulatory controls applied to antimicrobial-based trade name products and are working towards a reassessment programme for antimicrobials used in veterinary medicine.[33] To progress those activities, ACVM is re-evaluating the approved use patterns, mechanisms of action, antimicrobial resistance mechanisms, and current antimicrobial resistance profile for each compound and product. This will be used to determine whether the compound should be considered an important, highly important, or critically important antibiotic relative to New Zealand use. The outcomes of the

[31] [ ].
[32] See https://www.nzva.org.nz/resource/general/amr/
[33] See https://www.mpi.govt.nz/animals/veterinary-medicines-acvm/antimicrobial-resistance/

review will be actioned through a subsequent reassessment of the antimicrobial trade name products.[34]

123. On the NZVA traffic light system, semi-synthetic penicillin (ampicillin, clavulanic acid, and cloxacillin) are categorised as amber.[35] The products listed above in this market are therefore all categorised as amber. That means they are of more critical relevance to human therapy than other products and should not be used where efficacy is in doubt. The NZVA traffic light system is already having an impact on sales revenue of certain products, and competition in the market is likely to be further affected as the MoH and MPI project advances.

B. Injectable penicillin for companion animals

How firms compete in the relevant market

124. This market comprises products used to treat infections caused by bacteria and organisms that are sensitive to penicillin. Penicillin is described in the preceding section.

125. These products are administered by injection and are off-patent.

Existing competition

126. According to the Baron data, the existing competitor in the market for injectable penicillin for companion animals is Norbrook, which has Betamox and Noroclav products. Further detail about the products listed in the Baron data is included in Annexure E.

127. The ACVM Register does not show any additional products registered in New Zealand, but penicillin products are widely genericised, and suppliers can easily import generic products that compete in this market. As above, human equivalent amoxycillin and penicillin products are also being used to treat companion animals.

Estimated market shares

128. Based on the Baron data for 2020, Zoetis estimates that the market shares of suppliers of injectable penicillin for companion animals in New Zealand are as follows:

Supplier	Products	Annual revenue	Market share
Zoetis	Clavulox injection	[ ]	32.68%
Jurox	Moxylan	[ ]	9.17%
Norbrook	Betamox Noroclav	[ ]	58.14%

129. [ ]. Zoetis provides the rough estimate that the total market size including products not reported to Baron would be approximately $450,000.

130. Following completion of the proposed acquisition, excluding sales of non-reporting generic products, Zoetis will account for approximately 41.85% of the market for injectable penicillins for companion animals and the three firm concentration ratio would be 100. Norbrook will continue to dominate the market with its share of approximately 58.14%.

[34] See https://www.mpi.govt.nz/animals/veterinary-medicines-acvm/antimicrobial-resistance/
[35] See https://www.nzva.org.nz/resource/general/amr/

131. Zoetis understands that Jurox's Moxylan injectable product is mainly used for swine and feedlot cattle, and Zoetis' Clavulox is not considered to be its closest competitor. Additionally, Zoetis' injectable Clavulox and Jurox's injectable Moxylan contain different active ingredients. Jurox's Moxylan product contains amoxycillin (without clavulanic acid) and is therefore categorised as a first-line antibiotic due to its narrower spectrum of activity as compared to Zoetis' Clavulox. Zoetis does not have an equivalent amoxycillin-only injectable in the current portfolio. Like for like, Zoetis' closest competitor is likely to be Norbrook's injectable Noroclav. Jurox's Moxylan would likely have its closest competitor in Norbrook's Betamox, which is an amoxycillin-only injectable.

132. As above, oral and injectable penicillin products can also be used as substitutes in some settings.

133. As above, the products in this market are categorised as amber on the NZVA traffic light system. Zoetis is not an aggressive competitor in the market and is not looking to grow its market share. These products are likely to face additional regulatory controls stemming from the current work of MoH and MPI on antimicrobial resistance.

C. Pre-anaesthetics and sedatives (opioids)

134. Administering anaesthetics involves a 2 to 4 step process:

    (a) optional sedation (administered by injecting into the muscle (intramuscular) or under the skin (subcutaneous));

    (b) induction (administered intravenously), for example, with Alfaxan;

    (c) maintenance (such as, with gaseous inhalation), for example with Zoetis' isoflurane franchise IsoFlo; and

    (d) optional reversal, although anaesthesia is not reversed in larger operations.

135. Pre-anaesthetic and sedatives are mostly administered to companion animals before anaesthesia is induced. They do not maintain or induce anaesthesia.

136. Opioids have long been used for veterinary anaesthesia as they provide analgesia, sedation and anaesthetic sparing effects. However, opioids have significant side effects and there is a growing trend towards the use of non-opioid pre-anaesthetics and sedatives to avoid the side effects that can be caused by opioids.

137. Opioids are controlled drugs and are more heavily regulated than typical prescription only products. The products in this market are off-patent.

Existing competition

138. According to the Baron data, Zoetis will be constrained post-acquisition by Troy, which is the largest player in the market with its product Illium Butorgesic. Further details about the products listed in the Baron data are included in Annexure E.

139. The ACVM register lists other products in this market that are not reported to Baron, those are:

    (a) MSD's Dolorex;

    (b) Dechra's Calesdate;

(c) Akorn's Butorphic;

(d) Ausrichter's Butomidor; and

(e) Ceva's Vetergesic.

140. Further details about those products are provided in Annexure K

141. The human equivalent, Temgesic, a buprenorphine product, is also used in companion animals. Zoetis understands that it is very commonly used by vets for cats, mainly as an analgesic but also in pre-anaesthetic and sedative schedules as well. It is also used for dogs, but less frequently.

Estimated market shares

142. Based on the Baron data for 2020, Zoetis estimates that the market shares of suppliers of pre-anaesthetics and sedatives (opioids) are as follows:

Supplier	Products	Annual revenue	Market share
Zoetis	Torbugesic	[ ]	12.29%
Jurox	Buprelieve Butordyne	[ ]	36.25%
Troy	Illium Butorgesic	[ ]	51.46%

143. [ ]. Zoetis provides the rough estimate that the total market size including products not reported to Baron would be approximately $1,000,000.

144. Following completion of the Proposed Acquisition, Zoetis' market share will be approximately 48.54%, with the three firm concentration ratio being 100. However, Zoetis will be constrained by Troy which has a market share of approximately 51.46% through its Butorgesic product. Troy's Ilium Butorgesic product is widely and routinely used in equine sedation and is sold by both Ethical Agents and Pheonix.

145. The market shares are also overstated as they do not include the sales revenue of the five products listed on the ACVM register, and marketed in New Zealand, that are unreported to Baron. Both MSD and Dechra are significant participants in the veterinary medicine markets in New Zealand. [ ].

D. Pre-anaesthetics and sedatives (non-opioids)

146. The market includes products used before anaesthesia is induced, which are not based on opioids. The products in this market are off-patent.

Existing competition

147. According to the Baron data, Zoetis will be constrained post-acquisition by existing competitors in the market, as follows:

(a) Virbac's Zoletil product; and

(b) Troy's Ilium Medetomidine product.

148. Further detail about the products listed in the Baron data is included in Annexure E.

149. In addition, there are four other products registered in this market on the ACVM register that are not referenced in the Baron data. Those products and their suppliers are as follows:

(a) Ferrari Animal Health Pty Ltd's Stilator Injection;

(b) Le Vet Beheer B.V's Sedastart 1 mg/ml solution for injection for cats and dogs;

(c) Ceva Animal Health (NZ) Limited's SedaMed Medetomidine Injection; and

(d) Randlab's Sedator.

150. Further detail about the products is included in Annexure K.

Estimated market shares

151. Based on Baron data for 2020, Zoetis estimates that the market shares of suppliers of pre-anaesthetics and sedatives (non-opioids), excluding sales of non-reporting generic products, are as follows:

Supplier	Products	Annual revenue	Market share
Zoetis	Domitor Dexdomitor	[ ]	44.65%
Jurox	Medetate	[ ]	21.69%
Virbac	Zoletil	[ ]	28.89%
Troy	Ilium Medetomidine	[ ]	4.77%

152. [ ]. Zoetis provides the rough estimate that the total market size including products not reported to Baron would be approximately $1,000,000.

153. Following completion of the Proposed Acquisition, Zoetis market share will be approximately 66.35%, with the three firm concentration ratio being 95.23. Zoetis will continue to be constrained by Virbac, with its Zoletil product holding a 28.89% market share.

154. However, the market share may be overstated as there are four other products registered in this category on the ACVM register. [ ]. That market share would decrease further with the sales revenue of Ferrari, Le Vet Beheer and Randlab.

E. Antidotes for short term pre-anaesthetics and sedatives

155. This market comprises products used to reverse the effects of sedation from the use of medetomidine and dexmedetomidine in companion animals. The originator product in this market was Antisedan, with the active ingredient atipamezole. All other products in the market are atipamezole-containing generics.

156. All products in the market are administered via intramuscular injection. They are prescription only products and are off-patent.

157. Only Zoetis reports sales in this market to Baron. Further detail about Zoetis' products, as well as the Jurox products in this market, is provided in Annexure E. However, there are three other

products registered in this category on the ACVM register that are not reported to Baron. Those suppliers and products are:

(a) Ferrari Animal Health Pty Ltd's Mobitor injection;

(b) Le Vet Beheer B.V. with its Sedastop 5 mg/ml solution injection for cats and dogs; and

(c) Ceva Animal Health (NZ) Limited's Reversamed injection for dogs and cats.

158. Further detail about those products is included in Annexure K.

159. The type of product is also easily genericised and similar products can easily be sourced.

Estimated market shares

160. As only Zoetis reports to Baron in this market, the available data shows Zoetis having a market share of 63.45%, [ ]. Jurox would then have the remaining 36.55% of the market, [ ].

161. However, those market shares are unrealistic as there are three other products that are unreported in the Baron data. [ ].

162. [ ]. Zoetis provides the rough estimate that the total market size including products not reported to Baron would be approximately $500,000.

Markets in which the acquisition falls outside the Commerce Commission's indicators but there is no material aggregation

A. Cattle anthelmintics

163. The market comprises parasiticides used to treat parasites in cows. The products are applied by subcutaneous injection, orally, or by capsule.

164. The products in this market are sold over the counter. Most of the products are off-patent.

Existing competition

165. Zoetis will be constrained post-acquisition by a large number of existing competitors in the national market for cattle anthelmintics (injectables). According to the Baron data, existing competitors include:

    (a) BI, which is the market leader with 17 products in the market, as listed in the table below.

    (b) Elanco competes with 3 products in the market, Outlaw, Fasinex 24 and Bomatak C.

    (c) Ravensdown competed in the market with two products supplied by Jurox (Abamectin Injection and Abamectin Pour On), as well as Moximax Pour On and Combo Low dose. Products supplied by Jurox to Ravensdown are counted in the Jurox sales revenue rather than Ravensdown, to avoid double counting. Although Ravensdown has terminated its animal health business in New Zealand, the sales revenues of those products for 2020 are still included for completeness.

    (d) Norbrook is a smaller player in the market with five cattle anthelmintics products.

    (e) Virbac completes in the market with four products.

    (f) MSD has only one product in this market, Panacur 100 in capsule form.

166. Further detail about the products listed in the Baron data is provided in Annexure E.

167. A large number of products are supplied in this market that are not reported to Baron. Most significantly, Alleva does not report to Baron but its Boss and Boss Pour On products compete in this market. Zoetis estimates that the annual sales revenue for 2020 for those products was $6,400,000. As those products are so significant in the market, they are included in the market shares table below.

168. Alleva also has a new Turbo product range in the market for cattle anthelmintics, but they are not reported to Baron and Zoetis does not have sales revenue estimates for those products. Further details about Alleva's products are set out in Annexure K.

169. [ ].

170. In addition, the ACVM register lists the following unreported products in this market:

    (a) Horizon Agresources NZ's Doraject;

    (b) WSD Agribusiness Pty Ltd's BoviPor;

    (c) Nexan Corporation Limited's Active+Aba Pour On;

    (d) Nexan Corporation Limited's VetMed Abamectin Pour On; and

(e) Senaca Holdings Limited's Mectin Pour On.

171. Further details about the unreported products are provided in Annexure K.

Estimated market shares

172. Based on the Baron data for 2020, as well as estimate revenues for Alleva's products, Zoetis estimates that the market shares of each supplier of cattle anthelmintics are as follows:

Supplier	Products	Annual revenue	Market share
Zoetis	Dectomax Cydectin Pour On Cydectin + Fluke Pour On	[ ]	21.44%
Jurox	Paramectin Injection Paramectin Pour On Abamectin Injection (supplied to Ravensdown, no longer listed on the ACVM Register) Abamectin Pour On (supplied to Ravensdown, no longer listed on the ACVM Register)	[ ]	1.41%
BI	Eclipse E Eclipse Pour on Genesis Genesis Pour On Genesis Ultra Pour On Ivomec Plus Ivomec Ivomec Eprinex Exodus Pour On Cattle Pour Arrest C Matrix C Oxfen C Plus Switch C Switch Fluke Iver Matrix Calf	[ ]	54.83%

	Oxfen C		
Elanco	Outlaw Fasinex 24 Bomatak C	[ ]	29.05%
Alleva	Boss Boss Pour On	[ ]	16.69%
Ravensdown	Abamectin Injection (supplied by Jurox, no longer listed on the ACVM register) Abamectin Pour On (supplied by Jurox, no longer listed on the ACM register) Moximax Pour On (now registered by Polygon (NZ) Ltd on the ACVM Register) Combo Low dose (no longer listed on the ACVM Register)	[ ]	0.77%
Norbrook	Noromectin Pour On Eprizero	[ ]	0.17%
Virbac	Nitromec Injection Topline Neoprinil Flukecare	[ ]	1.53%
MSD	Panacur 100	[ ]	0.25%

173. [ ]. Zoetis provides the rough estimate that the total market size including products not reported to Baron would be approximately $50,000,000.

174. Following completion of the Proposed Acquisition, excluding sales of unreported products, Zoetis will account for approximately 22.85% of the market. The three firm concentration ratio will be approximately 94.37.

175. However, the market share of Jurox that Zoetis will acquire is only 1.41% and there would remain 7 other players in the market. In addition, the market shares are likely to be overstated due to the unreported products that are not included in the table above. [ ].[36]

[36] [ ].

176. [ ].[37]

177. In addition, the market shares above include Ravensdown products previously supplied by Jurox. Those products are no longer listed on the ACVM Register due to Ravensdown's exit from the market, so Jurox's current market shares will be lower than stated.

178. This is a highly competitive market with low barriers to entry, as evidenced by the significant number of players and generics for each of the major macrocyclic lactones. [ ].[38] In addition, since Zoetis' Dectomax product came off-patent, other doramectin products have entered the market, including Horizon Agresources' Doraject and Nexan Corporation Limited's Vetmed Doramectin Pour On.

179. Practically all the active parasiticide molecules for cattle are off-patent and the manufacturing process for these products is relatively straightforward.

B. Intramammary antibiotics for lactating cows

180. Intramammary antibiotics are antibiotics that are administered by infusing the mammary glands (glands within the udders) of dairy cattle. They are used for the treatment of bovine mastitis, a bacterial infection of the mammary glands of dairy cattle. Among other things, bovine mastitis can cause clot formation in milk, which results in decreased milk quality, reduced milk yield and increased treatment and care costs.

181. Intramammary antibiotics for lactating cows are off-patent and are a prescription product.

Existing competition

182. Zoetis will be constrained post-acquisition by the following existing competitors in the market for intramammary antibiotics for lactating cows:

    (a) Elanco competes in the market with Ultraclox.

    (b) MSD competes in the market with three products, Cobactain, Mastiplan and Spectrazol.

    (c) Virbac is the market leader, with its two products Intracillin and Penclox.

183. Further detail about the products listed in the Baron data is provided in Annexure E.

184. [ ].

185. Agrihealth NZ Limited has two products in this market on the ACVM register that are not reported in the Baron data. Those products are Lincovet and Albiotic. Albiotic was previously a Zoetis product and Zoetis understands it has a small market share. Lincovet was recently registered in August 2020 but falls within the red category of NZVA's traffic light system for antimicrobial resistance.[39] Further detail about the products is provided in Annexure K.

Estimated market shares

[37] [ ].
[38] [ ].
[39] See https://www.nzva.org.nz/resource/general/amr/

186. Based on the Baron data for 2020, Zoetis estimates that the market shares of suppliers of intramammary antibiotics for lactating cows, excluding non-reported generic products, are as follows:

Supplier	Products	Annual revenue	Market share
Zoetis	Clavulox Mastalone Orbenin	[ ]	33.65%
Jurox	Maxalac	[ ]	0.11%
Elanco	Ultraclox	[ ]	0.88%
MSD	Cobactan Mastiplan Spectrazol	[ ]	2.55%
Virbac	Intracillin Penclox	[ ]	62.80%

187. [ ]. Zoetis provides the rough estimate that the total market size including products not reported to Baron would be approximately $15,400,000.

188. Following completion of the Proposed Acquisition, Zoetis will account for approximately 33.76% of the market, and the three firm concentration ratio will be 99.11. However, the market share of Jurox is very small, with its Maxalac product having 0.11% of the market.

189. In addition, the market shares are likely to be overstated as Agrihealth NZ Limited does not report to Baron.

190. Virbac is dominating this market. Virbac's Intracillin product is the only one in this market that is categorised as green in NZVA's traffic light system for antimicrobial resistance, and Virbac's Penclox product is categorised as amber.[40] [ ].

191. Veterinarians act as gate keepers to the market as these are prescription-only products. Vets prescribe based on their assessment of the product and needs of their farmers, but are also influenced by the NZVA traffic light system toward green and amber antibiotics.

192. The main barrier to entry and expansion in this market is manufacturing capability. The products are off-patent, so participants who can access manufacturing capability face low barriers to entry. For example, Zoetis understands that Norbrook has this manufacturing capability, as it is selling similar products in Australia. Zoetis understands that Norbrook markets Noroclox and Lactoclox LC in Australia.

193. Zoetis has observed that there is strong price sensitivity in this market. The products are substitutable for one another, and any increase in price can result in customers easily switching to another supplier. Customers have very low or no switching costs.[41]

[40] See https://www.nzva.org.nz/resource/general/amr/
[41] [ ].

C. Teat sealants

194. Teat sealants prevent bacterial infection in the teats of heifers prior to their first lactation, and in cows in their dry period. The seal prevents bacteria entering the teat and reduces the need for antibiotics. In cases where there are concerns of an infection, an intramammary antibiotic for dry cows may be used in conjunction with a teat sealant.

195. [ ].

196. Teat sealants are off-patent and are applied as an infusion.

Existing competition

197. Zoetis will continue to be constrained by the following players in the market:

    (a) Norbrook, which is a significant player in the market with its products Sureseal, Dryseal and Duraseal. [ ];

    (b) BI's product BioBloc, which has only a small share of this market;

    (c) Virbac competes in the market with Dryzen, which had significant sales revenue in 2020; and

    (d) MSD competes in the market with Cepralock, as well as its recently registered Shut Out, for which revenue data is not yet available.

198. A description of the teat sealants counted in the Baron data is included in Annexure E. Beyond MSD's Shut Out product, the ACVM register does not list any other products registered in this market that are unreported in the Baron data and currently marketed in New Zealand. A description of MSD's Shut Out product is provided in the list of teat sealant products not counted in the Baron data, in Annexure K.

Estimated market shares

199. Based on the Baron data for 2020, Zoetis estimates that the market shares of suppliers of teat sealants in New Zealand, excluding non-reporting generic manufacturers, are as follows:

Supplier	Products	Annual revenue	Market share
Zoetis	Teatseal	[ ]	64.12%
Jurox	U-Seal	[ ]	0.29%
Norbrook	Sureseal Dryseal Duraseal	[ ]	19%
BI	BioBloc	[ ]	1.93%
Virbac	Dryzen	[ ]	9.95%
MSD	Cepralock	[ ]	4.71%

200. [ ].

201. Following completion of the Proposed Acquisition, Zoetis will account for approximately 64.41% of the market. Post-acquisition, the three firm concentration ratio would be 93.36.

202. However, Jurox contributes a very small market share of 0.29%. There are also 4 other players in the market that compete directly with Zoetis. [ ].[42]

203. Zoetis anticipates that other generics will gain traction in this market as the experience with Norbrook demonstrates that generics can gain traction and compete strongly with pioneer products, with the effect that the market becomes less concentrated within a relatively short period of time.

204. The teat sealant market has seen significant shifts in sales revenue in the first half of 2021. In particular, the sales revenue of Virbac's Dryzen product grew significantly in the last dry off season, during the first half of 2021. [ ].

205. Given the recent shifts in the teat sealant market, Zoetis provides updated estimates of market shares based on the June 2021 Baron data for this market, as follows:

Supplier	Products	Annual revenue	Market share
Zoetis	Teatseal	[ ]	69.58%
Jurox	U-Seal	[ ]	0.28%
Norbrook	Sureseal Dryseal Duraseal	[ ]	6.04%
BI	BioBloc	[ ]	0%
Virbac	Dryzen	[ ]	17.37%
MSD	Cepralock	[ ]	6.73%

206. Based on the new sales revenue figures, Zoetis' post-acquisition market share would be 69.86% and the 3 firm concentration ratio would be 93.96. However, Jurox's market share that Zoetis would obtain remains very low at 0.28%. Accordingly, the recent shifts in sales revenue in the market do not significantly affect the market shares of Zoetis and Jurox. However, Virbac's recent increase in market share does illustrate that strategies of competitors to gain market share can be successful in this market.

