Recognizing the serious threat of bacterial infections, Paratek is dedicated to providing solutions that enable positive outcomes and lead to better patient stories.
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Certain statements in this presentation, including responses to questions, contain or may contain “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Examples of such statements include, but are not limited to, statements about our strategy, future operations, short and long term product revenue guidance, funding projections, prospects, including plans, objectives of management, availability of data from our clinical studies, potential use of our product candidates, including Omadacycline and Sarecycline, the market acceptance of our product candidates, the strength of, and protection offered by, our intellectual property position, the potential clinical risks and efficacy of, and market opportunities for, our product candidates, the timing and stability of our supply chain, the timing of clinical development of, and regulatory approval for, our product candidates, and the nature and timing of our collaboration agreements with respect to our product candidates. The words “anticipate,” “estimate,” “expect,” “potential,” “will,” “project” and similar terms and phrases are used to identify forward-looking statements. These statements are based on current information and belief and are not guarantees of future performance. Our ability to predict results, financial or otherwise, or the actual effect of future plans or strategies, is inherently uncertain and actual results may differ from those predicted depending on a variety of factors. Our operations involve risks and uncertainties, many of which are outside our control, and any one of which, or a combination of which, could materially affect our results of operations or whether the forward-looking statements ultimately prove to be correct. Except as required by law, we undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise. Among the risks and uncertainties that could cause actual results to differ materially from those indicated by such forward-looking statements include: delays in clinical trials or unexpected results; the risk that data to date and trends may not be predictive of future results; the failure of collaborators to perform obligations under our collaboration agreements; our failure to obtain regulatory approval for our product candidates; if we obtain regulatory approval for our product candidates, the risk that the terms of such approval may limit how we manufacture and market our product candidates; delays in our supply chain, delays in undertaking or completing clinical trials; our products not gaining the anticipated acceptance in the marketplace or acceptance being delayed; our products not receiving reimbursement from healthcare payors; the effects of competition; our inability to protect our intellectual property and proprietary technology through patents and other means; the need for substantial additional funding to complete the development and commercialization of our product candidates; and the other risks described in the “Risk Factors” section and elsewhere in our Annual Report on Form 10-Q for the quarter ending September 30, 2018, our Form 10-K for the year ended December 31, 2017, and our other filings with the SEC.

PARATEK® and the Hexagon Logo are registered trademarks of Paratek Pharmaceuticals, Inc. NUZYRA™ and its design logo are trademarks of Paratek Pharmaceuticals, Inc.
Well-Positioned for Future Growth
Focused on Execution + New Value Creation

Near-term Execution

- NUZYRA U.S. Launch: “Hospital-to-Home”
- Prudent Operating Expense Management
- Non-Dilutive Sources of Capital

Future Value Creation

- NUZYRA Life-cycle Opportunities
- Bio-Defense
- Product / Pipeline Expansion

NUZYRA 100mg for injection & 150mg tablets
# Paratek Investment Highlights

**NUZYRA™: Potential Blockbuster Antibiotic in Both Hospital and Community Settings**

## Potential Blockbuster Antibiotic with NUZYRA
- 1st FDA approved and launched **once-daily oral & IV antibiotic** to treat both **CABP and ABSSSI** in nearly 20 years
- > $9 Billion Potential Addressable U.S. Market*

## Clear Registration Path: U.S. FDA and EU EMA
- NUZYRA U.S. FDA-approved in October 2018
- Filed in the EU in October 2018: EMA Approval Projected 2H 2019

## Additional Pipeline Potential
- **UTI Ph2 Studies Underway**: Data Expected in H2 2019
- **Biodefense opportunity**: Tx & Prophylaxis in Plague and Anthrax
- **Life-cycle opportunities**: Oral-Only CABP, Prostatitis, Rickettsial Disease

## Capital Efficient Commercial Model
- **Significant Value Proposition** = Hospitalization Minimization
- **Hospital Promotion** with no other Branded Once-Daily Broad-spectrum Oral + IV Competitors

## Non-dilutive Funding Options
- **Omadacycline**: Ex-U.S. Commercial Rights (Except Greater China)
- **Sarecycline**: Ex-U.S. Rights (PRTK)

(*) Paratek estimates based on 2015 AMR data current treatment failure rates and a Zyvox 2015 pricing analogue
# Paratek Pipeline

## Compelling Life-cycle Opportunities

<table>
<thead>
<tr>
<th>Research</th>
<th>Preclinical</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Registration</th>
<th>Marketed*</th>
<th>Commercial Rights</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUZRYA 100mg for injection &amp; 150mg tablets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(Global*)</td>
</tr>
<tr>
<td>SEYSARA™ (sarecycline)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(U.S.)</td>
</tr>
</tbody>
</table>

- **ABSSSI (IV & Oral) – QIDP + SPA**  
- **ABSSSI (Oral only) – QIDP**  
- **CABP (IV & Oral) – QIDP + SPA**  
- **uUTI (Oral only) – QIDP**  
- **Acute Pyelonephritis® (IV & Oral) – QIDP**  
- **Biodefense Pathogens**  
  - *FDA Animal Rule Applies*

- **Inflammatory Acne (Acne Vulgaris)**  
  - Marketed in the US only

---

*We have entered into a collaboration agreement with Zai Lab (Shanghai) Co., Ltd., for the greater China region.

