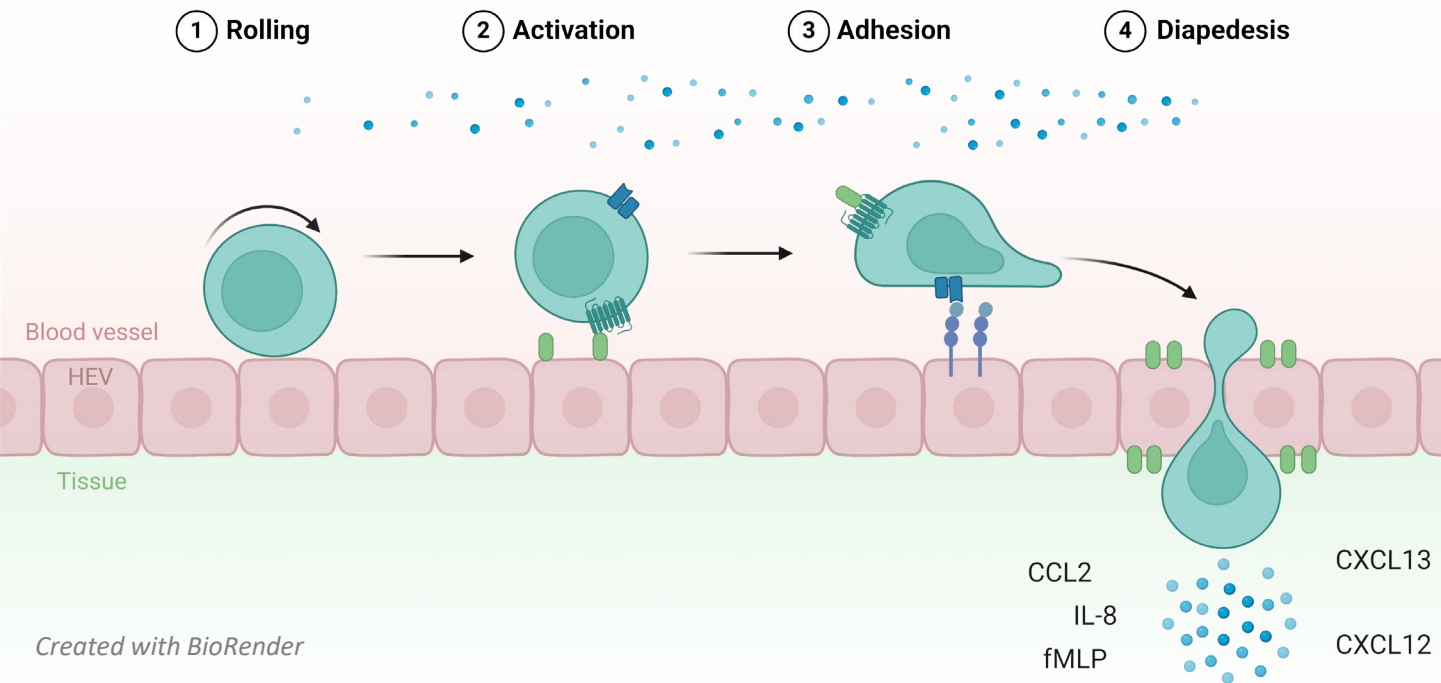


Development of a High-Throughput In Vitro Chemotaxis Assay in Jurkat T Cells for Hazard Identification of Immunotoxics

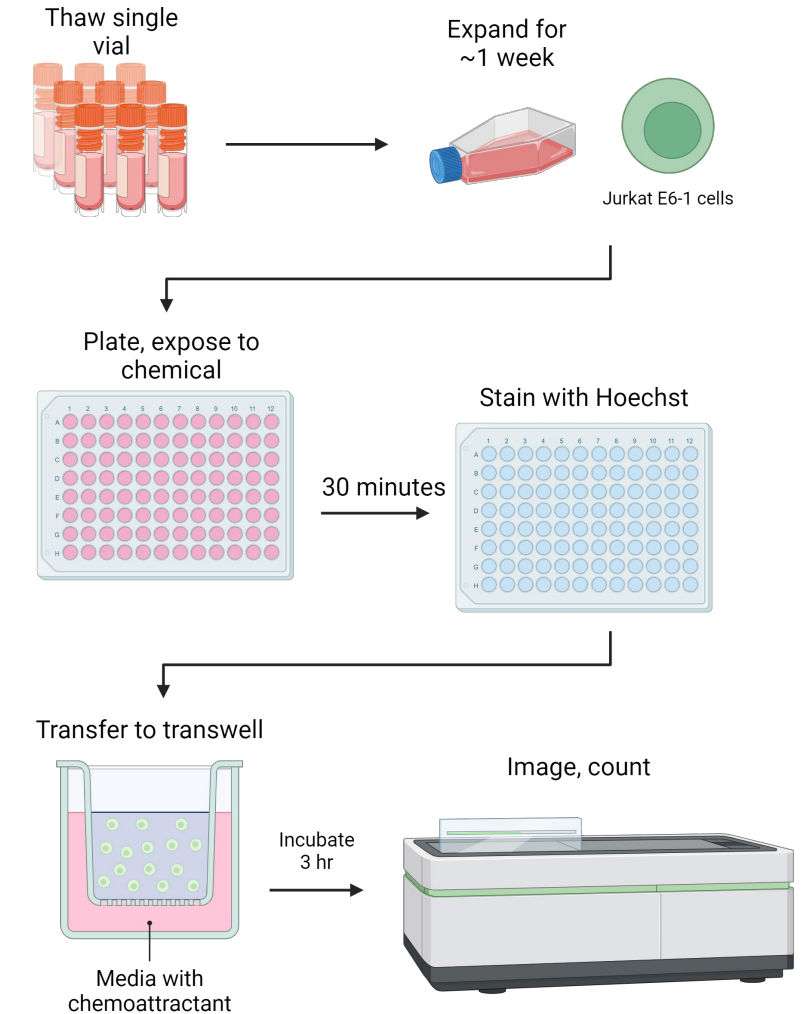
Drake Phelps^{1,2}, Joshua Harrill², Kimberly Slentz-Kesler²

