

**Prof. Mayda Gursel**, received her PhD degree from University of London, The School of Pharmacy in 1995. Dr. Gursel's research is focused on pattern recognition receptor ligands and their therapeutic applications as immune modulators and vaccine adjuvants. From 1998 to 2006, Dr. Gursel worked at the U.S. Food and Drug Administration (FDA), Center for Biologics Evaluation and Research (CBER) at NIH Campus first as a post-doctoral fellow and then as a senior scientist regulating viral vaccine products. Prof Gursel, joined Izmir Biomedicine and Genome Center (IBG) research Laboratory at IBG tries to decipher the mechanism and immunotherapeutic applications of Innate immune system sensors. Additionally another line of research includes investigation of the immunomodulatory effects of microbial derived extracellular vesicles along with design of effective adjuvants and vaccines against infectious diseases. She is heavily investing her efforts to reveal the immunological manifestations of primary immune deficiencies along with understanding the mechanisms of immune dysregulation.



### **Seminar: Disorders of Phagocytic Function: Diagnosis**

The analyses of phagocytic function of immune cells reveal information to offer better therapies against diseases. We will review flow cytometry based approaches to assess these functions. This seminar is of interest to both basic, applied and clinical immunologists and cell biologists.

### **Relevant Literature:**

1. Yilmaz, N.S., Eltan, S.B., Kayaoglu, B., Geckin, B., Heredia, R.J., Sefer, A.P., Kiykim, A., Nain, E., Kasap, N., Dogru, O., Yucelten, A.D., Cinel, L., Karasu, G., Yesilipek, A., Sozeri, B., Kaya, G.G., Yilmaz, I.C., Baydemir, I., Aydin, Y., Kahraman, D.C., Haimel, M., Boztug, K., Aydiner, E.K., Gursel, I., Ozen, A., Baris, S., **Gursel, M.**, Low Density Granulocytes and Dysregulated Neutrophils driving Autoinflammatory Manifestations in NEMO deficiency. 2021, Journal of Clinical Immunology. (Accepted), 2021.
2. Kayaoglu, B., Kasap, N., Yilmaz, N. S., Charbonnier, L. M., Geckin, B., Akcay, A., Eltan, S. B., Ozturk, G., Ozen, A., Karakoc-Aydiner, E., Chatila, T. A., **Gursel, M.**, & Baris, S. (2021). Stepwise Reversal of Immune Dysregulation Due to STAT1 Gain-of-Function Mutation Following Ruxolitinib Bridge Therapy and Transplantation. Journal of Clinical Immunology, 41(4), 769–779. <https://doi.org/10.1007/s10875-020-00943-y>.
3. Alpdundar Bulut E, Bayyurt Kocabas B, Yazar V, Aykut G, Guler U, Salih B, Surucu Yilmaz N, Ayanoglu IC, Polat MM, Akcali KC, Gursel I, **Gursel M.** Human Gut Commensal Membrane Vesicles Modulate Inflammation by Generating M2-like Macrophages and Myeloid-Derived Suppressor Cells. Accepted for publication in J. Immunol., 205 (10), 2707-2718, 2020.
4. Gul E, Sayar EH, Gungor B, Eroglu FK, Surucu N, Keles S, Guner SN, Fındık S, Alpdündar E, Ayanoglu IC, Kayaoglu B, Geçkin BN, Sanli HA, Kahraman T, Yakicier C, Muftuoglu M, Oguz B, Cagdas Ayvaz DN, Gursel I, Ozen S, Reisli I, **Gursel M.** Type I IFN related NETosis in Ataxia Telangiectasia and Artemis deficiency. J Allergy Clin Immunol. 2018;142(1):246-257. doi: 10.1016/j.jaci.2017.10.030.

5. Gungor B, Yagci FC, Tincer G, Bayyurt B, Alpdundar E, Yildiz S, Ozcan M, Gursel I, **Gursel M**. CpG ODN nanorings induce IFN $\alpha$  from plasmacytoid dendritic cells and demonstrate potent vaccine adjuvant activity. *Sci Transl Med*. 2014; 6(235):235ra61.