# Acute pyelonephritis is a subset of cUTI; Acute pyelonephritis is a common subset of complicated UTI's where the kidneys become infected.*
## Strong Track Record Delivering on Milestones

### Omadacycline Events

<table>
<thead>
<tr>
<th>Events</th>
<th>Timing</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSSSI Phase 3 data: IV &amp; oral</td>
<td>Q2 2016</td>
<td>Positive Phase 3 data</td>
</tr>
<tr>
<td>UTI Phase 1b data: PK/PD</td>
<td>Q4 2016</td>
<td>Proof-of-principle</td>
</tr>
<tr>
<td>CABP Phase 3 data: IV &amp; oral</td>
<td>Q2 2017</td>
<td>Positive Phase 3 data</td>
</tr>
<tr>
<td>ABSSSI Phase 3 data: Oral-only</td>
<td>Q3 2017</td>
<td>Positive Phase 3 data</td>
</tr>
<tr>
<td>NDA approval</td>
<td>Oct 2018</td>
<td>Approved</td>
</tr>
<tr>
<td><strong>U.S. Launch</strong></td>
<td><strong>Feb 2019</strong></td>
<td><strong>Launched</strong></td>
</tr>
<tr>
<td>Projected EMA Approval</td>
<td>H2 2019</td>
<td></td>
</tr>
<tr>
<td>UTI Phase 2 data: uUTI &amp; Acute Pyelonephritis</td>
<td>H2 2019</td>
<td></td>
</tr>
</tbody>
</table>

### Sarecycline Events

<table>
<thead>
<tr>
<th>Events</th>
<th>Timing</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 3 efficacy studies</td>
<td>Q1 2017</td>
<td>Positive Phase 3 data</td>
</tr>
<tr>
<td>NDA Approval</td>
<td>Oct 2018</td>
<td>Approved</td>
</tr>
<tr>
<td><strong>U.S. Launch</strong></td>
<td><strong>Jan 2019</strong></td>
<td><strong>Launched</strong></td>
</tr>
</tbody>
</table>

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1. Almirall, LLC licensed U.S. development & commercial rights
Publication affirmation of the potential positive clinical impact NUZYRA can play in supporting the battle against the growing health challenge of antibiotic resistance

Once-daily oral and IV NUZYRA safe and effective in adults with pneumonia and skin infections, demonstrating clinical activity against relevant pneumonia- and skin-associated drug resistant bacteria

The New England Journal of Medicine
Published February 7, 2019

Omadacycline for Community-Acquired Bacterial Pneumonia

Roman Stets, M.D., Ph.D., Monica Popescu, M.D., Joven R. Gonong, M.D., Ismail Mitha, M.D., William Nseir, M.D., Andrzej Madej, M.D., Ph.D., Courtney Kirsch, B.S., Anita F. Das, Ph.D., Lynne Garrity-Ryan, Ph.D., Judith N. Steenbergen, Ph.D., Amy Manley, B.S., Paul B. Eckburg, M.D., Evan Tzanis, B.S., Paul C. McGovern, M.D., and Evan Loh, M.D.


Omadacycline for Acute Bacterial Skin and Skin-Structure Infections

William O’Riordan, M.D., Sinikka Green, M.D., J. Scott Overcash, M.D., Ivan Puljiz, M.D., Ph.D., Symeon Metallidis, M.D., J. Gardovskis, M.D., Lynne Garrity-Ryan, Ph.D., Anita F. Das, Ph.D., Evan Tzanis, B.S., Paul B. Eckburg, M.D., Amy Manley, B.S., Stephen A. Villano, M.D., Judith N. Steenbergen, Ph.D., and Evan Loh, M.D.

NUZYRA Commercial Opportunity

Potential Blockbuster Antibiotic in Both Hospital and Community Settings
**NUZYRA: A Modernized Tetracycline**

*Restoring Tetracycline Efficacy with Convenience Attributes*

---

**7-Position Modification:**

*Overcomes Efflux Pump*

- $T_{1/2} = 16$ Hours
- Clinical and in-vitro activity against select: Gram-positives, Gram-negatives, Atypical,
Drug-resistant strains
- Not metabolized
- No P450 Interactions
- Biliary and renal excretion

**9-Position Modification:**

*Overcomes Ribosomal Protection*
NUZYRA: A Modernized Tetracycline
Clinically Meaningful Attributes Drive Trial to Adoption

- Once-daily IV & Oral
- High & durable clinical efficacy
- No dosage modifications or monitoring in hepatic or renal impairment
- No QTc prolongation
- Low potential for DDIs
- No cases of *C. diff* reported in completed clinical program