D. Non-steroidal anti-inflammatory drugs

207. Non-steroidal anti-inflammatory drugs are used to control pain and inflammation in a variety of settings in veterinary medicine. Those include arthritis in dogs and horses and controlling postoperative pain in dogs and cats. As with humans, NSAIDs can cause side effects in the digestive tract, including ulcers and discomfort.

208. The products are prescription only. Most of the products are administered orally, but some are administered via injection. The products are mostly off-patent.

[42] [ ].

Existing competition

209. Zoetis will be constrained post-acquisition by existing competitors in the national market for nonsteroidal anti-inflammatory drugs. Existing competitors in the market include:

    (a) BI's Metacam product is the market leader, and BI's Previcox product also competes in the market.

    (b) Norbrook competes in the market with four products (Carprieve Injection, Carprieve TABS, Flunixin Injection and Loxicom).

    (c) Troy's four products in this market are Ketoprofen, Meloxicam, Nabudone and Tolfejec.

210. A description of the non-steroidal anti-inflammatory products counted in the Baron data is included in Annexure E.

211. There are also a large number of generic products in the market that can easily be imported. According to the ACMV Register, competing generic products based on the active ingredients are follows:

    (a) Carprufen:

        (i) Chanelle Pharmaceuticals Manufacturing Limited's Canidryl Flavoured Tablets for Dogs.

    (b) Meloxicam:

        (i) Randlab Australia Pty Ltd's Meloxicam product;

        (ii) Ceva Animal Health (NZ) Limited's Meloxidyl 1.5mg/ml Oral Suspension for Dogs;

        (iii) Chanell Pharmaceuticals Manufacturing Limited's Rheumocam products; and

        (iv) Agrihealth NZ Limited's Melovem 30 and MeloxiVet;

    (c) Phenylbutazone:

        (i) Randlab Australia Pty Ltd's Equine Bute Paste; and

        (ii) International Animal Health Products Pty Ltd's Butin Anti-Inflammatory Oral Paste.

    (d) Tolfenamic acid:

        (i) Vetoquinol New Zealand Limited's Toldefine CS.

212. Zoetis understands that all of the above products are currently marketed in New Zealand, with the exception of Ceva's Meloxidyl product, which no longer appears to be marketed. Further details about each of those products listed on the ACVM Register but not counted in the Baron data are included in Annexure K.

Estimated market shares

213. Based on the Baron data for 2020, Zoetis estimates that the market shares of non-steroidal anti-inflammatory drugs in New Zealand are as follows:

Supplier	Products	Annual revenue	Market share
Zoetis	Rimadyl Trocoxil	[ ]	26.22%
Jurox	Relieven Domoso Roll-On Myoton Sachets 100 2.5Gm	[ ]	0.25%
BI	Metacam Previcox	[ ]	50.21%
Norbrook	Carprieve Injection Carprieve TABS Norflunix Loxicom	[ ]	18.16%
Troy	Ketoprofen Meloxicam Nabudone Tolfejec	[ ]	5.36%

214. As can be seen in the table above:

(a) [ ]. Zoetis provides the rough estimate that the total market size including products not reported to Baron would be approximately $10,000,000.

(b) Following completion of the Proposed Acquisition, Zoetis' market share will be approximately 26.47% and the three firm concentration ratio would be 94.59.

(c) However, the Proposed Acquisition adds only the very small market share of Jurox of 0.25%.

(d) In addition, there are a number of large suppliers in the market:

(i) BI is the largest player, with a market share of 50.21% from the sale of its Metacam and Previcox products.

(ii) Norbrook has a market share of 18.16% with its Carprieve, Flunixin and Loxicom products.

(iii) Troy also competes in the market with a 5.36%.

(e) Apart from Zoetis' Trocoxil product, all products in this market are old and fully genericised. The market shares are also likely to be overstated due to the large number of generic competitors that are unreported.

Markets in which the acquisition does not fall outside the Commerce Commission's indicators

A. Oral horse worming products

215. Horse worming products are used to protect horses against the health consequences of intestinal worms. Horses experience similar health effects to dogs, including weight loss, diarrhoea, lethargy, anaemia and even death.

216. Oral horse wormers are over the counter products. The active ingredients in these products are off-patent. The products are administered orally.

Existing competition

217. Zoetis will be constrained post-acquisition by existing competitors in the national market for oral horse worming products.

    (a) Virbac's Equimax and Strategy-T products compete in this market.

    (b) Elanco's Ultramox is the leading product in this market and Elanco's Equitak is the second leading product in the market. Elanco's Flubenol also competes in the market.

    (c) Boehringer Ingelheim's Genesis Horse Wormer and Triumph are both established products in the market.

218. A description of the oral horse worming products counted in the Baron data is included in Annexure E.

219. There are a number of other suppliers who have products in this market registered on the ACVM register that are not reported to Baron. The suppliers and products include the following:

    (a) Seneca Holdings Limited's Abagel Plus for Horses;

    (b) Senaca Holdings Limited's Vet Direct Abamctin Wormer, Bot + Tape;

    (c) Senaca Holdings Limited's Detonate; and

    (d) Robyn Bates Pharmaceuticals' Prazivec Oral Paste for Horses.

220. Further detail about the oral horse worming products not counted in the Baron data is included in Annexure K.

Estimated market shares

221. Based on Baron data for the year ending December 2020, Zoetis estimates that the market shares are as follows:

Supplier	Products	Annual revenue	Market share
Zoetis	Equest + Tape	[ ]	7.33%
Jurox	Promectin	[ ]	1.34%
Virbac	Equimax Strategy-T	[ ]	15.26%
Elanco	Equitak	[ ]	70.08%

	Ultramox Flubenol		
BI	Genesis Horse Wormer Triumph	[ ]	5.98%

222. [ ]. Zoetis provides the rough estimate that the total market size including products not reported to Baron would be approximately $4,000,000.

223. Following completion of the Proposed Acquisition, Zoetis will account for approximately 8.67% of the market for oral horse worming products, with the Proposed Acquisition resulting in a small change in Zoetis' market share of approximately 1.34%. The three firm concentration ratio will be 94.01.

224. Based on the market share figures estimated in the table, the acquisition falls within the Commission's concentration indicators. The fact that the transaction is within the Commission's concentration indicators supports Zoetis' position that the proposed acquisition will not have the effect or likely effect of substantially lessening competition in the market for oral horse worming products.

225. In addition, Zoetis will remain substantially constrained by Elanco, which will have a significant market share of approximately 70.08%, as well as Virbac which will have a market share of 15.26%.

B. Intramammary antibiotics for dry cows

226. The products in this market are similar to intramammary antibiotics for lactating cows described above, except that they are for cows that are between lactations, known as dry cows.

227. The products are prescription-only and administered as an infusion. They are off-patent.

Existing competition

228. Zoetis will be constrained post-acquisition by a large number of strong competitors in the national market for intramammary antibiotics for dry cows.

(a) MSD's Cepravin is the leading product in the market. MSD's Cefa Safe and Bovaclox also compete in the market.

(b) Elanco has well established products in the market, with Dryclox DX and DryClox Xtra.

(c) Norbrook has four products in the market. Claxamp 500 and Duramast 5&600 compete strongly with significant sales revenues. Norbrook also has Cloxamp 600 and Noroclox products in the market.

(d) Virbac has one product in the market, Quadrant.

229. A description of the intramammary antibiotics for dry cows counted in the Baron data is included in Annexure E.

230. The ACVM Register does not show any other products registered in this market in New Zealand that are not reported in the Baron data.

231. [ ].

Estimated market shares

232. Based on Baron data for the year ending December 2020, Zoetis estimates that the market shares of suppliers of intramammary antibiotics for dry cows are as follows:

Supplier	Products	Annual revenue	Market share
Zoetis	Orbenin Enduro Orbenin DC	[ ]	5.09%
Jurox	Juraclox (dry cow product only)	[ ]	2.21%
Elanco	Dryclox DC DryClox Xtra	[ ]	21.66%
MSD	Bovaclox Cefa Safe Cepravin	[ ]	48.91%
Norbrook	Cloxamp 500 Cloxamp 600	[ ]	15.70%

	Duramast 5&600 Noroclox		
Virbac	Quadrant	[ ]	6.42%

233. [ ].

234. Following completion of the Proposed Acquisition, Zoetis will account for approximately 7.3% of the market for intramammary antibiotics for dry cows, with the Proposed Acquisition resulting in a small incremental change in Zoetis' market share of approximately 2.21%. The three firm concentration ratio will be approximately 86.27.

235. Based on the market share figures estimated in the table, the acquisition falls within the Commission's concentration indicators. The fact that the transaction is within the Commission's concentration indictors supports Zoetis' position that the proposed acquisition will not have the effect or likely effect of substantially lessening competition in the market for intramammary antibiotics for dry cows.

236. In addition, Zoetis will remain substantially constrained by MSD, with a market share of 48.91% as well as Elanco and Norbrook with respective market shares of 21.66% and 15.7%.

237. Given the shifts in the industry in relation to antibiotics, as described above, Zoetis is not paying rebates, or giving discounts, free goods, or bundle offers, on dry cow antibiotic intramammary products in New Zealand.

238. Zoetis has observed that there is strong price sensitivity in this market. The products are substitutable for one another, and any increase in price can result in customers easily switching to another supplier. Customers have very low or no switching costs.[43]

C. Sheep anthelmintics

239. The market comprises parasiticides used to treat parasites in sheep. They are used against parasites that attack sheep internally, such as roundworms, tapeworms and flukes. They can be applied by subcutaneous injection, orally, or in capsule form.

240. The products in this market are sold over the counter and most are off-patent. However, Zoetis' Startect product has a unique multi-active combination (abamectin and derquantel) and is protected by a patent. The patent is due to expire in 2028.

Existing competition

241. Zoetis will be constrained post-acquisition by a large number of existing competitors in the oral sheep anthelmintics market.

    (a) Boehringer Ingelheim is the market leader, with a significant number of products in the market, as listed in the table below.

    (b) MSD has three products in the market, Alliance, Converge, and Scanda.

[43] [ ].

(c) Virbac has only one product in the market, Triple A,.

(d) Elanco's product Zolvix competes strongly in the market.

(e) Ravensdown competed in the market with Moximax, as well as products supplied by Jurox. To avoid double counting, products supplied by Jurox to Ravensdown are not included in Ravensdown's sales revenue. Although Ravensdown has terminated its animal health business in New Zealand, the sales revenues of those products for 2020 are still included in Jurox's revenue for completeness.

242. A description of the oral sheep anthelmintics products counted in the Baron data is included in Annexure E.

243. There are a number of other products in this market listed on the ACVM Register that are not reported to Baron. Those products are:

(a) Alleva Animal Health's Marathon LA injection, Boss Triple Combination Mineralised Drench for Sheep, Corporal, and Corporal + Tape;

(b) Horizon Agresources' Moxi LA Injection for Sheep and Moxisure Injection for Sheep;

(c) Donaghys Limited's Evolve Tape Hi Min, Evolve Sheep Hi Min, and Saturn Sheep Hi Min;

(d) Nexan Corporation Limited's Vetmed Triplemax Sheep Oral;

(e) WSD Agribusiness Pty Limited's Optimec Hi Min; and

(f) Chemvet (NZ) Ltd's Rycomectin.

244. Further details about the products that are not counted in the Baron data are included in Annexure K.

245. Separately, Elanco has registered Moxidectrin SA injection on the ACVM Register, but sales data is not available in Baron. It is unknown whether this product is marketed and sold in New Zealand.

Estimated market shares

246. Based on the Baron data for 2020, Zoetis estimates that the market shares of suppliers of sheep anthelmintics (oral), not including unreported products, are as follows:

Supplier	Products	Annual revenue	Market share
Zoetis	Cydectin oral Cydectin Injection Startect Eweguard	[ ]	17.73%
Jurox	Paramectin Injection Pentamox Q-Drench Strategik	[ ]	1.56%

	Troika Abamectin Sheep (supplied to Ravensdown, not currently listed on the ACVM Register) Combo Sheep (supplied to Ravensdown, not currently listed on the ACM Register) Trio Sheep (supplied to Ravensdown, not currently listed on the ACVM Register)		
BI	Arrest Arrest Hi Mineral Exodus SE Exodus LA First Drench Genesis Hi Mineral Sheep Genesis Ultra Oral Iver Matrix Tape Iver Switch Tape Matrix Polerize Switch Switch Hi Mineral Trimox Adtape Bionic Extender	[ ]	66.66%
Elanco	Zolvix	[ ]	5.35%
MSD	Alliance Converge Scanda	[ ]	7.68%
Ravensdown	Moximax Pour-On (now registered by Polygon (NZ) Limited on the ACVM Register)	[ ]	0.24%

	Abamectin Sheep (supplied by Jurox, not currently listed on the ACVM Register) Combo Sheep (supplied by Jurox, not currently listed on the ACVM Register) Trio Sheep (supplied by Jurox, not currently listed on the ACVM Register)		
Virbac	Triple A	[ ]	0.68%

247. [ ]. Zoetis provides the rough estimate that the total market size including products not reported to Baron would be approximately $55,000,000.

248. Following completion of the Proposed Acquisition, Zoetis' market share will be approximately 19.29% and the three firm concentration ratio will be 93.63.

249. The fact that the transaction is within the Commission's concentration indictors supports Zoetis' position that the proposed acquisition will not have the effect or likely effect of substantially lessening competition in the market for sheep anthelmintics.

250. In addition, the market shares above include Ravensdown products previously supplied by Jurox. Those products are no longer listed on the ACVM Register due to Ravensdown's exit from the market, so Jurox's current market shares will be lower than stated.

251. Sheep anthelmintics markets are highly competitive with low barriers to entry and a wide production manufacturing base. Another important factor in the anthelmintics markets is that many consumers rotate between products. This occurs for a variety of reasons including time of year, previous treatment history, the resistance profiles of the particular worm species, scientific purposes, convenience, and price. Pricing can vary significantly depending on the number of active ingredients.

252. In addition to pricing, the primary deciding factor for many consumers in anthelmintics markets is the relationship they have with their reseller at the point of sale. This means that Zoetis does not have a strong ability to reach consumers.

No likely substantial lessening of competition in any market

253. The Proposed Acquisition will not have the effect, or likely effect, of substantially lessening competition in the Relevant Markets, including because:

    (a) **The actual and potential level of import competition in the Relevant Markets is high**

    All of the types of products supplied by the Parties can be imported to New Zealand. Imported product from rival global manufacturers represents a growing external competitive force.

    (b) **There are low barriers to entry and expansion in the Relevant Markets**

The majority of the products are already highly genericised and no longer subject to any meaningful patent protection. Regulatory barriers in New Zealand are relatively low. Generic registrants can utilise the data already submitted by a pioneer registrant to support of the generic's own registration, provided that the proposed product is either identical or similar to an existing trade name product (**TNP**) (Application Type B1 "Identical to existing TNP" or Application Type B2 "Similar to existing TNP").

If the components of an originator product are not already available (for example, the formulation is published in a patent) reverse engineering of many animal health products to identify their components is usually relatively straightforward and inexpensive.

(c) **Zoetis will be constrained by a number of suppliers**

Following completion of the Proposed Acquisition, Zoetis will continue to be constrained by a number of competing manufacturers and distributors of animal health and biological products.

There are suppliers with notable market shares in many of the Relevant Markets, including Virbac, MSD, Norbrook, Elanco and BI.

(d) **Customers have countervailing power**

In relation to companion animal products, a retailer or veterinarian can purchase their entire requirements from a wholesaler of animal health products. Distributors and wholesalers have strong bargaining power as most manufacturers sell through them.

Large vet groups have significant bargaining power against both wholesalers and manufacturers and routinely extract concessions on price, rebates or other benefits from wholesalers and manufacturers.

In relation to production animal products, PGG Wrightson, Farmlands and Farmsource effectively constitute the rural reseller markets and have very considerable market power due to both their market share and their vertical integration that enable them to bargain effectively with manufacturers.

(e) **Zoetis will not be able to significantly and sustainably increase prices or profits**

Jurox does not supply any "must have products". Consequently, the Proposed Acquisition will not result in Zoetis being able to significantly and sustainably increase prices or profits. Zoetis will continue to be constrained by a range of other large and small suppliers, as well as the threat of entry.

(f) **The acquisition will not result in the removal of a vigorous and effective competitor**

Zoetis and Jurox are not each other's closest competitors. Their product ranges are largely complementary and Jurox has a very small share of most of the Relevant Markets.

(g) **Availability of substitutes**

Most of the products in the Relevant Markets are not protected by patents. Generic suppliers have already established a presence in most of the Affected Markets, where they compete aggressively on price.

In addition, suppliers of other products have the ability to enter any of the Affected Markets. In fact, some suppliers have already entered the equivalent markets in Australia and could easily offer the same products in New Zealand.

No adverse coordinated effects on competition

254. The acquisition will not enhance the ability of Zoetis and other competitors to coordinate their behaviour. As highlighted above, the relevant markets are highly competitive. There are number of vigorous competitors of varying sizes that are competing for market share, with the ability to expand in response to any softening of competition among any of the larger players.

255. In previous public decisions regarding this industry, neither the New Zealand Commerce Commission nor the ACCC have expressed any concerns that the industry displays characteristics that are conducive to coordinated effects. The number and diversity of suppliers in the animal health industry mean that the industry is not susceptible to coordinated effects.

No adverse vertical effects on competition

256. The transaction does not raise issues of detrimental increase in vertical integration. Combining Zoetis and Jurox would not in any way limit their competitors' access to essential inputs.

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The proposed acquisition will not have conglomerate effects.

262. The Proposed Acquisition will enhance Zoetis' portfolio of products. However, it will not give Zoetis the incentive or ability to engage in anti-competitive bundling or tying of products. The animal health product industry in New Zealand is not marked by aggressive bundling practices. Moreover, any attempt by Zoetis to do so would likely be defeated by large competitors and wholesalers who could match or better Zoetis' bundles. For example, in the market for intramammary antibiotics and teat sealants, competitors have their own suite of antibiotics and sealants. MSD and Virbac will (or would be able to) match or better such bundles.

PART 4: CONFIDENTIALITY

263. Confidentiality is sought for the information in this application that is in square brackets:

- [ ] is information confidential from the public
- [ ] is information confidential from the public and Jurox; and
- [ ] is information confidential from the public and Zoetis.

264. A public version of this notice with the confidentiality information deleted will be provided to the Commission.

265. We request that we be notified of any request made under the Official Information Act 1982 for the information and be given the opportunity to be consulted as to whether the information remains commercially sensitive at the time the request is made.

266. These requests for confidentiality are made because the information is commercially sensitive and disclosure would be likely to unreasonably prejudice Zoetis or, alternatively, the person who is the subject of, or who provided the information.

267. A schedule setting out the reasons for each request is attached as Confidential Annexure L.

PART 5: DECLARATION

I, Mark Andrew Worsman , have prepared, or supervised the preparation, of this notice seeking clearance.

To the best of my knowledge, I confirm that:

- all information specified by the Commission has been supplied;
- if information has not been supplied, reasons have bene included as to why the information has not been supplied;
- all information known to the applicant that is relevant to the consideration of this notice has been supplied; and
- all information supplied is correct as at the date of this notice.

I undertake to advice the Commission immediately of any material change in circumstances relating to the notice.

I understand that it is an offence under the Commerce Act to attempt to deceive or knowingly mislead the Commission in respect of any matter before the Commission, including in these documents.

I am a director/officer of Zoetis and am duly authorised to submit this notice.

Name and title of person authorised to sign:

Mark Andrew Worsman, Senior Director, Legal

Sign: Mark Worsman Date: 27 October 2021

CONFIDENTIAL ANNEXURE A: OWNERSHIP DIAGRAMS

[ ].

CONFIDENTIAL ANNEXURE B: JUROX FINANCIAL REPORTS 2020

[ ].

CONFIDENTIAL ANNEXURE C: SHARE SALE AND PURCHASE DEED

[ ].

CONFIDENTIAL ANNEXURE D: ZOETIS SALES, CUSTOMERS, SUPPLIERS

[ ].

ANNEXURE E – DESCRIPTION OF PRODUCTS COUNTED IN BARON DATA

The tables below provide further detail about the products counted in the Baron data that has been used to calculate the market shares. As explained in the application, Jurox does not report to Baron, but the Jurox products are included in this list for simplicity.

Oral penicillin for companion animals

Penicillin is commonly used to treat or prevent local or systematic infections caused by bacteria. Penicillin works by killing susceptible bacteria by their cell walls and preventing them from building a functional cell wall when they reproduce. Penicillin products are only available by prescription.

