The Plazomicin Project:
A Partnership Results in BARDA’s 36th FDA Approval

BARDA Industry Day
October 30, 2018

Brian N. Tse, PhD
Health Scientist
HHS/ASPR/BARDA
An Eight-Year Partnership

- Contract award: August 30, 2010
- First contract for the BARDA antibacterials portfolio
- Total BARDA cost-share: $124.4 M
- Total Achaogen cost-share: $48.9 M

Candidate: Plazomicin is a novel antibiotic designed to overcome multidrug resistance
- Aminoglycoside class (bactericidal)
- Activity against key biothreat agents
- Overcomes critical resistance mechanisms

Uniquely engineered to overcome aminoglycoside-modifying enzymes (AME) that inactivate existing aminoglycosides
Adapting to Evolving Needs

CARE study:
- Unmet need ("urgent" pathogen)
- Challenging study population
- Indications: pneumonia, bloodstream infections

Challenge:
slow enrollment in CARE study

Introduce EPIC study:
- Established pathway to NDA
- Robust anticipated enrollment
- Indication: complicated UTIs

Solution: BARDA and Achaogen agree to cost-share Phase 3 EPIC Study to expedite pathway to approval
Helping Partners Meet Their Targets

- Partnership includes BARDA review of regulatory submissions prior to FDA submission

**Challenge:** ambitious target date for NDA submission

**Solution:** Develop review schedule based on both partners needs
- Rolling review, targeted reviewers
- Proactive forecasting of upcoming reviews and review periods
- Schedule adjustments based on anticipated reviewer bandwidth

### NDA Document Review Forecasting

<table>
<thead>
<tr>
<th>NAME</th>
<th>REVIEW REQUEST</th>
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<th>REVIEW DEADLINE</th>
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<tbody>
<tr>
<td>Plazol vs amikacin in treating mouse thigh &amp; lung infections</td>
<td>8/24/2017</td>
<td>8</td>
<td>9/7/2017</td>
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<tr>
<td>Module 3 (all 3.2P sections) **</td>
<td>8/25/2017</td>
<td>16</td>
<td>9/15/2017</td>
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<tr>
<td>INFORM*: INCREMENT Report on colistin outcomes</td>
<td>8/28/2017</td>
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<td>8/29/2017</td>
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<td>INFORM*: 2.7A appendix Audiology Report</td>
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<tr>
<td>TDMA*: Team and Cross-functional Review</td>
<td>8/29/2017</td>
<td>5</td>
<td>9/5/2017</td>
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<tr>
<td>Module 3 (all 3.25 sections except 3.2.26) **</td>
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<td>Plazomicin dose selection report for patients with serious CRE Am2</td>
<td>9/7/2017</td>
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<td>2.7.2: Cross-Functional Review</td>
<td>9/14/2017</td>
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<td>9/20/2017</td>
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<td>2.4: Cross-Functional Review</td>
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<td>2.6.1: Cross-functional Review</td>
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<td>9/21/2017</td>
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<td>10/3/2017</td>
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<td>1.1.4: BARDA Review of full USP</td>
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<td>2.5: Cross-Functional Review</td>
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ZEMDRI is FDA Approved

- FDA approved ZEMDRI (plazomicin) for the treatment of complicated UTIs on June 25*.
- BARDA’s 36th FDA Approval (2nd for Antibacterials Program)

"Today's milestone was made possible by… BARDA, who contributed significant funding for the development of ZEMDRI. This marks an important step in our commitment to fighting MDR bacteria and we are excited to launch ZEMDRI, a much needed once-daily antibiotic."

– Blake Wise, CEO, Achaogen

*see label for full prescribing information