Delivering new beginnings for pets, for the people who love them and the veterinarians who care for them.
Safe Harbor Statement

Special Note Regarding Forward-Looking Statements
This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements contained in this presentation that do not relate to matters of historical fact should be considered forward-looking statements, including without limitation statements with respect to anticipated financial performance, our ability to bring innovative products to the market; steps necessary for and timing of regulatory submissions and approvals of therapeutic candidates; study, development and commercialization of therapeutic candidates, including potential expansion of the label for existing therapeutics; our belief that Galliprant has the potential to become one of the top pet therapeutics launched in the United States in the past decade and statements regarding the Company’s plans and opportunities, including, without limitation, offering innovative therapeutics that help manage pet’s medical needs safely and effectively and that result in longer and improved quality of life for pets.

These forward-looking statements are based on management’s current expectations. These statements are neither promises nor guarantees, but involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements, including, but not limited to, the following: our history of operating losses and our expectation that we will continue to incur losses for the foreseeable future; failure to obtain sufficient capital to fund our operations; risks relating to the impairment of intangible assets, including BLONTRESS, TACTRESS, AT-007 and AT-011; risks pertaining to stockholder class action lawsuits; unstable market and economic conditions; restrictions on our financial flexibility due to the terms of our credit facility; our substantial dependence upon the commercial success of our therapeutics; development of our biologic therapeutic candidates is dependent upon relatively novel technologies and uncertain regulatory pathways, and biologics may not be commercially viable; denial or delay of regulatory approval for our existing or future therapeutic candidates; failure of our therapeutic candidates that receive regulatory approval to obtain market approval or achieve commercial success; product liability lawsuits that could cause us to incur substantial liabilities and limit commercialization of current and future therapeutics; failure to realize anticipated benefits of our acquisitions and difficulties associated with integrating the acquired businesses; development of pet therapeutics is a lengthy and expensive process with an uncertain outcome; competition in the pet therapeutics market, including from generic alternatives to our therapeutic candidates, and failure to compete effectively; failure to identify, license or acquire, develop and commercialize additional therapeutic candidates; failure to attract and retain senior management and key scientific personnel; our reliance on third-party manufacturers, suppliers and partners; regulatory restrictions on the marketing of our therapeutic candidates; our small commercial sales organization, and any failure to create a sales force or collaborate with third-parties to commercialize our therapeutic candidates; difficulties in managing the growth of our company; significant costs of being a public company; risks related to the restatement of our financial statements for the year ended December 31, 2013, and the identification of a material weakness in our internal control over financial reporting; changes in distribution channels for pet therapeutics; consolidation of our veterinarian customers; limitations on our ability to use our net operating loss carryforwards; impacts of generic products; safety or efficacy concerns with respect to our therapeutic candidates; effects of system failures or security breaches; delay or termination of the development of grapiprant therapeutic candidates and commercialization of grapiprant products that may arise from termination of or failure to perform under the collaboration agreement and/or the co-promotion agreement with Elanco; failure to obtain ownership of issued patents covering our therapeutic candidates or failure to prosecute or enforce licensed patents; failure to comply with our obligations under our license agreements; effects of patent or other intellectual property lawsuits; failure to protect our intellectual property; changing patent laws and regulations; non-compliance with any legal or regulatory requirements; litigation resulting from the misuse of our confidential information; the uncertainty of the regulatory approval process and the costs associated with government regulation of our therapeutic candidates; failure to obtain regulatory approvals in foreign jurisdictions; effects of legislative or regulatory reform with respect to pet therapeutics; the volatility of the price of our common stock; our status as an emerging growth company, which could make our common stock less attractive to investors; dilution of our common stock as a result of future financings; the influence of certain significant stockholders over our business; and provisions in our charter documents and under Delaware law could delay or prevent a change in control. These and other important factors discussed under the caption “Risk Factors” in the Company’s Annual Report on Form 10-K filed with the Securities and Exchange Commission, or SEC, on March 14, 2017, along with our other reports filed with the SEC could cause actual results to differ materially from those indicated by the forward-looking statements made in this presentation. Any such forward-looking statements represent management’s estimates as of the date of this presentation. While we may elect to update such forward-looking statements at some point in the future, we disclaim any obligation to do so, even if subsequent events cause our views to change, except as required under applicable law. These forward-looking statements should not be relied upon as representing our views as of any date subsequent to the date of this presentation.
Our Market

65% Households with Pets

86M Households with Pets
78M Households with Pets

Pet Owner Spend - US

Source: APPA March 2017

Provided June 7, 2017
The Evolution of Veterinary Care

Historical Situation
- Outside pets
- Rural
- Puppies & kittens
- Wellness (vaccines, parasites)
- Generalist veterinarians
- Clinics

Emerging Trends
- Inside pets
- Urban
- Mature pets
- Disease states
- Specialist veterinarians
- Multi-specialty hospitals
What Problem Needs Solving?