Supplier	Product	Active Ingredient	Clinical indications
Zoetis	Clavulox palatable tablets broad spectrum antibiotic 250 mg	Clavulanic Acid and Amoxycillin	For the treatment of bacterial infections sensitive to Clavulanic Acid and Amoxycillin in dogs and cats
Zoetis	Clavulox palatable tablets broad spectrum antibiotic 500 mg	Clavulanic Acid and Amoxycillin	For the treatment of bacterial infections sensitive to Clavulanic Acid and Amoxycillin in dogs and calves
Zoetis	Clavulox palatable tablets broad spectrum antibiotic 50 mg	Clavulanic Acid and Amoxycillin	For the treatment of bacterial infections sensitive to Clavulanic Acid and Amoxycillin in dogs and cats
Jurox	Juroclav 50 Broad Spectrum Antibiotic Tablets	Clavulanic Acid and Amoxycillin	For the treatment of bacterial infections sensitive to clavulanic acid and amoxycillin in dogs and cats
Jurox	Juroclav 250 Broad Spectrum Antibiotic Tablets	Clavulanic Acid and Amoxycillin	For the treatment of bacterial infections sensitive to clavulanic acid and amoxycillin in dogs and cats

Jurox	Juroclav 500 Broad Spectrum Antibiotic Tablets	Clavulanic Acid and Amoxycillin	For the treatment of bacterial infections sensitive to clavulanic acid and amoxycillin in dogs and cats
Norbrook	Noroclav Tablets 50mg	Clavulanic Acid present as potassium clavulanate and Amoxycillin Trihydrate	For the treatment of bacterial infections sensitive to clavulanic acid and amoxycillin in cats and dogs
Norbrook	Noroclav tablets 500mg	Clavulanic Acid present as potassium clavulanate and Amoxycillin Trihydrate	For the treatment of bacterial infections sensitive to clavulanic acid and amoxycillin in pre-ruminant calves and large dogs
Le Vet Beheer B.V	Clavubactin	Clavulanic Acid and Amoxycillin	For treatment of bacterial infections sensitive to Clavulanic Acid and Amoxycillin in small, medium & large dogs, and cats

Injectable penicillin for companion animals

Supplier	Product	Active Ingredient	Clinical indications
Zoetis	Clavulox RTU injection	Amoxicillin Trihydrate and Potassium Clavulanate	For the control of bacterial infection in cattle, dogs and cats
Jurox	Moxylan RTU Injection Broad Spectrum Antibiotic	Amoxycillin	For the treatment of infection caused by Amoxycillin susceptible bacteria in cattle, sheep, pigs, dogs and cats
Norbrook	Betamox LA injection (intramuscular or subcutaneous)	Amoxycillin	For treatment of infections caused by organisms sensitive to Amoxycillin in horses, cattle, pigs, sheep, dogs and cats

Norbrook	Noroclav (intramuscular or subcutaneous)	Amoxycillin and Clavulanic Acid	Broad spectrum of bacterial activity against the bacteria commonly found in dogs and cats

Pre-anaesthetics and sedatives (opioids)

Supplier	Product	Active Ingredient	Clinical Indications
Zoetis	Torbugesic	Butorphanol tartrate	Analgesic and sedative for use in horses, dogs and cats
Jurox	Buprelieve Injection	Buprenorphine Hydrochloride	Analgesic injection for dogs and cats
Jurox	Butordyne	Butorphanol tartrate	Analgesic and sedative for us in horses, dogs and cats
Troy	Ilium Butorgesic Injection	Butorphanol tartrate	Analgesic and sedative for use in horses, dogs and cats

Pre-anaesthetics and sedatives (non-opioids)

Supplier	Product	Active Ingredient	Clinical Indications
Zoetis	Domitor	Medetomidine Hydrochloride	Sedative and analgesic for dogs and cats
Zoetis	Dexdomitor	Dexmedetomidine Hydrochloride	Sedative, analgesic for use in the restraint of dogs and cats
Jurox	Medetate Injection	Medetomidine Hydrochloride	For use as a sedative and analgesic in the restraint of dogs and cats
Virbac	Zoletil 100	Tiletamine as the hydrochloride	Anaesthetic agent for use in cats, dogs, zoo felidae, zoo canidae, goats, red deer and fallow deer

		Zolezepam as the hydrocholoride	
Troy	Iliam Medetomidine Injection	Medetomidine hydrochloride	For use as a sedative and analgesic in the restraint of dogs and cats

Antidotes for short term pre-anaesthetic sedatives

Supplier	Product	Active Ingredient	Clinical Indications
Zoetis	Antisedan	Atipamezole Hydrochloride	Specific reverser of medetomidine and dexmedetomidine for dogs and cats
Jurox	Antipam	Atipamezole Hydrochloride	For parenteral use in reversing and abolishing the effects of medetomidine hydrochloride in dogs and cats

Cattle anthelmintics

Supplier	Product	Active Ingredient	Clinical Indications
Zoetis	Dectomax	Doramectin	For the treatment and control of doramectin sensitive internal and external parasites of cattle, sheep and pigs
Zoetis	Cydectin Pour-On	Moxidectin	For the treatment and control of internal and external parasites of cattle (including lactating dairy cattle) and for the treatment and control of lungworm and roundworms of deer.
Zoetis	Cydectin plus Fluke pour on	Moxidectin Triclabendazole	For the treatment and control of liver fluke, internal and external parasites of cattle
Jurox	Paramectin injection	Abamectin	For the treatment and control of internal and external parasites of cattle and internal parasites of sheep

Jurox	Paramectin Pour-On for Cattle	Abamectin	For the treatment and control of abamectin sensitive strains of internal parasites (roundworms and lungworms) of sheep (including benzimidazole and levamisole resistant strains)
Jurox	Abamectin Injection (previously supplied to Ravensdown, no longer listed on the ACVM Register)	N/A	N/A
Jurox	Abamectin Pour on (previously supplied to Ravensdown, no longer listed on the ACVM Register)	N/A	N/A
BI	Eclipse E Injection	Levamisole Phosphate Eprinomectin	Subcutaneous injection for the treatment and control of internal parasites in cattle
BI	Eclipse E Injection with B12 and Selenium	Eprinomectin Selenium present as sodium selenate Levamisole phosphate Vitamin B12	Subcutaneous injection for the treatment and control of internal parasites in cattle and aids in the treatment and prevention of vitamin B21 (cobalt) and selenium deficiency
BI	Eclipse Pour On	Levamisole Abamectin	For the treatment and control of internal parasites, including endectocide resistant strains, lungworm and lice in cattle
BI	Genesis	Abamectin	Long acting subcutaneous injection for the treatment and control of internal and external parasites in cattle and internal parasites in sheep

BI	Genesis Injection with B12	Abamectin Hydrozocobalamin	Long acting subcutaneous injection for the treatment and control of internal and external parasites in cattle and internal parasites in sheep and aids in the treatment and prevention of Vitamin B12 (cobalt)
BI	Genesis Injection with B12 and Selenium	Selenium present as sodium selenate Vitamin B12 Abamectin	Long acting subcutaneous injection for the treatment and control of internal and external parasites in cattle and internal parasites in sheep. Also aids in the treatment and prevention of Vitamin B12 (cobalt) and selenium deficiency.
BI	Genesis Pour on	Abamectin	For the control and treatment of internal and external parasites in cattle and deer
BI	Genesis Ultra Pour on	Triclabendazole Abamectin	For the treatment and control of internal parasites, including mature and immature liver fluke and lice in cattle
BI	Ivomec Plus Injection for Cattle	Ivermectin Clorsulon	For the treatment and control of internal and external parasites of cattle, including adult liver flukes
BI	Ivomec Injection for Cattle, Sheep and Pigs	Ivermectin	For the treatment and control of internal and external parasites of cattle, sheep and pigs
BI	Ivomec Eprinex Pour-On for Cattle and Deer	Eprinomectin	For the treatment and control in all ages of beef and dairy cattle (including lactating cows) of gastrointestinal roundworms, lungworms, sucking and biting lite, and sarcoptic and chorioptic mites
BI	Exodus Pour on	Moxidectin	For the control and treatment of internal and external parasites in cattle and deer
BI	Cattle Pour	Abamectin	For the control and treatment of internal and external parasites in cattle and deer
BI	Arrest C	Albenzadole Levamisole hydrochloride	For the control of roundworms, tapeworm, lungworm and adult liver fluke in cattle, including roundworms resistant to benzimidazole or levamisole.

BI	Matrix C Hi-Mineral	Levamisole Hydrochloride Oxfendazole Selenium Abamectin Cobalt	For the treatment and control of internal parasites in cattle, including those with single or dual resistance to avermectin/milbemycin, benzimidazole or levamisole/morantel families
BI	Oxfen C Plus	Oxfendazole Levamisole hydrochloride Selenium present as sodium selenate	For the treatment and control of roundworms, lungworm, and tapeworm in cattle and sheep, type II Ostertagia in cattle and as an aid in the control of liver fluke in sheep.
BI	Switch C Hi-Mineral	Copper Levamisole hydrochloride Selenium Cobalt Abamectin	For the treatment and control of internal parasites in cattle
BI	Switch Fluke 10	Levamisole hydrochloride Triclabendazole Abamectin	For the treatment and control of roundworms, lungworm and liver fluke in cattle and sheep.

BI	Iver Matrix Mini-Dose Hi-Mineral	Ivermectin Oxfendazole Levamisole hydrochloride	For the treatment and control of internal parasites in cattle and sheep, including those with single or dual resistance to avermectin/milbemycin, benzimidazole or levamisole/morantel families.
BI	Oxfen C	Oxfendazole	For the control of roundworm, lungworm, and tapeworm in cattle and deer, and type II Ostertagia in cattle.
BI	Oxfen C Hi-Mineral	Selenium present as sodium selenate Oxfendazole Copper present as copper disodium edta	For the control of sensitive mature and immature haemonchus, ostertagia, trichostrongylus, nematodirus, cooperia, strongyloides, bunostomum, oesophagostomum, chabertia, trichuris, dictyocaulus and moniezia in cattle and deer, and type II Ostertagia in cattle.
Elanco	Outlaw	Abamectin Levamisole	Pour-on for the treatment and control of internal parasites, including endectocide resistant strains, lungworm and sucking lice in cattle
Elanco	Fasinex 24	Triclabendazole	For the treatment and control of liver fluke in cattle.
Elanco	Bomatak C	Oxfendazole	For the routine drenching of horses for the treatment of roundworms, bloodworms, redworms and pinworms. Also for the treatment and control of mature and immature stages of all major gastrointestinal roundworms, lungworms, and tapeworms in cattle, deer, sheep, and goats.
Elanco	Bomatak C Mineralised	Oxfendazole Ethylenediamine dihydroiodide Copper disodium edta Disodium zinc edta Sodium selenate	For the treatment and control of mature and immature stages of all major gastrointestinal roundworms, lungworms and tapeworms in cattle, deer, sheep and goats.

		Disodium cobalt edta	
Ravensdown	Moximax Pour On (now registered under Polygon (NZ) Ltd on the ACVM Register)	Moxidectin	For the treatment and control of internal and external parasites of cattle (including lactating dairy cattle) and for the treatment and control of lungworm and roundworms of deer
Ravensdown	Combo Low Dose (no longer listed on the ACVM Register)	N/A	N/A
Norbrook	Noromectin Pour-On for Cattle and Deer	Ivermectin	For the treatment and control of ivermectin sensitive strains of internal and external parasites in cattle and deer
Norbrook	Eprizero Pour on	Eprinomectin	For the treatment and control of internal and external parasites of beef and dairy cattle (including lactating cows)
Virbac	Nitromec Injection	Nitroxynil Ivermectin Clorsulon	For the treatment and control of nitroxinil, ivermectin and clorsulon sensitive strains and triclabendazole resistant strains of internal and external parasites of cattle, and early immature (including 2-week old fluke), immature and adult liver fluke
Virbac	Topline	Abamectin	For the treatment and control of abamectin sensitive internal and external parasites of beef and dairy cattle
Virbac	Neoprinil Pour On	Eprinomectin	For the treatment and control of internal and external parasites of beef and dairy cattle (including lactating cows) and internal parasites of deer
Virbac	Flukecare + SE	Triclabendazole Oxfendazole	Combination fluke and roundworm drench for cattle and sheep

		Sodium selenate	
MSD	Panacur 100	Fendendazole	For the management of internal parasites in cattle, sheep, goats, horses and deer

Intramammary antibiotics for lactating cows

Supplier	Product	Active Ingredient	Clinical Indications
Zoetis	Clavulox LC	Potassium clavulanate Prednisolone Amoxicillin present as amoxicillin trihydrate	For use against bacteria commonly associated with bovine mastitis, including B-lactamase resistant bacteria
Zoetis	Mastalone	Prednisolone Neomycin sulphate Oxytetracycline hydrochloride Oleandomycin	For the control of mastitis in lactating cattle
Zoetis	Orbenin LA	Cloxacillin sodium (anhydrous)	Intramammary antibiotic infusion with prolonged action for lactating cows
Jurox	Maxalac LC Intramammary Antibiotic	Cefuroxime sodium	For the treatment of clinical mastitis in lactating cows
Elanco	Ultraclox 24	Cloxacillin	For the treatment of mastitis in lactating cows
MSD	Cobactan LC	Cefquinome sulphate	For the treatment of clinical mastitis in lactating cows caused by Staphylococcus aureus, Streptococcus uberis, Streptococcus dysgalactiae, Escherichia coli and other enterobacteria susceptible to cefquinome

MSD	Mastiplan	Prednisolone Cephapirin sodium	For the treatment of clinical mastitis in lactating cows caused by Staphylococcus aureus, Coagulase negative staphylococci, Streptococcus agalactiae, Streptococcus dysgalactiae, Streptococcus uberis and Escherichia coli sensitive to cephapirin
MSD	Spectrazol Milking Cow	Cefuroxime present as cefuroxime sodium	For the treatment of clinical mastitis in lactating cows
Virbac	Intracillin 1000 Milking Cow	Penicillin g procaine	For the treatment of mastitis caused by Gram-positive organisms in lactating dairy cows
Virbac	Penclox	Cloxacillin Penicillin g procaine	For the treatment of mastitis caused by Gram-positive organisms in lactating dairy cows

Teat sealants

Supplier	Product	Active Ingredient	Clinical Indications
Zoetis	TeatSeal	Bismuth subnitrate	For the prevention of mastitis during the non-lactating (dry) period
Jurox	U-Seal	Bismuth subnitrate	For the prevention of mastitis during the non-lactating (dry) period
Norbrook	Sureseal	Bismuth subnitrate	For the prevention of mastitis during the non-lactating (dry) period
Norbrook	Dryseal	Bismuth subnitrate	For the prevention of mastitis during the non-lactating (dry) period in cows, and also heifers at the end of their first lactation
Norbrook	Duraseal	Bismuth subnitrate	For the prevention of mastitis during the non-lactating (dry) period
BI	Bio-Bloc	Bismuth subnitrate	For the prevention of mastitis during the non-lactating (dry) period
Virbac	Dryzen	Bismuth subnitrate	For the prevention of mastitis in dairy cows during the non-lactating (dry) period and for the prevention of pre-calving mastitis in maiden heifers
MSD	Cepralock	Bismuth subnitrate	For the prevention of mastitis during the non-lactating (dry) period

Non-steroidal anti-inflammatory drugs

Supplier	Products	Active Ingredient	Clinical Indications
Zoetis	Rimadyl Injection	Carprofen	Anti-inflammatory, antipyretic, analgesic for dogs, cats and horses
Zoetis	Rimadyl LA	Carprofen	Long acting anti-inflammatory, antipyretic and analgesic for cattle and horses in combination with antibiotic therapy, as appropriate
Zoetis	Rimadyl Chewable Tablets for Dogs	Carprofen	Long acting anti-inflammatory, antipyretic and analgesic for cattle and horses in combination with antibiotic therapy, as appropriate
Zoetis	Trocoxil Chewable Tablets for Dogs	Mavacoxib	For the treatment of pain and inflammation associated with degenerative joint disease in dogs
Jurox	Reliven 20mg/ml solution for injection	Meloxicam	A non-steroidal, anti-inflammatory, analgesic and antipyretic for use in cattle, sheep, pigs and horses
Jurox	Domoso Roll-On	Dimethyl sulphoxide	For the reduction of acute swelling due to injury in horses and dogs
Jurox	Myoton Phenylbutazone Granules	Phenylbutazone	For the relief of pain and inflammation in arthritic and musculoskeletal conditions in horses
Jurox	Myoton Tablets	Phenylbutazone	For the relief of pain and inflammation in arthritic and musculo-skeletal condition in dogs
BI	Metacam Anti-Inflammatory Oral Suspension for Dogs	Meloxicam	For the alleviation of inflammation and pain in both acute and chronic musculoskeletal disorders
BI	Metacam Anti-Inflammatory	Meloxicam	For the alleviation of inflammation and pain in both acute and chronic musculoskeletal disorders

	Injectable for Dogs and Cats		
BI	Metacam 20mg/ml solution for injection	Meloxicam	A non-steroidal anti-inflammatory, analgesic and antipyretic for use in cattle, sheep, pigs and horses
BI	Metacam 0.5mg/ml oral suspension for dogs	Meloxicam	For the alleviation of inflammation and pain in both acute and chronic musculoskeletal disorders
BI	Metacam 2.5mg chewable tablets for dogs	Meloxicam	Alleviation of inflammation and pain in both acute and chronic musculoskeletal disorders
BI	Metacam 1mg chewable tablets for dogs	Meloxicam	Alleviation of inflammation and pain in both acute and chronic musculoskeletal disorders
BI	Metacam 0.5mg/ml oral suspension for cats and guinea pigs	Meloxicam	Alleviation of inflammation and pain in both acute and chronic musculoskeletal disorders such as discospondylosis, arthropathy and soft tissue injuries.
BI	Metacam 15mg/ml oral suspension for horses	Meloxicam	Alleviation of inflammation and relief of pain in both acute and chronic musculoskeletal disorders
BI	Metacam 40 mg/ml solution for injection	Meloxicam	A non-steroidal anti-inflammatory, analgesic and antipyretic for use in cattle and horses
BI	Previcox	Firocoxib	For the relief of pain and inflammation associated with osteoarthritis as well as specific types of post-operative pain in dogs.
Norbrook	Carprieve Injection	Carprofen	Anti-inflammatory, analgesic, antipyretic for dogs, cats and horses

Norbrook	Carprieve LA Injection	Carprofen	Anti-inflammatory, analgesic and antipyretic for cattle and horses
Norbrook	Carprieve 100mg tablets	Carprofen	For analgesia and reduction of inflammation, for example in degenerative joint disease of the dog
Norbrook	Carprieve 50mg tablets	Carprofen	For analgesia and reduction of inflammation, for example in degenerative joint disease of the dog
Norbrook	Carprieve 20mg tablets	Carprofen	For analgesia and reduction of inflammation, for example in degenerative joint disease of the dog
Norbrook	Norflunix	Flunixin meglumine	A non-steroidal, anti-inflammatory, analgesic and antipyretic, with anti-prostaglandin effects for use in horses, cattle, pigs, and dogs
Norbrook	Loxicom Chewable Tablet	Meloxicam	A non-steroidal anti-inflammatory analgesic – antipyretic for use in dogs
Norbrook	Loxicom 1.5 mg/ml Oral Suspension	Meloxicam	A non-steroidal anti-inflammatory analgesic for use in dogs
Norbrook	Loxicom Injection	Meloxicam	A non-steroidal anti-inflammatory analgesic for use in dogs and cats
Norbrook	Loxicom 0.5mg/ml Oral Suspension	Meloxicam	A non-steroidal anti-inflammatory analgesic for use in cats and dogs
Norbrook	Loxicom LA Injection	Meloxicam	A non-steroidal anti-inflammatory analgesic – antipyretic for use in cattle and pigs
Troy	Ilium Ketoprofen Injection	Ketoprofen	Non-steroidal analgesic and anti-inflammatory agent for horses and cattle
Troy	Ilium Meloxicam 1.5 Anti-inflammatory	Meloxicam	For the alleviation of inflammation and pain in both acute and chronic musculoskeletal disorders

	oral suspension for dogs		
Troy	Ilium Meloxicam 0.5 Anti-inflammatory oral suspension for cats	Meloxicam	For the alleviation of inflammation and pain in both acute and chronic musculoskeletal disorders
Troy	Ilium Meloxicam Anti-Inflammatory Injection for Dogs and Cats	Meloxicam	A non-steroidal anti-inflammatory for use on dogs and cats
Troy	Ilium Meloxicam 30 Anti-Inflammatory Oral Suspension for Horses	Meloxicam	Non-steroidal anti-inflammatory for the alleviation of inflammation and pain in both acute and chronic musculoskeletal disorders in horses
Troy	Nabudone - P	Phenylbutazone	Intravenous, anti-inflammatory and analgesic sterile injection for dogs and horses
Troy	Ilium Tolfejec Anti-inflammatory Injection for Dogs and Cats	Tolfenamic acid	Non-steroidal anti-inflammatory agent for use in dogs and cats
Troy	Ilium Tolfejec Anti-inflammatory for Cattle and Pigs	Tolfenamic acid	A non-steroidal anti-inflammatory analgesic – antipyretic for use in cattle and pigs

