

Séance de l'Académie vétérinaire de France et de la Société
Franco-Japonaise des Sciences Vétérinaires in 2016



Animal medicines born in Japan, and then grown and bloomed in the world

June 5, 2016

Dr. Yuki UJIMASA, DVM, MS
AHRMS, Inc.

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YUKI UJIMASA, DVM, MS

Family

- 1 wife, 1 cat, and 3 dogs

Qualification

- D.V.M.
- Master of Science

Work Experience

- 1988 - 2005: Dainippon Pharmaceutical Co., Ltd.
- 2006 - Present: President, AHRMS, Inc.
- 2010 - Present: Board member, EBM Trading, K.K.
- 2011 - Present: Secretary General, CJVM
- 2013 - Present: President, Vm3, Inc.
- 2014 - Contract with Brakke Consulting, Inc.

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AHRMS, Inc.



- Foundation: January, 2006
- Consulting Services:
 - Support for Business Licenses
 - Support for Marketing Approvals
 - Strategic Planning Assistance
 - Introduction of New Products/ Molecules
 - Agent Business with Vetnosis, Inc.

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AHRMS Worldwide Network



Brakke Consulting, Inc.: Leading Consulting Firm for Animal Industries in the world
CjVM: Consortium for Japanese Veterinary Medicinal Products Manufacturers
Vetnosis: Research and Publishing Company for World Animal Industries
VICH: International Coordination and Harmonization for Veterinary Medicines

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Japanese Animal Health Market

- Worldwide Animal Health Market
\$27.6 billion* (in 2015)
- Japanese Animal Health Market
\$1.5 billion* (in 2014)

5.5 % of the worldwide market

*: incl. medicinal feed additives
(from various sources)

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The Past but Great Success

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Endoparasiticide (1)

- Discovery of the avermectin family was made by Dr. Satoshi Omura of Kitasato University and Dr. William C. Campbell of the Merck Institute.
- Dr. Omura identified avermectin from the bacterium *Streptomyces avermitilis* in the soil collected near Kawana GC.

(Source: Wikipedia)

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Endoparasiticide (2)

- Dr. Campbell purified avermectin from cultures obtained from Dr. Omura and led efforts leading to the discovery of ivermectin, a derivative of greater potency and lower toxicity.
- Half of the 2015 Nobel Prize in Physiology or Medicine was awarded jointly to Drs. Campbell and Omura for discovering avermectin.

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Dr. Omura and his groups' achievements

- ivermectin
 - Total Sales: US\$ 16.4 bil.
- tylosin
- tilmicosin
 - Total Sales: US\$ 4.1 bil.
- nanaomycin

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Other license transactions

- Pyriproxyfen: Insect Growth Regulator (IGR) invented and developed by **Sumitomo Chemical**.
 - At first, it was used for pesticide/agrichemical by SC.
 - **Virbac SA** found its marketability as animal medicine, and received the license from SC.
 - Now, it is used for many animal medicines worldwide, such as **Virbac's Cyclo**®, **Bayer's Advantage**® Plus, **Ceva's Vectra**® 3D, and so on.

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Other license transactions

- ACE Inhibitors for CHF in Japan -

- Enacard® (enarapril) by Merial
- Fortekor® (benazepril) by Elanco (Novartis)
- Vasotop® (ramipril) by MSD
- Apinac® (alacepril) by **DS Pharma Animal Health**
- Aceworker® (temocapril) by Elanco (**Daiichi Sankyo**)
- Prilium® (tanatril) from **Tanabe** to Vetoquinol

Tanabe's Tanatril was licensed to Vetoquinol, and marketed as "Prilium®".

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Other license transactions

- FQ Antibacterial Agents in Japan -

- Baytril® (enrofloxacin) by Bayer
- Advocin® (danofloxacin) by Zoetis
- Zeniquin (marbofloxacin) by Zoetis
- Victas® (orbifloxacin) by **DS Pharma Animal Health**

Orbifloxacin was licensed to MSD, and marketed as “Orbax®”.

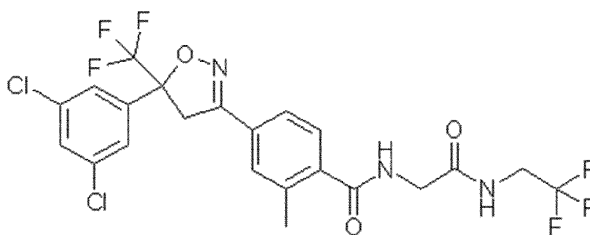
- Lomeone® (lomefloxacin) by **Senju Pharmaceutical**
- Infec® (norfloxacin) by **Meiji Seika Pharma**
- Marbocyl® (marbofloxacin) by **Meiji Seika Pharma**

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Recent Smash Hit

- Long Acting Ectoparasiticide -

- Fluralaner: A systemic insecticide and acaricide that was invented by **Nissan Chemical**.
 - It is manufactured by Nissan Chemical and supplied to MSD for the active ingredient of BRAVECTO®

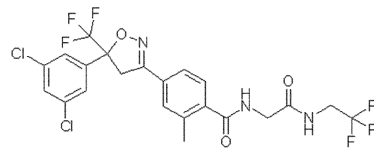


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 - Bravecto® was selected as the Best Companion Animal Product 2014 by Animal Pharm.



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Japanese particularity as source of new animal drug substances

- The Japanese market size for human ethical drugs is the World 2nd and exceeds US\$ 91 bil.
- Many domestic small to mid-sized human pharmaceutical companies and chemical companies exist in Japan.
- They have been trying many candidates by screening new molecules for many years. So, some can be candidates for animals.

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The Latest Successes (1)

- How do you pharmacologically kill pain in the dogs with a drug?
 - Narcotic Drug
 - Corticosteroids
 - NSAIDs
 - COX2 NSAID
 - COXIB NSAID
 - PGE2 Receptor Antagonist
- Inhibition of PGs synthesis by blocking cyclooxygenase
- New Concept!**

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Latest Successes (1)

- Aratana Therapeutics, Inc. (NASDAQ: PETX) received the following approvals from FDA:
 - Galliprant® (grapiprant) for osteoarthritis pain in dogs in March 2016
 - It acts PGE2 Receptor Antagonist.
 - It will be launched in fall 2016.

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Latest Successes (2)

- Entyce® (capromorelin) for appetite stimulation in dogs in May 2016, and launched in February 2017.

The product will be an oral liquid that works by mimicking ghrelin, the hunger hormone, to stimulate appetite.

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Recent Great Successes (2)

- Both of which RaQualia Pharma licensed to Aratana.
- RaQualia Pharma, Inc. is a drug discovery company founded in 2008 in Japan.



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My mission is to contribute animal health industries not only in Japan but in the world.

If you are interested in new products licensed by Japanese companies, please feel free to contact me.

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Thank you for your attention.
Merci de votre aimable attention.

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