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Area of Expertise

Pre-Clinical Services evaluate new therapies against infections using animal models. These studies are done in collaboration with pharmaceutical and academic researchers, and several of these therapies are now being used clinically to treat patients.

Qualifications

MS in Biology, Fairleigh Dickinson University
BS in Microbiology, Rutgers University

Recent Publications

Immunopotentiality by Lymph-Node Targeting of a Malaria Transmission-Blocking Nanovaccine

Howard, G. P., Bender, N. G., Khare, P., López-Gutiérrez, B., Nyasembe, V., Weiss, W. J., Simecka, J. W., Hamerly, T., Mao, H. Q. & Dinglasan, R. R., 27 Aug 2021, In: *Frontiers in Immunology*. 12, 729086.

Microbiological characterization of VNRX-5236, a broad-spectrum b-lactamase inhibitor for rescue of the orally bioavailable cephalosporin ceftibuten as a carbapenem-sparing agent against strains of enterobacterales expressing extended-spectrum b-lactamases and serine carbapenemases

Chatwin, C. L., Hamrick, J. C., Trout, R. E. L., Myers, C. L., Cusick, S. M., Weiss, W. J., Pulse, M. E., Xerri, L., Burns, C. J., Moeck, G., Daigle, D. M., John, K., Uehara, T. & Pevear, D. C., Aug 2021, In: *Antimicrobial agents and chemotherapy*. 65, 8, e00552.

Discovery of VNRX-7145 (VNRX-5236 Etzadroxil): An Orally Bioavailable β -Lactamase Inhibitor for Enterobacterales Expressing Ambler Class A, C, and D Enzymes

Trout, R. E., Zulli, A., Mesaros, E., Jackson, R. W., Boyd, S., Liu, B., Hamrick, J., Daigle, D., Chatwin, C. L., John, K., McLaughlin, L., Cusick, S. M., Weiss, W. J., Pulse, M. E., Pevear, D. C., Moeck, G., Xerri, L. & Burns, C. J., 22 Jul 2021, In: *Journal of Medicinal Chemistry*. 64, 14, p. 10155-10166 12 p.

Pseudomonas aeruginosa ventilator-associated pneumonia rabbit model for preclinical drug development

Nguyen, N. T. Q., Gras, E., Tran, N. D., Nguyen, N. N. Y., Lam, H. T. H., Weiss, W. J., Doan, T. N. M. & Diep, B. A., Jul 2021, In: *Antimicrobial agents and chemotherapy*. 65, 7, e02724-20.

FDA public workshop summary: Advancing animal models for antibacterial drug development

Byrne, J. M., Waack, U., Weinstein, E. A., Joshi, A., Shurland, S. M., Iarikov, D., Bulitta, J. B., Diep, B. A., Guina, T., Hope, W. W., Lawrenz, M. B., Lepak, A. J., Luna, B. M., Miesel, L., Phipps, A. J., Walsh, T. J., Weiss, W., Amini, T. & Farley, J. J., Jan 2021, In: *Antimicrobial agents and chemotherapy*. 65, 1, e01983-20.

Discovery of Taniborbactam (VNRX-5133): A Broad-Spectrum Serine- And Metallo- β -lactamase Inhibitor for Carbapenem-Resistant Bacterial Infections

Liu, B., Trout, R. E. L., Chu, G. H., McGarry, D., Jackson, R. W., Hamrick, J. C., Daigle, D. M., Cusick, S. M., Pozzi, C., De Luca, F., Benvenuti, M., Mangani, S., Docquier, J. D., Weiss, W. J., Pevear, D. C., Xerri, L. & Burns, C. J., 26 Mar 2020, In: *Journal of Medicinal Chemistry*. 63, 6, p. 2789-2801 13 p.

C1-CBP-vancomycin: Impact of a Vancomycin C-Terminus Trimethylammonium Cation on Pharmacological Properties and Insights into Its Newly Introduced Mechanism of Action

Wu, Z. C., Isley, N. A., Okano, A., Weiss, W. J. & Boger, D. L., 7 Feb 2020, In: *Journal of Organic Chemistry*. 85, 3, p. 1365-1375 11 p.

DAV131A Protects Hamsters from Lethal *Clostridioides difficile* Infection Induced by Fluoroquinolones

Saint-Lu, N., Burdet, C., Sablier-Gallis, F., Corbel, T., Nevière, A., Sayah-Jeanne, S., Pulse, M., Weiss, W., Ferreira, S., Andremont, A., Mentré, F. & de Gunzburg, J., 2020, In: Antimicrobial agents and chemotherapy. 64, 1, e01196-19.

Liposomal mupirocin holds promise for systemic treatment of invasive *Staphylococcus aureus* infections

Goldmann, O., Cern, A., Muesken, M., Rohde, M., Weiss, W., Barenholz, Y. & Medina, E., 28 Dec 2019, In: Journal of Controlled Release. 316, p. 292-301 10 p.

In Vivo Efficacy of Novel Monobactam LYS228 in Murine Models of Carbapenemase-Producing *Klebsiella pneumoniae* Infection

Weiss, W. J., Pulse, M. E., Nguyen, P. & Growcott, E. J., Apr 2019, In: Antimicrobial agents and chemotherapy. 63, 4, e02214-18.