**Background.** Penicillin allergy is reported in 10% patients in the US Patients with penicillin allergies are treated with broader spectrum antibiotics, often leading to more antibiotic-resistant infections, including C. difficile, increased risk of surgical site infections, and increased healthcare costs.

**Methods.** After informed consent, Medical-Surgical patients with documented allergies to penicillin (P) or cephalosporins (C) were given challenges doses through a standardized 2-step protocol from June 2015 to November 2017 at our community hospital. Patients with documented IgE-mediated hypersensitivity (IHR), rash, or unknown reactions were excluded. Those with anaphylaxis or Type II-IV HSR were excluded. Treating clinicians selected the antibiotic for testing guided by the protocol: 320/336 patients (96%) were challenged with C. Based on results, allergies were updated in patients' charts, noting that tolerance of cephalosporins does not preclude penicillin allergy. Charts were reviewed to determine adverse events and antibiotic narrowing, the latter adjudicated by ID specialists not directly involved in the patient's care. A cost analysis used the acquisition cost of administered antibiotics before and after testing.

**Results.** 336 patients (53 Medical, 283 Surgical) underwent the allergy test dose protocol: 267 with reported P allergy, 47 C allergy, 22 P+C allergy. None had a major adverse reaction. 7 patients (2%) experienced minor reactions: rash (4), throat irritation (1), wheezing (1). Before testing, 321/336 were prescribed inappropriately. After informed consent, Medical-Surgical patients with documented allergy were them to non-penicillin antibiotics: 225/267 with reported P allergy, 47 C allergy, 22 P+C allergy. None had a major adverse reaction. 7 patients (2%) experienced minor reactions: rash (4), throat irritation (1), wheezing (1). Before testing, 321/336 were prescribed inappropriately. After testing, 41/267 were prescribed non-penicillin antibiotics, translating to $630 saved per patient. In Surgical patients there was a 50% cost savings.

**Conclusion.** Despite the frequency with which β-lactam antibiotics are reported, few patients had an allergy that interfered with optimal treatment when tested. This standardized protocol can be safely performed in a community hospital setting and lead to improved antibiotic choice and pharmacy cost savings.

**Reference**

Immattone M et al. | Allergy Clin Immunol Pract. 2014 November; 2, 768–74.

**Disclosures.** No reported disclosures.

**1961. A Randomized Controlled Trial of the Effect of Accelerated Copper Textiles on Healthcare-Associated Infections and Multidrug-Resistant Organisms:** The “Investigating Microbial Pathogen Activity of Copper Textiles” (IMPACT) Study

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**Background.** Healthcare-associated infections (HAIs) and multidrug-resistant organisms (MDROs) are a major threat to patients. The use of copper has well-documented antimicrobial properties, the impact of copper-impregnated linens on HAIs and MDROs in healthcare settings remains undefined.

**Methods.** This study was conducted in a 24-bed medical ICU and a 24-bed surgical ICU from 1/12/16 to 7/31/16. Six beds in each ICU were randomized to CottonX- accelerated copper linens (flat sheet, fitted sheet, pillow cover, gown) (Argamanta Healthcare, Inc.). The remaining 18 beds were controls. Patients were enrolled if they were in the ICU for 23 days and were followed prospectively for development of an HAI (including C. difficile infection) and/or MDRO from ICU day 3 through 2 days after ICU discharge. MDROs were defined as a new clinical culture (i.e., no culture with the same organism in the prior year) with methicillin-resistant Staphylococcus aureus, vancomycin-resistant enterococci, carbapenem-resistant or carbapenem-resistant Entrobacteriaceae. A patient could be included more than once for distinct ICU stays (“episodes”).

**Results.** Among 1,021 subjects, the median stay was 61 and 448 (42%) were female. 120/336 total episodes, 678 (56%) were in the MICU, 527 (44%) were in the SICU, and 351 (29%) were randomized to copper rooms. There were no significant differences between study groups with regard to demographics, comorbidities, indwelling devices, or antibiotic use. The overall rate (per 1,000 patient-days) of the composite outcome (HAI or MDRO) was 11.66 and 13.44 in copper and non-copper episodes, respectively. (incidence rate ratio (IRR) = 0.76 (95% CI, 0.46, 1.19); P = 0.22). Rates of HAIs were 10.26 and 10.41 for copper and non-copper episodes, respectively (IRR (95% CI) = 0.99 (0.57, 1.64); P = 0.97). Rates of MDROs were 3.73 and 6.51 for copper and non-copper episodes, respectively (IRR (95% CI) = 0.67 (0.23, 1.26); P = 0.15). Results were consistent when stratified by type of ICU.