- HCP confidence in treating patients
  - Efficacy
  - Safety
  - Tolerability

- Efficacy from hospital to home
  - Helps minimize hospitalization
Significant Unmet Need in CABP

Important Demography:
- Together with influenza, CABP is currently the eighth leading cause of death in the U.S.\(^2\)
  - All cause 30-day mortality in hospitalized patients exceeds 10%\(^3\)-\(^5\)
- Hospitalization Rates in CABP are increased in older populations and in populations with certain co-morbid conditions, including COPD, CHF, and diabetes\(^6\)

CABP Pathogens\(^1\):
- S. pneumoniae
- S. aureus
- Legionella pneumophila
- H. influenzae
- Enterobacteriaceae
- Mycoplasma pneumonia
- Other

NUZYRA Opportunities Beyond Current CABP Treatment Options: Addressing Limited Formulations with Safety Concerns

IDSA/ATS CABP Guideline:\(^1\)

**Inpatient Rx Non-ICU**\(^8\)

- Beta-lactam + Macrolide
- Respiratory Fluoroquinolone

**NUZYRA as First-Line Therapy:**

Monotherapy, IV + Oral, when β-lactam/Macrolide or Quinolones are not options

---

Significant Unmet Need in Skin Infections

Important Demography:

- Incidence of skin infections requiring hospitalization has substantially increased since the 2000’s\(^1,\)\(^3\)

- ~ 870,000 admissions, 6.3M office visits, and 3.4M emergency department visits annually\(^4\)

- Underlying co-morbidities including diabetes and vascular disease can complicate management and antibiotic selection\(^5\)

Common Skin Pathogens\(^2\)

- MRSA
- MSSA
- Beta-hemolytic Streptococci
- Other Gram positive
- Anaerobe
- Other Streptococci
- Gram negative

NUZYRA as First-Line Therapy:
Monotherapy, IV + Oral, when Vancomycin/Zyvox +/- Pip/Tazo are not options

IDSA SSTI Guideline:¹

| Inpatient Rx | Vancomycin +/- Pip/Tazo | OR | Zyvox +/- Pip/Tazo |

SSTI: Skin and Soft Tissue Infection, pip/tazo: piperacillin/tazobactam
NUZYRA Attributes Provide A Modern-Day Solution

Unmet Need Confirmed Through Physician Research

There are Unmet Needs that NUZYRA Will Address

- New Therapies to Overcome Drug Resistance
- More Oral Options
- Equivalent IV & Oral
- Confidence to Discharge Patient
- Modernized Tetracycline
- Known Safety Profile
- One Daily Dosing
- Reduced Hospital Length of Stay
- Reduced Usage of Multi-Drug Combinations
- Established Efficacy in a Monotherapy
- Reduced Nursing Time
- Lower C.diff Potential
- Alternative to Quinolones

Source: Paratek Sponsored Market Research
Success Begins in the Hospital with Specialists
“Go-Home” Strategy to Minimize Hospital Stay

Launch and Beyond
- IDs
- ER HCPs
- Hospitalists
- Pulmonologists
- PharmD IDs
- Allied HCPs

Year 2 and Beyond
- Internal Medicine
- Primary Care Provider
- NPs, PAs
- Urgent Care
Paving The Path For a Successful Launch
Market Access Followed by Commercial Execution for Demand Generation

2018

Oct ‘18 – Jan ‘19
Execution by Select Customer-Facing Team
✓ Contract negotiations
✓ Pre-orders
✓ Qualify key accounts
✓ Appointments

2019

February ‘19 - Forward
Execution by Sales Force & Market Access Customer-Facing Teams
✓ Continue institutional access
✓ Demand generation

2020
Focused Launch Targeting Early Adopters

Expansion to ~80 Representatives by Year End 2019

- Launched in **February 2019** with **40 Sales Specialists**
- Focusing on ‘Early Adopting’ HCPs in ‘high value’ institutions (~400), will drive institutional access
- By end of 2019, plan to have a total of **~80 Sales Specialists** targeting 800 institutions
- Inside Sales Team are supplementing efforts of Sales Specialists and broaden outreach

**Physician Segments**

- **Early Adopter**
  - Focused on broad spectrum and efficacy
- **Late Adopter**
  - Convenient features with IV to oral transition
  - Wait for Early Adopters to trial and use
  - Guideline and protocol driven
Field Force Has Two Simultaneous Objectives

**Institutional Access + Demand Generation**

**Institutional Access** + **Demand Generation** = **Adoption**

**Formulary/Protocols**
- Specialty Access & Buying

**Influencers:**
- IDs
- PharmD IDs
- Pharmacy Directors
- Microbiologists

**Trial & Usage**
- **Prescribers:**
  - IDs
  - ER
  - Hospitalists
  - Pulmonologists

**Adoption**
NUZYRA: As First-line Therapy
Targeted Patient Profiles

CABP

- Alternative to fluoroquinolone + β-lactam allergic
- Prior C. difficile infection

