Late Stage, Novel Antibiotics

September, 2015
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Paratek Investment Highlights

- Developing novel tetracycline antibiotics to address unmet medical needs

- **Omadacycline**
  - Oral/IV antibiotic addressing bacterial resistance
  - Enrolling two pivotal trials – ABSSSI and CABP
  - Developing for UTI
  - Potential additional indications - Sinusitis
  - Worldwide commercial rights retained

- **Sarecycline**
  - Antimicrobial and anti-inflammatory tetracycline for treating acne
  - Partnered with Allergan in U.S.
  - Ex-U.S. commercial rights retained

- Proven management team

- Strong IP position
Aminomethylcyclines
A New Generation Tetracycline Antibiotic

7-Position Modification:
Overcomes Efflux Pump

9-Position Modification:
Overcomes Ribosominal Protection
# Omadacycline

Potent Against Key Resistant ABSSSI Pathogens

<table>
<thead>
<tr>
<th>Organism (# Isolates)</th>
<th>Omadacycline</th>
<th>Vancomycin (Vancocin)</th>
<th>Linezolid (Zyvox)</th>
<th>Levofloxacin (Levaquin)</th>
<th>Ceftriaxone (Rocephin)</th>
<th>Amox-Clav (Augmentin)</th>
<th>Azithromycin (Zithromax)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRSA (111)</td>
<td>0.25</td>
<td>1</td>
<td>4</td>
<td>&gt;8</td>
<td>&gt;64</td>
<td>&gt;8</td>
<td>&gt;8</td>
</tr>
<tr>
<td>MSSA (52)</td>
<td>0.25</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>&gt;8</td>
</tr>
<tr>
<td>S.pyogenes (104)</td>
<td>0.25</td>
<td>0.5</td>
<td>2</td>
<td>1</td>
<td>0.03</td>
<td>0.015</td>
<td>&gt;4</td>
</tr>
</tbody>
</table>

(1) CMI 2007 report to Paratek
# Omadacycline

**Potent Against Key Resistant CABP Pathogens**

<table>
<thead>
<tr>
<th>Organism (# Isolates)</th>
<th>Omadacycline</th>
<th>Levofloxacin (Levaquin)</th>
<th>Azithromycin (Zithromax)</th>
<th>Ceftriaxone (Rocephin)</th>
<th>Amox-Clav (Augmentin)</th>
<th>Vancomycin (Vancocin)</th>
</tr>
</thead>
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<tr>
<td>MRSA (111)</td>
<td>0.25</td>
<td>&gt;8</td>
<td>&gt;8</td>
<td>&gt;64</td>
<td>&gt;8</td>
<td>1</td>
</tr>
<tr>
<td>PRSP (51)</td>
<td>0.12</td>
<td>1</td>
<td>&gt;4</td>
<td>2</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td><em>H. influenzae</em> (105)</td>
<td>1</td>
<td>0.03</td>
<td>4</td>
<td>0.008</td>
<td>1</td>
<td>Not Active</td>
</tr>
<tr>
<td>Legionella (25)</td>
<td>0.25</td>
<td>≤0.03&lt;sup&gt;(2)&lt;/sup&gt;</td>
<td>0.5</td>
<td>Not Active</td>
<td>Not Active</td>
<td>Not Active</td>
</tr>
</tbody>
</table>

<sup>(1)</sup> CMI 2007 report to Paratek
<sup>(2)</sup> Indicates data is from moxifloxacin; J. Dubois et al. 2006
## Omadacycline