**Conclusion.** While not statistically significant, there was a nearly 50% lower rate of MDRO infection and colonization with use of CottonX- accelerated copper linens, possibly in part due to decreases in environmental contamination. Future work should further explore the role of copper linens in reducing MDROs.

**Disclosures.** D. Pegues, DaVita / Total Renal Care: Consultant, Consulting fee.
1963. Combined Microbiological Response Rates From Two Phase 3 Trials Demonstrating the Activity of Eravacrycin in the Treatment of Complicated Intra-abdominal Infections: A Pooled Analysis of IGNITE1 and IGNITE4

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Background. IGNITE1 and IGNITE4 were randomized, double-blind, double-dummy, multicenter studies which compared the efficacy and safety of eravacyclin (ERV) compared with a carbapenem in subjects with complicated intra-abdominal infections (cIAIs). The primary objective of this analysis was to compare the microbiological response at the test-of-cure (TOC) visit for subjects in the two treatment groups.

Methods. Appropriate aerobic and anaerobic specimens for culture at the time of the initial protocol were collected from the site of infection and directly inoculated into transport media. Blood and intra-abdominal specimens were cultured, and species identified according to local laboratory practice. Pure cultures of isolates were sent to a reference laboratory for susceptibility analysis to ERV and comparators. Favorable microbiological response rates at the TOC visit were determined for each baseline pathogen isolated from blood and/or intra- or extra-abdominal specimens in the micro-ITT population.

Results. For subjects with infections caused by Enterobacteriaceae, the overall favorable microbiological response rates for ERV-treated subjects were 86.3% and 91.8% for IGNITE1 and IGNITE4, respectively. The favorable microbiological response rates among pooled ERV-treated subjects are shown in the Table.

| Pathogen or Genotype Category | PLZ (N = 24) | CST (N = 15) | Difference PLZ Minus CST (90% CI) | PLZ (N = 14) |
|------------------------------|--------------|--------------|---------------------------------|--------------|
| Ps with CRE, n/total (%)     | 20/23 (87)   | 15/20 (75)   | 5 (29.4 to 80.6)                | 15/15 (100) |
| E. coli                      | 22/23 (96)   | 19/21 (90.5) | 3 (15.6 to 64.4)                | 15/15 (100) |
| E. aerogenes                 | 1/3 (33.3)   | 1/2 (50)     | 0 (−100 to 100)                 | 1/1 (100)   |
| A. baumannii                 | 2/2 (100)    | 0/1 (0)      | 0 (−100 to 100)                 |              |

Conclusion. In IGNITE1 and IGNITE4 studies, high favorable microbiological responses were observed for ERV. More than 88% of five Enterobacteriaceae spp. and B. fragilis, the most common bacteria associated with intraabdominal infections, were eradicated by ERV. Comparable eradication rates were observed following eravacyclin and meropenem therapy, further establishing that ERV was at least as effective as carbapenem treatments. These data support in vitro observations that ERV has broad-spectrum activity against common isolates found in intra-abdominal infections.

Disclosures. J. Newman, Tetraphase Pharmaceuticals: Employee. Salary, S. Ismailyan, Tetraphase Pharmaceuticals: Employee. Salary. C. Fyfe, Tetraphase Pharmaceuticals: Employee. Salary. L. Tsai, Tetraphase Pharmaceuticals: Employee. and Shareholder. Salary.

1965. Microbiological Outcomes With Plazomicin (PLZ) vs. Colistin (CST) in Patients With Bloodstream Infections (BSI) Caused by Carbapenem-Resistant Enterobacteriaceae (CRE). In the CARE Study

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Background. PLZ is a next-generation aminoglycoside with structural modifications that protect it from aminoglycoside-modifying enzymes (AMEs) and in vitro activity against multidrug-resistant (MDR) Enterobacteriaceae, including aminoglycoside- and carbapenem-resistant strains. In the CARE study, PLZ was associated with improvement in 28-day all-cause mortality vs. CST in patients with CRE BSI. We report the microbiological outcomes in the CARE study by pathogen and key resistance mechanisms.