ABSSSI

- Suspected polymicrobial infection + β-lactam / sulfa allergic
- Renal insufficiency + SSRI
Ensure Seamless Transition from Hospital to Home
Continuity of Care Providing Access to Oral NUZYRA

**Continuity of Care**
- Prevent gap in care
- Sample / Bridge Program (as needed)

**Distribution Network**
- IV Formulation
  - National & Regional Distributors
- Oral Formulation
  - National & Regional Pharmacies
  - Program allows for oral formulation pick-up at retail locations or home delivery

**Reimbursement Support Services**
- HUB Services
  - Enables effective discharge process

**Affordability Program**
NUZYRA™ Approved, Launched & Available in the U.S.
First FDA approved, once-daily oral and IV antibiotic to treat both CABP and ABSSSI in nearly 20 years

Launched in U.S. February 2019
Additional Tools to Support NUZYRA Adoption
Early Indicators to Track Performance

**Covered Lives**
- 3 months Post-Launch
  - 33% of covered lives under contract
- 12 months Post-Launch
  - 66% of covered lives under contract

**Institutional Access**
- 12 months Post-Launch
  - 70% of 800 targeted institutions
NUZYRA: U.S. Timeline
Launched February 2019

- Commercial Team Hired
- Payer Mktg Team Hired
- Advisory Boards
- Market Research
- Disease State Education
- Initial Payer Research
- Campaign Development
- MSDs Hired/Deployed

- Account Teams Hired

- Trademark Review Complete
- Product Supply
- Payer Reimbursement and Trade Discussions
- KPI Dashboard

- Sales Management & ISR Hired

- Sales Teams Hired and Trained

- Finalize Pricing

- Budget Impact Model and Health Economic Analysis and Publications

- Scientific Exchange

- Publications/News Flow Continues

- Ad Comm Completed

- NDA Submitted

- NDA Accepted

2017
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
2018
2019

Launch

Trademark Review Complete

Launched

Complete

Planned

NUZYRA™
(omadacycline)
NUZYRA Efficacy and Safety in ABSSSI and CABP

Positive Benefit / Risk Profile
Omadacycline OASIS-1 Study Results
Achieved Primary Efficacy Endpoints for Both FDA and EMA

Early Clinical Response
- FDA Primary Endpoint: 84.8
- Linezolid: 85.5

Delta (95% CI) = -0.7 (-6.3, 4.9)

mITT PTE - Clinical Success
- FDA Primary Endpoint: 86.1
- Linezolid: 83.6

Delta (95% CI) = +2.5 (-3.2, 8.1)

CE-PTE - Clinical Success
- FDA Primary Endpoint: 96.3
- Linezolid: 93.5

Delta (95% CI) = +2.8 (-0.9, 7.1)

EMA Co-Primary Endpoints
Clinical Success at PTE by Baseline Pathogen (OASIS-1)
Highly Effective Across Key Gram (+) Skin Pathogens

<table>
<thead>
<tr>
<th>Baseline Pathogen</th>
<th>Omadacycline (N=228)</th>
<th>Linezolid (N=227)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N1</td>
<td>Favorable Response (n (%))</td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td>156</td>
<td>130 (83.3)</td>
</tr>
<tr>
<td>MRSA</td>
<td>69</td>
<td>57 (82.6)</td>
</tr>
<tr>
<td>MSSA</td>
<td>88</td>
<td>74 (84.1)</td>
</tr>
<tr>
<td>Streptococcus anginosus group</td>
<td>47</td>
<td>36 (76.6)</td>
</tr>
<tr>
<td>Streptococcus pyogenes</td>
<td>11</td>
<td>8 (72.7)</td>
</tr>
<tr>
<td>Enterococcus faecalis (VSE)</td>
<td>10</td>
<td>9 (90.0)</td>
</tr>
</tbody>
</table>

*10 or More Isolates for Omadacycline

*S. anginosus group consists of: S. anginosus, S. intermedius, and S. constellatus.
MRSA, methicillin-resistant *Staphylococcus aureus*; MSSA, methicillin-susceptible *Staphylococcus aureus*; VSE, vancomycin-susceptible enterococci.
Omadacycline OPTIC Study Results
Achieved Primary Efficacy Endpoints for Both FDA and EMA

Early Clinical Response - ITT
- Omadacycline: 81.1
- Moxifloxacin: 82.7

Clinical Success at PTE - ITT
- Omadacycline: 88.4
- Moxifloxacin: 85.2

Clinical Success at PTE - CE-PTE
- Omadacycline: 92.5
- Moxifloxacin: 90.5

Delta (95% CI)
- FDA Primary Endpoint: Omadacycline -1.6 (-7.1, 3.8)
- Clinical Success at PTE - ITT: Omadacycline +3.3 (-2.7, 9.3)
- Clinical Success at PTE - CE-PTE: Omadacycline +2.0 (-3.2, 7.4)

