

CONTINUING MEDICAL EDUCATION EXAMINATION

# Eosinophil Response Against Classical and Emerging Respiratory Viruses: COVID-19

Instructions for obtaining 1,0 Continuing Medical Education Credits

Credits can be earned by reading the text and completing the CME examinations online throughout the year on the SEAIC web site at [www.seaic.org](http://www.seaic.org)



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## CME Items

- How do eosinophils recognize viral particles?
  - By pattern recognition receptors such as TLRs.
  - By L-selectins.
  - By CD69 antigen.
  - By both CD80 and CD86
- Which are the main cationic granule proteins released by eosinophils?
  - Major basic protein, eosinophil-derived neuraminidase, eosinophil cationic protein, and eosinophil peroxidase.
  - Major basic protein, eosinophil-derived neurotoxin, eosinophil cationic protein, and eosinophil peroxidase.
  - Main basic protein, eosinophil-derived neurotoxin, eosinophil cytotoxic protein, and eosinophil peroxidase.
  - Myeloid basic protein, eosinophil-derived neurotoxin, eosinophil cytotoxic protein, and eosinophil peroxidase.
- Which of the following are produced by COVID-19 infection?
  - Massive lymphocyte inflammation.
  - High lung neutrophil inflammation.
  - Low blood eosinophil counts.
  - Mild macrophage inflammation
- Which surface molecules related to antigen presentation are expressed by eosinophils?
  - Major histocompatibility complex class II.
  - CD80/86.
  - CD40.
  - All of the above.
- With respect to extracellular traps, which kind of nucleic acid is released?
  - Ribosomal RNA.
  - Cytoplasmic DNA.
  - Mitochondrial DNA.
  - Mitochondrial RNA.
- Which of these mechanisms would be the most appropriate for creating an effective vaccine against a respiratory virus, without enhancing a type 2 immune response?
  - Addition of the adjuvant alum.
  - Not removing the N-protein from the virus.
  - Addition of Toll-like receptor (TLR) agonists.
  - Administration of exogenous IL-4.
- Which of the following pathways of intracellular signaling is activated by TLR-7 recognition of RSV RNA viral particles?
  - Notch intracellular signaling.
  - MyD88 adaptor signaling.
  - CD45 intracellular signaling.
  - ROS signaling pathway.
- Through which of the following is recognition of human rhinovirus viral particles mediated?
  - IL-13R.
  - TLR-2.
  - ICAM-I.
  - NOD-9.
- Abortive infection is an antiviral mechanism in eosinophils. Which of the following does it involve?
  - Inhibition of virus replication inside an infected host cell.
  - Viral production of viable progeny that can infect the next cell.
  - Disruption of the virus by antiviral granule proteins.
  - Inactivation of the cell functions by viral antigens through autoimmune mechanisms.
- Which of the following can be said of the optimal vaccine for viral immunity?
  - It produces sufficient neutralizing antibodies to respond against a future infection.
  - It does not induce an exacerbated immune response.
  - It is safe and effective in basic and clinical trials.
  - All of the above.