



# **Infectious Diseases**

## **Division Newsletter**

### **INSIDE THIS ISSUE**

- Awards and Honors
- Appointments and Transitions
- Grants
- Other News
- Newsroom Updates
- Divisional Publications
- Important Dates





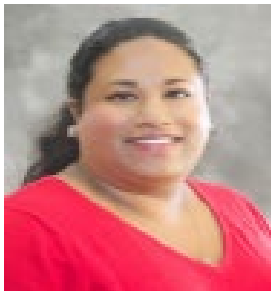
## Awards and Honors



Congratulations to **Carrie Johnston**, who was selected as a recipient of the Research Assistance for Primary Parents (RAPP) Award of the Mastercard Diversity-Mentorship Collaborative at WCM.



# Appointments and Transitions



Congratulations to **Priya Kodiyanplakkal**, who joined the American Society of Transplantation (AST) committee. ([Link](#))



Farewell and Congratulations to **Anna Mertelsmann**, who will be leaving WCM and moving to Switzerland where she will start as a clinical I.D. fellow.



Farewell and Congratulations to **Wesley Rogers**, who will be leaving WCM and going to NYU as Assistant Professor of Clinical Medicine at Tisch Hospital.





# Grants



Congratulations to **Jennifer Downs**, who successfully competed for an NIH K24 grant entitled: “Schistosomiasis and Women's Reproductive Health.”



Congratulations to **Mike Satlin**, who successfully competed for an NIH R21 grant entitled: “Screening for Fluoroquinolone-Resistant Viridans Group Streptococci to Individualize Infection Prevention Strategies in Neutropenic Patients”.





## Other News

On June 27<sup>th</sup>, Trip Gulick presented the “Annual State of the I.D. Division” talk followed by our annual celebration of the end of the academic year. PowerPoint presentation attached.







## Other News

Additional pictures of the End of Year Party:





## Other News

Cornell Clinical Trials Unit (CCTU) had a gathering to say farewell to **Tim Wilkin**.







## Other News

I.D. Fellowship Graduation Dinner was on June 27<sup>th</sup>.







## Other News

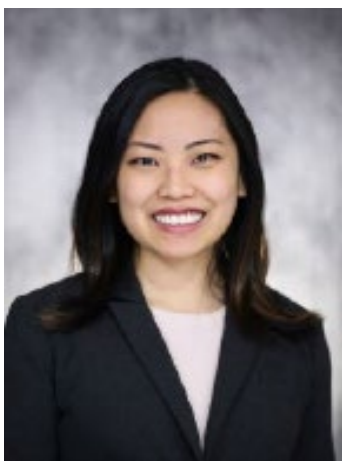
Medical Student Infectious Diseases Interest Group meeting was on June 4<sup>th</sup>.





## Other News

Welcome to the new fellows:



Catherine Cai:  
[cwc9006@nyp.org](mailto:cwc9006@nyp.org)



David DiTullio:  
[drg9024@nyp.org](mailto:drg9024@nyp.org)



Tony Li-Geng:  
[xjr9003@nyp.org](mailto:xjr9003@nyp.org)



## Other News



- Plenary Speaker: **David Calfee**
  - Keeping Control and Preventing Infections: Hospital Epidemiology and Microbiology Col-LAB-oration ([Link](#))
- Session Speakers: **Karen Acker, Rebecca Rolon**
  - Crossing Paths: Microscopy Across Clinical Laboratories for the Unified Diagnosis of Infection ([Link](#))
  - Keeping Our Kids Safe: Prevention, Diagnosis, and Treatment of Childhood Infections ([Link](#))
- Organizing Committee: **Lars Westblade**





## Other News

**Ruta Petraitiene, Vidmantas Petraitis, Ethan Naing, Andrew Garcia, Povilas Kavaliauskas, Auriya Kalasauskiene, Joseph M. Wiley, Mark Resnick, Natalia Gorlatova, GianFranco Fornasini, Thomas J. Walsh,** presented a poster at the 34th European Congress of Clinical Microbiology and Infectious Diseases (ECCMID 2024) in Barcelona, Spain:

"Novel liposomal formulations of amphotericin B (LFAMB) were effective in murine models of experimental mycotic keratitis caused by *Candida albicans* (CA), *Aspergillus fumigatus* (AF), and *Fusarium solani* complex (FS)"





# Other News



34th **ECCMID** Barcelona, Spain  
27 – 30 April 2024

**Lee Gottesdiener** presented a poster at ECCMID.

**Resistance to Novel  $\beta$ -Lactam/ $\beta$ -Lactamase Inhibitors Among Carbapenem-Resistant *Pseudomonas aeruginosa* and Clinical Implications in the Prospective Observational *Pseudomonas* (POP) Study**

**ARLQ**  
Antibiotic Resistance Leadership Group

**Background**

- The global extent of resistance to novel  $\beta$ -lactam/ $\beta$ -lactamase inhibitors (BL/BLi) for among carbapenem-resistant *Pseudomonas aeruginosa* (CRPA) and its impact on patient outcomes is unclear.
- We determined the susceptibility of CRPA isolates from 8 regions to 3 novel BL/BLi: ceftolozane-tazobactam (C/T), ceftazidime-avibactam (C/A), and meropenem-vaborbactam (M/V), and assessed the relationship between susceptibility and clinical outcomes.

**Methods**

- CRPA isolates with CRPA isolated from blood, respiratory, urinary, or wound infections were included from 26 hospitals (June 2018–June 2023).
- Antimicrobial susceptibility testing was performed by agar diffusion for C/T and C/A, and broth microdilution for M/V, using CLSI breakpoints.
- Isolates underwent whole-genome sequencing to assess for carbapenemase.
- Clinical outcomes and outcomes of patients treated with isolates non-susceptible to each agent were compared to isolates susceptible to each agent.
- Outcomes included 30-day mortality and probability of outcome (success, failure, or death).

**Results**

- 800 CRPA isolates were analyzed (USA: 526; Europe: 127; Middle East: 51; Australia/Asia: 14).
- The number (%) of isolates to each agent were: C/T: 247 (31%); C/A: 265 (33%); M/V: 543 (68%).
- Susceptibility to novel BL/BLi differed among regions (Fig. 2A), with USA isolates most likely to be susceptible.
- Carbapenemase-producing isolates were less frequently susceptible than non-carbapenemase-producing isolates (Fig. 2B).
- 30-day mortality and OOR outcomes were similar for patients infected with isolates M/V vs. C to each agent when evaluating all infections (Table 1).
- Among 52 patients with CRPA bloodstream infection (BSI), the adjusted OOR probability of a favorable outcome was 33.5% (95% confidence interval: 25.8%–42.9%) for patients with C/T M/V isolates compared to those with C/T S isolates.
- Patients with BSI due to C/T M/V isolates were more likely to receive aminoglycosides or polymyxins than those with C/T S isolates (57% vs. 29%,  $p=0.024$ ) and less likely to receive fluoroquinolones (7% vs. 44%,  $p=0.001$ ).

**Conclusions**

- Non-susceptibility to novel BL/BLi is common among CRPA isolates, particularly outside the USA and in carbapenemase-producing isolates.
- Non-susceptibility may be more common to M/V among CRPA than to C/T and C/A.
- Among all CRPA infections, clinical outcomes did not differ based on susceptibility to novel BL/BLi. However, BSI due to C/T M/V CRPA was associated with worse OOR outcomes compared to C/T S CRPA.