Innovation Gap

Source: United States Government Federal Register

*New Molecular Entities are products that contain active moieties that have not been approved by FDA previously, either as a single ingredient drug or as part of a combination product

** New Chemical Entities/Biopharmaceuticals defined as new chemical entities not previously approved in humans or animals (excluding parasite drugs)

"It's always 'Sit,' 'Stay,' 'Heel'—never 'Think,' 'Innovate,' 'Be yourself.'"
## What are the Precedents?

### Rimadyl® (carprofen)
- Launched 1996
- Continues to grow despite generics and other cox-inhibitors
- Created a $300M market in U.S.
- Use limited by perceived tolerability issues

### Previcox® (firocoxib)
### Metacam® (meloxicam)
- Companies try to differentiate their products
- Consumer advertising on the disease state grew the overall category
- NSAID market and nutraceuticals have grown for two decades

### Vetmedin®
- Pioneer in category of CHF
- Launched in 2007 in U.S.
- Shown to increase median survival
- Sales estimated $50M+
- Other products in cardiology are mostly generic

### Apoquel® (oclacitinib)
- Early success creating market
- Launched in 2014
- Product initially “on allocation” (supply-constrained)
- Peak sales estimated > $300M
- Starting dose is twice daily
Our Roadmap

1. Defining and selling our model
   - Success in the clinic
   - Regulatory approvals
   - Expand the portfolio
   - Shape the commercial opportunity
   - Product level & ecosystem-wide partnerships

2. Proving our model
   - Demonstrate high revenue growth
3. Achieving financial viability
   - Achieve industry margins
   - Operate in a highly capital-efficient manner
   - Maintain a competitive advantage
4. Leveraging the brand

Provided June 7, 2017
## Our Development Efforts

<table>
<thead>
<tr>
<th>10+</th>
<th>5</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>POTENTIAL PIPELINE PRODUCTS</td>
<td>THREE FDA APPROVED AND TWO USDA FULLY LICENSED PRODUCTS</td>
<td>PRODUCTS INVESTIGATED IN CLIENT-OWNED PATIENTS</td>
</tr>
<tr>
<td>USDA LICENSED ESTABLISHMENT</td>
<td>10+ NEW MOLECULAR ENTITIES</td>
<td>NETWORK OF CROs IN U.S. AND EU DOING CLINICAL &amp; PRE-CLINICAL WORK</td>
</tr>
<tr>
<td>4 PIVOTAL STAGE PROGRAMS</td>
<td>WORLDWIDE MANUFACTURING CMOs</td>
<td>5 CMC PACKAGES &amp; FOUR DRUG MASTER FILES</td>
</tr>
</tbody>
</table>

**PIVOTAL STAGE PROGRAMS**

**NETWORK OF CROs IN U.S. AND EU DOING CLINICAL & PRE-CLINICAL WORK**

**WORLDWIDE MANUFACTURING CMOs**

**CMC PACKAGES & FOUR DRUG MASTER FILES**
Our Commercial Strategy

Marketing
Builds Brand Awareness

Sales
Gain Trial, Penetration and Retention

Sales Operations
Enable and Measure

Veterinary Services
Educate and Train

Veterinarians
Our Sales Channel

- Aratana Sales
- Co-Promote or CSO
- Distributors
- Corporate Sales
- eCommerce

Dispensed in Clinic/Pharmacy/Home Delivery

Pet Owners

Provided June 7, 2017
Go-to-Market Paradigms

Relevance to Specialists

<table>
<thead>
<tr>
<th>Primary Care Adoption</th>
<th>Specialty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower</td>
<td>Galliprant (gripiprant tablets) Co-promotion &amp; Distribution</td>
</tr>
<tr>
<td>Higher</td>
<td>entyce (capromorelin oral solution) Direct &amp; Distribution +/− Contract Selling</td>
</tr>
<tr>
<td>Lower</td>
<td>nocita (bupivacaine liposome injectable suspension) Direct</td>
</tr>
<tr>
<td>Higher</td>
<td>AT-014 Canine Osteosarcoma Vaccine Direct</td>
</tr>
</tbody>
</table>