### Potent Against Key Resistant UTI Pathogens

<table>
<thead>
<tr>
<th>Organism (# Isolates)</th>
<th>Omadacycline</th>
<th>Amox-Clav (Augmentin)</th>
<th>Ceftriaxone (Rocephin)</th>
<th>Linezolid (Zyvox)</th>
<th>Levofloxacin (Levaquin)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>E. coli</em> ESBL+ (102)</td>
<td>4</td>
<td>16</td>
<td>128</td>
<td>Not Active</td>
<td>&gt;16</td>
</tr>
<tr>
<td><em>E. faecium</em>, VS (56)</td>
<td>0.12</td>
<td>&gt;8</td>
<td>&gt;64</td>
<td>4</td>
<td>&gt;8</td>
</tr>
<tr>
<td><em>E. faecium</em>, VRE* (100)</td>
<td>0.12</td>
<td>&gt;8</td>
<td>&gt;64</td>
<td>2</td>
<td>&gt;8</td>
</tr>
<tr>
<td><em>E. faecalis</em>, VS (107)</td>
<td>0.5</td>
<td>1</td>
<td>&gt;64</td>
<td>2</td>
<td>&gt;8</td>
</tr>
<tr>
<td><em>E. faecalis</em>, VNS* (47)</td>
<td>0.25</td>
<td>1</td>
<td>&gt;64</td>
<td>2</td>
<td>&gt;8</td>
</tr>
</tbody>
</table>

(1) CMI 2007 report to Paratek; *VNS=Vancomycin MIC ≥16 µg/ml; VRE=Vancomycin MIC ≥ 32 µg/ml
### Omadacycline: Demonstrated Clinical Efficacy in Complicated Skin, Skin Structure Infections in both Phase 2 and a Truncated Phase 3

#### Phase 2 Population

<table>
<thead>
<tr>
<th></th>
<th>Clinical Success Rate</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Omadacycline</td>
<td>Linezolid</td>
<td></td>
</tr>
<tr>
<td>Intent-to-Treat (ITT)</td>
<td>88.3% (98/111)</td>
<td>75.9% (82/108)</td>
<td></td>
</tr>
<tr>
<td>Clinically Evaluable (CE)</td>
<td>98.0% (98/100)</td>
<td>93.2% (82/88)</td>
<td></td>
</tr>
</tbody>
</table>

#### Phase 3 Population

<table>
<thead>
<tr>
<th></th>
<th>Clinical Success Rate</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Omadacycline</td>
<td>Linezolid</td>
<td></td>
</tr>
<tr>
<td>Intent-to-Treat (ITT)</td>
<td>85.3% (58/68)</td>
<td>88.9% (64/72)</td>
<td></td>
</tr>
<tr>
<td>Clinically Evaluable (CE)</td>
<td>96.7% (58/60)</td>
<td>95.5% (64/67)</td>
<td></td>
</tr>
</tbody>
</table>

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1. Data from PRTK’s Phase 2 and truncated Phase 3 cSSSI trials
2. An Intent-to-Treat, or ITT, population refers to all enrolled subjects, as defined in the protocol, who received at least one dose of study drug. A Clinically Evaluable, or CE, population refers to all ITT subjects who had a qualifying infection, as defined in the protocol.
3. Clinical success refers to resolution of the infection such that no additional antibiotics were needed in the ITT or CE populations, as assessed by the clinical investigator 10 to 17 days after the last dose of study drug.
Omadacycline
SPA Approved Phase 3 Trial Designs (1)

ABSSSI 650 patients
- Omadacycline IV
- Linezolid IV
- Late Response
- Up to d14
- Post Treatment Evaluation, Test of Cure (2)

CABP 750 patients
- Omadacycline IV
- Moxifloxacin IV
- Early Response
- Up to d14
- Post Treatment Evaluation, Test of Cure (2)

(1) FDA approved 1 + 1 strategy
(2) TOC endpoint = Primary endpoint confirmed through EMA scientific advice
Omadacycline
Favorable Safety and Tolerability Profile

- ~700 individuals treated to-date
- No known metabolites
- No CYP interactions identified
- No DDI effects anticipated
- No anticipated monitoring
- No hERG channel effects: TQTc (1) study completed
  - No effects on heart rate (HR) in patients
  - Modest transient vagolytic HR effect in healthy volunteers

(1) Thorough QTc study
Omadacycline
Commercial-Scale Formulations and Process Established

- **Both** Oral tablet and IV manufactured at commercial-scale
- Stability >3 years at room temp for **both** oral and IV
- Oral tablets are bioequivalent to the IV
- Cost effective 3 step manufacturing process
Omadacycline
Value Proposition Aligns Well with Current and Future Patient Needs\(^{(1)}\)

**Unmet Need**

- Lack of Bio-equivalent IV-to-oral step-down therapies
- Need for oral therapies covering drug-resistant pathogens (DRP)
- Improved safety, tolerability & Once-daily dosing