Oral horse worming products

Supplier	Product	Active Ingredient	Clinical indications
Zoetis	Equest + Tape	Moxidectin and Praziquantel	For the treatment and control of tapeworm, roundworms, adult and late encysted stages of small strongyles, and bots of horses and ponies
Jurox	Promectin Plus Mini Allwormer Paste for Horses 300-600kg	Praziquantel Ivermectin	For the treatment and control in horses (300kg-600kg) of ivermectin or praziquantel susceptible tapeworms and roundworms (including arterial larval stages of Strongylus vulgaris and benzimidazole resistant small strongyles), bots and skin lesions (summer sores) caused by Habronema and Drashia spp, and microfilariae of Onchocerca spp (cutaneous onchocerciasis).
Jurox	Promectin Plus Mini Allwormer Paste for Foals and Ponies (150kg-300kg)	Praziquantel Ivermectin	For the treatment and control in foals and ponies (150 kg – 300 kg) of ivermectin or praziquantel susceptible tapeworms and roundworms (including arterial larval stages of Strongylus vulgaris and benzimidazole resistant small strongyles), bots and skin lesions (summer sores) caused by Habronema and Draschia* spp, and microfilariae of Onchocerca* spp (cutaneous onchocerciasis)
Jurox	Promectin Plus LV Allwormer Paste for Horses	Praziquantel Ivermectin	For the treatment and control in horses (300 kg – 600 kg) of ivermectin or praziquantel susceptible tapeworms and roundworms (including arterial larval stages of Strongylus vulgaris and benzimidazole resistant small strongyles), bots and skin lesions (summer sores) caused by Habronema and Draschia* spp, and microfilariae of Onchocerca* spp (cutaneous onchocerciasis)
Jurox	Promectin Plus LV Allwormer	Praziquantel Ivermectin	For the treatment and control in foals and ponies (150 kg – 300 kg) of ivermectin or praziquantel susceptible tapeworms and roundworms (including arterial larval stages of Strongylus vulgaris and benzimidazole

	Paste for Foals and Ponies		resistant small strongyles), bots and skin lesions (summer sores) caused by Habronema and Draschia* spp, and microfilariae of Onchocerca* spp (cutaneous onchocerciasis).
Jurox	Promectin Plus Allwormer Paste for Horses	Praziquantel Abamectin	For the treatment of internal parasites including tapeworms, large strongyles, small strongyles, pinworm, hairworm, large-mouthed stomach worm, neck threadworm, bots, lungworm, intestinal threadworm.
Virbac	Equimax LV	Praziquantel Ivermectin	For treatment and control of susceptible tapeworms, roundworms (including arterial larval stages of Strongylus vulgaris and benzimidazole resistant small strongyles), bots, and skin lesions caused by Habronema and Draschia spp. (summer sores).
Virbac	Strategy-T	Oxfendazole and Pyrantel Embonate	For the treatment and control of susceptible strains of all common worms of horses including small strongyles, benzimidazole resistant strains, large strongyles, large roundworms including adult stages of Ivermectin, Moxidectin and Abamectin resistant strains of Parascaris quorum. Also aids in the control of tapeworms
Elanco	Equitak Excel	Abamectin Praziquantel Oxfendazole	For the treatment and control of roundworms, tapeworms, bots and abamectin-resistant Parascaris equorum in horses
Elanco	Equitak Multidose	Abamectin Praziquantel	For the treatment and control of Roundworms, Tapeworms and Bots in Horses
Elanco	Equitak Excel Multidose	Abamectin Praziquantel Oxfendazole	For the treatment and control of all roundworms, tapeworms, bots and abamectinresistant Parascaris equorum in horses

Elanco	Ultramox	Moxidectin Praziquantel Oxfendazole	For the treatment and control of all roundworms, tapeworms and bots and abamectin resistant Parascaris equorum in horses
Elanco	Ultramox Multidose	Moxidectin Praziquantel Oxfendazole	For the treatment and control of all roundworms, tapeworms and bots and abamectin resistant Parascaris equorum in horses
Elanco	Flubenol	Flubendazole	For the treatment of worm infestations in pigs and poultry
BI	Genesis Horse Wormer	Ivermectin Praziquantel	For the treatment and control of roundworms, tapeworms, bots and skin lesion caused by Habronema and Draschia spp. and Onchocerca spp.
BI	Triumph Liquid	Oxibendazole Ivermectin Praziquantel	For the treatment and control of roundworms (including arterial larval stages of Strongylus vulgaris and benzimidazole-resistant small stronglyes), lungworms, tapeworms, bots and skim lesions (summer sores) caused by Habronema spp.
BI	Triumph Paste	Oxibendazole Ivermectin Praziquantel	For the treatment and control of roundworms (including arterial larval stages of Strongylus vulgaris and benzimidazole-resistant small strongyles), lungworms, tapeworms, bots and skin lesions (summer sores) caused by Habronema spp.

Intramammary antibiotics for dry cows

Supplier	Product	Active Ingredient	Clinical Indications
Zoetis	Orbenin Enduro	Cloxacillin benzathine	For the control of mastitis in dairy cows caused by Streptococcus spp, Staphylococcus spp. (including penicillin resistant strains), Corynebacterium spp and other organisms susceptible to cloxacillin

Zoetis	Orbenin Dry Cow	Cloxacillin benzathine	For treatment of Bovine Mastitis caused by organisms sensitive to Cloxacillin during the dry period
Jurox	Juraclox LA 600 Dry Cow	Cloxacillin benzathine	For the treatment of bovine mastitis caused by organisms sensitive to cloxacillin during the dry period.
Elanco	Dryclox DC	Cloxacillin benzathine Ampicillin trihydrate	Active against Gram-positive organisms associated with mastitis. These include Streptococcus agalaciae and other Streptococcus species, and penicillin resistant and sensitive Staphylococci.
Elanco	Dryclox DC AF	Cloxacillin benzathine Ampicillin trihydrate	Effective against Streptococcus uberis and other Streptococcus species, penicillin resistant and sensitive Staphylococci, Corynebacterium species, Escherichia coli and other susceptible gram-negative bacteria.
Elanco	DryClox Xtra	Cloxacillin benzathine Ampicillin	Effective against both Gram-positive and Gram-negative organisms associated with mastitis. These include Streptococcus agalactiae and other Streptococcus species, penicillin resistant and sensitive Staphylococci, Corynebacterium species, Escherichia coli and other susceptible Gramnegative bacteria.
Elanco	Dryclox Xtra AF	Cloxacillin benzathine Ampicillin	Effective against both Streptococcus uberis and other Streptococcus species, penicillin resistant and sensitive Staphylococci, Corynebacterium species, Escherichia coli and other susceptible gram-negative bacteria.
MSD	Bovaclox Dry Cow	Cloxacillin benzathine Ampicillin trihydrate	Routine dry cow therapy is an integral part of mastitis control. In conjunction with teat spraying and proper management of the cow during the drying off period, the careful administration of dry cow therapy reduces new infections at drying off and in the early dry period. Dry cow therapy is also useful in treating subclinical mastitis that may be present at drying off.

MSD	Bovaclox DC Xtra	Cloxacillin benzathine Ampicillin trihydrate	Active against both Gram-positive and Gram-negative organisms associated with mastitis. These include Streptococcus agalactiae and other Streptococcus species, penicillin resistant and sensitive Staphylococci, Corynebacterium species, Escherichia coli and other susceptible Gram-negative bacteria.
MSD	Cefa-Safe	Cephapirin benzathine	Treatment of subclinical mastitis and prevention of mastitis caused by bacteria sensitive to cephapirin in cows at drying off
MSD	Cepravin	Cephalonium	Routine dry cow therapy is an integral part of mastitis control. In conjunction with, proper management of the cow during drying-off and over the dry period, correct administration of Cepravin Dry Cow at drying off: • reduces new infections at drying off and in the dry period • treats subclinical mastitis that may be present at drying off • helps to reduce SCC's and mastitis in the subsequent lactation
Norbrook	Cloxamp DC 500	Cloxacillin benzathine Ampicillin trihydrate	For the prevention of mastitis in cattle caused by Gram positive organisms sensitive to cloxacillin and/or ampicillin.
Norbrook	Cloxamp DC 600	Cloxacillin benzathine Ampicillin trihydrate	For the prevention of mastitis in cattle caused by bacteria sensitive to cloxacillin and/or ampicillin
Norbrook	Duramast 500	Cloxacillin benzathine Ampicillin trihydrate	For the prevention of mastitis in cattle caused by bacteria sensitive to cloxacillin and/or ampicillin

Norbrook	Duramast 600	Cloxacillin benzathine Ampicillin trihydrate	For the prevention of mastitis in cattle caused by bacteria sensitive to cloxacillin and/or ampicillin.
Norbrook	Noroclox DC 600	Cloxacillin benzathine	For the treatment of cows at drying off, to treat existing mastitis caused by, or associated with, organisms sensitive to cloxacillin. To provide prolonged protection against further infections during the dry period
Virbac	Quadrant DC	Cephalonium	Routine dry cow therapy is an integral part of mastitis control. In conjunction with teat spraying and proper management of the cow during the drying off period, the careful administration of Quadrant™ DC at drying off: • Reduces new infections at drying off and in the dry period • Treats subclinical mastitis that may be present at drying off • And helps reduce SCCs and mastitis in the subsequent lactation

Sheep anthelmintics

Supplier	Product	Active Ingredient	Clinical indications
Zoetis	Cydectin Oral Drench for Sheep	Moxidectin	For the treatment of gastrointestinal and pulmonary nematodes and itchmite of sheep
Zoetis	Cydectin Long Acting Injection for Sheep	Moxidectin	For the treatment and control of internal parasites, nasal bot and itch mite in sheep

Zoetis	Startect	Abamectin Derquantel	For the treatment and control of a broad range of susceptible adult and immature (L4) gastrointestinal nematodes of sheep, including those resistant to macrocyclic lactones (ML), levamisole/morantel (clear), benzimidazoles (white) and closantel based drenches, and combinations of these. For the treatment and control of lungworm, nasal bot and itch mite.
Zoetis	Eweguard	Moxidectin	6 in 1 vaccine and wormer for adult sheep
Zoetis	Eweguard Plus Selenium	Moxidectin	6 in 1 vaccine and wormer for adult sheep with selenium
Zoetis	Eweguard Plus Se B12	Moxidectin	6 in 1 vaccine and wormer for adult sheep with selenium and vitamin B12
Jurox	Paramectin injection	Abamectin	For the treatment and control of internal and external parasites of cattle and internal parasites of sheep
Jurox	Pentamox Mineralised Oral Drench for Sheep	Moxidectin	For the treatment of susceptible gastrointestinal and pulmonary nematodes and itchmite of sheep
Jurox	Q-Drench Multi-Combination Drench for Sheep	Albendazole Abamectin Levamisole hydrochloride Closantel	For the treatment and control in sheep of susceptible gastrointestinal roundworms (including strains with single or dual resistance to macrocyclic lactones, benzimidazoles, levamisole or closantel, and strains of Haemonchus contortus with emerging resistance to closantel). It is also effective against lungworm, tapeworms, mature and late immature liver fluke, nasal bot and itch mite.
Jurox	Q-Drench Mineralised Multi-	Albendazole Abamectin	For the treatment and control in sheep of susceptible gastrointestinal roundworms (including strains with single or dual resistance to macrocyclic lactones, benzimidazoles, levamisole or closantel, and strains of

	Combination Drench for Sheep	Levamisole hydrochloride Closantel	Haemonchus contortus with emerging resistance to closantel). It is also effective against lungworm, tapeworms, mature and late immature liver fluke, nasal bot and itch mite.
Jurox	Strategik Combo Dual Action Mineralised Sheep & Lamb Drench	Albendazole Levamisole hydrochloride	For the treatment and control in sheep and lambs of benzimidazole or levamisole resistant roundworms. Also controls lungworms, tapeworms and adult liver fluke. Reduces the output of worm and fluke eggs.
Jurox	Strategik Mineralised Sheep & Lamb Broad Spectrum Worm Drench	Albenzadole	For the treatment and control in sheep and lambs of susceptible mature and immature gastrointestinal roundworms, large lungworms and tapeworms; to aid in the control of adult liver fluke and to reduce the output of viable worm and fluke eggs
Jurox	Strategik Sheep & Lamb Board Spectrum Worm Drench	Albenzadole	For the treatment and control in sheep and lambs of susceptible mature and immature gastrointestinal roundworms, large lungworms and tapeworms; to aid in the control of adult liver fluke; and to reduce the output of viable worm and fluke eggs
Jurox	Strategik Combo plus Tape Mineralised Combination	Albenzadole Levamisole hydrochloride Praziquantel	For the treatment and control in sheep and lambs of benzimidazole or levamisole resistant roundworms, tapeworms, lungworms and adult fluke.

	Drench for Sheep		
Jurox	Troika Combination Drench for Sheep	Albenzadole Levamisole hydrochloride Abamectin	For the treatment and control in sheep of susceptible gastrointestinal roundworms (including strains with single or dual resistance to macrocyclic lactones, benzimidazoles, levamisole or closantel, and strains of Haemonchus contortus with emerging resistance to closantel). It is also effective against lungworm, tapeworms, adult liver fluke, nasal bot and itch mite
Jurox	Troika Mineralised Combination Drench for Sheep	Albenzadole Levamisole hydrochloride Abamectin	For the treatment and control in sheep of susceptible gastrointestinal roundworms (including strains with single or dual resistance to macrocyclic lactones, benzimidazoles, levamisole or closantel, and strains of Haemonchus contortus with emerging resistance to closantel). It is also effective against lungworm, tapeworms, adult liver fluke, nasal bot and itch mite.
Jurox	Abamectin Sheep (previously supplied to Ravensdown, no longer listed on the ACVM Register)	N/A	N/A
Jurox	Combo Sheep (previously supplied to Ravensdown, no longer	N/A	N/A

	listed on the ACVM Register)		
Jurox	Trio Sheep (previously supplied to Ravensdown, no longer listed on the ACVM Register)	N/A	N/A
BI	Arrest	Levamisole hydrochloride Albendazole	For the control of levamisole or benzimidazole resistant roundworms. Also for the control of tapeworms, lungworms and adult fluke in sheep.
BI	Arrest Hi Mineral	Levamisole Albendazole	For the control of roundworms, tapeworm, lungworm, and adult liver fluke in sheep, including roundworms resistant to benzimidazoles or levamisole
BI	Exodus SE	Moxidectin	Oral drench for the control and treatment of internal parasites and itch mite in sheep
BI	Exodus LA Injection	Moxidectin	For the treatment and control of internal parasites, nasal bot and itch mite in sheep
BI	First Drench Hi-Mineral	Albendazole Levamisole hydrochloride Praziquantel	For the control of levamisole- or benzimidazole-resistant roundworms, tapeworm, lungworm and adult fluke in lambs and sheep.

BI	Genesis Hi Mineral	Abamectin	Oral drench for the control and treatment of roundworms in sheep
BI	Genesis Tape Hi Mineral	Abamectin Praziquantel	Oral drench for the control & treatment of roundworms and tapeworm in lambs.
BI	Genesis Ultra Oral	Abamectin Closantel	For the treatment and control of internal parasites in sheep, including liver fluke and persistent activity of 42 days against Haemonchus contortus
BI	Genesis Ultra Hi-Mineral	Abamectin Closantel	Mineralised oral drench for the control and treatment of internal parasites, including persistent activity against Haemonchus contortus, and liver fluke in sheep
BI	Iver Matrix Tape Hi-Mineral	Ofendazole Ivermectin Praziquantel Levamisole hydrochloride	For the treatment and control of tapeworm and internal parasites in sheep, including those with single or dual resistance to avermectin/milbemy
BI	Iver Matrix Tape Hi-Mineral Oral Drench	Levamisole hydrochloride Praziquantel Oxfendazole Ivermectin	For the treatment and control of tapeworm and internal parasites in sheep, including those with single or dual resistance to avermectin/milbemycin, benzimidazole or levamisole/morantel families
BI	Iver Switch Tape Hi-Mineral	Ivermectin Praziquantel	For the treatment and control of tapeworm and internal parasites in sheep, including those with single resistance to avermectin/milbemycin, benzimidazole or levamisole/morantel families

		Levamisole hydrochloride	
BI	Matrix Hi-Mineral Oral Drench for Sheep	Oxfensazole Levamisole hydrochloride Abamectin	For the treatment and control of internal parasites in sheep, including those with single or dual resistance to avermectin/milbemycin, benzimidazole or levamisole/morantel families
BI	Matrix Tape Hi-Mineral	Praziqantel Oxfendazole Abamectin Levamisole hydrochloride	For the treatment and control of tapeworm and internal parasites in sheep, including those with single or dual resistance to avermectin/milbemycin, benzimidazole or levamisole/morantel families.
BI	Matrix Oral Drench for Sheep	Oxfendazole Abamectin Levamisole hydrochloride	For the treatment and control of internal parasites in sheep, including those with single or dual resistance to avermectin/milbemycin, benzimidazole or levamisole/morantel families
BI	Polerize	Abamectin Albendazole Closantel sodium	For the treatment and control of mature and immature gastrointestinal roundworms in sheep including those with single or dual resistance to macrocyclic lactones, benzimidazoles or closantel. It also provides persistent activity of 42 days against Barber's pole worms (Haemonchus contortus) and is effective against lungworm, tapeworm, and liver fluke in sheep
BI	Switch Oral Drench	Levamisole hydrochloride Abamectin	For the treatment and control of internal parasites in sheep, including those with resistance to either avermectin/milbemycin, benzimidazole or levamisole/morantel families

BI	Switch Hi-Mineral	Levamisole hydrochloride Abamectin	For the treatment and control of internal parasites in sheep
BI	Trimox Hi-Mineral	Moxidectin Albendazole Levamisole hydrochloride	For the treatment and control of internal parasites in sheep, including those with single or dual resistance to avermectin/milbemycin, benzimidazole or levamisole/morantel families, and itch mite
BI	Adtape	Praziquantel	For the treatment and control of tapeworms heads and segments in sheep and horses and as an aid in the control of sheep measles
BI	Bionic Hi Mineral Combination Sheep Capsules	Abamectin Albendazole Disodium cobalt edta Selenium edta	For the treatment and 100 day control of internal parasites
BI	Bionic Hi Mineral Combination Lamb Capsules	Abamectin Albendazole Disodium cobalt edta Selenium edta	For the treatment and 100 day control of internal parasites
BI	Bionic-X	Abamectin Albendazole	For the treatment and 100 day control of internal parasites

		Disodium cobalt edta Selenium edta Levamisole hydrochloride	
BI	Bionic Prime	Selenium Levanisole hydrochloride Disodium cobalt edta Abamectin Albendazole	For the treatment and 100 day control of internal parasites
BI	Extender Jnr	Albendazole	For continuous protection against gastrointestinal parasites.
BI	Extender SE	Albendazole Sodium selenate	For continuous protection against gastrointestinal parasites.
BI	Extender SECO	Albendazole Cobalt sulphate heptahydrate Sodium selenate	For 100 day protection against gastrointestinal parasites.

BI	Extender Jnr SECO	Albendazole Cobalt sulphate heptahydrate Sodium selenate	For 100 day protection against gastrointestinal parasites
Elanco	Zolvix	Monepantel	For the treatment and control of AAD-sensitive strains of gastro-intestinal roundworms (nematodes), including macrocyclic lactone (ML), benzimidazole (white), levamisole and morantel (clear) and salicylanilide (e.g. closantel)-resistant strains in sheep.
MSD	Alliance	Levamisole hydrochloride Oxfendazole Abamectin	For the management of internal parasites in sheep & cattle
MSD	Converge	Levamisole hydrochloride Abamectin	For the management of internal parasites in sheep & cattle
MSD	Scanda	Levamisole hydrochloride Oxfendazole	For the management of internal parasites in sheep & cattle
MSD	Scanda Selenised	Levamisole hydrochloride Oxfendazole	For the management of internal parasites in sheep & cattle

Virbac	Triple A	Levamisole hydrochloride Abamectin Oxfendazole	For the treatment and control of internal parasites in sheep and cattle
Virbac	Triple A Plus	Levamisole hydrochloride Oxfendazole Abamectin Praziquantel	For the treatment and control of tapeworm and internal parasites in sheep

ANNEXURE F – FULL PRODUCT LISTS

There are a number of markets in which either Zoetis or Jurox, but not both, supply products in New Zealand. This section lists all products sold by Zoetis and Jurox in New Zealand, including details of the manufacturer and place of manufacture.