Omadacycline
Moxifloxacin
### Clinical Success at PTE by Baseline Pathogen* (OPTIC)

**Highly Effective Across Key Gram (+), Gram (−) & Atypical CABP Pathogens**

<table>
<thead>
<tr>
<th>Baseline Pathogen</th>
<th>Omadacycline (N=204)</th>
<th>Moxifloxacin (N=182)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Clinical Success n (%)</td>
</tr>
<tr>
<td>Atypical Pathogens</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mycoplasma pneumoniae</td>
<td>118</td>
<td>109 (92.4)</td>
</tr>
<tr>
<td>Chlamydophila pneumoniae</td>
<td>70</td>
<td>66 (94.3)</td>
</tr>
<tr>
<td>Legionella pneumophila</td>
<td>28</td>
<td>25 (89.3)</td>
</tr>
<tr>
<td></td>
<td>37</td>
<td>35 (94.6)</td>
</tr>
<tr>
<td>Gram-Negative Bacteria (aerobes)</td>
<td>79</td>
<td>67 (84.8)</td>
</tr>
<tr>
<td>Haemophilus influenzae</td>
<td>32</td>
<td>26 (81.3)</td>
</tr>
<tr>
<td>Haemophilus parainfluenzae</td>
<td>18</td>
<td>15 (83.3)</td>
</tr>
<tr>
<td>Klebsiella pneumoniae</td>
<td>13</td>
<td>10 (76.9)</td>
</tr>
<tr>
<td>Gram-Positive Bacteria (aerobes)</td>
<td>61</td>
<td>52 (85.2)</td>
</tr>
<tr>
<td>Streptococcus pneumoniae</td>
<td>43</td>
<td>37 (86.0)</td>
</tr>
<tr>
<td>PSSP</td>
<td>26</td>
<td>23 (88.5)</td>
</tr>
<tr>
<td>Macrolide Resistant</td>
<td>10</td>
<td>10 (100.0)</td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td>11</td>
<td>8 (72.7)</td>
</tr>
</tbody>
</table>

*10 or More Isolates for Omadacycline
**Omadacycline OASIS-2 Study Results**

*Achieved Primary Efficacy Endpoints for Both FDA and EMA*

**Delta (95% CI)**

- **FDA Primary Endpoint**
  - Omadacycline: 87.5
  - Linezolid: 82.5
  - Delta: +5.0 (-0.2, 10.3)

- **EMA Co-Primary Endpoints**
  - Omadacycline: 84.2
  - Linezolid: 80.8
  - Delta: +3.3 (-2.2, 9.0)

- Omadacycline: 97.9
  - Linezolid: 95.5
  - Delta: +2.3 (-0.5, 5.8)
Clinical Success at PTE Baseline Pathogen (OASIS-2)
Highly Effective Across Key Gram (+) Skin Pathogens

<table>
<thead>
<tr>
<th>Baseline Pathogen</th>
<th>Omadacycline (n=276)</th>
<th>Linezolid (n=287)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Clinical Success</td>
</tr>
<tr>
<td></td>
<td></td>
<td>n (%)</td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td>220</td>
<td>182 (82.7)</td>
</tr>
<tr>
<td>MRSA</td>
<td>104</td>
<td>89 (85.6)</td>
</tr>
<tr>
<td>MSSA</td>
<td>120</td>
<td>97 (80.8)</td>
</tr>
<tr>
<td>Staphylococcus lugdunensis</td>
<td>5</td>
<td>4 (80.0)</td>
</tr>
<tr>
<td>Streptococcus pyogenes</td>
<td>29</td>
<td>20 (69.0)</td>
</tr>
<tr>
<td>Streptococcus anginosus group</td>
<td>57</td>
<td>49 (86.0)</td>
</tr>
<tr>
<td>Streptococcus anginosus</td>
<td>27</td>
<td>24 (88.9)</td>
</tr>
<tr>
<td>Streptococcus intermedius</td>
<td>23</td>
<td>18 (78.3)</td>
</tr>
<tr>
<td>Streptococcus constellatus</td>
<td>9</td>
<td>8 (88.9)</td>
</tr>
<tr>
<td>Enterococcus faecalis</td>
<td>8</td>
<td>8 (100.0)</td>
</tr>
<tr>
<td>VRE</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>VSE</td>
<td>7</td>
<td>7 (100.0)</td>
</tr>
</tbody>
</table>
### Most Frequent TEAEs in the OASIS-1, OASIS-2 and OPTIC Studies

**Omadacycline Safety and Tolerability Profile Established**

#### Selected TEAS Occurring in ≥2% of Patients Receiving Omadacycline in the Pooled Phase 3 CABP and ABSSSI Clinical Trials