**Hospital Formulary Acceptance:** In the hospital setting for ABSSSI and CABP, the IV and oral formulations of omadacycline allow for **IV-oral step-down therapy in hospital**, greatly facilitating patient discharge (1.5M patients with known or suspected drug resistant pathogens DRP)

**Hospital & Community Adoption Opportunity:** The broad spectrum of activity with coverage against drug resistant pathogens (MRSA, Penicillin and macrolide-resistant \(S.\ pneumonia\) & MDR \(E.\ coli\)), and an oral formulation, make Omadacycline especially suited for elevated risk patients with confirmed or suspected DRP (1.5M Hospital + 3.5M Community Patients)

**Expansion Opportunity:** A lack of drug-drug interactions, overall tolerability profile and once-daily oral dosing makes Omadacycline suitable for all elevated risk patients with or without DRP (8M patients)

\(^{(1)}\) Paratek Research and Analysis September 2015
### Scarcity of Late-Stage IV/Oral Antibiotics in Development

<table>
<thead>
<tr>
<th>Late-Stage IV &amp; Oral</th>
<th>Hospital</th>
<th>Community</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>cUTI</td>
<td>ABSSSI</td>
</tr>
<tr>
<td>Omadacycline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delafloxacin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finafloxacin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lefamulin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solithromycin</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Omadacycline
Potential Broad Range of Major Indications
Sarecycline: Narrow-spectrum Tetracycline Antibiotic Specifically Designed for Inflammatory Acne

- Novel, narrow-spectrum antibiotic
- Demonstrated anti-inflammatory activity
- Does not cross Blood-Brain Barrier
  - Favorable GI tolerability
- Once-daily Oral formulation
- Composition of Matter IP protection
  - U.S. Base Composition of Matter: 2031
  - EU: 10 years of market exclusivity expected
Sarecycline
Late-Stage Development Progressing as Planned

- U.S. commercial rights: Allergan
- Ex-U.S. commercial rights: Paratek
- Phase 2 Trials met primary endpoints for efficacy and safety\(^{(1)}\)
- Phase 3 Trials in U.S. underway; Data expected in 2016
- Milestones and royalties to Paratek
- Allergan estimates $250-500M peak U.S. revenue\(^{(1)}\)
- **Sloody**n analogue supports sales potential
  - Peak sales >$750M (*reformulated* minocycline)\(^{(2)}\)

\(^{(2)}\) IMS Sales data 2011
## Phase 3 & NDA Filing Milestones for Omadacycline and Sarecycline

### Omadacycline Events

<table>
<thead>
<tr>
<th>Events</th>
<th>Estimated Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSSSI Phase 3 Study</td>
<td>Initiated enrolment 2015</td>
</tr>
<tr>
<td>CABP Phase 3 Study Initiation</td>
<td>Late 2015</td>
</tr>
<tr>
<td>ABSSSI Phase 3 Data</td>
<td>2H 2016</td>
</tr>
<tr>
<td>CABP Phase 3 Data</td>
<td>2H 2017</td>
</tr>
<tr>
<td>Omadacycline Filing</td>
<td>2018</td>
</tr>
</tbody>
</table>

### Sarecycline Events

<table>
<thead>
<tr>
<th>Events</th>
<th>Estimated Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sarecycline Phase 3 Efficacy Data (2 trials)</td>
<td>2016</td>
</tr>
<tr>
<td>Sarecycline Phase 3 long term safety study Data</td>
<td>2016</td>
</tr>
<tr>
<td>Sarecycline Filing</td>
<td>2017</td>
</tr>
</tbody>
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(1) Allergan owns U.S. development & commercial rights
Back Up Slides
Paratek Investment Highlights

- Developing novel tetracyclines to address unmet medical needs

**Omadacycline:**
- Oral/IV antibiotic addressing bacterial resistance
- Enrolling two pivotal trials – ABSSSI and CABP
- Developing for UTI
- Potential additional indications - Sinusitis
- Worldwide commercial rights retained

**Sarecycline:**
- Antimicrobial and anti-inflammatory tetracycline for treating acne
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- Proven management team
- Strong IP position
### Developing Novel Tetracycline Antibiotics Addressing Unmet Medical Needs