Methods. CARE was a multinational, open-label trial that enrolled BSI patients with documented or presumed CRE into two cohorts. Patients in the randomized cohort received PLZ (15 mg/kg/dose plus adjunctive ticarcillin or meropenem. Patients in the observational cohort received PLZ plus investigator’s choice of adjunctive treatment. Duration was 7–14 days. Isolate identification and susceptibility testing were conducted by a central laboratory. Whole-genome sequencing was used to identify AME and carbapenemase genes. Microbiological outcomes were assessed in patients with confirmed CRE who received ≥1 dose of study drug (mITT population).

Results. Of 45 BSI patients enrolled, 43 had confirmed CRE (mITT, including Klebsiella pneumoniae (n = 42) and Enterobacter aerogenes (n = 1). Against CRE, PLZ MICs ranged from 0.12 to >128 µg/mL. 25/28 (89%) isolates from PLZ–treated patients had a PLZ MIC ≤4 µg/mL, while 3 had a PLZ MIC 2128 µg/mL and a confirmed 165 ribosomal methyltransferase gene. CST MICs ranged from 0.25 to >128 µg/mL; 6/16 (37.5%) isolates from CST-treated patients had an MIC >2 µg/mL.

There were 47 distinct Enterobacteriaceae pathogens isolated from 43 patients, and of these, AME genes were detected in 43/47 (93.5%), most commonly aac(6’)-Ib-cr (n = 29). Carbapenemase genes were detected in 45/47 (95.7%) isolates, most commonly blaKPC (n = 33). PLZ demonstrated higher microbiological eradication rates than CST against CRE, including AME- and carbapenemase-producing isolates (Table).

Conclusion. The results provide evidence of the efficacy of PLZ-based therapy for patients with BSI due to MDR Enterobacteriaceae, including AME- and carbapenemase-producing organisms.

Disclosures. A. W. Serio, Achaogen, Inc.: Employee and Shareholder. Salary. A. Smith, Achaogen, Inc.: Employee and Shareholder. Salary, K. M. Krause, Achaogen, Inc.: Employee. Salary. I. Galani, Achaogen, Inc.: Scientific Advisor, Research funding and honoraria. MSD: Scientific Advisor, Honoraria. A. C. Gales, MSD: Consultant and Speaker. Pfizer: Consultant. MSD: Consultant and Speaker. MSD: Consultant and Shareholder, Consulting fee. Pfizer: Consultant and Speaker, Consulting fee. BD: Consultant, Consulting fee. Bayer: Consultant, Consulting fee. A. Jubb, Achaogen, Inc.: Employee and Shareholder, Salary. L. E. Connolly, Achaogen, Inc.: Consultant, Consulting fee.

1966. Safety and Efficacy of Glapecrevir/Pibrentasvir in Patients With Chronic Hepatitis C Virus Genotypes 1-6 and Human Immunodeficiency Virus-1 Co-Infection: An Integrated Analysis of Two Phase 3 Clinical Trials

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Background. People co-infected with hepatitis C virus (HCV) and human immunodeficiency virus (HIV) may be treated for HCV without special considerations apart from drug interactions with antiretroviral therapies (ART). The once-daily, all-oral, ribavirin-free, pangenotypic combination of glecaprevir (identical to glecaprevir/pibrentasvir) was studied in a phase 2b study (NCT02866298) that achieved the primary endpoint of sustained virologic response at week 12 (SVR12) in HCV mono-infected patients. We evaluated the safety/efficacy of glecaprevir/pibrentasvir in patients co-infected with HCV/HIV-1.

Methods. Data were pooled from two Phase 3 trials for treatment-naïve and -experienced patients co-infected with HCV genotypes (GT) 1–6/HIV-1 without cirrhosis or with compensated cirrhosis who received glecaprevir/pibrentasvir for 8 or 12 weeks.