

Basale mekanismer ved anafylaksi

Specialistkursus i allergologi 2019

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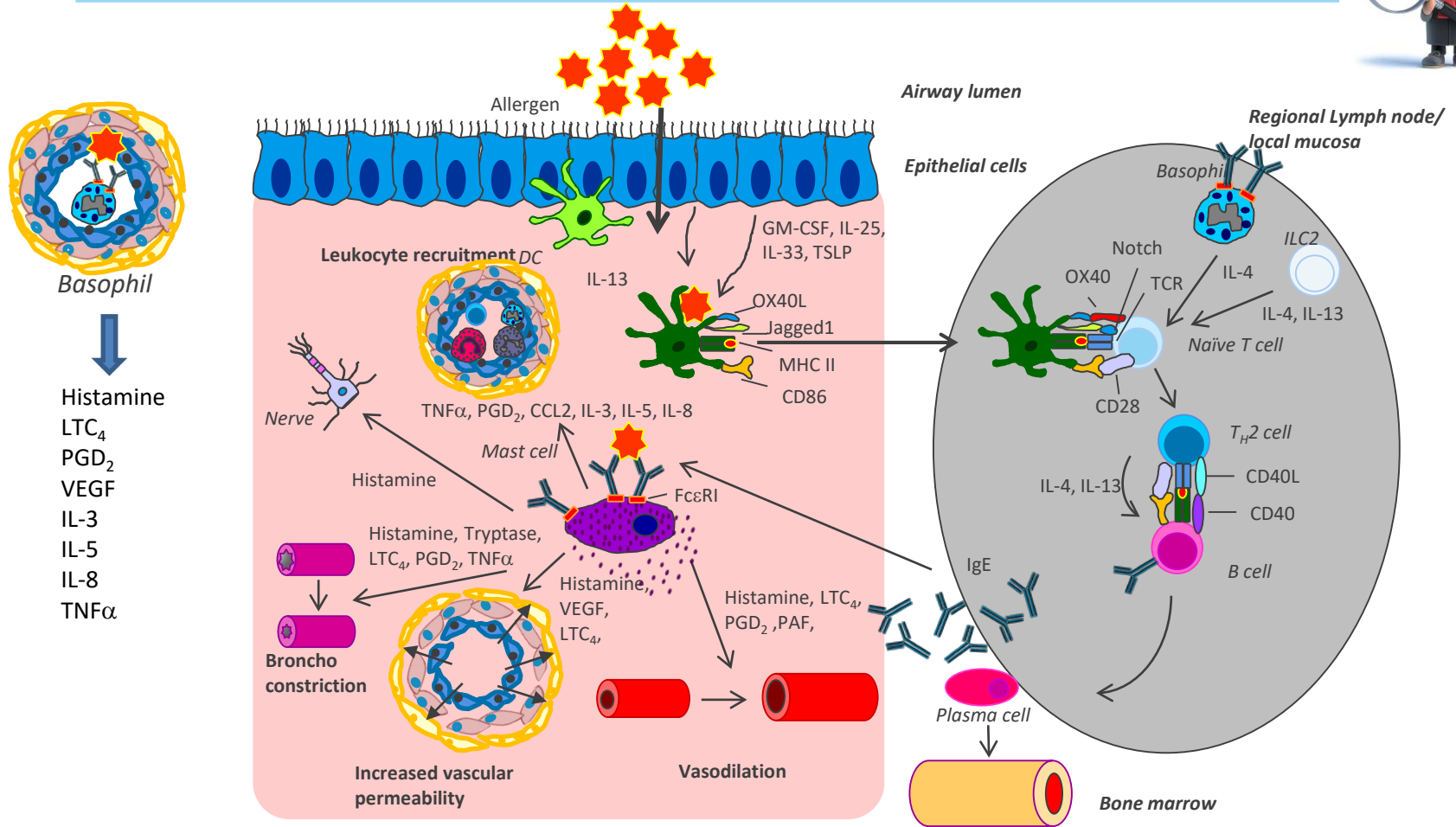
Laboratoriet for medicinsk allergologi, Herlev & Gentofte Hospital, Denmark