<table>
<thead>
<tr>
<th>Research</th>
<th>Preclinical</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Commercial Rights</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Omadacycline</strong>(1)</td>
<td></td>
<td><strong>ABSSSI (Oral &amp; IV) – QIDP Status</strong></td>
<td></td>
<td><strong>SPA</strong></td>
<td><strong>PARATEK™</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>CABP (Oral &amp; IV) – QIDP Status</strong></td>
<td></td>
<td><strong>SPA</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>UTI (Oral &amp; IV) – QIDP Staus</strong>(2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Acute Sinusitis (Oral)</strong></td>
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<tr>
<td><strong>Sarecycline</strong>(3)</td>
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<td><strong>Acne Safety/Efficacy X2 (Oral)</strong></td>
<td></td>
<td></td>
<td><strong>ALLERGAN</strong></td>
</tr>
<tr>
<td>(WC 3035)</td>
<td></td>
<td><strong>Acne Long Term Safety Follow up (Oral)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
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(1) Paratek owns Worldwide Commercial Rights  
(2) UTI program in development + QIDP for cUTI  
(3) Paratek owns Ex-U.S. Commercial Rights
Proven Management Team
Commercialized Major Antibiotics/Built Leading Companies

Michael F. Bigham
Chairman & CEO

Evan Loh, MD
President & CMO
Led Tygacil Development

Doug Pagan
Chief Financial Officer

Adam Woodrow
Chief Commercial Officer
Led Tygacil Commercialization

Evan Tzanis
VP, Clinical Development

Susan Perkins
VP, Intellectual Property

Randy Brenner
SVP, Regulatory & Quality

Yulii Bogatyrenko
SVP, Business Development

William Haskel
SVP, General Counsel & Corporate Secretary

Jeanne Jew
VP, Business Development

Sean M. Johnston, PhD
VP, Manufacturing

S. Ken Tanaka, PhD
VP, Research and Development
Developed clarithromycin, temafloxacin
Developing Novel Tetracycline Antibiotics Addressing Unmet Medical Needs

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<td></td>
<td></td>
<td>SPA</td>
</tr>
<tr>
<td></td>
<td>CABP (Oral &amp; IV) – QIDP Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>UTI (Oral &amp; IV) – QIDP Status&lt;sup&gt;(2)&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute Sinusitis (Oral)</td>
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<tr>
<td><strong>Sarecycline</strong>&lt;sup&gt;(3)&lt;/sup&gt; (WC 3035)</td>
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<sup>(1)</sup> Paratek owns Worldwide Commercial Rights

<sup>(2)</sup> UTI program in development + QIDP for cUTI

<sup>(3)</sup> Paratek owns Ex-U.S. Commercial Rights
Critical Need for New Antibiotics

- Bacterial resistance renders generic products obsolete over time
- Bacterial resistance costs society billions $USD
  - > $20 billion USD/year in excess health care costs
  - ~ $35 billion USD societal costs in 2000
  - > 8 million additional patient days\(^1\)

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Scarcity of New Antibiotics in Development

Figure 1: Number of NME systemic antibiotics approved in the USA

## Legislative Initiatives to Drive Antibiotic Development

<table>
<thead>
<tr>
<th>Year</th>
<th>GAIN ACT(^{(1)})</th>
<th>ADAPT ACT(^{(2)})</th>
<th>DISARM ACT(^{(3)})</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Five years additional data exclusivity &amp; priority review</td>
<td>Accelerated development pathway</td>
<td>New Reimbursement framework to enable premium pricing</td>
</tr>
</tbody>
</table>

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\(^{(1)}\) Provisions signed into law on July 9, 2012 as part of the Food and Drug Administration Safety and Innovation Act (FDASIA)

\(^{(2)}\) S. 2582 (113\(^{th}\)): ADAPT Act, Introduced Jul 10, 2014

Developing Novel Tetracycline Antibiotics that Overcome Bacterial Resistance

Efflux Pump

Ribosomal Protection
Omadacycline
Overcoming Bacterial Resistance

The Next Levofoxacin?

