FIG. 1

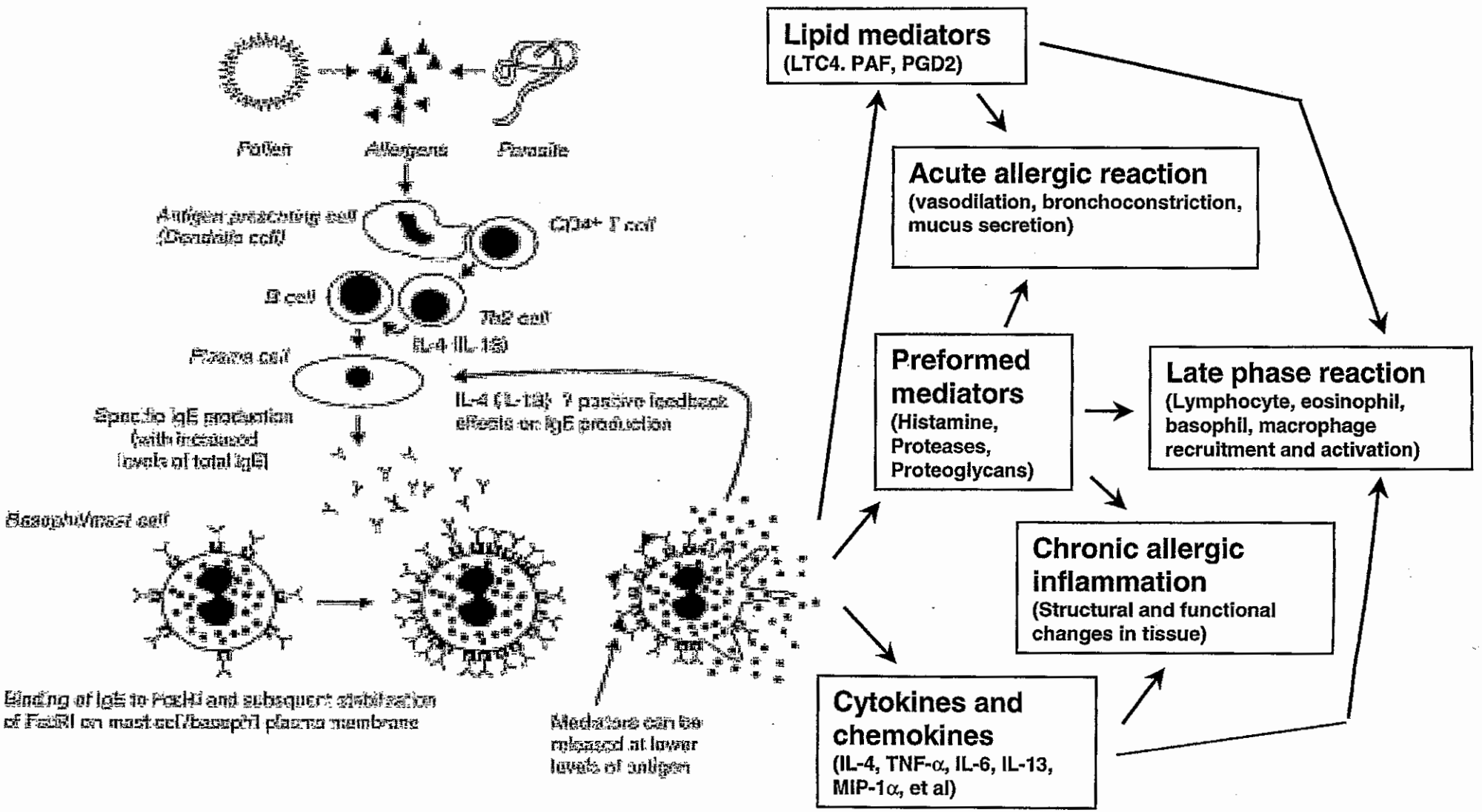

Pollen
Allergens
Parasite
Antigen presenting cell (Dendritic cell)
CD4+ T cell
B cell
Th2 cell
IL-4 IL-13
Plasma cell
Specific IgE production (with increased levels of total IgE)
IL-4 (IL-13) ? positive feedback effects on IgE production
Basophil/mast cell
Binding of IgE to FcεRI and subsequent stabilization of FcεRI on mast cell/basophil plasma membrane
Mediators can be released at lower levels of antigen
Lipid mediators
(LTC4. PAF, PGD2)
Acute allergic reaction
(vasodilation, bronchoconstriction, mucus secretion)
Preformed mediators
(Histamine, Proteases, Proteoglycans)
Late phase reaction
(Lymphocyte, eosinophil, basophil, macrophage recruitment and activation)
Chronic allergic inflammation
(Structural and functional changes in tissue)
Cytokines and chemokines
(IL-4, TNF-α, IL-6, IL-13, MIP-1α, et al)