**Figure 1: No. of CRPA Isolates Non-Susceptible to Novel BL/BLi**

**Figure 2: Percent of Isolates Non-Susceptible to Novel BL/BLi by Region (A) and Carbapenemase Production (B)**

**Table 1: 30-Day Mortality and OOR by Non-Susceptible vs. Susceptible to Novel BL/BLi**

Agent	Isolate No.	30-Day Mortality (%)	OOR (%)
C/T	247	11.3%	33.5%
C/A	265	10.2%	31.8%
M/V	543	10.1%	33.5%

**References**

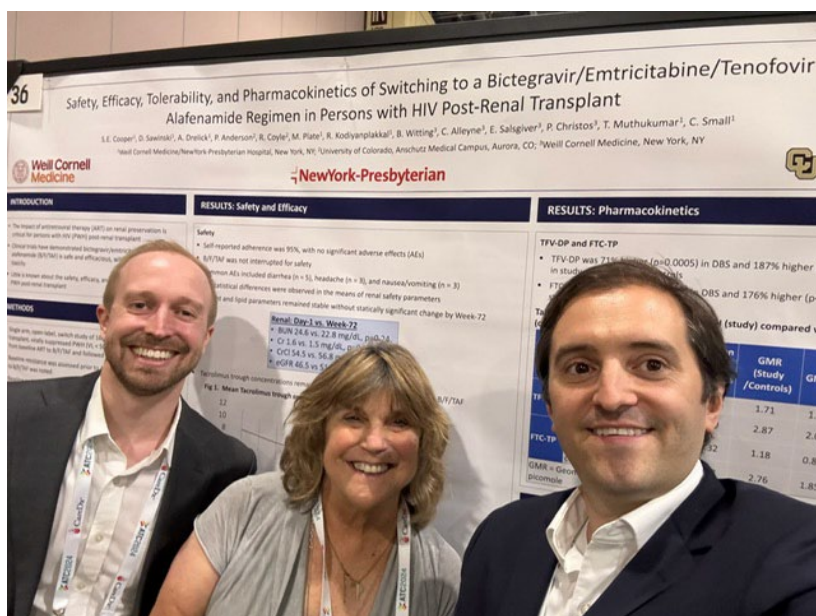
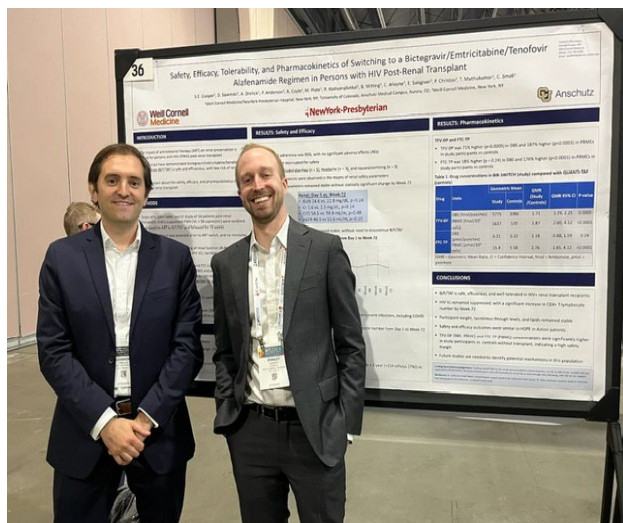
- Lee Gottesdiener et al. (2023). Resistance to Novel  $\beta$ -Lactam/ $\beta$ -Lactamase Inhibitors Among Carbapenem-Resistant *Pseudomonas aeruginosa* and Clinical Implications in the Prospective Observational *Pseudomonas* (POP) Study. *Antimicrobial Agents and Chemotherapy*, 67(12), e028123.



## Other News



Below are some pictures from The American Transplant Congress (ATC 2024).







# Newsroom Updates

**Khanh Pham** was featured in the [WCM Newsroom](#):

“2024 Business Plan Challenge Pitch Competition Supports Innovation for Health Care Challenges”.

The company, StewardGuard, was founded by Khanh Pham. This is a runner-up in the pitch competition and received an investment from various industry/VC members to further develop the product and company.





