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### **Profile:**

Dr. Arshad Mahmood, Assistant Professor, obtained a Bachelor degree in Eastern Medicine and surgery from Islamia University, Bahawalpur, Pakistan, and Ph. D. in the field of Medical Life Sciences from University of Toyama, Japan. His Ph. D. research was focused on the relationship of high-fat diet-induced obesity and insulin resistance along with the implications of hypoxic conditions which is generally a result of diet-induced obesity. Later, he was offered a Post-Doctoral Research position in the Department of Metabolism and Nutrition, University of Toyama, Japan, where he worked on aging related metabolic anomalies.

### **Research Interest:**

1. Metabolic ailments (development of hypoxia in response to High Fat Diet and its consequences)
2. Molecular mechanism of aging related metabolic anomalies.
3. Strategies for combating obesity-induced insulin resistance by medicinal plants

### **Selected Publications:**

1. Nawaz, A., **Mehmood, A.**, Kanatani, Y., Kado, T., Igarashi, Y., Takikawa, A., Yamamoto, S., Okabe, K., Nakagawa, T., Yagi, K., Fujisaka, S., and Tobe, K. "Sirt1 activator induces proangiogenic genes in preadipocytes to rescue insulin resistance in diet-induced obese mice" **Scientific Report** 2018 Jul 27;8(1):11370. Epub 2018 Jul 27.
2. Gulshan, M., Yaku, K., Okabe, K., **Mahmood, A.**, Sasaki, T., Yamamoto, M., Hikosaka, K., Usui, I., Kitamura, T., Tobe, K., Nakagawa, T. "Overexpression of Nmnat3 efficiently increases NAD and NGD levels and ameliorates age-associated insulin resistance". **Aging Cell**. 2018 Aug; 17(4): e12798.
3. Takikawa, A., **Mahmood, A.**, Nawaz, A., Nakagawa, T., Senda, S., Fujisaka, S., Aminuddin, Usui, I., Tobe, K. "HIF-1 $\alpha$  in myeloid cell promotes adipose tissue remodeling toward insulin resistance". **Diabetes**. 2016 Dec; 65(12): 3649-3659.
4. Yamamoto, M., Hikosaka, K., **Mahmood, A.**, Tobe, K., Shojaku, H., Inohara, H., Nakagawa, T. "Nmnat3 Is Dispensable in Mitochondrial NAD Level Maintenance in Vivo". **PLoS ONE** 11(1): e0147037, January 2016.
5. Senda, S., Inoue, A., **Mahmood, A.**, Suzuki, R., Kamei, N., Kubota, N., Watanabe, T., Aoyama, M., Nawaz, A., Ohkuma, Y., Tsuneyama, K., Koshimizu, Y., Usui, I., Saeki, K., Kadowaki, T., Tobe, K. "Calorie restriction-mediated restoration of hypothalamic signal transducer and activator of transcription 3 (STAT3) phosphorylation is not effective for lowering the body weight set point in IRS-2 knockout obese mice". **Diabetology international** 6(4), 321-335, February 2015.