Zoetis

ACVM No.	Tradename	1O Manufacturer	2O Manufacturer
10022593	ALPHATRAK 2 TEST STRIPS 50 CT 1	Abbott Diabetes Care, Alanieda, CA	
10014536	ALPHATRAK CONTROL SOLUTION 1 US	Abbott Diabetes Care, Alanieda, CA	
10014538	ALPHATRAK LANCETS 100 CT_1	Abbott Diabetes Care, Alanieda, CA	
10014556	ALPHATRAK LANCING DEVICEX1	Abbott Diabetes Care, Alanieda, CA	
10022594	ALPHATRAK STARTER KIT INT M/MOL	Abbott Diabetes Care, Alanieda, CA	
A008150	ANTIROBE Antibiotic Capsules 150mg	Fareva Amboise, France	
A006895	ANTIROBE Antibiotic Capsules 25mg	Fareva Amboise, France	
A006894	ANTIROBE Antibiotic Capsules 75mg	Fareva Amboise, France	
A006893	ANTIROBE Aquadrops	Zoetis, Kalamazoo, USA	
A006178	ANTISEDAN	Orion, Espoo, Finland	
A010963	APOQUEL	Pfizer Italia (Ascoli, Italy	
A008026	ARVAC	Zoetis, Charles City, USA	
A007933	AUROFAC 200G	None	None
A010829	AVATEC / BOVATEC Technical	Zoetis, Willow Island, USA	
A009931	BOPRIVA	Zoetis, LLN, Belgium	
A006956	BOVATEC 20 Liquid	Zoetis, Willow Island, USA	
A009679	BOVATEC 20CC	Zoetis, Salisbury, Maryland	Zoetis, Willow Island, USA
A011406	BOVISEAL	Cross Vetpharm (Bimeda), Ireland	
A009667	CANVAC CCi Vaccine	Zoetis, Parkville, Australia	
A011175	Cefaclear	Crosspharm (Bimeda), Ireland	
A009845	CERENIA Injectable Solution for Dogs	Transferring to Zoetis, Olot, SPAIN	Inovat, Guarulhos, BRAZIL Fareva Amboise, FRANCE
A009844	CERENIA Tablets for Dogs	Zoetis, Lincoln, USA	
10002459	CIDR IUD 0.33GMX20BGX1 EN NZ	DEC, New Zealand (Zoetis)	

A004559	CIDR Cattle Insert	DEC, New Zealand	
A005945	CLAVULOX LC	Haupt Latina, ITALY	
A004925	CLAVULOX Palatable Drops	Aurobindo, India	Norbrook, Newry, Ireland
A008140	CLAVULOX Palatable Tablets Broad Spectrum Antibiotic 250mg	Haupt Latina, ITALY	
A008141	CLAVULOX Palatable Tablets Broad Spectrum Antibiotic 500mg	Haupt Latina, ITALY	
A008139	CLAVULOX Palatable Tablets Broad Spectrum Antibiotic 50mg	Haupt Latina, ITALY	
A005722	CLAVULOX Ready to USAe Injection	Haupt Latina, ITALY	
A010032	CONVENIA	Zoetis, Kalamazoo, USA	
A001557	CYCOSTAT 66 Coccidiostat	Zoetis, Medolla, Italy	Zoetis, Yantai, China
A005979	CYDECTIN Injection	Zoetis, Olot, Spain	
A009926	CYDECTIN Long Acting Injection for Sheep	Viirbac, Penrith, Australia	Zoetis, Olot, Spain
A006204	CYDECTIN Oral Drench for Sheep	Argenta, New Zealand	Olot, Spain
A010651	Cydectin PlUSA Fluke Pour On	Zoetis, Olot, Spain	
A008036	CYDECTIN PlUSA Tape	Argenta, New Zealand	
A006203	CYDECTIN Pour-On	Argenta, New Zealand	
A007388	CYDECTIN S	Argenta, New Zealand	
A005035	CYGRO	Puyang Pharmaceuticals, China	
A007472	CYLAP RCD Vaccine	Zoetis, Olot, Spain	
A011348	CYTOPOINT 10 mg/mL	Zoetis, LLN, Belgium	
A011443	CYTOPOINT 20 mg/mL	Zoetis, LLN, Belgium	
A011444	CYTOPOINT 30 mg/mL	Zoetis, LLN, Belgium	
A011445	CYTOPOINT 40 mg/mL	Zoetis, LLN, Belgium	
A011012	DECCOX 6% Medicated Premix	Zoetis, Chicago Heights, USA	
A006199	DECTOMAX	Zoetis, Kalamazoo, USA	
A007101	DECTOMAX Pour-On Endectocide	Laboratorios Pfizer Brazil	
A000473	DEPO MEDROL	Pfizer Kalamazoo, USA	
A010396	DEXDOMITOR	Orion, Espoo, Finland	

10006079	DIROCHEK 144 WELLS	Synbiotics, San Diego	
A006177	DOMITOR	Orion, Espoo, Finland	
A005562	DORMOSEDAN	Orion, Espoo, Finland	
A010534	DORMOSEDAN Gel	Orion, Turku, Finland	
A010814	DRAXXIN Injectable Antibiotic Solution	Zoetis, Olot, SPAIN	Inovat, Guarulhos, BRAZIL
10006082	D-TEC CB 25 TEST KIT	Synbiotics, San Diego	
A007981	DUVAXYN R	Zoetis, Charles City, USA	
A009566	Eazi-Breed CIDR 1900 Insert	DEC, New Zealand	
A005439	Eazi-Breed CIDR Sheep & Goat Insert	DEC, New Zealand	
A009085	EQUEST PIUSA Tape	Zoetis, Olot, Spain	
A008138	EQUITY OestrUSA Control Vaccine for Horses	Zoetis, Parkville, Australia	
A006587	EQUIVAC 2in1	Zoetis, Parkville, Australia	
A006833	EQUIVAC EST	Zoetis, Parkville, Australia	
A011122	EQUIVAC HeV Hendra VirUSA Vaccine for Horses	Zoetis, Parkville, Australia	
A009925	EQUIVAC Innovator EHV-1/4	Zoetis, Charles City, USA	
A003352	EQUIVAC S	Zoetis, Parkville, Australia	
A003692	EQUIVAC T	Zoetis, Parkville, Australia	
A003691	EQUIVAC TAT	Zoetis, Parkville, Australia	
A003584	ERYVAC	Zoetis, Parkville, Australia	
A007302	EWEGUARD	Viirbac, Penrith, Australia	
A009659	EWEGUARD PIUSA Se B12	Viirbac, Penrith, Australia	
A009122	EWEGUARD PIUSA Selenium	Viirbac, Penrith, Australia	
A010150	EXCEDE LA Sterile SUSApension	Zoetis, Kalamazoo, USA	
A006812	EXCENEL	Zoetis, Kalamazoo, USA	
A011314	EXCENEL Flow	Zoetis, Kalamazoo, USA	
A010599	FELOCELL 2	Zoetis, Lincoln, USA	
A003874	FELOCELL 3	Zoetis, Lincoln, USA	

A005694	FELOCELL 4	Zoetis, Lincoln, USA	
A009238	FEL-O-VAX FIV Vaccine (Inactivated)	Elanco, Iowa, USA, USA	
A009282	FLUVAC Innovator 4	Zoetis, Charles City, USA	
A011459	FOSTERA PCV MH	Zoetis, Charles City, USA	
A004780	GLANVAC 6	Zoetis, Parkville, Australia	
A007996	GUDAIR Vaccine	CZV Spain	
A007723	IMPROVAC Boar Taint Vaccine for Male Pigs	Zoetis, LLN, Belgium	
A011413	IMPROVAC FORTE	Zoetis, LLN, Belgium	
40003669	LASALOCID SODIUM	Zoetis, Willow Island, USA	
A006462	LEPTO-ERYVAC	Zoetis, Parkville, Australia	
A006526	LEPTOGUARD	Zoetis, Lincoln, USA	
A003734	LEPTOSHIELD	Zoetis, Parkville, Australia	
A007426	LEPTOSHIELD 3	Zoetis, Parkville, Australia	
A011056	LEUKOCELL PlUSA	Zoetis, LLN, Belgium	
A011147	LIFEGUARD 5in1	Zoetis, Parkville, Australia	
A011146	LIFEGUARD 5in1 with Selenium	Zoetis, Parkville, Australia	
A002098	LINCO-SPECTIN Soluble Powder	Zoetis, Suzhou, China	
A003231	LUTALYSE	Zoetis, LLN, Belgium	
A000829	MASTALONE	Jurox, Australia, Australia	
A001350	NEOMIX Concentrate	Zoetis, Shenzhou, China	
A000888	ORBENIN Dry Cow	Haupt Latina, ITALY	
A006036	ORBENIN Enduro	Haupt Latina, ITALY	
A004751	ORBENIN Eye Ointment	Haupt Latina, ITALY	
A003664	ORBENIN LA	Haupt Latina, ITALY	
A010834	PALLADIA	Pfizer Italia (Ascoli, Italy	
A007902	PINNACLE IN StreptococcUSA Equi Vaccine	Zoetis, Charles City, USA	
A003911	PNEUMABORT-K + 1b	Zoetis, Charles City, USA	

A005781	PORCINE Parvac	Zoetis, Parkville, Australia	
A009288	POULVAC Pabac IV Vaccine (Inactivated)	Zoetis, Charles City, USA	
A007928	PROTECH Bronchi-Shield I	Zoetis, Charles City, USA	
A007929	PROTECH Bronchi-Shield III	Elanco, Iowa, USA, USA	
A010061	RELSURE PCV	Zoetis, Charles City, USA	
A006665	RESPISURE	Zoetis, Lincoln, USA	
A008250	RESPISURE One	Zoetis, Lincoln, USA	
A007816	REVOLUTION for Cats	Zoetis, Kalamazoo, USA	
A007817	REVOLUTION for Dogs	Zoetis, Kalamazoo, USA	
A007813	REVOLUTION for Puppies & Kittens	Zoetis, Kalamazoo, USA	
A011536	REVOLUTION PIUSA	Zoetis, Kalamazoo, USA	
A008023	RIMADYL Chewable Tablets for Dogs	Zoetis, Lincoln, USA	
A007086	RIMADYL Injection	Inovat, Guarulhos, BRAZIL	
A009897	RIMADYL LA	Belapharm, Germany	
A003731	SCABIGARD	Zoetis, Parkville, Australia	
A010057	SCOURGUARD 4(K)	Zoetis, Lincoln, USA	
10016384	SERELISA BVDV ERNS AG CAP 5 PLT	Synbiotics, San Diego	
10011151	SERELISA PARATB AB MONO IND 5 PLT	Synbiotics, San Diego	
A009639	SILIRUM	CZV Spain	
A011219	SIMPARICA	Zoetis, Lincoln, USA	
A010299	SIMPLICEF	Sandoz, Australia	
10007788	SRLSA BHV-1 GB AB MONO BLKG MDEVX1BXX1	Delpharm, Lyon (Zoetis)	
10006288	SRLSA BLV AB MONO BLKG MDEVX384BXX1 Z1	Delpharm, Lyon (Zoetis)	
10006294	SRLSA BVD P80 AB MONO BLKG MDEVX384BXX1	Delpharm, Lyon (Zoetis)	
10022977	STABLELAB EQ1 HANDHELD READER	Epona Biotech Ltd	
10022979	STABLELAB LAB VERSION KIT	Epona Biotech Ltd	
10022976	STABLELAB SAA TEST: 25 PACK POUCH	Epona Biotech Ltd	

A010353	STARTECT	Argenta, New Zealand	
A007294	TEATSEAL	Crosspharm (Bimeda), Ireland	
A001862	TERRAMYCIN Pinkeye Powder	Jurox, Australia, Australia	
10006102	TITERCHEK CDV/CPV 32 TEST KIT	Synbiotics, San Diego	
A007730	TORBUGESIC	Zoetis, Olot, SPAIN	
A010459	TROCOXIL Chewable Tablets for Dogs	Pfizer Italia (Ascoli), Italy	
A003585	ULTRAVAC 5 in 1	Zoetis, Parkville, Australia	
A006926	ULTRAVAC 5 in 1 with Selenium	Zoetis, Parkville, Australia	
A011607	ULTRAVAC 5+1 B12	Zoetis, Parkville, Australia	
A011606	ULTRAVAC 5+1 Se B12	Zoetis, Parkville, Australia	
A006935	ULTRAVAC 7 in 1	Zoetis, Parkville, Australia	
A010730	ULTRAVAC BVD	Zoetis, Parkville, Australia	
A010191	ULTRAVAC SD 6 in 1	Zoetis, Parkville, Australia	
A004473	VANGUARD 5	Zoetis, Lincoln, USA	
A011428	VANGUARD CC 3 Intranasal	Zoetis, Charles City, USA	Zoetis, Lincoln, USA
A011463	VANGUARD CC B Oral	Zoetis, Charles City, USA	Zoetis, Lincoln, USA
A007448	VANGUARD PIUSA 5	Zoetis, Lincoln, USA	
A006077	VIBRAVET 100 Paste for Cats & Dogs	Jurox, Australia	
A006928	VIBRAVET 100 Tablets for Large Dogs	Not manufactured	
A006078	VIBRAVET 50 Tablets for Cats & Dogs	Not manufactured	
10006106	VIRACHEK CV 96 TEST KIT	Synbiotics, San Diego	
10023831	VS IMAGYST FECAL GIARDIA KIT (40 TESTS)	Apacor	
10023835	VS IMAGYST FECAL PARASITE KIT (40 TESTS)	Apacor	
10015428	Witness Bovi-D 5 (Calf Scours)	Bionote Inc (ZOETIS)	
10012040	Witness Canine Leptospira Antibody Test kit	Delpharm, Lyon (Zoetis)	
10010959	WITNESS FELV-FIV 10 TESTS SD	Synbiotics, San Diego	
10012140	WITNESS LH 6 TESTS US	Synbiotics, San Diego	

10012674	Witness Parvo	Synbiotics, San Diego	
10009407	WITNS GIARDIA T KIT MDEVX5BXX1 Z1	Operon S.A. (Zoetis)	
10010958	WITNS RELAXIN MDEVX5BXX1 EN	Synbiotics, San Diego	
10009062	WITNS FIV MDEVX10BXX1 Z1	Delpharm, Lyon (Zoetis)	

Jurox

Product	Manufacturer, Place of Manufacture
Anesthetics/Tranquilisers	
Alfaxan CD RTU DOG & CAT 10ML	Jurox Australia, Australia
Alfaxan CD RTU DOG & CAT 20ML	Jurox Australia, Australia
ALFAXAN MULTIDOSE 20ML NZ	Jurox Australia, Australia
MEDETATE INJ. 10ML ANZ	Jurox Australia, Australia
BUTORDYNE INJ. 10ML ANZ	Jurox Australia, Australia
ANTIPAM INJ. 10ML ANZ	Jurox Australia, Australia
THIOBARB 5G NZ	Jurox Australia, Australia
VALABARB EUTHANASIA 250ML NZ	Jurox Australia, Australia
BUPRELIEVE INJECTION 10ml (NZ)	Jurox Australia, Australia
BUPREDYNE INJECTION 10ml (NZ)	Jurox Australia, Australia
Anti Inflamatories	
Domoso Roll On NZ 100g	Jurox Australia, Australia
Antibiotics - Eye & Ear	
Tricin Ear & Eye Ointment .4G ANZ	Jurox Australia, Australia
Antibiotics - Eye & Ear	Jurox Australia, Australia
Antibiotics – Oral	
JX - Juraclav 50mg 100's ANZ	Jurox Australia, Australia
JX - Juraclav 250mg 250's ANZ	Jurox Australia, Australia
JX - Juraclav 500mg100's ANZ	Jurox Australia, Australia
Cardiorespiratory	
VetAce 2.5mg	Jurox Australia, Australia
VetAce 5.0mg	Jurox Australia, Australia
VetAce 20mg	Jurox Australia, Australia
Frudix Tablets 40mg x 1000	Jurox Australia, Australia
Frudix Tablets 40mg x 100	Jurox Australia, Australia
Dermatological	
Prednil Tablets 1000's	Jurox Australia, Australia
Emetics	
Apomorphine 20's	Jurox Australia, Australia
Parasitides – External	
LICE N SIMPLE 6 X 100ML NZ	Jurox Australia, Australia
Parasitides – Internal	
Promectin Plus Horse Paste	Jurox Australia, Australia
PROMECTIN PLUS 32.4G x 60 ANZ BUCKET	Jurox Australia, Australia
PROMECTIN PLUS MINI PONY ALLWORMER 20's	Jurox Australia, Australia

PROMECTIN PLUS MINI HORSE ALLWORMER 20's	Jurox Australia, Australia
PROMECTIN PLUS LV HORSE ANZ	Jurox Australia, Australia
PROMECTIN PLUS LV FOAL & PONY ANZ	Jurox Australia, Australia
POPANTEL F NZ 10 KG X 8 BLI X 10 TABS	Jurox Australia, Australia
POPANTEL F NZ 35 KG X 7 BLI X 6 TABS	Jurox Australia, Australia
Sex Hormones	
Domperidone Paste 5g X 30's ANZ	Jurox Australia, Australia
Antibiotics – Injectables	
Moxylan RTU 100ml Inj	Jurox Australia, Australia
Antibiotics – Intramammary	
Juraclox PA600 DC 200's	Jurox Australia, Australia
MAXALAC LC 20'S	Jurox Australia, Australia
U-SEAL SYRINGES 200'S NZ	Jurox Australia, Australia
Anti Inflammatories	
RELIVEN 20MG/ML INJ 100ML NZ	Jurox Australia, Australia
Nutrition/Metabolism	
Vytrate Liquid 1 Ltr ANZ	Jurox Australia, Australia
Vytrate Liquid 5Ltr ANZ	Jurox Australia, Australia
VYTRATE LIQUID 20LTR ANZ	Jurox Australia, Australia
Vytrate Std (12 Sachets) ANZ	Jurox Australia, Australia
Parasitides – External	
Pouracide NF 5L (NZ Only)	Jurox Australia, Australia
Vitamins Injectables	
COBALEX 2000 B12 PLAIN 500ML PP	Jurox Australia, Australia
COBALEX 2000 B12 + SE NZ 500ML PP	Jurox Australia, Australia
Rural Manufacture	
PARAMECTIN INJ 500ML NZ P/PACK	Jurox Australia, Australia
Paramectin Pour On 15L NZ	Jurox Australia, Australia
Paramectin Pour On 5L	Jurox Australia, Australia
Q-DRENCH 10LTR NZ	Jurox Australia, Australia
Q-DRENCH 1L NZ	Jurox Australia, Australia
STRATEGIK COMBO DRENCH NZ 20LT	Jurox Australia, Australia
STRATEGIK FIRST COMBO TAPE 10L	Jurox Australia, Australia
STRIKEFORCE 15L	Jurox Australia, Australia
STRIKEFORCE 5L	Jurox Australia, Australia
TROIKA 20L	Jurox Australia, Australia
PENTAMOX 10L	Jurox Australia, Australia

CONFIDENTIAL ANNEXURE G: JUROX SALES, CUSTOMERS, SUPPLIERS

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ANNEXURE H – SUMMARY OF MARKET DEFINITIONS ADOPTED BY THE NEW ZEALAND COMMERCE COMMISSION AND OVERSEAS AGENCIES

Geographic dimension

1. The Commerce Commission (**NZCC**) has previously applied a national geographic dimension when considering veterinary pharmaceutical markets. For example, in *Boehringer Ingelheim / Sanofi* (2016), the Commission concluded that the merger parties supply their products nationally so the geographic dimension of all the relevant markets should be national.[1] More recently in *Elanco/Bayer* (2020), the Commission identified national markets for the manufacture/importation and wholesale supply of the relevant products, noting that all of the relevant animal healthcare products were distributed nationwide, and competitive conditions at the wholesale level did not seem to differ by region.

2. The Australian Competition and Consumer Commission (**ACCC**) has consistently identified the geographic dimension of veterinary pharmaceutical markets to be national in scope. In *Pfizer / Wyeth* (2009), the ACCC's finding that the geographic dimension of the markets in question were national was made on the basis that the products within the markets are supplied from a single manufacturing location, and participants compete to market and supply products nationally. More recently, in *Elanco / Bayer* (2020), the ACCC also identified national markets.[2]

3. The European Commission has similarly identified the geographic dimension for veterinary pharmaceutical markets as being national in scope. For example, the European Commission reasoned that:

    - products on these markets remain subject to national and mutual recognition registration systems, causing products to be sold according to indications and uses prescribed by national registration and approval requirements;[3]
    - competitive landscapes vary from one Member State to another, while pricing strategies of pharmaceutical companies also seem to be national;[4] and
    - national legislation determines the selling conditions of the products, while competitive landscapes in EEA countries differ in terms of market penetration, shares, price, distribution systems, and local veterinarian preferences.[5]

[1] NZCC, Determination, Boehringer Ingelheim International GmbH and Sanofi S.A. [2016] NZCC 18 (13 September 2016), available at: https://comcom.govt.nz/__data/assets/pdf_file/0033/76956/2016-NZCC-18-Boehringer-Ingelheim-International-and-Sanofi-clearance-determination-13-September-2016.PDF
[2] Public competition assessment found here: https://www.accc.gov.au/public-registers/mergers-registers/public-informal-merger-reviews/elanco-animal-health-incorporated-bayer-aktiengesellschaft%E2%80%99s-animal-health-business.
[3] In the EU: Boehringer Ingelheim / Sanofi (2016); Eli Lilly / Novartis (2014); Pfizer / Wyeth (2009); Schering-Plough / Organon Biosciences (2007)
[4] In the EU: Boehringer Ingelheim / Sanofi (2016); Pfizer / Wyeth (2009); Schering-Plough / Organon Biosciences (2007)
[5] In the EU: see for example, Boehringer Ingelheim / Sanofi (2016); Eli Lilly / Novartis (2014); Pfizer / Wyeth (2009); Schering-Plough / Organon Biosciences (2007)

4. The United States Federal Trade Commission has identified a national geographic dimension in its decisions relating to veterinary pharmaceutical markets, including in *Elanco / Bayer* (2020) and *Pfizer / Wyeth* (2009).

Product dimension

5. Defining the relevant product markets in veterinary pharmaceuticals is a complex issue because substitutability between different products may vary between different clinical situations and between consumers (veterinarians, pet owners, farmers, advised by veterinary surgeons). That being the case, it is difficult to draw generalisations. Substitution and competitive interaction occur to an appreciable degree across the boundaries of categories.

