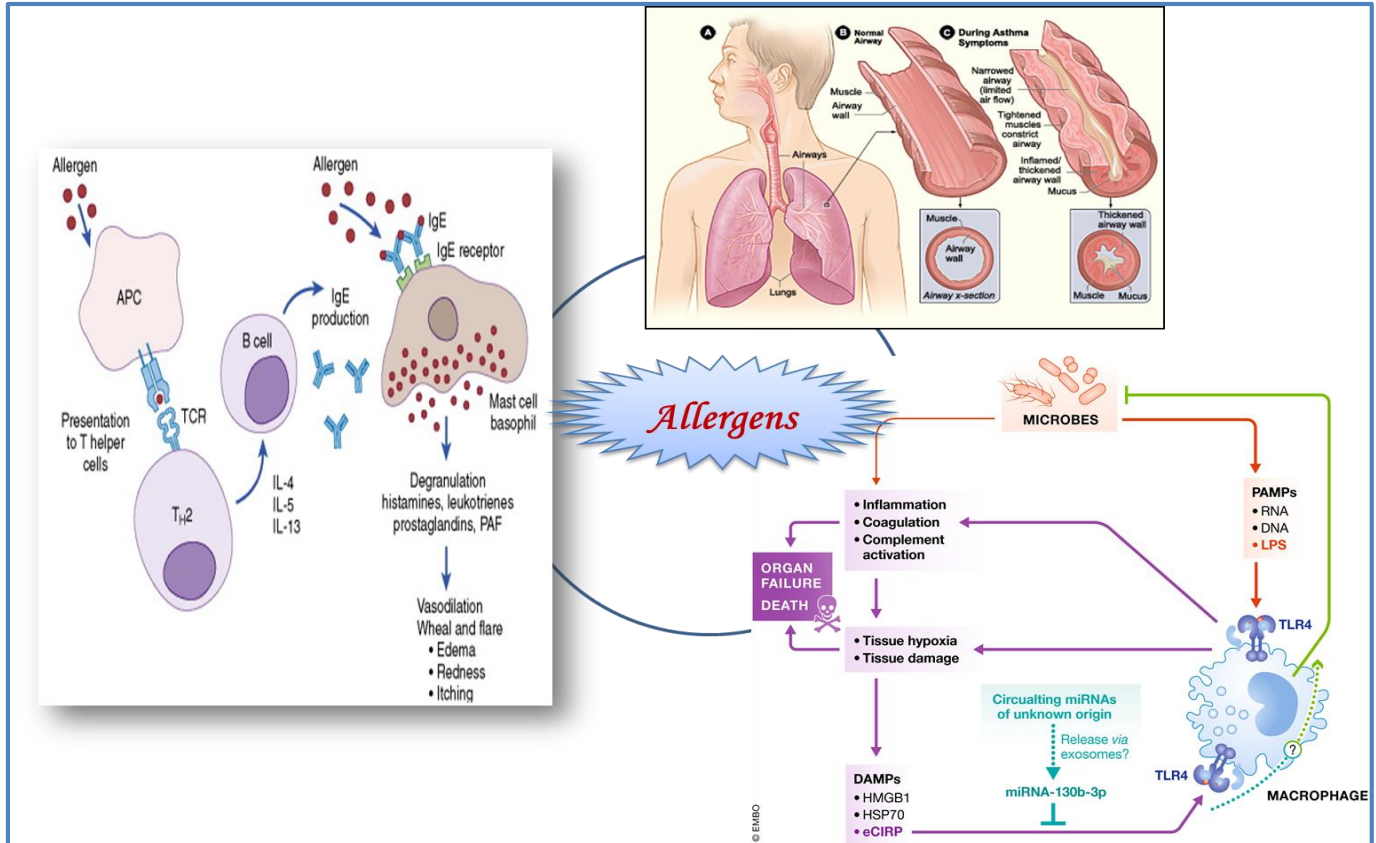


# Allergy, Asthma, and immunological diseases



Allergic diseases have become one of the top three conditions demanding major effort toward prevention and control in the 21st century, according to WHO. From 2011 to 2013, 235–300 million people worldwide suffered from asthma which may increase to 400 million in 2025. **Pharmacology and Toxicology department focuses** on exploring novel pharmacological interventions that could lower incidence and so morbidity and mortality rate associated with allergic diseases such as asthma, allergic rhinitis and others. Our projects aim at exploring potential impacts of certain agents experimentally in different animals' models in addition to the investigation of underlying mechanisms of these agents. Agent targeting various pathways such as SIRT1/Nrf2/NF- $\kappa$ Bp65/NLRP3 signaling and TLR4/NF- $\kappa$ B could be promising therapeutic tools to alleviate allergic diseases.

## Publications

- Mohamed, G.A., Ibrahim, S.R.M., El-Agamy, D.S., ...Koshak, A.E., Elhady, S.S. Terretonin as a new protective agent against sepsis-induced acute lung injury: Impact on SIRT1/Nrf2/NF- $\kappa$ Bp65/NLRP3 signaling. *Biology*, **2021**, 10(11), 1219. <https://doi.org/10.3390/biology10111219>
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- El-Agamy, D.S., Mohamed, G.A., Ahmed, N., .Mohamed, S.G.A., Ibrahim, S.R.M. Protective anti-inflammatory activity of tovophyllin A against acute lung injury and its potential cytotoxicity to epithelial lung and breast carcinomas. *Inflammopharmacology*, **2020**, 28(1), pp. 153–163. <https://doi.org/10.1007/s10787-019-00609-1>
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- Ibrahim SRM, Ahmed N, Almalki S, Alharbi N, El-Agamy DS, Alahmadi LA, Saubr MK, Elkablawy M, Elshafie RM, Mohamed GA, El-Kholy MA. Vitexagnus-castus safeguards the lung against lipopolysaccharide-induced toxicity in mice. *J Food Biochem*. **2019**; 43(3):e12750. <https://doi.org/10.1111/jfbc.12750>

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