Enterobacteriaceae in the PLZ group with a PLZ MIC of 4 µg/mL (6/6) were eradicated at TOC (Table 2). Across 49 patients with concurrent bacteremia, 100% (27/27) and 96% (24/25) of Enterobacteriaceae were cleared from the blood at TOC in the PLZ and MEM groups, respectively.

**Conclusion.** PLZ demonstrated comparable or higher microbiological eradication rates compared with MEM for common Gram-negative uropathogens, including resistant pathogens. The results support PLZ as a potential treatment option for cUTI, including AP, caused by Enterobacteriaceae with PLZ MICs of ≤4 µg/mL.

### Methods

In August 2017, select jurisdictions were funded to collect urogenital and extragenital specimens from men and women seen in participating STD clinics. Positive gonorrhea cultures were sent to regional laboratories for antimicrobial susceptibility testing (AST) by agar dilution. Isolates with elevated minimum inhibitory concentration (MIC) to azithromycin (AZI) (MIC ≥2.0 µg/mL), cefixime (CFX) (MIC ≥0.25 µg/mL), and/or ceftriaxone (CRO) (MIC ≥0.125 µg/mL) were designated as Alert isolates. Clinical and epidemiological data were linked to AST results.

### Results

From August 2017 to February 2018, 4 clinics in 4 jurisdictions submitted 468 positive gonococcal specimens for AST. 36.1% were from men who have sex with men (MSM), 51.9% from men who have sex with women (MSW), and 12.0% from women. Overall, 71.8% were urethral, 7.9% endocervical, 7.1% rectal, and 13.2% pharyngeal. Seventy-two isolates (15.4%) were Alerts: 97.2% (N = 70) had elevated MICs to AZI, 2.8% (N = 2) had elevated MICs to CFX, and none had elevated MICs to CRO. No isolate had elevated MICs to both AZI and CFX. Among MSM, 15.9% of urogenital isolates and 16.1% of extragenital isolates had an elevated AZI MIC. Among women, 24.3% of endocervical isolates and 26.3% of extragenital isolates had an elevated AZI MIC.

### Conclusion

Preliminary eGISP data suggest that enhanced surveillance of pharyngeal, rectal, and endocervical isolates is feasible and that elevated MICs to azithromycin are common among males and females. Including isolates from extragenital anatomic sites and women may help strengthen surveillance capacity.

### Table 1. Per-Pathogen Microbiological Eradication at TOC by Resistance Phenotype and Resistance Mechanism (Extended mNMT Population)

| Pathogen | PLZ (N = 202) | N (%) | MEM (N = 205) | N (%) | Difference PLZ Minus MEM (95% CI) |
|----------|--------------|-------|--------------|-------|----------------------------------|
| Enterobacteriaceae | 191/215 (88.8) | 164/222 (73.9) | 15.0 (β = 4.0 to 24.4) |
| AG-N resistant | 49/60 (81.7) | 37/68 (54.4) | 12.1 (β = 4.4 to 19.8) |
| ESBL phenotype | 47/79 (59.7) | 47/76 (61.0) | 9.5 (β = 6.9 to 25.0) |
| Aminoglycoside-resistant phenotype | 5/12 (41.7) | 5/12 (41.7) | 0.0 (β = 0.0 to 1.8) |
| β-Lactamase-positive phenotype | 1/25 (4.0) | 1/25 (4.0) | 0.0 (β = 0.0 to 1.8) |

### Table 2. Per-Pathogen Microbiological Eradication at TOC by Baseline PLZ MIC (Extended mNMT Population)

| Pathogen | PLZ (N = 202) | N (%) | MEM (N = 205) | N (%) |
|----------|--------------|-------|--------------|-------|
| Enterobacteriaceae | <0.05 | 2/2 (100) | 0.12 | 23/29 (82.8) |
| 0.12 | 25/68 (37.2) |
| 0.25 | 60/68 (88.2) |
| 0.5 | 6/6 (100) |
| 1.0 | 1/2 (50.0) |
| 2.0 | 1/2 (50.0) |
| 4.0 | 1/2 (50.0) |
| 8.0 | 1 (100) |
| 16.0 | 1/2 (50.0) |
| 32.0 | 1/2 (50.0) |
| >128 | 2/2 (100) |

### Disclosures

T. R. Keepers, Achaogen, Inc.: Employee. Salary. D. S. Cebrik, Achaogen, Inc.: Employee. Salary. D. J. Cloutier, Achaogen, Inc.: Employee. Shared holder. Salary. A. Komirek, Achaogen, Inc.: Employee and Shareholder. Salary. L. Connolly, Achaogen, Inc.: Consulting. Consulting fee. K. Krause, Achaogen, Inc.: Employee. Salary.

### 126. Robust and Persistent Vaginal Colonization with LACTIN-V Vaginal Lactobacillus crispatus Probiotic in a Double-Blind, Placebo-Controlled (DBPC) Phase 2b Trial to Prevent Recurrent UTI (rUTI)

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### Background

We investigated vaginal colonization using repeatitive sequence PCR (repPCR) and 16S rRNA sequencing in a Phase 2b DBPC trial of a L. crispatus intravaginal suppository probiotic for prevention of rUTI in premenopausal women.