<table>
<thead>
<tr>
<th></th>
<th>Omadacycline (N = 1073)</th>
<th>Linezolid (N = 689)</th>
<th>Moxifloxacin (N = 388)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nausea¹</td>
<td>14.9</td>
<td>8.7</td>
<td>5.4</td>
</tr>
<tr>
<td>Vomiting¹</td>
<td>8.3</td>
<td>3.9</td>
<td>1.5</td>
</tr>
<tr>
<td>Diarrhea²</td>
<td>2.4</td>
<td>2.9</td>
<td>8.0</td>
</tr>
<tr>
<td>Transaminase Elevations Increased</td>
<td>4.3</td>
<td>4.4</td>
<td>5.2</td>
</tr>
<tr>
<td>Headache</td>
<td>2.9</td>
<td>3.0</td>
<td>1.3</td>
</tr>
</tbody>
</table>

#### Events of Nausea and Vomiting in Phase 3 CABP and ABSSSI Clinical Trials

<table>
<thead>
<tr>
<th></th>
<th>CABP IV/Oral</th>
<th>ABSSSI IV/Oral</th>
<th>ABSSSI Oral-Only</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IV</td>
<td>Oral</td>
<td>IV</td>
</tr>
<tr>
<td>Nausea¹</td>
<td>0.5</td>
<td>2.4</td>
<td>4.3</td>
</tr>
<tr>
<td>Vomiting</td>
<td>1.8</td>
<td>1.0</td>
<td>1.2</td>
</tr>
</tbody>
</table>

¹ Nearly all events of nausea and vomiting were mild or moderate in severity, resolved, and were not treatment limiting. Only 4 patients (0.4%) discontinued OMC treatment for nausea or vomiting.

² Diarrhea occurred in 2.4% of OMC patients and no cases of *C. difficile* infection were reported in OMC patients.
Completed Omadacycline Phase 1b UTI Study Design

Imminent Need to Replace Quinolones in Cystitis

Group 1 (n=10)
Dose 200 mg IV Day 1
Dose 300 Oral q24h Days 2-5

Group 2 (n=10)
Dose 300 mg Oral q12h Day 1
Dose 300 mg Oral q24h Days 2-5

Group 3 (n=11)
Dose 450 mg Oral q12h Day 1
Dose 450 mg Oral q24h Days 2-5

Screening
(≤ 48 hours prior to randomization)

End of Treatment (Day 6)

Post Treatment Evaluation

5 – 9 Days Post Last Dose

Follow-Up

30 – 37 Days Post First Dose

Serial Blood and Urine Samples Collected for Pharmacokinetic (PK)
Oral Bioavailability Results in High Omadacycline Concentrations in Urine Supports Development for a UTI Indication

Day 1

Day 5
Phase 2 UTI Programs Underway
Adaptive Dosing Designs Employed in Cystitis and Acute Pyelonephritis Studies

Cystitis

- Oral omadacycline (up to 450mg) 7 days
- Oral nitrofurantoin 7 days

Approximately 200 patients

Day 1
Day 7
Day 14 (+/- 2d)
Day 30 - 37
End of Treatment (EOT)
Post-Therapy Evaluation (PTE)
Final Follow-up

Acute Pyelonephritis (1)

- IV omadacycline 7-10 days
- IV to oral omadacycline 7-10 days
- IV to oral levofloxacin 7-10 days

Day 1
Day 7-10
Days 21
Day 28
(± 2 days)
(± 2 days)
EOT
PTE
Final Follow-up

(1) Design and comparator subject to FDA discussions prior to initiation
Balance Sheet, IP Protection & Other
### Key Metrics (unaudited)

<table>
<thead>
<tr>
<th>Metric</th>
<th>12/31/18 balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cash, Cash Equivalents, and Marketable Securities</td>
<td>$292.8 million</td>
</tr>
<tr>
<td>Long-term Debt Obligation</td>
<td>$229.0 million</td>
</tr>
<tr>
<td>Basic Shares Outstanding</td>
<td>32,284,602</td>
</tr>
<tr>
<td>Total Potentially Dilutive Securities*</td>
<td>16,709,048</td>
</tr>
</tbody>
</table>

* Cash runway **now** projected beyond Q1 2021**

---

* Includes common stock issuable under the April 2018 convertible debt offering, options, restricted share units, warrants, and for our ESPP

** Includes proceeds from $32.5 million SEYSARA royalty-backed loan closed in February 2019
Strengthening the Balance Sheet

**Summary of Deal terms:**

- Non-recourse, SEYSARA royalty-backed loan with HealthCare Royalty Partners

- Principal amount of $32.5 million, to be funded May 1, 2019

- Interest rate 12% per annum paid quarterly

- Royalty payments in excess of accrued interest on the loan will be used to repay principal until the balance is fully repaid

- Once the loan has been paid back in full, the value will revert back to the benefit of Paratek
NUZYRA IP Protection and Market Exclusivity

**GAIN Act Ensures 10 Yrs.' Market Exclusivity and Patent Term Extension protection to at least 2030**

---

**IP Protection:**

- **Key Composition of Matter Patent (U.S. 7,553,828):**
  - Issued: 2007
  - Expiry: June 2023
  - Patent Term Extension (PTE)