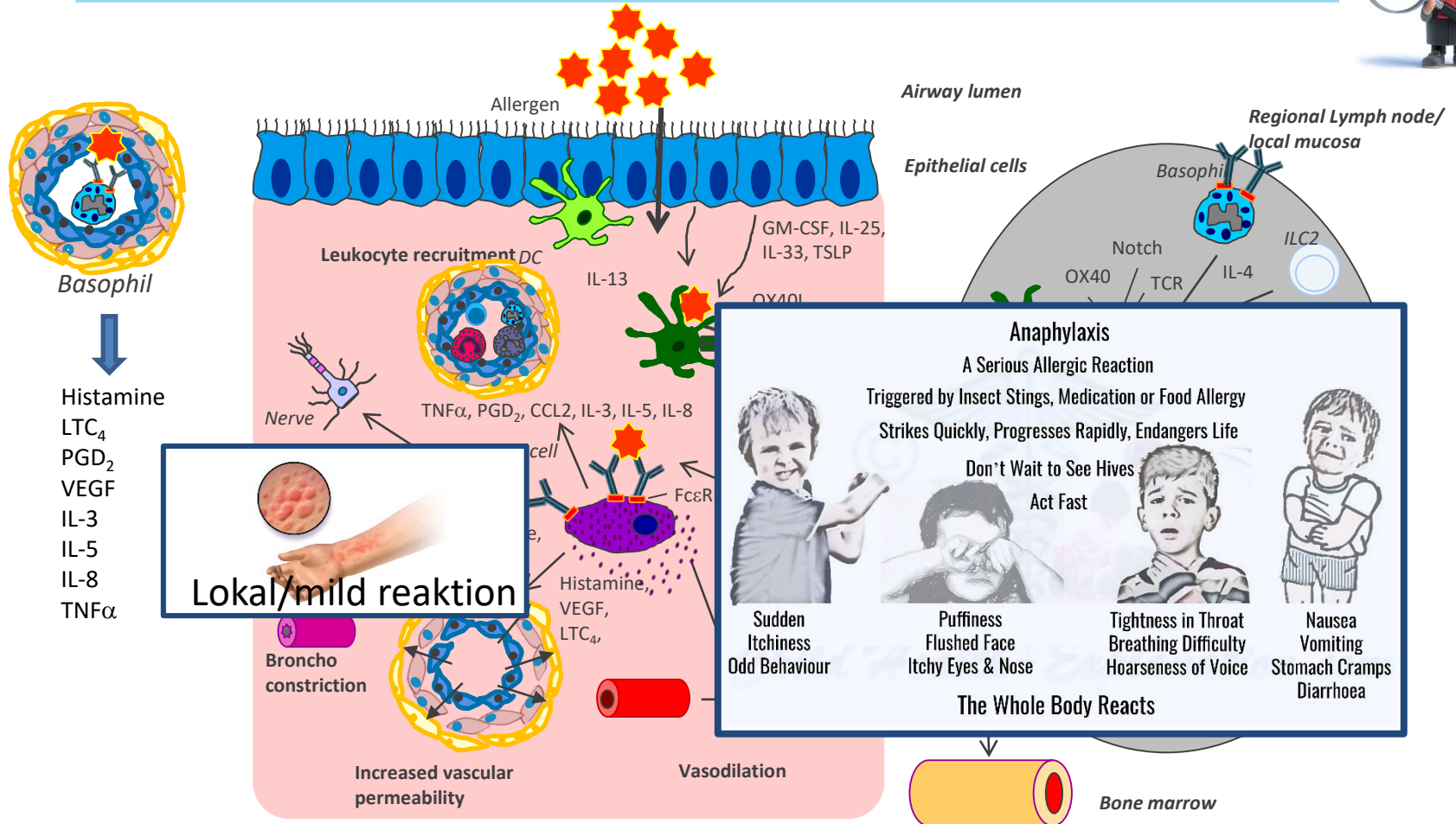
COPENHAGEN
HEALTH
SCIENCE
PARTNERS



Allergi på celle niveau



Allergi på celle niveau





Lau Larsen
PhD

Er mastceller og basofile granulocytter forandret hos allergikere?