6. A table summarising how the product dimension of veterinary pharmaceutical markets to the affected markets of this application have been considered by the NZCC and overseas regulators including the ACCC, European Commission, Federal Trade Commission, and Canadian Competition Bureau is set out below.

7. In summary, the approach taken by the NZCC and competition authorities overseas to defining product markets has been on the basis of a number of variables, including:

    - substance;
    - class of animals (e.g. production or companion animals) or animal species;
    - target pathology/scope of effectiveness;
    - method of administration
    - duration of efficacy; and
    - duration of withdrawal periods.

Category of product relevant to affected markets	Product market dimensions adopted and associated commentary
Anaesthesia	**New Zealand Commerce Commission** In *BI / Sanofi* (2016),[6] the NZCC did not consider anaesthetics for horses further because the merging parties' respective products are prescribed for different therapeutic indications. Boehringer Ingelheim's anaesthetic is a sedative while Merial's products are general anaesthetics. On this basis the Commission considered the overlap between the merging parties' products to be limited. **European Commission** The Commission in *Pfizer / Wyeth* (2009)[7] and *Schering-Plough/Organon Biosciences* (2007)[8] recognised the following separate anaesthetic markets: a) general anaesthetic inhalants; b) general anaesthetics injectables; c) local anaesthetics; and d) sedatives and pre-anaesthetics. Injectables and inhalants for general anaesthetics may belong in the same market In *Schering-Plough/Organon Biosciences* (2007), the Commission left open the question as to whether inhalation and injectable anaesthetics belonged in separate markets. The parties submitted that general anaesthetic inhalants and injectables belong in a single product market. They submitted that inhalation anaesthetics tend to be used for longer operations and for larger animals such as ruminants or horses and require specialised equipment for administration. Injectable anaesthetics tend to be used for (i) the induction of unconsciousness and (ii) brief surgery on small animals such as companion animals (cats and

[6] NZCC, Determination, Boehringer Ingelheim International GmbH and Sanofi S.A. [2016] NZCC 18 (13 September 2016), available at: https://comcom.govt.nz/__data/assets/pdf_file/0033/76956/2016-NZCC-18-Boehringer-Ingelheim-International-and-Sanofi-clearance-determination-13-September-2016.PDF

[7] European Commission, Case COMP/M.5476 - Pfizer/Wyeth (17 July 2009), available at: https://ec.europa.eu/competition/mergers/cases/decisions/m5476_20090717_20212_en.pdf

[8] European Commission, Case COMP/M.4691 - Schering Plough/Organon Biosciences (11 October 2007) available at: https://ec.europa.eu/competition/mergers/cases/decisions/m4691_20071011_20212_en.pdf

	dogs). The parties pointed to recent developments that make the distinction between injectable and inhalable anaesthetics irrelevant as they are becoming increasingly substitutable for each other: (i) inhalants are increasingly used for companion animals; (ii) inhalants can also be used to induce unconsciousness; (iii) injectables are increasingly used in large animals; and (iv) following technological advances, injectables are used to both induce and maintain unconsciousness, in particular in operations of medium duration, and that only in very short and very long operations is the substitution between injectables and inhalants pronounced.
Anti-inflammatories	**New Zealand Commerce Commission** In *Boehringer Ingelheim International GmbH / Sanofi S.A*. (2016)[9] the NZCC identified non-steroidal anti-inflammatory drugs (**NSAID**) as two separate markets: a) oral NSAIDs which are primarily used to treat companion animals (the oral NSAID market); and b) injectable NSAIDs which are used to treat all types of animal species (the injectable NSAID market). The Commission outlined that oral NSAIDs, such as those in tablet and oral suspension form, are typically administered to smaller animals such as companion animals for less acute, longer-term treatment (where the owner can administer the anti-inflammatory to the animal). The Commission acknowledged there are also oral suspensions for horses. The Commission outlined that NSAIDs are typically administered by a veterinarian in more acute cases (particularly post-operation). Dosages of injectable NSAIDs can be easily adapted to administer to a range of different animals including companion animals, horses, and production animals. For those reasons, the Commission considered separate product markets based on the size of the animal and the method of administration. The Commission also considered whether there are separate markets for the different molecules contained in NSAIDs. The Commission outlined that some of the NSAIDs supplied in New Zealand contain different active molecules, which can impact on whether a particular NSAID is administered to the animal, in certain circumstances. For example, some NSAID molecules can result in more damage to the digestive system than others. However, the Commission found that, while there is a degree of differentiation, all of the products are used to treat the same types of inflammation. For the purposes of assessing the

[9] NZCC, Determination, Boehringer Ingelheim International GmbH and Sanofi S.A. [2016] NZCC 18 (13 September 2016), available at: https://comcom.govt.nz/__data/assets/pdf_file/0033/76956/2016-NZCC-18-Boehringer-Ingelheim-International-and-Sanofi-clearance-determination-13-September-2016.PDF

	application, the Commission concluded that the differentiation was not sufficient to place the different molecules in discrete product markets. **ACCC** In *Pfizer / Wyeth* (2009),[10] the Commission considered a market for the supply of companion animal anti-inflammatories. **European Commission** <u>Corticosteroids belong to a separate product market to NSAIDs</u> In line with the Commission's previous decisions, the Commission in *BI/ Merial* (Sanofi) (2016)[11] determined non-steroidal anti-inflammatory drugs (NSAIDs) belong in a separate product market from corticosteroids. The Commission observed that although NSAIDs and corticosteroids both have anti-inflammatory properties, only NSAIDs have analgesic (anti-pain) and anti-pyretic (anti-fever) properties. Furthermore, NSAIDs can relieve pain and inflammation without the immunosuppressive and metabolic side-effects associated with corticosteroids. NSAIDs also tend to be more expensive than corticosteroids. NSAIDs are used in animal health primarily for pain relief and for treating inflammation. NSAIDs act by inhibiting the formation of prostaglandins synthesized via the cyclooxygenase pathway or the formation of leukotrienes via the lipoxygenase pathway to mediate the body's inflammatory response to injury. Adverse effects of treating pain with NSAIDs are most commonly gastrointestinal ulceration and renal impairment. In *Pfizer/Wyeth* (2009) and *Schering Plough / Organon Biosciences* (2007), the Commission considered NSAIDs to belong in a separate product market from corticosteroids. <u>The market for corticosteroids is likely to be for multispecies</u> In *Pfizer / Wyeth* (2009), the Commission analysed the proposed merger in a market including corticosteroids for multispecies. In *Schering Plough/ Organon Biosciences* (October 2007), the Commission identified a market for corticosteroids for ruminants, swine, horses and companion animals ('multispecies'). <u>Possibility of differentiation of injectable corticosteroids for chronic vs acute conditions</u>

[10] ACCC, Public Competition Assessment, Pfizer Inc - proposed acquisition of Wyeth Corp (18 November 2009), available at: https://www.accc.gov.au/system/files/public-registers/documents/D09%2B185734.pdf

[11] European Commission, Case M.7917 - Boehringer Ingelheim / Sanofi Animal Health Business (9 November 2016), available at: https://ec.europa.eu/competition/mergers/cases/decisions/m7917_3406_3.pdf

	In *Akzo Nobel/ Hoechst Roussel Vet* (1999),[12] the parties submitted that while a sub-division of the market by species or size of animal does not reflect market reality, a distinction can be drawn, on the basis of their different setting of prescription indication, between: a) injectable corticosteroids prescribed for use in chronic conditions and b) injectable corticosteroids prescribed for use in acute conditions. The parties submitted that the a) and b) would generally not be viewed as substitutable. This claim was not contested by the Commission's market investigation. The Commission did not make a finding as it considered no competition concern arose regardless of any possible alternative market definition. **Federal Trade Commission** In *Pfizer / Wyeth* (2009),[13] the Federal Trade Commission (**FTC**) identified a market for "equine joint-injected steroids for the prevention or treatment of joint inflammation".
Mastitis treatments/intramammary antibiotics for cows	**NZCC** In *BI / Sanofi* (2016), the NZCC did not consider antibiotics for cattle and dairy cows further given the limited overlap between the merging parties' products but observed the merging parties' respective products are prescribed for different therapeutic indications and for different stages of the cows' milking cycle. **European Commission** Separate markets for mastitis treatments for dry cows and lactating cows In *BI/ Merial* (Sanofi) (2016), *Pfizer / Wyeth* (2009) and *Schering Plough/Organon Biosciences* (2007), the Commission considered mastitis treatments in dry cows to belong to a separate product market from mastitis treatments for lactating cows. In coming to this view, the Commission generally recognised there are two different types of mastitis infection. Acute mastitis most commonly occurs during the lactation period. The treatment of acute cases requires daily repeated administration of quick and short acting therapeutic formulations (lactating cow products). Chronic udder infections (or sub-clinical mastitis) are less clearly noticed than acute mastitis and merely cause an increased number of white blood cells in the milk, without any obvious clinical symptoms. Sub-clinical mastitis is typically treated during the 60 days of the year when the cow is not milked (i.e. a dry cow), with routine preventive (single) administration of one injector at the start of the dry period.

[12] European Commission, Case COMP/M.1681 - Akzo Nobel/Hoechst Roussel Vet (22 November 1999), available at: https://ec.europa.eu/competition/mergers/cases/decisions/m1681_en.pdf

[13] Federal Trade Commission, Complaint, In the matter of Pfizer Inc and Wyeth (Docket No. C-4267), available at: https://www.ftc.gov/sites/default/files/documents/cases/2010/01/091014pwyethcmpt.pdf

	In *Pfizer / Wyeth* (2009), the Commission observed there is otherwise little product differentiation in this market as the active substances are basic antibiotics and the method of administration tends to be similar. <u>Possibility of differentiation based on active substances</u> In *Schering Plough/Organon Biosciences* (2007), the Commission considered that each mastitis product (dry and lactating) based on different anti-infective compounds (mainly cephalosporin and Penicillin) could be considered as a separate product market. The parties in this merger disagreed that an active ingredient should constitute a relevant criterion for the definition of product market. The Commission observed that further segmentation by active ingredient has not been supported by the majority of the respondents to the market investigation. Ultimately, the issue was left open as the key products of the parties were cephalosporin-based and did not need to be resolved for the Commission's finding on effects. In *Pfizer/Pharmacia* (2003),[14] the Commission accepted the parties' submission in line with the Commission's decision in *Akzo Nobel/Hoechst Roussel Vet* (1999) that there are separate markets for: a) topical mastitis, dry cow - Penicillin antibiotics; and b) topical mastitis, lactating cow - Penicillin antibiotics In *Akzo Nobel/ Hoechst Roussel Vet* (1999), the Commission considered that in addition to dividing the sector of mastitis treatment into lactating cow products and dry cow products, the two markets should be further divided according to the active substance used. The active substance would be different kinds of antibiotics (sulphonamides, penicillins, cephalosporins, tetracyclines, macrolides, quinolones, aminoglycosides, phenicols, and fluoroquinolones). The segmentation based on the active substance included can be applied to both lactating and dry cow products respectively. The Commission's market test confirmed the parties' view that the active substances differ in their bacteriostatic/bactericidal characteristic, in their low/high cost, in their common/not common resistance level and their wide/narrow spectrum of activity, and that each active substance used leads to the definition of a respective separate market. The Commission further considered the findings from its market test which confirmed the parties' submission that, in order to treat mastitis properly, a sample is taken from the cow and sent to a laboratory for examination in order to determine which bacteria are present and which anti-infective compound would be effective in combating the bacteria.

[14] European Commission – Case COMP/M.2922 - Pfizer/Pharmacia (27 February 2003), available at: https://ec.europa.eu/competition/mergers/cases/decisions/m2922_en.pdf

	Accordingly, the Commission considered products based on different anti-infective compounds are not demand-side substitutable and the active substance used appears therefore to be the relevant criterion to define the affected markets of dry cow products and lactating products respectively. **Federal Trade Commission** In *Pfizer / Wyeth* (2009), the FTC identified markets for: a) pharmaceutical products for the treatment of "lactating-cow" mastitis; and b) pharmaceutical products for the treatment of "dry-cow" mastitis.
Anti-microbials/antibiotics	**ACCC** In *Pfizer / Wyeth* (2009), the Commission considered a market for the supply of companion animal antibiotics. **European Commission** Antimicrobial product markets should be determined based on active substance In *Eli Lilly / Novartis Animal Health* (2014),[15] the Commission followed its previous decisions in segmenting anti-microbials based on active substance. The following main categories of active substances were singled out: sulphonamides, Penicillins, cephalosporins, tetracyclines, etc. In *Pfizer / Wyeth* (2009), the Commission found against a market for beta lactams (comprising both Penicillin and cephalosporin). The Commission's market investigation also showed limited substitution between Penicillin and cephalosporin based on price, different spectrums of activity and resistance status of the bacterial infections, amongst other factors. The most acute cases will only be sensitive to cephalosporin and in those cases Penicillin will not be considered a substitute whereas in the milder cases the use of cephalosporin will not be a cost effective solution. In addition, the Commission accepted it would run against the EMEA's recommendations for the use of third generation cephalosporin for the treatment of clinical conditions which have responded poorly or are expected to respond poorly to other classes of antimicrobials to limit the development of antibiotic resistance. Accordingly, the Commission analysed the effects of the proposed transaction at the level of the active substance (i.e. separate markets for Penicillins and cephalosporins) instead.

[15] European Commission, Case COMP/M.7277 - Eli Lilly / Novartis Animal Health (3 October 2014), available at: https://ec.europa.eu/competition/mergers/cases/decisions/m7277_747_2.pdf

	The Commission concluded that while a certain degree of substitutability between products in different classes is likely to exist, products of the same class normally tend to be perceived as closest substitutes. The Commission considered that the limited overlaps in indications highlighted by the market investigation, although not sufficient to completely exclude that some products from one class may be considered substitutes for certain products of another class, did not provide evidence of the existence of strong competitive constraints between any two classes of antibiotics, and in particular between the Penicillin class and other classes. The market can be broken down into companion and production animals, and possibly by species In *Eli Lilly / Novartis Animal Health* (2014), in relation to the size of the animals or animal species, the Commission noted it has in its previous decisions analysed antimicrobial markets based on a separation between large animals, comprising production animals and companion animals (without any further segmentation by particular species). When it came to different species of production animals, the Commission's market investigation in this case showed mixed results. The Commission observed that there are several products indicated for two or even three different species but ultimately left further segmentation of the market by species open. In *Schering Plough/Organon Biosciences* (2007), the Commission identified the following affected markets where Schering Plough and Intervet would have a combined market share over 25% in the EEA at the national level of certain Member States: a) Cephalosporin for large animals; b) Penicillin for large animals; c) Sulphonamides for large animals; d) Phenicols for large animals; e) Fluoroquinolones for companion animals; and f) Sulphonamides for companion animals. Injectable and oral products may belong in separate markets

	In *Eli Lilly / Novartis Animal Health* (2014), in line with previous Commission decisions, the large majority of the respondents to the Commission's market investigation submitted that injectable products are often very different from oral formulations from the point of view of efficiency, prices, easiness of administration, duration of action and targeted pathology. Moreover, looking at a further possible segmentation of the oral products into pre-mixes and solubles, the respondents to the market investigation mostly from the demand side submitted that these products might not always be fully substitutable. This is mainly due to the differences in the easiness of administration or the differences in the equipment of the farmers, the speed of administration and in some countries, due to the legislative or regulatory framework. In *Pfizer / Wyeth* (2009), the Commission found that substitution between injectable and oral antimicrobial products both from a demand and a supply perspective is limited. The Commission observed that for companion animals, the vast majority of Penicillin products is administered in an oral form, as injectable Penicillins need to be administered daily (or twice daily) by a vet. There are no ad hoc injectable Penicillin products for companion animals but only products with claims for use in cattle, swine, dogs and cats. The parties considered the use of injectable Penicillin products for companion animals would be negligible. The Commission also noted that the substitutability between the oral and injectable cephalosporin products of the Parties for companion animals has not been market tested. Consumers of products for companion animals are less price sensitive than consumers of products for production animals. In addition, the distinction between mass treatments and individual treatments which is relevant for production animals does not apply to the segment of companion animals. Therefore, the conclusion drawn on the substitutability between oral and injectable treatments in the field of production animals cannot be extrapolated to the field of companion animals. In view of the above, the Commission analysed the effects of the proposed transaction in the broad market of cephalosporin (oral and injectable) for companion animals. In *Pfizer / Pharmacia* (2003), the Commission identified one of the relevant product markets as the market for oral antibiotics for companion animals (Penicillins). **Federal Trade Commission** In *Pfizer / Wyeth* (2009), the FTC identified the following markets relevant for the transaction in respect of antibiotics:

	a) dairy cattle broad-spectrum antibiotics with low milk-withholding times; and b) companion animal cephalosporin antibiotics.
Parasiticides	**NZCC** In *Elanco/Bayer* (2020),[16] the NZCC focused on the potential impact of the proposed acquisition on two markets, including competition in the market for the supply of products for the treatment and prevention of external parasites on sheep. Breakdown by species for production animals The Commission outlined that the products for us on external parasites on sheep supplied by Elanco and Bayer (and all other existing suppliers) are only registered and indicated for use on sheep and so cannot be used on other animals. The Commission therefore considered the market for sheep products as separate from markets for products for other species. Pharmaceutical molecules or active pharmaceutical ingredient (API) do not constitute separate markets The Commission acknowledged that the products for use on external parasites on sheep, currently supplied in New Zealand, contain a number of different APIs that fall into different chemical groups and/or chemical classes but all have similar purposes from the perspective of the end use (ie. sheep farmers). The Commission stated its understanding that farmers can and do switch between different chemical groups and APIs, in part to avoid the parasite developing a resistance. The Commission therefore did not consider it necessary to delineate products for use on external parasites on sheep by the pharmaceutical molecules or API. No separate markets for external parasites that the products target The Commission outlined that the products for use on external parasites on sheep are used to treat, prevent and control flystrike and lice. It stated that narrowing the assessment to focus on products targeting one specific parasite would not impact its competition assessment. Most suppliers supply a range of narrow (eg, flystrike only) and broad spectrum (combination flystrike and lice) products and the Commission viewed that competitive constraints on the merged entity would be the same whether it looked separately at combination products, fly-only products or lice-only products. Application methods of jetting/saturation and pour-on/spray-on do not constitute separate markets

[16] NZCC, Media release: "Commission grants clearance for Elanco to acquire Bayer's animal health business subject to divestment" (9 July 2020), available at: https://comcom.govt.nz/news-and-media/media-releases/2020/commission-grants-clearance-for-elanco-to-acquire-bayers-animal-health-business-subject-to-divestment

	The Commission stated that there are two common application methods for products for use on external parasites on sheep with each method having certain advantages and disadvantages. The application methods are jetting or saturation (which involves saturating the sheep in a shower or bath with a dip wash), or the pour-on/spray-on method (which involves a low volume of product being applied by a hand-held applicator). The Commission found that most suppliers supply their products in both application methods and the Commission did not consider it necessary to delineate products for use on external parasites on sheep by application method. Different wholesale customer groups not in separate markets The Commission outlined that Elanco and Bayer supply products for the prevention and treatment of external parasites on sheep to two customer groups who supply to retail customers. Those two groups are: a) veterinarians; and b) rural supply merchant stores including firms such as Farmlands and PGG Wrightson. The Commission received mixed evidence on the extent to which farmers switch their purchasers between veterinarians and the rural supply merchant stores. It also acknowledged that, on the supply side, there are some suppliers who only distribute their products to veterinarians and some who only distribute to rural supply merchant stores. However, while there appeared to be some differences in the conditions of wholesale supply to veterinarians and to rural supply merchant stores, the Commission did not view those differences as sufficient to place different wholesale customer groups in separate markets. **ACCC** In *Elanco / Bayer* (2020),[17] the ACCC identified the following product markets of concern: a) gastrointestinal worming treatments for companion animals; and b) sheep lice products. In *Pfizer / Wyeth* (2009), the ACCC identified the following markets relevant to parasiticides for the purposes of that particular transaction:

[17] See Public Competition Assessment at: https://www.accc.gov.au/system/files/public-registers/documents/Elanco%20Bayer%20-%20Public%20Competition%20Assessment%20-%2011%20November%202020.pdf.

	a) endectocides for worm control in cattle; and b) endoparasiticides and endectocides for worm control in sheep. The Commission outlined that the active ingredients used in drenches primarily belong to the following active groups: Macrocyclic lactones (MLs); Benzimidazoles (BZs) and levamisole (LV). BZs and LV are endoparasiticides because they treat only internal parasites while MLs are endectocides because they treat internal and external parasites concurrently. <u>Further breakdown by species (cattle and sheep)</u> In respect of cattle, the Commission found endectoparasiticides are not substitutable with endectocides because: • the pour-on application (used for ML products) is the most convenient method of application for cattle worming products. BZs can only be administered orally, and this is not a convenient method of application for cattle worming products; • MLs tend to have greater longevity of action against target worms than BZs and LV; • MLs are more effective than BZs and LV at killing important target worms, in particular, inhibited *Ostertagia ostertagi*; and • MLs are more effective than BZs and LV in killing worms generally and have a broader spectrum of activity. In respect of sheep, the Commission considered there is a single market for the supply of endoparasiticides and endectocides. This is because, unlike relevant cattle applications, endoparasiticides tend to be substitutable for endectocides for worm control in sheep. Market inquiries conducted by the Commission suggested the existence of parasite resistance to chemicals used in drenches is a much greater problem in sheep than cattle. Accordingly, farmers rotate sheep drenches to minimise the risk of developing parasite resistance and use the different chemical groups in combination formulations to increase efficacy and manage drench resistance. Additionally, BZs, LVs and MLs can all be administered orally to sheep, and this is the most convenient method of administration of sheep drenches. **European Commission** <u>Products for multi-celled parasites and anti-coccidial treatments belong in separate markets</u>

	In *Eli Lilly / Novartis Animal Health* (2014), consistent with its previous decisions, the Commission considered that within parasiticides, there are products against multi-celled parasites (such as fleas and worms) and anti-coccidial treatments which act against single celled parasites. The Commission explained in *Merck/Rhone-Poulenc-Merial* (1997),[18] anti-coccidials are used where animals are raised in confinement and in high densities. Over 80% are used in the poultry industry. In contrast to the other anti-parasitics, anti-coccidials are administered in the animals' feed or water. Furthermore, because the products are administered constantly the animals build up a resistance to a given product so animal breeders have to rotate the products they use at regular intervals or when the levels of coccidials build up in the animal's gut. Anti-coccidials can be differentiated from anti-parasitics by their characteristics, therapeutic effect, their means of administration, and to some extent by the fact that they are mainly used in poultry breeding. Therefore, there are strong indications that anti-coccidials constitute a separate product market to parasiticides for multi-celled parasites. <u>Extent of substitutability between ectoparasiticides, endoparasiticides and endectocides</u> In *Eli Lilly / Novartis Animal Health* (2014), in line with its previous decisions, the Commission previously considered three main types of parasiticides for multi-celled parasites: a) ectoparasiticides, used to control external parasites such as fleas, ticks, etc, b) endoparasiticides, used to control internal parasites such as gastro-intestinal roundworms and tapeworms, lungworms, liver flukes, protozoa, etc. and c) endectocides, used to treat both external and internal parasites. In relation to substitutability between ectoparasiticides, endoparasiticides and endectocides, the results of the Commission's market investigation were mixed and revealed that it depends very much on the customers' preferences, the disease, and the particular characteristics of the animals that are being treated. From the demand side, the customers' participating in the market investigation submitted that they would not switch from endoparasiticides or ectoparasiticides products to endectocides products as a reaction to a permanent price increase of 10% of the former. However, customers who want to treat both internal and external parasites at the same time would choose a combined active ingredient product (endectocide). There is therefore a certain degree of substitution between ecto / endecto products and between endo / endecto products that the Commission will take into account in the competitive assessment.