Provided June 7, 2017
Therapeutics Approach
General Practitioners & Specialists

- Generate corporate brand awareness and confidence
- Educate on new therapeutic alternatives
  - Advisory boards
  - Medical conferences
  - Veterinary Medical Liaisons
- Generate therapeutic awareness
  - Trade shows
  - Publications
  - Aratana digital library
- Gain therapeutic trial
  - Specialist reps
  - Aratana continuing education
- Support the experience
Our FDA-Approved Therapeutics
Co-Promotion with Elanco

Treat with Galliprant® (grapiprant tablets) from its earliest diagnosed stages of canine osteoarthritis (OA)

- Galliprant is a first-in-class piprant; a non-COX-inhibiting prostaglandin receptor antagonist (PRA)
- Galliprant does not inhibit the production of many housekeeping prostanoids that maintain homeostatic functions
- It specifically blocks the EP4 receptor, the primary mediator of canine OA pain and inflammation
- Galliprant is indicated for the control of pain and inflammation associated with osteoarthritis in dogs
The mode of action targets canine OA pain and inflammation while reducing the impact on GI, kidney and liver homeostasis\textsuperscript{1,2}

Suitable for patients as young as 9 months of age

The most common adverse reactions reported were vomiting, diarrhea, decreased appetite and lethargy

Proven safe in a 9-month safety study in healthy dogs at up to approximately 15x the recommended therapeutic dose

Most dogs can be dosed with a whole or half tablet*

*Dosage should be calculated in half-tablet increments. Dogs weighing less than 8 lbs cannot be accurately dosed.

### Aratana Financials for GALLIPRANT®

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020 &amp; Beyond</th>
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<tbody>
<tr>
<td><strong>Co-promote</strong></td>
<td></td>
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<td></td>
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<tr>
<td>$45M upfront</td>
<td></td>
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<td></td>
<td></td>
<td>Mid single digit % Fixed Net Sales fee (in-lieu of GP %)</td>
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<tr>
<td>($38M recorded in revenue)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2028</td>
</tr>
<tr>
<td>25% of Gross Profit</td>
<td></td>
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<tr>
<td><strong>Royalties</strong></td>
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<tr>
<td>Mid-single digit royalty on Net Sales (US)</td>
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<td></td>
<td></td>
<td>Low double digit royalty on Net Sales (US)</td>
<td>Until patent expires</td>
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<tr>
<td>Low double digit royalty on Net Sales (OUS)</td>
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<tr>
<td><strong>Milestones</strong></td>
<td></td>
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<tr>
<td>+ $4M for EU Approval for Inflammation Indication</td>
<td></td>
<td></td>
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<td>Up to $75M for WW Revenues exceeding certain thresholds if by 2021</td>
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<tr>
<td>+ $4M for Manufacturing</td>
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<tr>
<td><strong>Other</strong></td>
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<tr>
<td>Aratana 25% of development cost / Elanco 75% (Aratana cap $7M)</td>
<td></td>
<td></td>
<td></td>
<td>Elanco 100% of development cost</td>
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<tr>
<td><strong>Product Sales</strong></td>
<td></td>
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<td></td>
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<tr>
<td>Finished Goods inventory sold to Elanco at modest markup until Elanco assumes responsibility or 12/18</td>
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*Provided June 7, 2017*  
*Illustrative only.*
A new, unique first-in-class, appetite stimulant in dogs

- **First-in-class** prescription therapeutic
- **Ghrelin receptor agonist** (works by mimicking ghrelin, the hunger hormone)
- Oral liquid solution, **once daily dosing**
- Multiple packaging sizes
- FDA approved in May 2016
Underlying conditions that can cause inappetence

- Dehydration
- Fever
- Gastroenteritis
- Medications
- Nasal disease
  - Causing inability to smell
- Nausea
- Neurologic disease
  - Especially damage to the appetite center