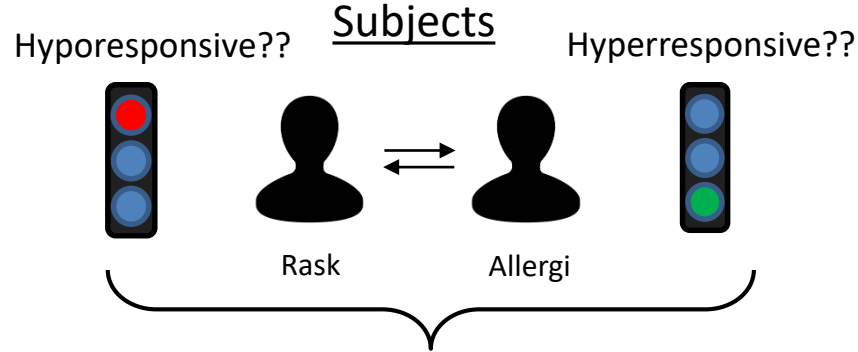


Table 1. Characteristics of the study population

Demographic features	Non-Allergic (n = 10)	Allergic (n = 8)	P value
Age (y)	25 (24-32)	20.5(19-29)	0.04[#]
Female sex. no. (%)	7 (70)	7 (88)	0.59
Total IgE (kU/l)	37.7 (8.8 - 95.7)	463 (227 – 3419)	0.0014[#]
Specific IgE to peanut (kU/l)	<0.35 [‡]	67.6 (18.5-90.2)	<0.0001[#]
Specific IgE to Ara h 2 (kU/l)	<0.35 [‡]	23.3 (19.3-36.0)	<0.0001[#]

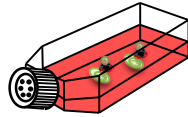
Er mastceller og basofile granulocytter forandret hos allergikere?

Hyporesponsive?? Subjects Hyperresponsive??



Rask

Allergi



Mastceller og Basofile G.



1)

