The diagram illustrates the processes involved in inflammation, particularly focusing on the role of NADPH oxidase, MPO, and iNOS in generating reactive oxygen species (ROS) like superoxide ($O_2^-$), hydrogen peroxide ($H_2O_2$), and hypochlorous acid (HOCl), which contribute to inflammation. CO-RM (Carbon Monoxide-Releasing Molecule) is shown to release CO, which interacts with various components of the cell, including mitochondria and NADPH oxidase, influencing the generation of ROS and the overall inflammatory response.

- **NADPH oxidase**: Produces superoxide ($O_2^-$) from oxygen ($O_2$) and reduces NADPH to NADP$^+$.
- **MPO**: Metmyoglobin peroxidase, which converts $H_2O_2$ to HOCl.
- **iNOS**: Inducible nitric oxide synthase, which produces nitric oxide (NO) from $NADPH$. NO can be further metabolized to $O_2^-$. The diagram also highlights the role of $O_2^-$ in the electron transport chain (ETC).

The inflammatory cascade is initiated by LPS/TNF-α/INF-γ, leading to an increase in CO-RM activity, which is depicted as releasing CO into the system. The CO molecules then interact with various cellular components, including the mitochondria, leading to the production of reactive oxygen species and contributing to the overall inflammatory response.