Pain
- Post-operative ileus
- Post-surgery

Psychological
- Aging
- Change in diet
- Changes in routine
- Environment changes
  - Boarding
  - Unfamiliar surroundings

Systemic or chronic disease
- Autoimmune disease
- Bone disease
- Cancer
- Endocrine disease
- Gastrointestinal disease
- Heart disease
- Infectious disease
- Kidney disease
- Respiratory disease
Limited treatment options*

- With no approved drugs to stimulate appetite, clinicians were using drugs extra-label to treat inappetence
- 68% of veterinarians reported they were unsatisfied with products available to treat inappetence\(^1\)
- 81% of veterinarians expressed a need for an effective product indicated to treat inappetence\(^1\)

---

Question 1: How satisfied are you with the products currently available to you to treat inappetence in dogs and cats?

Question 2: To what degree do you feel there is a need in the marketplace for a product indicated to treat inappetence in dogs and cats?

(n=166)

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*Prior to the FDA approval of ENTYCE® (capromorelin oral solution) on May 16, 2016.

1. Aratana data file.

IMPORTANT SAFETY INFORMATION: ENTYCE® (capromorelin oral solution) is for use in dogs only. Do not use in breeding, pregnant or lactating dogs. Use with caution in dogs with hepatic dysfunction or renal insufficiency. Adverse reactions in dogs may include anorexia, vomiting, polydipsia, and hypocalcaemia. Should not be used in dogs that have a hypersensitivity to capromorelin. Please see the full Prescribing Information for more detail.
ENTYCE® (capromorelin oral solution)

A new, unique, first-in-class appetite stimulant for dogs

- The ONLY FDA-approved veterinary therapeutic indicated for stimulation of appetite in dogs
- Fulfills an unmet need to help veterinarians restore appetite
- A ghrelin receptor agonist, ENTYCE works by mimicking ghrelin (the “hunger hormone”)

The mechanism of action of capromorelin
Turn on appetite
Finally, appetite stimulation is in your control

ENTYCE® (capromorelin oral solution) is for use in dogs only. Do not use in breeding, pregnant or lactating dogs. Use with caution in dogs with hepatic dysfunction or renal insufficiency. Adverse reactions in dogs may include anorexia, vomiting, polydipsia, and hyperesthesia. Should not be used in dogs that have a hypersensitivity to capromorelin. Please see the full Prescribing Information for more detail.
Post-Operative Pain in Dogs

A long-acting local anesthetic formulation of bupivacaine for single-dose infiltration into the surgical site to provide local post-operative analgesia for cranial cruciate ligament surgery in dogs.

- Bupivacaine in a liposome injectable suspension that releases over time
- Long-acting analgesia lasts up to 72 hours post-surgery
- Single dose administered by infiltration injection into the tissues of a CCL surgical site during closure
Extended Post-Operative Pain Relief: Local Anesthetics

Opioid

NSAID

Local Anesthetic
Transform the way you control CCL* post-operative pain

*Craniocaudal ligament

IMPORTANT SAFETY INFORMATION: NOCITA® (bupivacaine liposome injectable suspension) is for use in dogs only. Do not use in dogs younger than 5 months of age, dogs used for breeding, or in pregnant or lactating dogs. Do not administer by intravenous or intra-articular injection. Adverse reactions in dogs may include discharge from incision, incisional inflammation and vomiting. Avoid concurrent use with bupivacaine HCl, lidocaine or other amide local anaesthetics. Please see the full Prescribing Information for more detail.
Raising the standard of care

**NOCITA** is a long-acting local anesthetic that gives you the control of extended-release bupivacaine, providing up to 72 hours of **post-operative pain relief** for cranial cruciate ligament surgery with one dose.

- Extended duration of action assists in preventing analgesia gaps in the first 72 hours post-surgery
- Provides a bridge between in-clinic pain control after patient is discharged
- Single dose administered during cranial cruciate ligament surgery closure by infiltration into the tissues for post-operative pain control
Therapeutic Pipeline

FDA CVM Therapeutics

Pilot Studies ➔ Pivotal Studies ➔ Phased Submission ➔ Commercial

AT-002
Management of Weight Loss in CKD

AT-003
Post-Operative Pain

AT-006
Feline Herpes Virus

AT-016
Allogeneic Stem Cell OA

AT-018
Atopic Dermatitis

USDA CVB Therapeutics

Field Safety & Efficacy ➔ Conditional and/or Full Licensure ➔ Extended Field Efficacy and Post Market Studies ➔ Commercial

