

Leukocyte Recruitment

Lecturer: Markus Sperandio

Leukocyte recruitment is a fundamental immunological process allowing leukocytes to leave the intravascular compartment and transmigrate into tissue. Leukocyte recruitment follows a well-defined cascade of adhesion and activation events including rolling, arrest, postarrest modifications such as flattening and crawling before transmigration in tissue occurs. In the Advanced Methods Courses we will introduce you to several in vitro and in vivo methods which will allow you to investigate specific steps along the leukocyte recruitment cascades. Among the models we will show are intravital microscopy of the inflamed cremaster muscle, ex vivo and in vitro flow chamber models as well as transwell assays.

Literature:

MST1-dependent vesicle trafficking regulates neutrophil transmigration through the vascular basement membrane.

Kurz AR, Pruenster M, Rohwedder I, Ramadass M, Schäfer K, Harrison U, Gouveia G, Nussbaum C, Immler R, Wiessner JR, Margraf A, Lim DS, Walzog B, Dietzel S, Moser M, Klein C, Vestweber D, Haas R, Catz SD, Sperandio M.
J Clin Invest. 2016 Nov 1;126(11):4125-4139.

Ontogenetic regulation of leukocyte recruitment in mouse yolk sac vessels.

Sperandio M, Quackenbush EJ, Sushkova N, Altstätter J, Nussbaum C, Schmid S, Pruenster M, Kurz A, Margraf A, Steppner A, Schweiger N, Borsig L, Boros I, Krajewski N, Genzel-Boroviczeny O, Jeschke U, Frommhold D, von Andrian UH.
Blood. 2013 May 23;121(21):e118-28.