FIG. 2

Mast Cell FceR1 Signaling Pathway

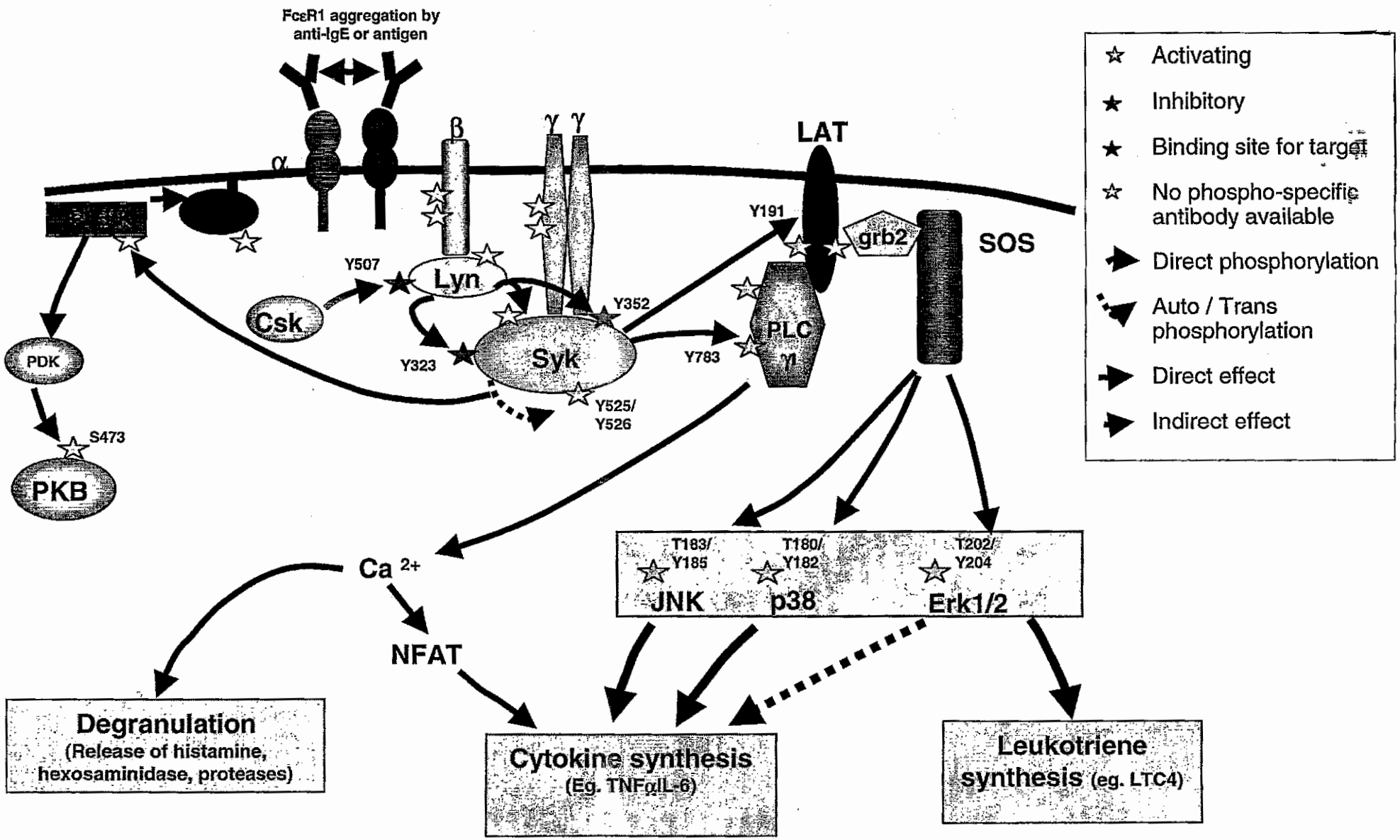
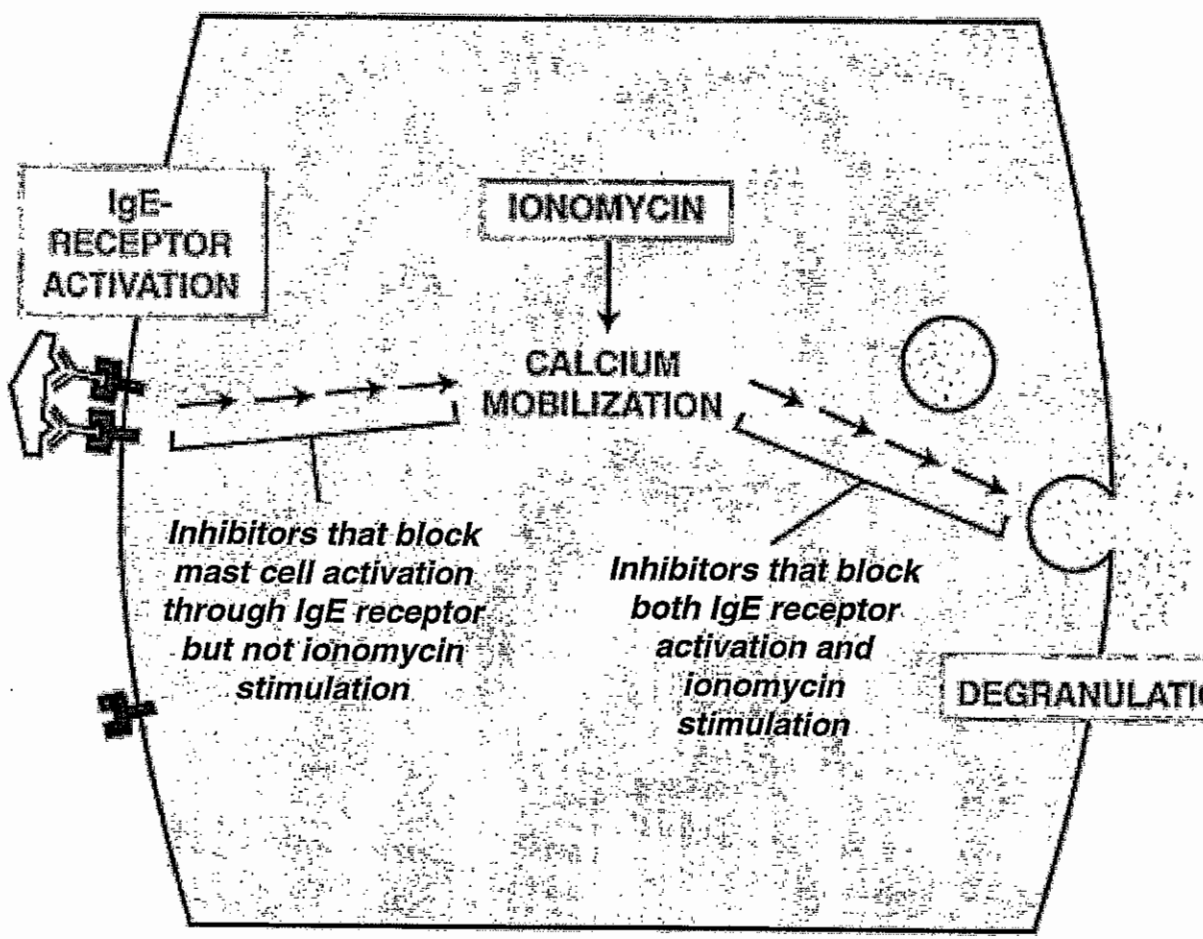


FIG. 3


Crosslinking of IgE
with anti-IgE antibody
IgE-
RECEPTOR
ACTIVATION
IONOMYCIN
CALCIUM
MOBILIZATION
Inhibitors that block
mast cell activation
through IgE receptor
but not ionomycin
stimulation
Inhibitors that block
both IgE receptor
activation and
ionomycin
stimulation
DEGRANULATION
Tryptase
Hexosaminidase
Histamine