Aktiverende receptorer

FceR1, CD117, C3aR, CD88

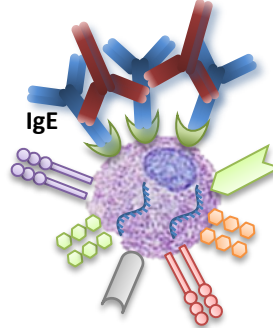


Dæmpende receptorer

CD32, CD200R, CD300a



Anti-IgE



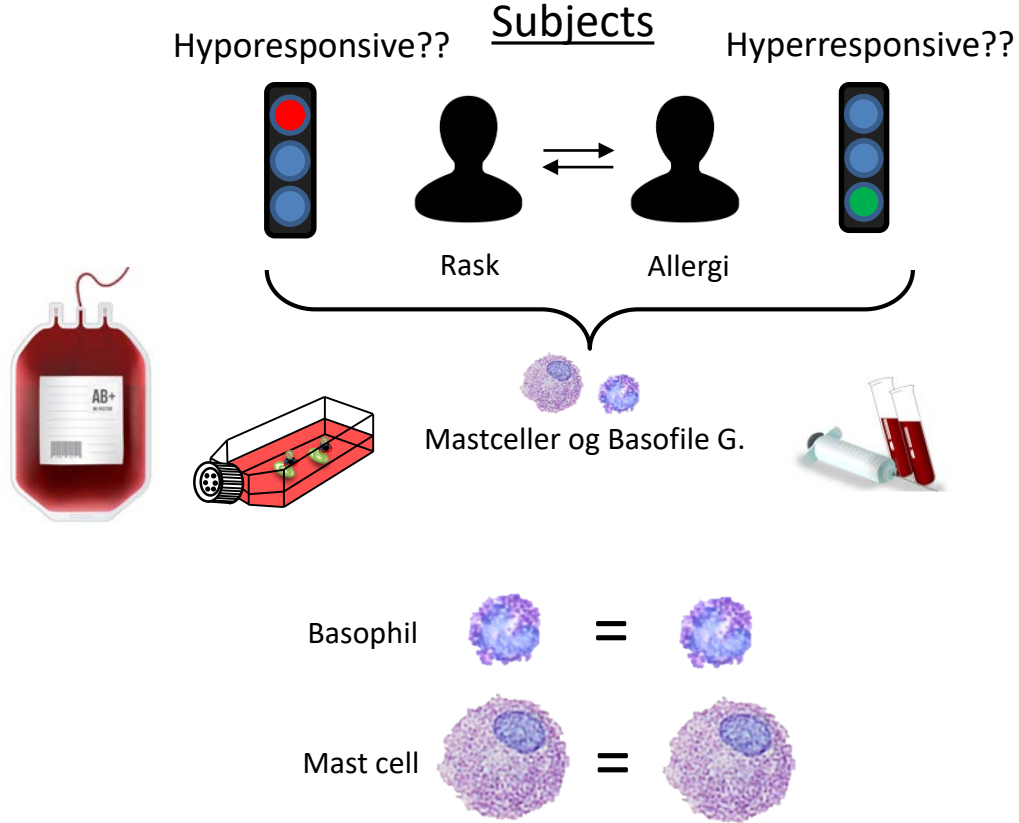
IgE

2)

Udskillelse af inflammatoriske mediatorer

Histamine, (GM-CSF, IL-8, IL-10, IL-13, IL-23, IL-31, IL-37, MCP-1, VEGF)

Er mastceller og basofile granulocytter forandret hos allergikere?

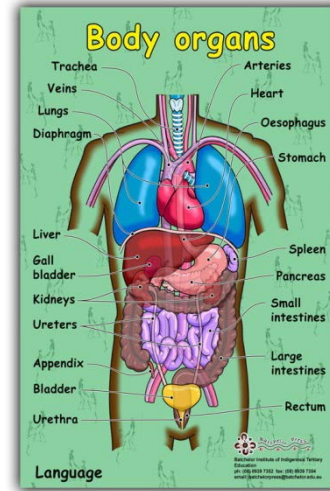
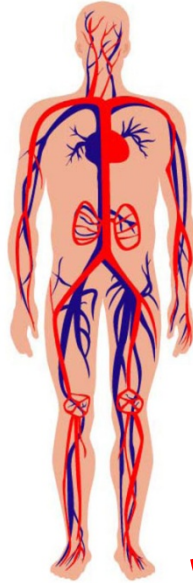


Mastcellen – fra spæd til pensionist

Stamceller
CD34+/CD13+/CD117+/FcεRIα
(0.1 – 0.01% of WBC)