¹Oak Ridge Institute for Science and Education Research Program, ²Center for Computational Toxicology and Exposure, United States Environmental Protection Agency

High-throughput methods are needed for rapid identification of immunotoxics.



Chemotaxis is a critical function of immune cells that can be inhibited by chemical exposure.

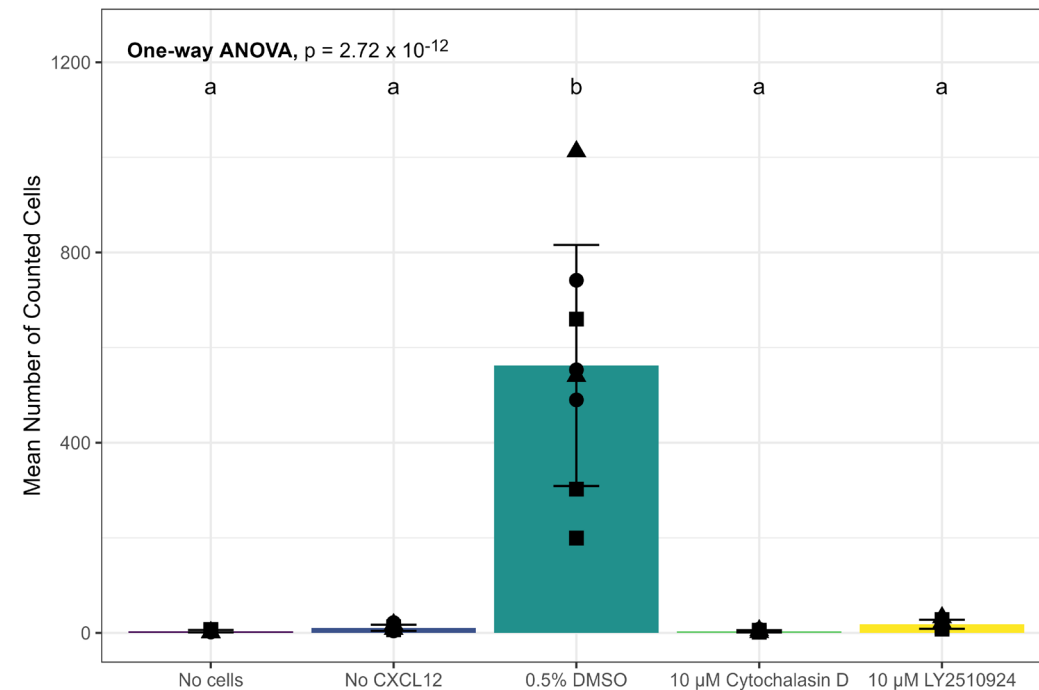


Development of a High-Throughput In Vitro Chemotaxis Assay in Jurkat T Cells for Hazard Identification of Immunotoxicants

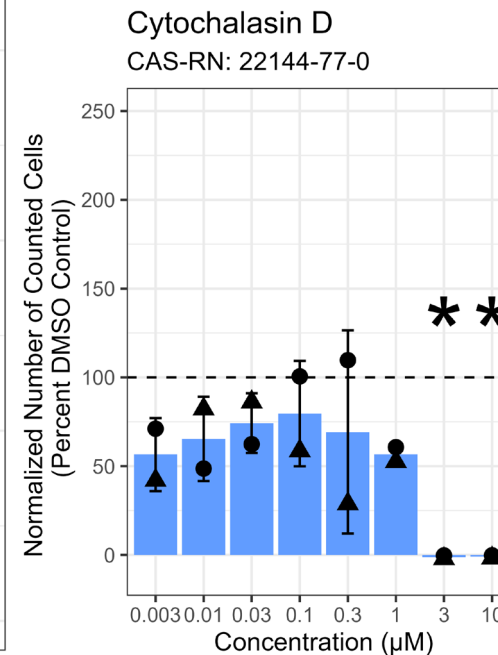
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Specific inhibitors blocked chemotaxis *in vitro*.



Cytochalasin D – inhibitor of actin polymerization
LY2510924 – inhibitor of receptor for CXCL12



Key Takeaways

- Chemotaxis is a key function of immune cells.
- Jurkat T cells migrate towards CXCL12 in a transwell system.
- Chemotaxis can be inhibited in this model via chemical exposure.
- **This assay represents a NAM for identifying immunotoxicants.**

To see the effects of other chemicals, stop by my poster!

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