AT-014
Canine Osteosarcoma Vaccine

Other Orthopedic Surgeries
nocita
(3x injected/dose reversible suspension)
## Upcoming Regulatory Milestones

**Pivotal Stage FDA-Regulated Therapeutics**

<table>
<thead>
<tr>
<th></th>
<th>capromorelin (AT-002)</th>
<th>bupivacaine liposome injectable suspension (AT-003)</th>
<th>AT-016 Allogeneic Stem Cell for Osteoarthritis in Dogs</th>
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<tbody>
<tr>
<td><strong>Pilot Studies</strong></td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td><strong>Pivotal Safety Study</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td><strong>Pivotal Efficacy Study</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Results anticipated mid-2017</td>
<td>Results anticipated in 2017</td>
</tr>
<tr>
<td><strong>CMC Technical Section</strong></td>
<td></td>
<td>Same as dog</td>
<td></td>
</tr>
<tr>
<td><strong>Safety Technical Section</strong></td>
<td></td>
<td></td>
<td>Submit to CVM for review</td>
</tr>
<tr>
<td><strong>Effectiveness Technical Section</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Administrative NADA</strong></td>
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</table>
AT-014
Canine Osteosarcoma Vaccine

An investigational immunotherapeutic vaccine to target HER2-expressing canine osteosarcoma licensed from Advaxis

- Preliminary data suggest AT-014 is safe and well-tolerated, and may be able to delay or prevent metastatic disease and prolong overall survival in dogs with osteosarcoma that had minimal residual disease following tumor removal
- Osteosarcoma is the most common primary bone tumor in dogs and approximately 10,000 dogs a year are diagnosed in the U.S. (predominantly middle to older-aged dogs and larger breeds)\(^1\)
- Current standard of care treatment is amputation immediately after diagnosis, followed by chemotherapy and sometimes radiation
- Aratana anticipates conditional licensure by the USDA in the second half of 2017

\(^1\) Small Animal Clinical Oncology (5th edition); Stephen Withrow, David Vail, Rodney Page; Elsevier 2013; page 463
AT-014 uses a live vector to access antigen-presenting cells

- The activated cells secrete TAA-fusion proteins and may trigger innate, adaptive pathogen immune response
- As a result, the tumor cells are “seen” by the immune system as pathogen-infected and are targeted by T-cells
AT-016
Allogeneic Stem Cell Therapeutic

An investigational adipose-derived allogeneic stem cell therapeutic for the treatment of osteoarthritis in dogs

- Provides veterinarians with point-of-care treatment as a single intra-articular injection in the clinic
- May have the potential to regenerate normal tissue, however further studies are needed
- Pilot study data indicates AT-016 may provide relief of clinical signs (i.e. pain, disability)
- More than 20% of dogs in the U.S. have been diagnosed with osteoarthritis
- Aratana’s collaborator, VetStem, is enrolling dogs in a pivotal field effectiveness study and anticipates results from the study in 2017
AT-016
Allogeneic Stem Cell Therapeutic

Allogeneic Stem Cell Process

- Collect donor fat tissue
- Isolate and expand stem cells using GMP process
- Harvest, wash, formulate and freeze stem cells
- Store stem cells with Cryostorage and Distribute to clinics
Commercial Manufacturing
Q1 Financial Summary

- Total Net Revenues of approximately $3.8 million
  - ~$2.5 million of GALLIPRANT® finished goods product sales
  - ~$0.9 million in GALLIPRANT licensing and collaboration revenues
  - NOCITA and other products sales
- Operating (R&D and SG&A) expenses of approximately $12.1 million
- Net loss of $12.6 million or $0.34 diluted loss per share
- As of March 31, 2017, the Company had approximately $68.4 million of cash, cash equivalents, restricted cash and short-term investments
  - Current cash and net proceeds of approximately $24.4M from May 2017 registered direct offering expected to fund obligations through 2018 under current operating plan
- 2017 Expense Outlook
  - 2017 FY operating expenses of approximately $45 million (which includes ~$10 million of non-cash expenses)
  - Additional ~$10 million of net cash outflows (contractual milestones and working capital expenditures, net of modest positive gross margins)