Well Tolerated
Once-Daily IV & Oral
Potentially optimizes patient compliance

No Drug-Drug Interactions Anticipated
Reduces potential safety concerns

Potentially Replaces Quinolones
MRSA in ABSSSI
PRSP/MRSA in CABP
ESBL+ E. coli in UTI

Reduces potential safety concerns
97.1% of surveyed physicians believe that their patients with resistant *E. coli* could benefit from a new antibiotic\(^{(1)}\)

**Omadacycline**: UTI Profile

- Activity against most prevalent UTI pathogen *E.coli* \(^{(2)}\)
- >40% Renal clearance
- **Once-daily oral dose**; plus an IV formulation
- Safety and tolerability profile: anticipated to match community-based needs

Clinical development plans being finalized

\(^{(1)}\) Medacorp survey 1Q 2013  
\(^{(2)}\) CMI 2007 report to Paratek
# Omadacycline

**Potent Against Key Resistant Sinusitis Pathogens**

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<tr>
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<td>S. pneumonia (104)</td>
<td>0.12</td>
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<td>0.12</td>
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<td>1</td>
<td>0.03</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>M. catarrhalis (105)</td>
<td>0.25</td>
<td>0.06</td>
<td>0.06</td>
<td>0.25</td>
</tr>
</tbody>
</table>

(1) CMI 2007 report to Paratek
Significant at risk patient population in U.S. hospitals and community\(^{(1)}\)
*ABSSSI, CABP, UTI*

- **Non-elevated risk**
  - 66%

- **Elevated risk**\(^{(3)}\)
  - 34%

- **No suspected drug resistant pathogens (DRP)**
  - 8M or 62%

- **Suspected or confirmed DRP**
  - 5M or 38%

- **Community**
  - 3.5M

- **Hospital**
  - 1.5M

- **~38M by 2028**
- **Total Patients**\(^{(2)}\)

- **~13M Elevated-Risk Patients**\(^{(1)}\)

- **~5M patients with suspected or confirmed DRP**\(^{(1)}\)

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(1) Paratek Research and Analysis, September 2015
(2) Projected Total Patient Population in the U.S. with Omadacycline potential indications of ABSSSI, CABP and UTI both hospital and community in 2028
(3) Elevated risk defined as Elderly, Immuno-compromised, Co-morbidity e.g., diabetes, history of treatment failure, recent hospitalization, resident of a nursing home, suspected or confirmed drug-resistant pathogen
## Key Financial Information

<table>
<thead>
<tr>
<th>Key Metrics</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cash (1)</td>
<td>$148.7 million</td>
</tr>
<tr>
<td>Total Debt (1)</td>
<td>$0 million</td>
</tr>
<tr>
<td>Basic Shares Outstanding (1)</td>
<td>17,561,327</td>
</tr>
<tr>
<td>Stock Options, Restricted Stock, and Warrants Outstanding (1)</td>
<td>2,057,630</td>
</tr>
</tbody>
</table>

- **Cash balance expected to fund operations through 2H 2017**
- **Potential BD opportunities**
  - **Sarecycline:**
    - Ex-U.S. development and commercialization rights
    - Monetize potential U.S. royalties
  - **Omadacycline:** Ex-U.S. partnerships e.g., Asia

(1) As of June 30, 2015
## Omadacycline: Data supports Potential CABP Indication

<table>
<thead>
<tr>
<th></th>
<th>Tygacil</th>
<th>Omadacycline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal Pneumonia Model Efficacy</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>AUC:MIC PK Target</td>
<td>12.8 (human(^1))</td>
<td>4.3-8.9 (mouse)</td>
</tr>
<tr>
<td>AUC (human; µg-hr/ml)(^2)</td>
<td>~ 4.7</td>
<td>~ 10</td>
</tr>
<tr>
<td>MIC(_{90}) (µg/ml; <em>S. pneumoniae</em>)</td>
<td>0.06(^3)</td>
<td>0.12</td>
</tr>
<tr>
<td>AUC:MIC (human) Achieved</td>
<td>~ 80</td>
<td>~ 80</td>
</tr>
<tr>
<td>Efficacy for CABP</td>
<td>Approved</td>
<td>Phase 3</td>
</tr>
</tbody>
</table>