Knoglemarv



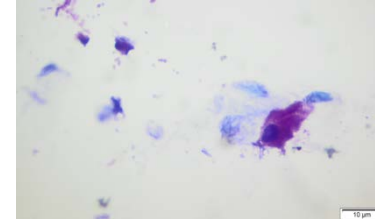
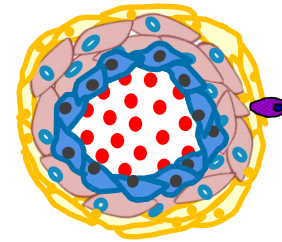
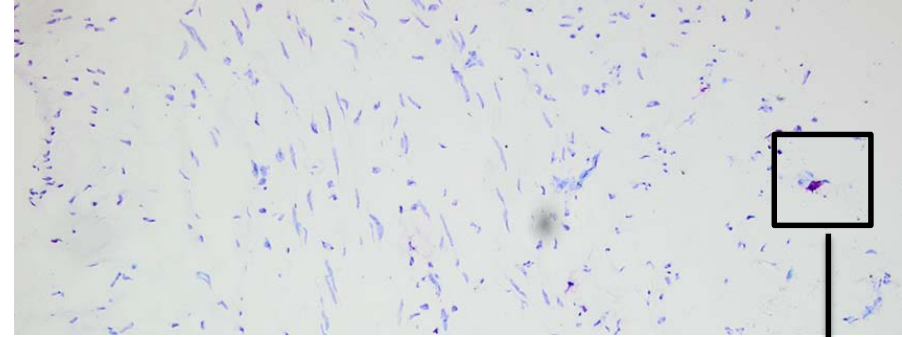
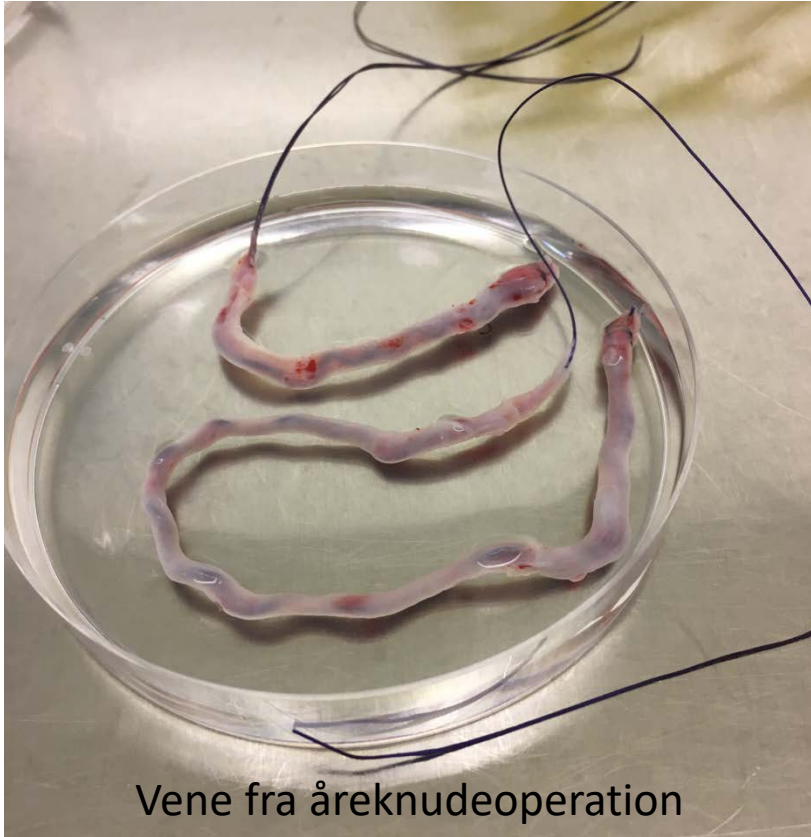
Nøgle cytokin:
Udvikling og aktivering

SCF
IL-3
IL-4
IL-6
IL-9
???





Mastceller i blodkar



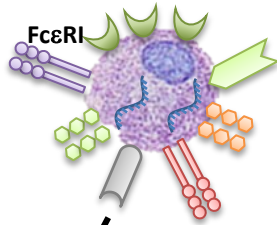
Mastceller i blodkar

Hyporesponsive?? Subjects Hyperresponsive??