[18] European Commission, Case IV/M.885 - Merck/Rhone-Poulenc – Merial (2 July 1997), available at: https://ec.europa.eu/competition/mergers/cases/decisions/m885_en.pdf

	The results of the Commission's market investigation were mixed in respect of the substitutability between endectocides and endoparasiticides. One supplier explained that "given the sliding scale between targeted parasiticides on the one hand and broad coverage products in the other hand, it is difficult to delineate precise borders of each of these segments". Additionally, while one supplier indicated that endoparasiticides and endectocides are different from the point of view of price, duration of action, and withdrawal time, other suppliers mentioned that "it is common for endectocide compounds to be used interchangeably with endoparasiticides for the treatment of internal parasiticides when in single active and multiple active formulations". From the supply side, switching from one segment to another is not an easy process and could take up to even five to eight years. On this basis, the Commission considered there are arguments to suggest that endoparasiticides and endectocides may constitute separate markets. However, taking into account the degree of substitutability between endo/endecto products, the Commission considers that the product market for parasiticides for production animals could also be segmented along these lines. In any case, the Commission considers that the market definition for endoparasiticides, endectocides, or endo/endectocides can be left open, as the proposed transaction did not give rise to competition concerns under any plausible product market definition. In *Eli Lilly / Janssen* (2011),[19] the Commission's findings from its market inquiries as to whether endoparasiticides and endectocides belong to the same product market were inconclusive. The Commission observed that some respondents considered that endoparasiticides and endectocides are indistinctively used as treatments against parasites and are generally substitutable as the primary focus for treatment is the control of internal parasites, for which both types of products are indicated. However, other respondents submitted that these two types of products are neither substitutable nor indistinctively used as they have a different spectrum of activity (endectocides having a broader spectrum), duration of efficacy, prices, and resistance levels, and may be used at different times of the year. The Commission did not have to come to a concluded view as it found that the proposed transaction would not give rise to serious doubts under any of the possible definitions. In *Schering Plough / Organon Biosciences* (2007), the Commission accepted a possible alternative market comprising both endectocides and endoparasiticides.

[19] European Commission, Case COMP/M.6205 – Eli Lilly / Janssen Pharmaceutica Animal Health Business Assets (6 July 2011), available at: https://ec.europa.eu/competition/mergers/cases/decisions/m6205_20110706_20310_1916641_EN.pdf

	The parties submitted that since the introduction of endectocides, there has been a general trend towards replacing individual endoparasiticides products with endectocides. Particularly, consumers of endoparasiticides see endectocides as a convenient, slightly more expensive means of meeting their requirements for control of internal parasites, while also obtaining some limited protection from external parasites. Consequently, the parties consider that competition from endectocides is sufficient to justify a finding that endoparasiticides and endectocides form part of a single relevant product market. The Commission's market investigation generally supported the parties' claim that endectocides belong to the same product market as endoparasiticides, although some respondents disagreed. The parties submitted additional information showing that: (i) customers can and do use both types of products interchangeably to treat internal worms with no significant difference in effectiveness, duration and withdrawal period; (ii) suppliers of endoparasiticides generally must price their products sufficiently under endectocides in order to maintain competitiveness; (iii) suppliers of endectocides focus advertising of their products primarily (sometimes exclusively) on the endoparasiticidal aspects of their endectocide products. In light of the additional evidence submitted by the parties, and the fact that most of the respondents to the market investigation accepted the existence of the broader market encompassing both endoparasiticides and endectocides, the Commission concluded that endoparasiticides and endectocides form a single relevant market. In *Pfizer / Wyeth* (2009), the Commission analysed endoparasiticides and endectocides together but also analysed them separately, as the market investigation in that case indicated that these two segments are not always substitutable. The Commission's market test did not fully support the parties' submission of there being a market definition encompassing both endoparasiticides and endectocides for production animals and for companion animals. In the field of production animals, considerations including cost of treatment and the duration of the withdrawal period do play a major role and result in limited substitutability between endoparasiticides and endectocides from the demand side. The majority of the respondents to the market investigation indicated that there is limited supply-side substitutability and that, from the demand perspective, the products are not always substitutable as endectocides are generally more expensive than endoparasiticides, so that end users would not choose them without considering their real added value in each specific circumstance, and also because substitution between delivery technologies for particular species only occurs in limited circumstances. In *Schering Plough / Organon Biosciences* (2007), the Commission concluded also that boluses can be considered as part of the wider endo/endectocide market.

	In *Merck/Rhone-Poulenc-Merial* (1997), the parties argued that endectocides cannot be considered to belong to the same product market as ectoparasiticides and/or endoparasiticides. They state that, even if multivalent products, such as endectocides, have the effect of monovalent products in some applications, the differences in terms of spectrum of parasite treated, efficacy, prices, consumer uses, are sufficient to allow the definition of separate relevant markets for endectocides, endocides, and ectocides. For example, endectocides enable a farmer to be sure that his animal is not infected by large spectrum infestations with a single application. Endectocides cost about three times the price of the traditional anti-parasitics and competitors have indicated that higher prices have not impeded the development of the endectocides, although the prices are well above the combined treatment price for endo- and ecto-parasiticide treatment. The Commission considered that these factors, together with the arguments put forward by the parties, suggest that there may be separate relevant market for endectocides. In situations in which the farmer knows which parasite is affecting their animals, it may be more effective to use preparations for that specific problem. Furthermore, some endecto-parasiticides cannot be given to lactating cows. For some infestations, such as liver flukes, endectocides are ineffective even when administered in combination with a flukicide. A more specific and potent flukicide may be indicated. The Commission recognised that, in practice, choice of parasiticide will depend on a wide variety of factors including the number and species of parasites, the species of animal, and the condition of the animal. On the other hand, the Commission observed endectocides have been progressively replacing endoparasiticides and ecto-parasiticides and, as a result, in the three preceding years, there had been an erosion of the endo- and ectoparasiticide markets, which may indicate the two products should be considered as forming a single product market. The Commission concluded there is a certain degree of interchangeability between endectocides and both endoparasiticides and ectoparasiticides which, according to the Commission, may indicate that the three products form part of a single market or that endectocides and ectocides, or endectocides and endocides, may be the relevant market. <u>Production animals and companion animals, and species</u> In *Eli Lilly / Novartis Animal Health* (2014), respondents to the market investigation indicated that a separation by species should also be taken into account. However, they have also submitted that some products are suited for several species and that, for example, cattle and sheep could equally be considered one segment, as argued by the Notifying Party. In this regard, one supplier mentioned that even though “some formulations might be mode adopted for sheep […], sheep and cattle products

	are the same". However, a further split of the market by different species was left open by the Commission as the proposed transaction did not give rise to competition concerns under any plausible product market definition. In *Eli Lilly / Janssen* (2011), in line with its previous decisions, the Commission considered separate markets for production animals and companion animals for endoparasiticides and endectocides. Market respondents supported the Parties' view that endoparasiticides and endectocides for production animals belong to a separate product market from endoparasiticides and endectocides for horses. The main reasons given by respondents are the products' different methods of administration, and the products' different formulations, although other reasons such as different dosage, different level of resistance developed by the animal, the products' compatibility with other compounds, the products' efficacy, and the lack of studies were also invoked. As to a further breakdown by species for production animals, the parties argued this would not reflect competitive conditions as most endoparasiticides/endectocides for production animals are indicated for several species. A majority of respondents to the Commission's market inquiries also indicated that a sub-division of endoparasiticides/endectocides for production animals by species would not reflect demand patterns. The Commission did not have to reach a conclusion as it found that the proposed transaction would not give rise to serious concerns under any of the possible definitions. In *Pfizer / Wyeth* (July 2009), the Commission observed that, from the supply side, the respondents to its market test pointed out that an animal species extension requires a pharmaceutical development, either generic or not, involving time and costs, and if a company is active in manufacturing and marketing endoparasiticides and endectocides for sheep, it may not be able to successfully develop a cattle product. This is also because sheep endoparasiticides and endectoparasiticides are mainly delivered as oral suspensions while cattle endoparasiticides and endectoparasiticides are primarily delivered as pour on solutions or as injectables and different formulations require different R&D and manufacturing technology. In terms of companion animals, the Commission considered endoparasiticides and endectocides are not always substitutable from a consumer (i.e. pet owners) perspective since external parasites (which are treated only by endectocides, as well as by ectoparasiticides) represent the main concerns. The Commission's market investigation also indicated that endectocides and endoparasiticides should be considered separate product markets as, when it comes to companion animals, end-users view endectocides mainly as products for coverage against external parasites rather than as products for coverage against both external and internal parasites.

	Customers in this area typically seek products to prevent or treat either external parasites (primarily fleas and ticks) or internal parasites (such as heartworms or gastro-intestinal worms). Endectocides, which treat both internal and external parasites, are most comparable to (and are most commonly used as substitutes for) ectoparasiticides in the companion animal segment. Endectocides have similar protection levels and are generally sold at comparable price levels as ectoparasiticides. In practice, a customer seeking to eradicate fleas and ticks could either turn to an ectoparasiticide or could achieve similar results using an endectocide – the only difference being that endectocides would also offer some internal parasite protection. In *Schering Plough / Organon Biosciences* (2007), the Commission considered a distinction between parasiticides for different species/species-group is appropriate. First, large and small animals are often afflicted by different types of parasites. Secondly, in the case of farm animals, considerations of the cost of the treatment and indications on the withdrawal period play a significant role in the farmer and veterinarians' decision as to which product to purchase, whereas the economic considerations are evaluated to a limited extent in the case of the treatment of companion animals and equine. The Commission considered the relevant production animal markets in that case to be ectoparasiticides for farm animals (ruminants and swine), and endoparasiticides/endectocides for farm animals (ruminants and swine). In terms of companion animals, the Commission identified a market for ectoparasiticides (including collars) for companion animals; In *Merck/Rhone-Poulenc-Merial* (1997), the Commission considered there are indications that, as well as the separation between small animals and animals for food production, there may be separate relevant markets for individual animal species. In *Ciba/Sandoz* (1997),[20] the Commission considered that a further distinction for farm animals (ruminants and swine) and companion animals is appropriate. The Commission concluded the following four classifications represent distinct product categories, given their different characteristics, intended purposes and customers: farm animal ectocides, farm animal endocides, small animal ectocides and small animal endocides. According to the Commission, the respective products in the above four classifications differ in terms of their effect, formulation and composition, so that they can frequently only be used for either farm or small animals. Moreover, they have different customers, e.g. typically farmers for farm animals, or consumers owning household pets for small animals. Similarly, depending upon their dispensing form and their active substance, they are used either for controlling only internal or only external parasites.

[20] European Commission, Case IV/M.737 – Ciba-Geigy/Sandoz (17 July 1996), available at: https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31997D0469:EN:HTML

	Injectable vs non-injectable In *Eli Lilly / Novartis Animal Health* (2014), the respondents to the Commission's market investigation indicated that the distinction between oral / topical on the one side and injectable products on the other side is particularly relevant for ecto / endecto products. One supplier mentioned that "oral and topical products are usually administered by pet owners, whereas injectable products are usually administered by veterinarians" and that "twice-a year injection administered by a veterinarian is a very different prospect than a monthly owner-administered treatment". On this basis, the Commission observed that oral and topical ecto / endecto products could constitute a separate segment altogether. Active substance / target pathology - flukicides and nematocides In *Eli Lilly / Novartis Animal Health* (2014), the Commission's market investigation indicated a delineation should be adopted according to the spectrum of activity, segmenting the market into flukes and nematodes. In that case, however, a further split of the market into flukicides and nematodicides was left open as the proposed transaction did not give rise to competition concerns under any plausible product market definition. In *Eli Lilly / Janssen* (2011), a majority of respondents to the Commission's market investigation indicated that a segmentation of endoparasiticides/endectocides for production animals based on the product's active ingredient or molecule would not be pertinent as this would not reflect demand patterns. The Commission did not have to reach a conclusion as it found the proposed transaction would not give rise to serious doubts under any of the possible definitions. In *Schering Plough / Organon Biosciences* (2007), with respect to active substance/target pathology, the parties recognised that, within each of these groups of products, individual products may contain active substances that are more effective against one or more specific types of parasite. Targeted parasiticides (treating a single parasite) have no substitutability with other parasiticides that are effective against a different, targeted parasite (e.g., flukicides that treat liver flukes cannot treat lungworms). However, a number of parasiticides are effective against multiple parasites and thus cannot be defined as being part of single market of products that treat individual parasites. Given the sliding scale between potent and targeted parasiticides on the one hand, and broad- coverage products on the other, the parties submitted that it is difficult to delineate the precise borders of each of these segments.

	In *Merck/Rhone-Poulenc-Merial* (1997), the Commission considered the following products were not substitutable or not fully substitutable, for example, in the endoparasiticides for animals for food production, nematocides, which are used for combating gastrointestinal or pulmonary roundworms, are not substitutes for flukicides which treat liver flukes. Separate market for heartworm products In *Eli Lilly / Novartis Animal Health* (2014) and *Pfizer / Wyeth* (2009), the Commission's market investigation showed that products for the treatment of heartworms are not substitutable for products that treat other internal parasites such as gastro-intestinal parasites and on this basis, the Commission considered heartworm as a separate segment. In *Pfizer / Wyeth* (2009), the Commission's market test found in relation to endoparasiticides, that a number of competitors and customers consider that products for the treatment of heartworm or dirofilaria are not substitutable from a customer's perspective with products that target other internal parasites such as gastro-intestinal parasites. The Commission left open the possibility the market for endoparasiticides for companion animals could be further sub-divided along these lines. Over the counter (**OTC**) and vet channels do not constitute separate markets The Commission concluded that the OTC and the vet channels do not constitute separate segments as they play a role only from a marketing strategy's point of view rather than from a competitive point of view. **Federal Trade Commission** In *Elanco / Bayer* (2020),[21] the FTC identified a number of relevant lines of commerce, including in respect of "brand name cattle pour-on insecticides". The FTC found that many customers trust and rely on brand name cattle pour-on insecticides rather than generic products. Consequently, generic cattle pour-on insecticides are not a reasonable substitute for the parties' brand name cattle pour-on insecticides. In *Pfizer / Wyeth* (2009), the FTC identified the following markets relevant for the transaction in respect of parasiticides: a) cattle macrocyclic lactone parasiticides; b) cattle benzimidazole parasiticides; and

[21] Federal Trade Commission, Complaint, In the Matter of Elanco Animal Health, Incorporated and Bayer Aktiengesellschaft (Docket No. C-4725), available at: https://www.ftc.gov/system/files/documents/cases/191_0198_elanco_bayer_-_complaint.pdf

	c) equine tapeworm parasiticides containing praziquantel. **Canadian Competition Bureau** In *Elanco/Bayer* (2020),[22] the Bureau determined that the Proposed Transaction would result in a substantial lessening of competition in three Canadian markets including a market for feline de-wormers that include tapeworm coverage.

[22] Competition Bureau Canada, Position Statement regarding the acquisition by Elanco of Bayer Animal Health (14 July 2020), available at: https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04541.html

ANNEXURE I – DESCRIPTION OF RELEVANT MARKETS

This Annexure describes the Relevant Markets and types of products within them.

Animal pharmaceuticals are a wide group of medicines containing a large variety of active product ingredients (**APIs**) that prevent or treat a range of animal diseases and disorders, and include:

- anti-inflammatories;
- analgesics and anaesthetic;
- antimicrobials (also known as antibiotics);
- parasiticides;
- endocrine treatments; and
- specialty products.

Within these categories, there are many factors that distinguish products in the pharmaceutical sector or influence the closeness of competition between them, the most important being:[1]

(a) **species of animal** – although many pharmaceutical products are multi-species, some are effective only for groups of species (such as companion animals) or even single species;

(b) **active substance** – in some instances the active substance would be the main differentiator (ie. in antibiotics because the same active substance is efficacious against the whole range of pathologies and the same pathology can be treated with different active substances);

(c) **target pathology/scope of effectiveness** – this is particularly the case with anti-microbials / anti-biotics and parasiticides, as potent treatments against a single pathology compete with the treatments that are efficacious against the whole spectrum of pathologies;

(d) **route of administration** – many pharmaceuticals are injectable for production animals; for companion animals, a large part is also orally administered in the form of tablets (including chewable tablets), pastes and granules. However, there exists a whole spectrum of ways of administration depending on the specific needs (i.e. intra-mammary products for mastitis treatment in cows, anti-parasitic collars or spot-on drops for companion animals, inhalable general anaesthesia, etc);

(e) **duration of efficacy** – in some instances, farmers, pet owners and veterinarians can be inclined to look for products that act for a long time in the body of the animal usually for preventive purposes (e.g. anti-parasitic products, long-acting preventive antibiotics, hormones for the synchronisation of the oestrus cycle); and

(f) **duration of withholding periods** – this criterion is relevant for production animals. Withholding period (sometimes also termed withdrawal period) means the amount of time after treatment that the animal may not be slaughtered or have a commodity like milk harvested for human consumption due to the fact that the active substance has not been sufficiently eliminated from the carcass of the animal or the commodity produced by the animal.

1 Anti-inflammatories

Anti-inflammatories are used to treat inflammation (ie. a localised protective reaction of tissue to irritation, injury, or infection) and to reduce the pain and fever associated with inflammation.

[1] European Commission, Case COMP/M.4691 - Schering-Plough / Organon Biosciences (11 October 2007), available at: https://ec.europa.eu/competition/mergers/cases/decisions/m4691_20071011_20212_en.pdf page 10.

Anti-inflammatories may be divided into two categories:

(a) non-steroidal anti-inflammatory drugs (**NSAIDs**); and

(b) corticosteroids.

NSAIDs are the anti-inflammatories relevant to this application. NSAIDs can relieve pain and inflammation without the immunosuppressive and metabolic side-effects associated with corticosteroids. NSAIDs also tend to be more expensive than corticosteroids. NSAIDs are used in animal health primarily for pain relief and for treating inflammation.

NSAIDs act by inhibiting the formation of prostaglandins synthesized via the cyclooxygenase pathway or the formation of leukotrienes via the lipoxygenase pathway to mediate the body's inflammatory response to injury. Adverse effects of treating pain with NSAIDs are most commonly gastrointestinal ulceration and renal impairment.[2]

2 Anaesthetics and analgesics

Anaesthetic products induce a loss of physical sensation, with or without a loss of consciousness, while analgesics are products that relieve pain but do not cause a complete loss of consciousness, feeling or movement.

There are four main types of anaesthesia products:

(a) general anaesthetic inhalants;

(b) general anaesthetics injectables;

(c) local anaesthetics; and

(d) sedatives and pre-anaesthetics.