# Divisional Publications

- Ament SA, Campbell RR, Lobo MK, Receveur JP, Agrawal K, Borjabad A, Byraredy SN, Chang L, Clarke D, Emani P, Gabuzda D, Gaulton KJ, Giglio M, Giorgi FM, Gok B, Guda C, Hadas E, Herb BR, Hu W, Huttner A, Ishmam MR, Jacobs MM, Kelschenbach J, Kim DW, Lee C, Liu S, Liu X, Madras BK, Mahurkar AA, Mash DC, Mukamel EA, Niu M, O'Connor RM, Pagan CM, **Pang APS**, Pillai P, Repunte-Canonigo V, Ruzicka WB, Stanley J, Tickle T, Tsai SA, Wang A, Wills L, Wilson AM, Wright SN, Xu S, Yang J, Zand M, Zhang L, Zhang J, Akbarian S, Buch S, Cheng CS, **Corley MJ**, Fox HS, Gerstein M, Gummuluru S, Heiman M, Ho YC, Kellis M, Kenny PJ, Kluger Y, Milner TA, Moore DJ, Morgello S, **Ndhlovu LC**, Rana TM, Sanna PP, Satterlee JS, Sestan N, Spector SA, Spudich S, Tilgner HU, Volsky DJ, White OR, Williams DW, Zeng H. The single-cell opioid responses in the context of HIV (SCORCH) consortium. Mol Psychiatry. 2024 Jun 15. doi: 10.1038/s41380-024-02620-7. Epub ahead of print. [PMID: 38879719](#).
- **Kavaliauskas P**, Acevedo W, **Garcia A**, **Naing E**, Grybaite B, Sapijanskaite-Banevic B, Grigaleviciute R, **Petraitiene R**, Mickevicius V, **Petraitis V**. Exploring the potential of bis(thiazol-5-yl)phenylmethane derivatives as novel candidates against genetically defined multidrug-resistant Staphylococcus aureus. PLoS One. 2024 Mar 22;19(3):e0300380. doi: 10.1371/journal.pone.0300380. PMID: 38517855; [PMCID: PMC10959338](#).
- **Petraitiene R**, **Petraitis V**, Zaw MH, Hussain K, Ricart Arbona RJ, Roilides E, Walsh TJ. Combination of Systemic and Lock-Therapies with Micafungin Eradicate Catheter-Based Biofilms and Infections Caused by *Candida albicans* and *Candida parapsilosis* in Neutropenic Rabbit Models. J Fungi (Basel). 2024 Apr 17;10(4):293. doi: 10.3390/jof10040293. PMID: 38667964; [PMCID: PMC11050883](#).
- **Petraitis V**, **Petraitiene R**, **Kavaliauskas P**, **Naing E**, **Garcia A**, Zigmantaite V, Grigaleviciute R, Kucinskas A, Pockevicius A, Stakauskas R, Walsh TJ. Development of rabbit models of ventilator-associated bacterial pneumonia produced by carbapenem-resistant *Pseudomonas aeruginosa*. Antimicrob Agents Chemother. 2024 Apr 30:e0020524. doi: 10.1128/aac.00205-24. Epub ahead of print. [PMID: 38687014](#).
- Stier EA, Jain M, Joshi H, Darragh TM, Deshmukh AA, Lee J, Einstein MH, Jay N, Berry-Lawhorn JM, Palefsky JM, **Wilkin T**, **Ellsworth G**, French AL, Barroso LF, Levine R, Guiot HM, Rezaei MK, Chiao E. Two-Year Incidence and Cumulative Risk and Predictors of Anal High-Grade Squamous Intraepithelial Lesions (Anal Precancer) Among Women With Human Immunodeficiency Virus. Clin Infect Dis. 2024 Mar 20;78(3):681-689. doi: 10.1093/cid/ciad614. PMID: 37805952; [PMCID: PMC10954341](#).





# Important Dates



Independence Day  
(WCM Holiday)



International AIDS Society Meeting  
2024 in Munich, Germany

 **AIDS** 2024



Next I.D. Faculty Meeting  
**8/5 postponed to 9/9**  
12PM to 1PM  
([Zoom Link](#))