Rask

Allergi

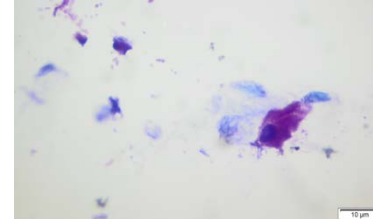
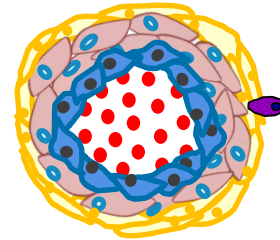
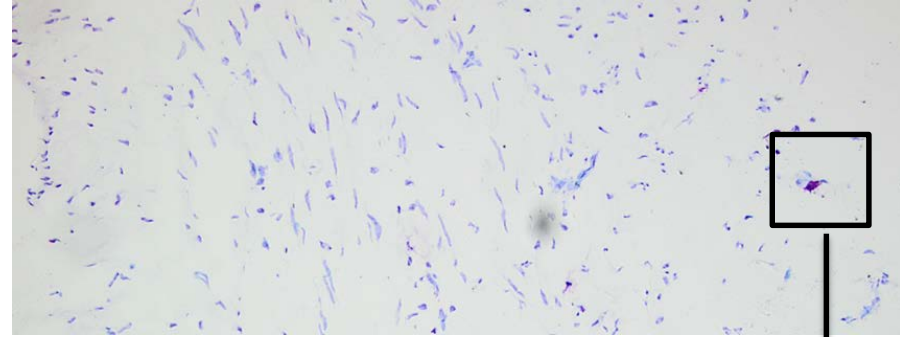