Of those, the only products relevant to this application are sedatives and pre-anaesthetics. Many anaesthetic techniques involve the administration of a sedative, pre-anaesthetic or tranquilizer before the anaesthetic agent is given. Tranquilizers and sedatives can allow for less of the general anaesthetic to be used, may calm the animal prior the procedure and may also make the recovery from anaesthesia smoother. Combinations of opiate and non-opiate-based products may also be used to provide very short term, deep sedation / light anaesthesia or as a premedication for inhalational or injectable general anaesthesia.

Antidotes for short term pre-anaesthetic sedatives are also relevant to this application. The products relevant to this application are used to reverse the effects of sedation from medetomidine and dexmedetomidine in companion animals.

3 Antimicrobials (also known as antibiotics) and related products

Antimicrobials (which include antibiotics) are pharmaceutical products that belong to the general group of anti-infectives for systemic, local or topical use. They are used to destroy and prevent the growth of microbes such as bacteria, mycoplasma (pathogens that lack cell walls) and treat associated diseases.[3]

Anti-microbials may also vary on the following factors:

(a) **active substance**: such as sulphonamides, Penicillins, cephalosporins, tetracyclines, etc;

[2] European Commission, Case COMP/M.7917 - Boehringer Ingelheim / Merial (Sanofi) (9 November 2016), available at: https://ec.europa.eu/competition/mergers/cases/decisions/m7917_3406_3.pdf page 33.

[3] European Commission, Case COMP/M.7917 - Boehringer Ingelheim / Merial (Sanofi) (9 November 2016), available at: https://ec.europa.eu/competition/mergers/cases/decisions/m7917_3406_3.pdf page 49.

(b) **route of administration:** such as injectable products, products for oral administration and products for topical administration such as eye drops or ointment; and

(c) **animal size:** such as different products for large animals such as horses, ruminant and swine and companion animals such as dogs and cats.

3.1 The main active substances

The main categories for active substances include sulphonamides, Penicillins, cephalosporins, tetracyclines, macrolides, aminoglycosides and fluoroquinolones Some antibiotics are potentiated by other substances such as trimethoprim which potentiates sulphonamides and clavulanic acid which can be used to potentiate some penicillins. These types differ in their bacteriostatic/bactericidal characteristic, in their low/high cost, in their common/not common resistance level and their wide/narrow spectrum of activity.[4]

Of most relevance to this application is Penicillin. Penicillin or synthetic penicillins are among the most common active substances, belonging to the oldest antibiotic family (Penicillin was discovered in 1928), and are used regularly to treat infection in production animals. Each product will require varying rates of administration, with some requiring administration every 24 hours, while others have a long-lasting action allowing administration only every 48 hours. Withdrawal periods (i.e. necessary medication-free waiting period before slaughter or harvest of milk) vary depending on the product formulation.

Cephalosporins are another group of anti-microbials used to treat infections caused by gram-positive and gram-negative bacteria. Cephalosporins are most commonly used to treat respiratory, skeletal, urinary, skin and soft tissue infections and are a newer generation of antibiotics priced higher than penicillin and tetracycline.

Sulphonamides are organic sulphur compounds that are used as antimicrobials to treat bacterial infections in both humans and animals. Sulphonamides work by interfering with a bacterium's production of folic acid, which the bacterial cell needs for energy and reproduction. In animals, sulphonamides are used to treat conditions such as bacterial pneumonia, bacterial scours, coccidiosis, foot rot, calf diphtheria, acute mastitis and acute metritis.

Tetracycline is a family of broad-spectrum antibiotics which include actives such as oxytetracycline, doxycycline, minocycline, and others. The tetracycline antibiotics are bacteriostatic. Their mechanism of action is through the reversible binding of bacterial 30S ribosomes and the alteration of the bacterial cytoplasmic membrane. Tetracycline antibiotics are used to treat bacterial infections due to aerobic, gram-positive and gram-negative bacteria, mycoplasma, rickettsiae, chlamydia, and some protozoa.

Macrolides are a class of antibiotics derived from Saccharopolyspora erythraea, a type of soil-borne bacteria. They inhibit protein synthesis in bacteria by reversibly binding to the P site of the 50S unit of the ribosome. Macrolides mainly affect gram-positive cocci and intracellular pathogens such as mycoplasma, chlamydia, and legionella. Erythromycin was the first macrolide discovered; other macrolides include tulathromycin, oleandomycin and tilmicosin.

Aminoglycosides are a class of antibiotics used mainly in the treatment of aerobic gram-negative bacilli infections, although they are also effective against other bacteria including Staphylococci and Mycobacterium tuberculosis. They are often used in combination with other antibiotics. Aminoglycosides are thought to work by inhibiting protein synthesis inside bacteria. Kill rates of bacteria are increased when higher concentrations of aminoglycosides are present; however, the margin between a safe and a toxic dose is narrow, and monitoring is often needed. Aminoglycosides used in veterinary medicine include gentamicin, neomycin, streptomycin and framycetin.

[4] European Commission, Case COMP/M.1681 - Akzo Nobel / Hoechst Roussel Vet (22 November 1999), available at: https://ec.europa.eu/competition/mergers/cases/decisions/m1681_en.pdf page 4.

Fluoroquinolones are broad-spectrum antimicrobials and are an important class of drugs to both human and animal health. The fluoroquinolones are approved for indications such as urinary tract infections and soft tissue infections in dogs and cats.

Antimicrobial products will also vary on the route of administration based on the type of pathology being targeted. For example, oral antibiotics for companion animals are used to treat a range of different infections (e.g. soft tissue infections, dental infections, urinary tract infections and respiratory disease).

3.2 Intramammary antibiotics for the treatment of mastitis

One use for antibiotics (and relevant to this application) is the treatment of mastitis, which is an infection of the cow's mammary glands or udder, and which requires a more local route of administration in the form of intramammary infusion.

Mastitis is a recurring problem for dairy farming, particularly in the case of lactating cows. In the dairy cow, mastitis is nearly always caused by micro-organisms, usually bacteria, that invade the udder, multiply and produce inflammatory toxins. There are two different types of mastitis infections:

(a) Acute mastitis which most commonly occurs during the lactation period (i.e. when the cow is producing milk). Treatment generally requires repeated administration of therapeutic formulations (lactating cow products). All lactating cow product require the milk from treated udders to be discarded for a certain length of time after the last treatment; and

(b) Chronic infections (or sub-clinical mastitis) cause an increased number of white blood cells in the milk (somatic cells), but do not have any obvious clinical symptoms. Sub-clinical mastitis is typically treated during the days of the year when the cow is not milked (the so-called dry period).

Mastitis treatments are administered through a specially designed syringe (injector tube) that is inserted into the animal's teat canal by which the antibiotic compound is then released into the udder. This mode of application, as well as a special formulation including the ability to deliver high concentrations of antibiotics to the site of infection makes them particularly effective against the relevant bacteria and allows them to function over a certain period of time in their particular environment (inside the cow's udder), distinguish these products from other antimicrobial products.

In cases where there are concerns of infection, an intramammary antibiotic for dry cows may be used in conjunction with a teat sealant, another product relevant to this application. Teat sealants prevent bacterial infection in the teats of heifers prior to their first lactation and in cows in their dry period. The seal prevents bacteria entering the teat and reduced the need for antibiotics.

4 Parasiticides

Parasiticides are agents or preparations used to control internal and external parasites and/or prevent such parasites from infesting an animal.

Parasiticides can be categorised into two broad categories: anti-coccidials, which act against single-celled parasites (called coccidial); and other anti-parasitic preparations that treat multi-celled parasites.

Parasiticides may be further categorised into:

(a) **Ectoparasiticides**, used to control external parasites such as fleas, ticks, flies, lice and mange mites, which affect many animal species. Ectoparasiticides are applied directly on the animal in the form of sprays, dusting powders, pour-on applications, spot-on application, shampoos, collars, creams and lotions;

(b) **Endoparasiticides**, used to control internal parasites (gastro-intestinal roundworms and tapeworms, lungworms, liver flukes, protozoa, etc.) in various species. They are administered either orally or by injection; and

(c) **Endectocides**, used to concurrently treat external and internal parasites. They are administered orally, by injection or topically.

This application uses the term "anthelmintics", to refer collectively to endoparasiticides and endectocides, ie. both of the product types that are used treat or control internal parasites.

The type of parasiticide and route of administration will depend on the animal and the parasite being targeted. For example, parasiticides for worm control in cattle and sheep are commonly referred to as “drenches”. The active ingredients used in cattle and sheep drenches primarily belong to the following active groups: Macrocyclic lactones (**MLs**); Benzimidazoles (**BZs**) and Levamisole (**LV**). Drenches containing BZs and LV are classified as endoparasiticides because they treat only internal parasites; drenches containing MLs are classified as endectocides because they treat internal and external parasites concurrently.

The method of administration for parasiticides may differ between animal species and depending on the active substance. For example, applying BZs, LVs and MLs orally to sheep is the most convenient method of administration of sheep drenches. The pour-on application (which is used for ML products) is the most convenient method of application for cattle worming products.

In terms of duration of efficacy and effectiveness, MLs tend to have greater longevity of action against target parasites than BZs and LV.

MLs are more effective than BZs and LV at killing important target worms, particularly inhibited Ostertagia ostertagi, and are more effective than BZs and LV in killing worms generally and have a broader spectrum of activity.

To guard against the animal developing parasite resistance, farmers typically rotate drenches to minimise the risk of developing parasite resistance and use the different chemical groups in combination formulations to increase efficacy and manage drench resistance where resistance is an existing problem.

CONFIDENTIAL ANNEXURE J: COMPETITORS AND TRADE ASSOCIATIONS

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ANNEXURE K – DESCRIPTION OF PRODUCTS NOT COUNTED IN BARON DATA

Oral penicillin for companion animals

Supplier	Product	Active Ingredient	Clinical indications
Ethical Agents	Vetamox Tablets 625mg	Potassium clavulanate Amoxicillin	For the treatment of infections sensitive to the amoxicillin/clavulanic acid combination in cats and dogs
Vetoquinol New Zealand Limited	Clavaseptin Palatable Tablets	Amoxycillin Clavulanic acid	For treatment of bacterial infections sensitive to clavulanic acid and amoxycillin in cats and dogs

Injectable penicillin for companion animals

Supplier	Product	Active Ingredient	Clinical indications
None registered			

Pre-anaesthetics and sedatives (opioids)

Supplier	Product	Active Ingredient	Clinical Indications
MSD	Dolorex	Butorphanol base	For the relief of moderate to severe pain in the horse, especially abdominal pain associated with colic and post-partum pain.
Dechra	Calesedate	Butorphanol tartrate	For the alleviation of abdominal pain associated with colic and postpartum pain. Used in combination with tranquilisers and sedatives butorphanol is effective for chemical restraint in standing surgical procedures.

Akorn	Butorphic Injection	Butorphanol tartrate	For the alleviation of abdominal pain associated with colic and postpartum pain. Used in combination with tranquilisers or sedatives, butorphanol is effective for chemical restraint in standing surgical procedures.
Ausrichter (New Zealand) Limited	Butomidor Injection	Butorphanol base	Analgesic and sedative for use in horses, dogs and cats
Ceva Animal Health (NZ) Limited	Vetergesic Multidose Injection for Cats, Dogs, and Horses	Buprenorphine hydrochloride	For the relief of post-operative pain in the dog and cat. For the relief of post-partum pain in the horse only in conjunction with a sedative agent.

Pre-anaesthetics and sedatives (non-opioids)

Supplier	Product	Active Ingredient	Clinical Indications
Ferrari Animal Health Pty Ltd	Stilator Injection	Medetomidine hydrochloride	Sedative, analgesic for use in the restraint of dogs and cats
Le Vet Beheer B.V.	Sedastart 1 mg/ml solution for injection for cats and dogs	Medetomidine hydrochloride	Sedative, analgesic for use in the restraint of dogs and cats
Ceva Animal Health (NZ) Limited	SedaMed Medetomidine Injection	Medetomidine hydrochloride	Sedative and analgesic for use in the restraint of dogs and cats

Randlab Australia Pty Ltd	Sedator Injection	Detomidine hydrochloride	For mild to heavy sedation and for analgesia in cattle and horses. For control of pain in uncomplicated colic in horses.

Antidotes for short term pre-anaesthetic sedatives

Supplier	Product	Active Ingredient	Clinical Indications
Ferrari Animal Health Pty Ltd	Mobitor Injection	Atipamezole hydrochloride	For parenteral use in reversing and abolishing the effects of medetomidine hydrochloride and dexmedetomidine hydrochloride in dogs and cats
Le Vet Beheer B.V.	Sedastop 5 mg/ml solution for injection for cats and dogs	Atipamezole hydrochloride	For parenteral use in reversing and abolishing the effects of medetomidine hydrochloride (SEDASTART) and dexmedetomidine hydrochloride in dogs and cats
Ceva Animal Health (NZ) Limited	Reversamed Injection for Dogs and Cats	Atipamezole hydrochloride	For reversing the sedative and analgesic effects of medetomidine HCl in dogs and cats

Cattle anthelmintics

Supplier	Product	Active Ingredient	Clinical Indications
Alleva	Boss Injection	Eprinomectin Ivermectin Levamisole Phosphate	For the treatment and control of internal and external parasites of cattle

Alleva	Boss Pour on	Abamectin Levamisole	For the treatment and control of internal and external parasites of cattle
Horizon Agresources NZ	Doraject	Doramectin	For the treatment and control of doramectin-sensitive internal parasites of cattle
WSD Agribusiness Pty Ltd	BoviPor	Abamectin	For the control and treatment of internal and external parasites in cattle and deer
Nexan Corporation Limited	Active+ Aba Pour On	Abamectin	For the treatment and control of internal and external parasites of cattle
Nexan Corporation Limited	Vetmed Abamectin Pour On	Abamectin	For the treatment and control of internal and external parasites of cattle
Senaca Holdings Ltd	Mectin Pour On	Abamectin	For the treatment and control of internal and external parasites of cattle

Intramammary antibiotics for lactating cows

Supplier	Product	Active Ingredient	Clinical Indications
Agrihealth NZ Limited	Lincovet	Neomycin sulphate Lincomycin hydrochloride	For the treatment of bovine mastitis caused by organisms sensitive to lincomycin and neomycin
Agrihealth NZ Limited	Albiotic	Neomycin present as neomycin sulphate	For the treatment of bovine mastitis caused by organisms sensitive to lincomycin and neomycin

		Lincomycin present as lincomycin hydrochloride	

Teat sealants

Supplier	Product	Active Ingredient	Clinical Indications
Schering-Plough Animal Health Ltd	SHUTOUT	Bismuth subnitrate	For the prevention of mastitis during the non-lactating (dry) period

Non-steroidal anti-inflammatory drugs

Supplier	Product	Active Ingredient	Clinical Indications
Chanelle Pharmaceuticals Manufacturing Limited	Canidryl Flavoured Tablets for Dogs	Carprofen	For the relief of chronic and acute pain and inflammation in dogs
Randlab Australia Pty Ltd	Meloxicam Paste	Meloxicam	Alleviation of inflammation and relief of pain in both acute and chronic musculoskeletal disorders
Randlab Australia Pty Ltd	Meloxicam Injection Anti-Inflammatory Injection	Meloxicam	Non-steroidal anti-inflammatory analgesic antipyretic for us in horses, cattle and pigs

Ceva Animal Health (NZ) Limited	Meloxidyl 1.5mg/ml Oral Suspension for Dogs	Meloxicam	Alleviation of inflammation and pain in both acute and chronic musculoskeletal disorders such as disco-spondylosis, arthropathy and soft tissue injury
Chanelle Pharmaceuticals Manufacturing Limited	Rheumocam 0.5 mg/ml oral suspension for cats	Meloxicam	Alleviation of inflammation and pain in chronic Musculo-skeletal disorders such as disco-spondylosis, arthropathy and soft tissue injuries in cats
Chanelle Pharmaceuticals Manufacturing Limited	Rheumocam 1.5 mg/ml oral suspension for dogs	Meloxicam	Alleviation of inflammation and pain in both acute and chronic musculoskeletal disorders in dogs
Chanelle Pharmaceuticals Manufacturing Limited	Rheumocam 2.5mg Chewable Tablets for Dogs	Meloxicam	Alleviation of inflammation and pain in both acute and chronic musculo-skeletal disorders
Chanelle Pharmaceuticals Manufacturing Limited	Rheumocam 20mg/ml solution for injection	Meloxicam	A non-steroidal anti-inflammatory analgesic - antipyretic for use in cattle, pigs and horses
Chanelle Pharmaceuticals Manufacturing Limited	Rheumocam 5mg/ml solution for injection	Meloxicam	For the alleviation of inflammation and pain in both acute and chronic musculoskeletal disorders and reduction of postoperative pain and inflammation following orthopaedic and soft tissue surgery in dogs
Chanelle Pharmaceuticals	Rheumocam 1mg Chewable Tablets for Dogs	Meloxicam	Alleviation of inflammation and pain in both acute and chronic musculo-skeletal disorders

Manufacturing Limited			
Agrihealth NZ Limited	Melovem 30	Meloxicam	Non-steroidal anti-inflammatory, analgesic and antipyretic injection for use in cattle, pigs and horses
Agrihealth NZ Limited	MeloxiVet	Meloxicam	Non-steroidal anti-inflammatory, analgesic and antipyretic injection for use in cattle, pigs and horses
Randlab Australia Pty Ltd	Equine Bute Paste	Phenylbutazone	An aid in the treatment of Musculo-skeletal conditions and soft tissue injuries in horses where anti-inflammatory, antipyretic and analgesic activity would be beneficial
International Animal Health Products Pty Ltd	Butin Anti-inflammatory Oral Paste	Phenylbutazone	Treatment of acute laminitis, bone and joint inflammation, and musculoskeletal disorders, as well as in soft tissue inflammation, tendoritis, acute tenosynovitis
Vetoquinol New Zealand Limited	Tolfedine CS	Tolfenamic acid	As an aid in the treatment of pneumonia and acute mastitis in cattle and metriris-mastitis-agalactia in pigs

Oral horse worming products

Supplier	Product	Active Ingredient	Clinical indications
Seneca Holdings Ltd	Abagel Plus for Horses	Abamectin Praziquantel	Effectively controls gastrointestinal roundworms, including the arterial stages of Strongylus vulgaris, small strongyles (including benzimidazole resistant strains), lungworm and bots in horses. Also controls horse tapeworms, Anopocephala perfoliate.
Senaca Holdings Ltd	Vet Direct Abamectin Wormer, Bot + Tape	Abamectin Praziquantel	Controls parasitic worms and bots including tapeworm and round worm

Senaca Holdings Ltd	Detonate	Ivermectin	Controls gastrointestinal roundworms, including the arterial stages of Strongylus vulgaris, small strongyles (including benzimidazole resistant strains), lungworm and bots in horses.
Robyn Bates Pharmaceuticals	Prazivec Oral Paste for Horses	Ivermectin Praziquantel	For the treatment and control of roundworm, tapeworm (including arterial larval stages of Strongylus vulgaris and benzimidazole resistant small strongyles), and bots in horses

Intramammary antibiotics for dry cows

Supplier	Product	Active Ingredient	Clinical Indications
None registered			

Sheep anthelmintics

Supplier	Product	Active Ingredient	Clinical Indications
Alleva	Marathon LA injection	Moxidectin	For the control and treatment of internal parasites, nasal bot and itch mite in sheep
Horizon Agresources	Moxi LA Injection for Sheep	Moxidectin	For the treatment and control of internal parasites, nasal bot and itch mite in sheep
Horizon Agresources	Moxisure Injection for Sheep	Moxidectin	For the treatment and control of internal parasites, nasal bot and itch mite in sheep
Donaghys Limited	Evolve Tape Hi Min	Abamectin	For the treatment and control of mature and immature stages of all major gastrointestinal parasites in sheep, including those with single or dual resistance to the benzimadole, levamisole/morantel and avermectin/milbemycin families. Also treats and controls lungworm,

			itch mite, nasal bot, tapeworms, and as an aid in the control of adult liver fluke infestation in sheep
Donaghys Limited	Evolve Sheep Hi Min	Abamectin Oxfendazole Levamisole hydrochloride	For the treatment and control of gastrointestinal parasites in sheep, including those with single or dual resistance to Avermectin/Milbemycin, Benzimidazole, or Levamisole/Morantel families
Donaghys Limited	Saturn Sheep Hi Min	Abamectin Levamisole hydrochloride	For the treatment and control of mature and immature stages of all gastrointestinal roundworms and lungworms in sheep, including those parasites with single resistance to either levamisole/morantel or avermectin/milbemycin anthelmintic families
Nexan Corporation Limited	Vetmed Triplemax Sheep Oral	Abamectin Oxfendazole Levamisole hydrochloride	For the treatment and control of internal parasites in sheep
WSD Agribusiness Pty Ltd	Optimec Hi Min	Abamectin	For the treatment and control of abamectin sensitive strains of internal parasites (roundworms and lungworms) of sheep (including benzimidazole and levamisole resistant strains)
Chemvet (NZ) Ltd	Rycomectin	Abamectin	For control of susceptible gastrointestinal roundworms and lungworm in sheep and lambs, including benzimidazole and levamisole resistant strains

CONFIDENTIAL ANNEXURE L: SCHEDULE OF CONFIDENTIAL INFORMATION

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CONFIDENTIAL ANNEXURE M: EXAMPLES OF PURCHASING POWER OF CUSTOMERS

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