- **Key Method of Use Patent (U.S. 9,265,740):**
  - Issued: 2017
  - Expiry: March 2029
  - PTE

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**Regulatory Protection:**

- **U.S. Data Exclusivity:** 5-years
- **GAIN Act Extension:** 5-years

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**Follow-On IP Protection:**

Issued Patents and Pending Applications Covering Salts, Polymorphs, Formulations, Methods of Use, Methods of Manufacture, Modes of Administration, and Dosage Regimens
History Can Repeat Itself…

Today: Slower starts…But with the Right Attributes, a Strong Finish

**History of Antibiotic US Launches Pre & Post 2010**

Cubicin (Launched 2003)

Avg recent AB launches

Recent AB Launches: antibiotics launched since 2010 that have at least 36 months of data - Avycaz, Dalvance, Orbactiv, Sivextro, Teflaro, & Zerbaxa (does not include Dificid or new formulations/line extensions)

*MAT = 12-month rolling total

Source: NSP Data, NSP Gross Sales MAT* $M
Potential $3.9 Billion Addressable U.S. Hospital Market by 2028

### ABSSSI Opportunity: 1st line treatment (Tx) failure, resistance suspected

- **3,300K**
  - Hospitalized ABSSSI
  - ~12% failure
  - Fail broad sp + MRSA cov

- **~400k**
  - Fail broad sp + MRSA cov

- **$3,000**
  - Cost per course

- **$1.2B opportunity**

### CABP Opportunity: 1st line Tx failure, resistance suspected

- **3,400K**
  - Hospitalized CABP
  - ~14% failure
  - Fail FQ or ceph+macrolide

- **~490k**
  - Fail FQ or ceph+macrolide

- **$3,000**
  - Cost per course

- **$1.4B opportunity**

### UTI Opportunity: 1st line Tx failure (or repeated Tx), ESBL suspected

- **5,400K**
  - Hospitalized UTI
  - ~7% failure
  - Fail fluoroquinolone

- **~405k**
  - Fail fluoroquinolone

- **$3,150**
  - Cost per course

- **$1.3B opportunity**

---

1. AMR data (2015): Of patients never receiving confirmed pathogen and getting potential MRSA coverage, 30%+ switch therapies (i.e., to another empiric therapy)
2. Primary market research (est 18% of hospitalized CABP patients & 16.5% of community CABP patients are “high-risk” and suspected/confirmed to have a resistant pathogen)
3. DRG Current Treatment: Gram Negative Infections (ID’s est ~20% failure rate for fluoroquinolones)
4. Cost per course based on health outcome analysis, 10 day course of therapy and cost of branded Zyvox therapy as an analogue
5. Cost per course based on mid point for levofloxacin course in UTI, a 450mg OMC daily dose, and 50% price premium to branded oral Zvox as an analogue
6. Paratek estimates based on 2015 AMR data current treatment failure rates and a Zvox 2015 pricing analogue
Potential $5.4 Billion Addressable U.S. Community Market by 2028

### ABSSSI Opportunity: Initial treatment (Tx) failure, resistance suspected

- **14,400K**(1)
  - Community ABSSSI
- **~5%(1)**
  - Fail broad sp + MRSA cov
- **~735k**
  - cases
- **$2,100(4)**
- **$1.5B opportunity**

### CABP Opportunity: Fluoroquinolone failure, resistance suspected

- **9,370K**(1)
  - Community CABP
- **~6%(2)**
  - Fail fluoroquinolone
- **~510k**
  - cases
- **$2,100(4)**
- **$1.1B opportunity**

### UTI Opportunity: Initial Tx failure (or repeated Tx), ESBL suspected

- **33,000K**(1)
  - Community UTI
- **~3%(3)**
  - Fail fluoroquinolone
- **~890k**
  - cases
- **$3,150(5)**
- **$2.8B opportunity**

---

1. **20% est failures (based on hospital patterns) of first line MRSA treatment**
2. **Primary market research (est 18% of hospitalized CABP patients & 16.5% of community CABP patients are “high-risk” and suspected/confirmed to have a resistant pathogen)**
3. **Primary market research (est 1-2% of community patients sent to ED/hospital due to resistant infection not treatable with current oral AB; estimated to grow to 2.7% by 2028)**
4. **Cost per course based on health outcome analysis, 7 day course of therapy and cost of branded Zvox therapy as an analogue**
5. **Cost per course based on mid point for levofloxacin course in UTI, a 450mg OMC daily dose, and 50% price premium to branded oral Zvox as an analogue**
6. **Paratek estimates based on 2015 AMR data current treatment failure rates and a Zvox 2015 pricing analogue**
**NUZYRA: Well Positioned for Blockbuster Potential**