MRGPRX2

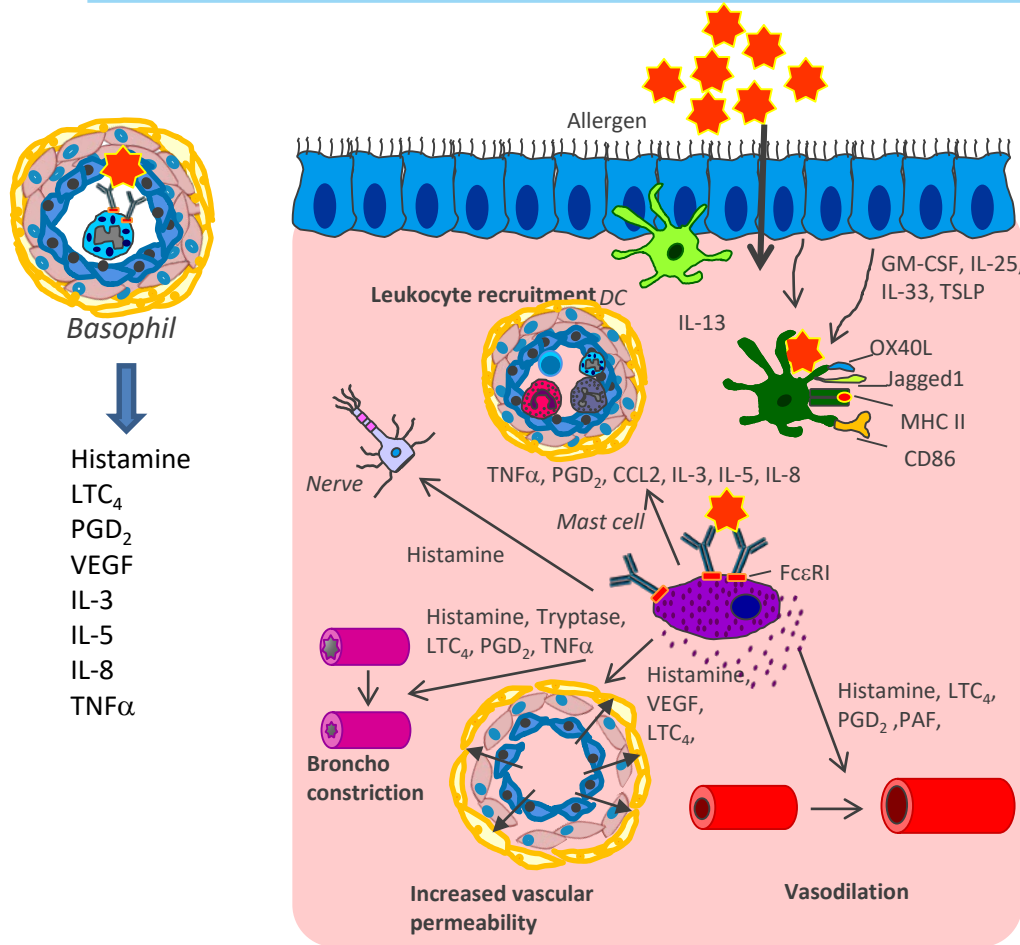
Den nye receptor

Mastceller i hud
og blodkar

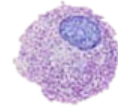
Opioider
NMBA
Antibiotika



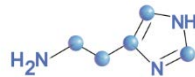
Basale mekanismer ved anafylaksi

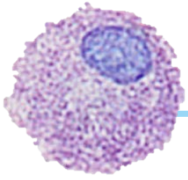


- **Mastceller**



- **Følsomhed overfor inflammatoriske mediatorer**





Forskkel i histamin effekt

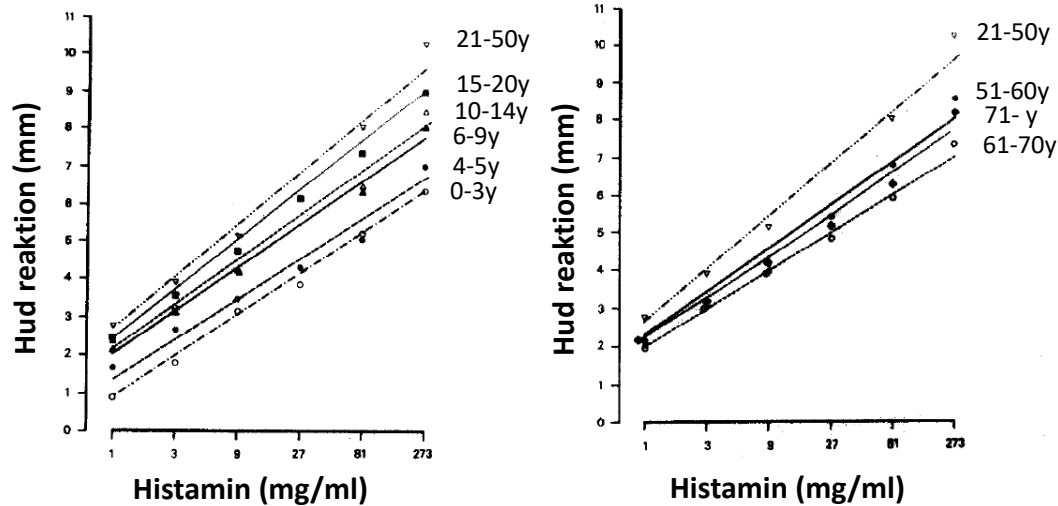
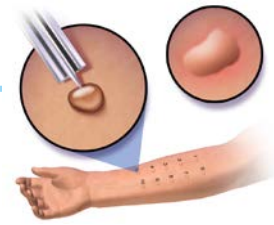
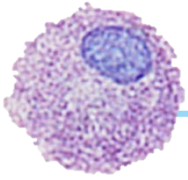


FIG. 1. Dose-response curves of skin test reactions induced by threefold dilutions of histamine hydrochloride: 0 to 3 years, —○—; 4 to 5 years, ---●; 6 to 9 years, —▲; 10 to 14 years, ---△; 15 to 20 years, ---■; 21 to 50 years, ---▽; 51 to 60 years, ---●; 61 to 70 years, ---○; and more than 71 years, —◆.

Skassa-Brociek, W. et al., 1987, JACI



Forskkel i histamin effekt

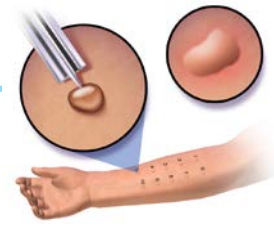


Table 1

Medial wheal area (mm²) of histamine HCl 1, 10, and 100 mg/ml in normals, latent and manifest allergics