### Methods

Twenty-four young women with a history of rUTI and current culture-confirmed symptomatic UTI were enrolled and treated (Visit 0), then randomized (Visit 1) to receive an intravaginal suppository containing L. crispatus CTV-05 (LACTIN-V, Osel, Inc.) or placebo daily for 5 days, then once weekly for 2 months. Participants were followed up during the 2-month probiotic/placebo intervention (Visits 2 to 4) and during 2 months following the intervention (Visits 5 and 6 post-intervention). At each visit, vaginal swabs were collected for repPCR to determine the presence or absence of the probiotic strain and the duration of its presence in the vagina and for 16S rRNA-based sequence analysis to determine relative abundance of any L. crispatus vaginal suppository probiotic for prevention of rUTI in premenopausal women.

### Results

LACTIN-V vaginal suppository induced selective and sustained colonization in the probiotic but not the placebo recipients, as follows. Pre-intervention: Probiotic lactobacillus strain, a (Probiotic arm): 100% of participants positive at one or more visits and (b) Placebo arm: 0% of participants positive at any time. (2) L. crispatus relative abundance, (a) Probiotic arm: 75% of all specimens, all visits and (b) Placebo arm: 15% of all specimens, all visits. Post-intervention: (1) Probiotic lactobacillus strain, (a) Probiotic arm: 75% of participants positive at Visit 5, 58% at Visit 6 and (b) Placebo arm: 0% of participants positive at Visits 5 and 6. (2) L. crispatus relative abundance, (a) Probiotic arm: 70% to 100% and (b) Placebo arm: below 5%.

### Conclusion

LACTIN-V L. crispatus vaginal probiotic achieved robust and persistent colonization throughout 2 months of weekly dosing and for 2 months after the last dose in most participants.

### Disclosures

All authors: No reported disclosures.

### 127. Urinary Tract Infection Incidence Is Associated with Recent Environmental Temperatures

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### Background

Urinary tract infections (UTI) are one of the most common infections and the incidence of UTIs is seasonal, peaking in summer months. Relative to other months of the year, incidence of UTIs during the summer period is approximately 10% greater. Prior work has suggested that a cause of this seasonality may be warmer temperatures during summer months. However, this work focused on inpatients and used average monthly temperatures.

### Methods

We identified all UTI cases located in 1 of 397 metropolitan statistical areas (MSAs) in the contiguous United States between 2011 and 2016 using the Truven
Health MarketScan databases. A total of 192 million person-years of data were included in this dataset and a total of 21,975,244 outpatient claims for UTI were identified by ICD-9 (599.0) and ICD-10 (N39.0) codes. Weather data for each MSA and date were obtained from the National Centers for Environmental Information. We computed the mean temperature during the period 3 to 8 days prior to the service date of the claim. A Poisson generalized linear model was used to estimate the effect of temperature on the count of UTI cases adjusted for MSA size, day-of-week, and week-of-year.

Results. The effect of temperature on UTI risk was significant (likelihood ratio test $P < 0.0001$). Relative to times when the average temperature 3–8 days prior was 40.1–43°F, UTI incidence exhibited a dose–response pattern with temperature during the period 3–8 days prior to presentation. This pattern persists after adjustment for seasonal factors. These results suggest a causal relationship between warm weather, and UTI risk may exist and warrants further investigation.

Conclusion. Incidence of UTIs exhibits a dose–response pattern with temperature during the period 3–8 days prior to presentation. This pattern persists after adjustment for seasonal factors. These results suggest a causal relationship between warm weather, and UTI risk may exist and warrants further investigation.

Disclosures. All authors: No reported disclosures.

128. Sexually Transmitted Infections Among Adolescent Girls in Thika, Kenya Tiffany Yuh, MD; Catherine Kipkem, MPH; Stacy Selke, MS; Lynda Ouchoch, MPH; Arinda Magare, PhD; Kenneth Njiru, MSc, PhD; Anna Wadl, MD, MPH, FIDSA; Nelly Mugo, MD and Alison C. Ruxby, MD, MSc, 1 Department of Medicine, University of Washington, Seattle, Washington, 2 Partners in Health MarketScan databases. A total of 192 million person-years of data were included in this dataset and a total of 21,975,244 outpatient claims for UTI were identified by ICD-9 (599.0) and ICD-10 (N39.0) codes. Weather data for each MSA and date were obtained from the National Centers for Environmental Information. We computed the mean temperature during the period 3 to 8 days prior to the service date of the claim. A Poisson generalized linear model was used to estimate the effect of temperature on the count of UTI cases adjusted for MSA size, day-of-week, and week-of-year.

Results. The effect of temperature on UTI risk was significant (likelihood ratio test $P < 0.0001$). Relative to times when the average temperature 3–8 days prior was 40.1–43°F, UTI incidence exhibited a dose–response pattern with temperature during the period 3–8 days prior to presentation. This pattern persists after adjustment for seasonal factors. These results suggest a causal relationship between warm weather, and UTI risk may exist and warrants further investigation.

Conclusion. Incidence of UTIs exhibits a dose–response pattern with temperature during the period 3–8 days prior to presentation. This pattern persists after adjustment for seasonal factors. These results suggest a causal relationship between warm weather, and UTI risk may exist and warrants further investigation.

Disclosures. All authors: No reported disclosures.