<table>
<thead>
<tr>
<th>Antibiotic</th>
<th>Broad Spectrum</th>
<th>Big 3(^{(1)}) Indications</th>
<th>Oral Frequency</th>
<th>2010 Sales(^{(3,4)})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levofloxacin</td>
<td>✓</td>
<td>3</td>
<td>Once Daily</td>
<td>$3.4B</td>
</tr>
<tr>
<td>Co-Amoxy clav</td>
<td>✓</td>
<td>3</td>
<td>Twice Daily</td>
<td>$2.8B</td>
</tr>
<tr>
<td>Azithromycin(^{(2)})</td>
<td>✓</td>
<td>2</td>
<td>Once Daily</td>
<td>$1.8B</td>
</tr>
<tr>
<td>Ciprofloxacin</td>
<td>✓</td>
<td>3</td>
<td>Twice Daily</td>
<td>$1.4B</td>
</tr>
<tr>
<td>Clarithromycin(^{(2)})</td>
<td>✓</td>
<td>2</td>
<td>Twice Daily</td>
<td>$1.4B</td>
</tr>
<tr>
<td>NUZYRA(^*)</td>
<td>✓</td>
<td>2(^*)</td>
<td>Once Daily</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*Phase 2 studies in UTI currently underway; Topline data expected in H2 2019

>65% of Revenue was Generated by the Oral Formulations

\(^{(1)}\) Skin, Respiratory, UTI

\(^{(2)}\) Both Azithromycin and Clarithromycin did not have UTI claim

\(^{(3)}\) IMS global sales data in 2010

\(^{(4)}\) Major patents had expired for all products by 2010 except Levofloxacin where 2010 was peak year sales
## Equity Research Analyst Coverage

<table>
<thead>
<tr>
<th>Firm</th>
<th>Analyst</th>
</tr>
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<tbody>
<tr>
<td>Baird</td>
<td>Mike Ulz</td>
</tr>
<tr>
<td>Bank of America</td>
<td>Jason Gerberry</td>
</tr>
<tr>
<td>BTIG Research</td>
<td>Robert (Bert) Hazlett</td>
</tr>
<tr>
<td>Canaccord Genuity</td>
<td>Dewey Steadman</td>
</tr>
<tr>
<td>Gabelli</td>
<td>Kevin Kedra</td>
</tr>
<tr>
<td>Guggenheim</td>
<td>Adnan Butt</td>
</tr>
<tr>
<td>HC Wainwright</td>
<td>Ed Arce</td>
</tr>
<tr>
<td>Ladenburg Thalmann</td>
<td>Mike Higgins</td>
</tr>
<tr>
<td>Leerink Partners</td>
<td>Ami Fadia</td>
</tr>
<tr>
<td>Wedbush</td>
<td>Robert Driscoll</td>
</tr>
</tbody>
</table>

Paratek Pharmaceuticals, Inc. is followed by the analysts listed above. Please note that any opinions, estimates or forecasts regarding Paratek Pharmaceuticals, Inc. ’s performance made by these analysts are theirs alone and do not represent opinions, forecasts or predictions of Paratek Pharmaceuticals, Inc. or its management. Paratek Pharmaceuticals, Inc. does not by its reference above or distribution imply its endorsement of or concurrence with such information, conclusions or recommendations.
# Paratek Investment Highlights

**NUZYRA™: Potential Blockbuster Antibiotic in Both Hospital and Community Settings**

<table>
<thead>
<tr>
<th>Potential Blockbuster Antibiotic with NUZYRA</th>
<th>Clear Registration Path: U.S. FDA and EU EMA</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 1st FDA approved and launched <strong>once-daily oral &amp; IV antibiotic</strong> to treat both CABP and ABSSSI in nearly 20 years</td>
<td></td>
</tr>
<tr>
<td>• &gt; $9 Billion Potential Addressable U.S. Market*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• NUZYRA U.S. FDA-approved in October 2018</td>
</tr>
<tr>
<td></td>
<td>• Filed in the EU in October 2018: EMA Approval Projected 2H 2019</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additional Pipeline Potential</th>
<th>Capital Efficient Commercial Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>• UTI Ph2 Studies Underway: Data Expected in H2 2019</td>
<td></td>
</tr>
<tr>
<td>• <strong>Biodefense opportunity</strong>: Tx &amp; Prophylaxis in Plague and Anthrax</td>
<td></td>
</tr>
<tr>
<td>• Life-cycle opportunities: Oral-Only CABP, Prostatitis, Rickettsial Disease</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• <strong>Significant Value Proposition</strong> = Hospitalization Minimization</td>
</tr>
<tr>
<td></td>
<td>• <strong>Hospital Promotion</strong> with no other Branded Once-Daily Broad-spectrum Oral + IV Competitors</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-dilutive Funding Options</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• <strong>Omadacycline</strong>: Ex-U.S. Commercial Rights (Except Greater China)</td>
<td></td>
</tr>
<tr>
<td>• <strong>Sarecycline</strong>: Ex-U.S. Rights (PRTK)</td>
<td></td>
</tr>
</tbody>
</table>

*Paratek estimates based on 2015 AMR data current treatment failure rates and a Zyvox 2015 pricing analogue*