	Histamine concentrations					
	1 mg/ml		10 mg/ml		100 mg/ml	
(31-37 years) Normals	↑	3	↑	10	↑	44
	NS		NS		NS	
(26-37 years) Latent allergics <i>Asymptomatic</i>	↓	6	**	↓	14	**
	↑			↑		
	*		**		*	
(19-51 years) Manifest allergics	↓	13	↓	25	↓	61

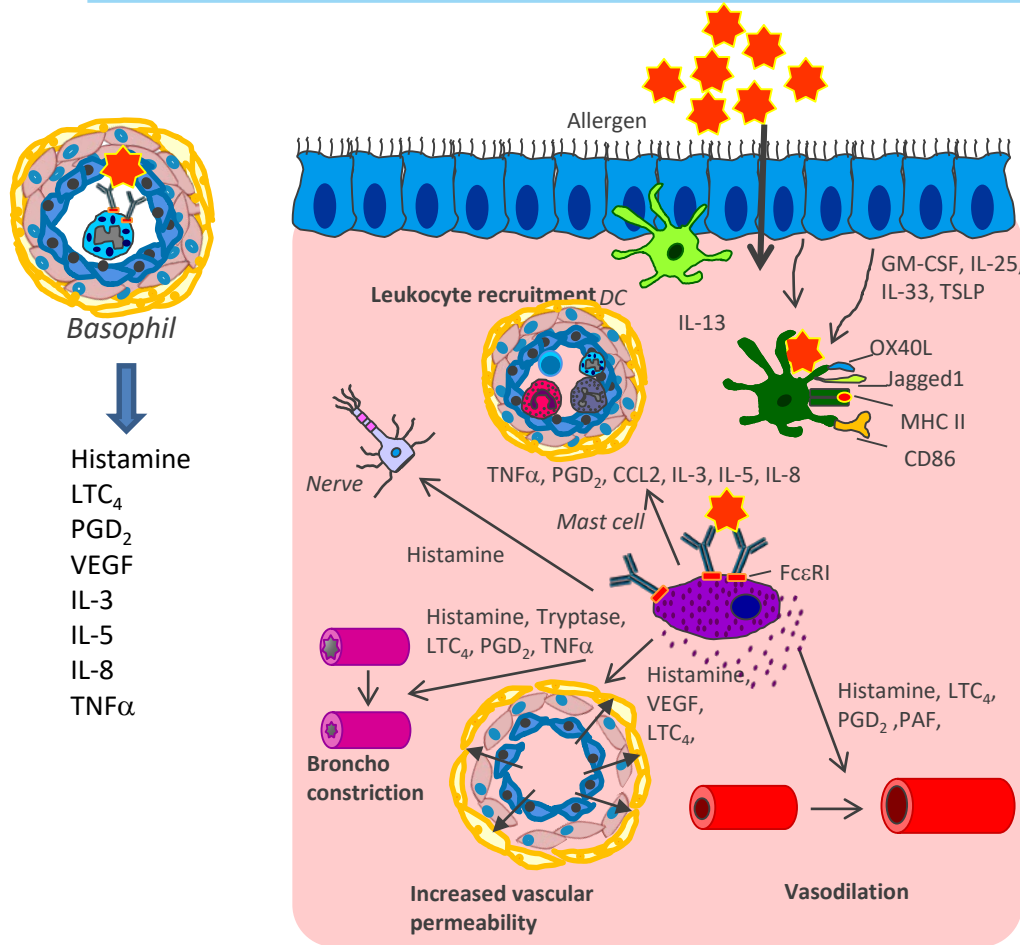
NS not significant

* $P < 0.05$

** $P < 0.01$

Malling, H.J., 1987, Allergy

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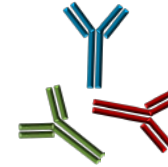
Basophil

Histamine
LTC₄
PGD₂
VEGF
IL-3
IL-5
IL-8
TNFα

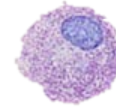
- Allergen



- IgE



- Mastceller



- Følsomhed overfor inflammatoriske mediatorer



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Tak for jeres
opmærksomhed