\(^1\) Rubino et al. 2012. Pharmacokinetics-Pharmacodynamics of Tigecycline in Patients with Community-Acquired Pneumonia. AAC56:130-136.;


\(^3\) Tomic and Dowzicky. 2014. Regional and Global Susceptibility among isolates of *Streptococcus pneumoniae* and *Haemophilus influenzae* collected as part of the Tigecycline Evaluation and Surveillance Trial (Table S1). Ann Clin Micro Antimicrob. 13:52.;
# Proven Management Team

*Commercialized Major Antibiotics/Built Leading Companies*

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael F. Bigham</td>
<td>Chairman &amp; CEO</td>
<td>AVILA, corixa, Abingworth, GILEAD</td>
</tr>
<tr>
<td>Doug Pagan</td>
<td>Chief Financial Officer</td>
<td>ACCELERON, Bristol-Myers Squibb, J.P.Morgan</td>
</tr>
<tr>
<td>Evan Tzanis</td>
<td>VP, Clinical Development</td>
<td>Wyeth, endo, Pfizer</td>
</tr>
<tr>
<td>Randy Brenner</td>
<td>SVP, Regulatory &amp; Quality</td>
<td>Wyeth, Tygacil, Shire, Pfizer</td>
</tr>
<tr>
<td>William Haskel</td>
<td>SVP, General Counsel &amp; Corporate Secretary</td>
<td>WilmerHale, Wyeth, Cambrex</td>
</tr>
<tr>
<td>Sean M. Johnston, PhD</td>
<td>VP, Manufacturing</td>
<td>Magainin Pharmaceuticals Inc. SQUIBB, Lonza</td>
</tr>
<tr>
<td>Evan Loh, MD</td>
<td>President &amp; CMO</td>
<td>Pfizer, Wyeth*</td>
</tr>
<tr>
<td>Adam Woodrow</td>
<td>Chief Commercial Officer</td>
<td>Pfizer, Wyeth*</td>
</tr>
<tr>
<td>Susan Perkins</td>
<td>VP, Intellectual Property</td>
<td>Pfizer, Enbrel, Wyeth*</td>
</tr>
<tr>
<td>Yulii Bogatyrenko</td>
<td>SVP, Business Development</td>
<td>Wyeth, TEVA</td>
</tr>
<tr>
<td>Jeanne Jew</td>
<td>VP, Business Development</td>
<td>Wyeth, Pfizer, Teva, Bayer, Abbott</td>
</tr>
<tr>
<td>S. Ken Tanaka, PhD</td>
<td>VP, Research and Development</td>
<td>SQUIBB, Abbott, Pathogenesis Corporation</td>
</tr>
</tbody>
</table>

*Developed clarithromycin, temafloxacin*
### Omadacycline
**Power of Oral and IV Dosing for the Big 3 Indications**

<table>
<thead>
<tr>
<th>Antibiotic</th>
<th>Class</th>
<th>Oral Frequency</th>
<th>Big 3 Indications</th>
<th>2010 Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levofloxacin</td>
<td>Quinolone</td>
<td>Once Daily</td>
<td>3</td>
<td>$3.4B</td>
</tr>
<tr>
<td>Co-Amoxy clav</td>
<td>B-Lactam</td>
<td>Twice Daily</td>
<td>3</td>
<td>$2.8B</td>
</tr>
<tr>
<td>Azithromycin</td>
<td>Macrolide</td>
<td>Once Daily</td>
<td>2 (^{(2)})</td>
<td>$1.8B</td>
</tr>
<tr>
<td>Ciprofloxacin</td>
<td>Quinolone</td>
<td>Twice Daily</td>
<td>3</td>
<td>$1.4B</td>
</tr>
<tr>
<td>Clarithromycin</td>
<td>Macrolide</td>
<td>Twice Daily</td>
<td>2 (^{(2)})</td>
<td>$1.4B</td>
</tr>
</tbody>
</table>

**Oral Use ~Two-thirds of Total Sales**

---

\(^{(1)}\) 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
Strong IP Through 2028

- U.S. Base Composition of Matter plus anticipated patent term extension into 2028

  And

- U.S. Hatch Waxman plus GAIN Act extension totaling 10 yrs.

- EU: 10 yrs. of market exclusivity expected