

# Constitutioneel Eczeem 2010



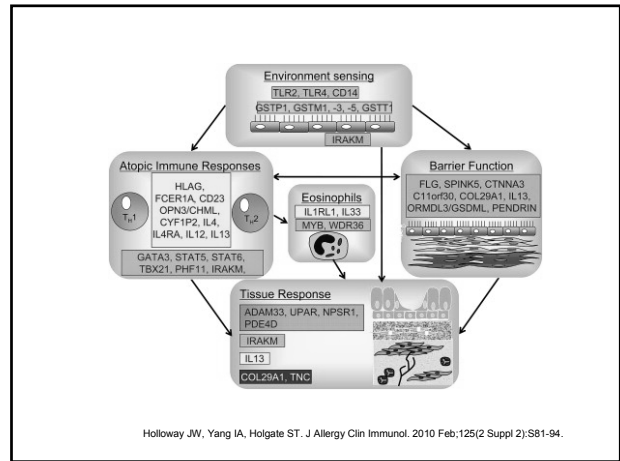
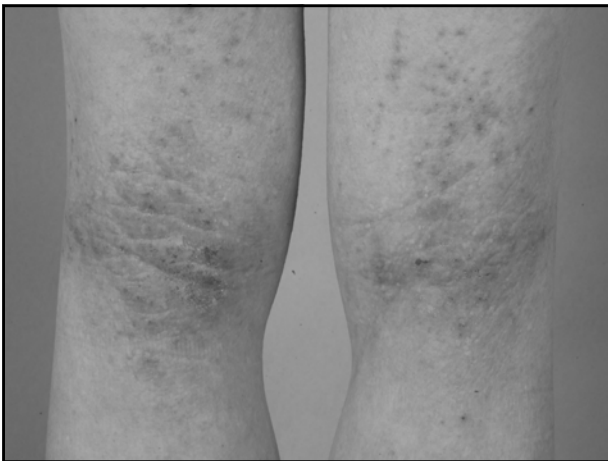
Bing Thio  
Afdeling Dermatologie  
Erasmus MC, Rotterdam  
Nieuwegein, 9 oktober 2010

## M L Burr, et al on behalf of the British Thoracic Society Research Committee. Asthma prevalence in 1973, 1988 and 2003. *Thorax* 2006;61:296-299

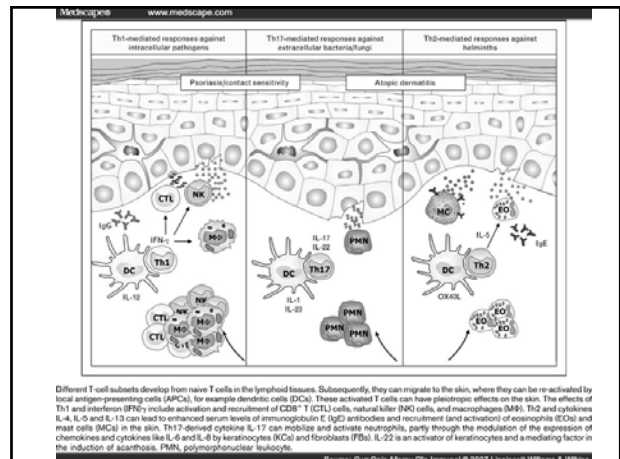
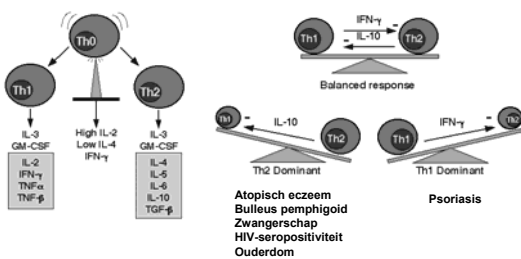
Asthma criterion or symptom	1973(n = 817)	1988(n = 965)	2003(n = 1148)	Difference 2003-1988(95% CI)
<b>Asthma ever</b>	<b>5.5</b>	<b>12.0</b>	<b>27.3</b>	<b>15.2 (11.9 to 18.5)</b>
Asthma in last 12 months	4.2	9.1	15.4	6.3 (3.5 to 9.1)
Wheeze ever	17.0	22.3	28.0	6.7 (2.0 to 9.3)
Wheeze in last 12 months	9.8	15.2	19.7	4.5 (1.2 to 7.7)
Breathless wheeze ever	9.2	14.0	19.9	6.0 (2.7 to 9.1)
Wheeze without cold ever	6.6	13.8	17.8	4.0 (0.9 to 7.1)
Inhaler in last 12 months	-	10.1	19.1	9.0 (6.0 to 12.0)
PEFR fell >15% after exercise*	6.7	7.7	4.7	-3.0 (-5.2 to -0.9)
PEFR fell >25% after exercise*	2.0	4.1	2.4	-1.7 (-3.3 to -0.2)
Hay fever/allergic rhinitis ever	-	16.0	19.4	3.5 (0.2 to 6.7)
<b>Eczema ever</b>	<b>4.8</b>	<b>15.9</b>	<b>23.1</b>	<b>7.2 (3.8 to 10.6)</b>

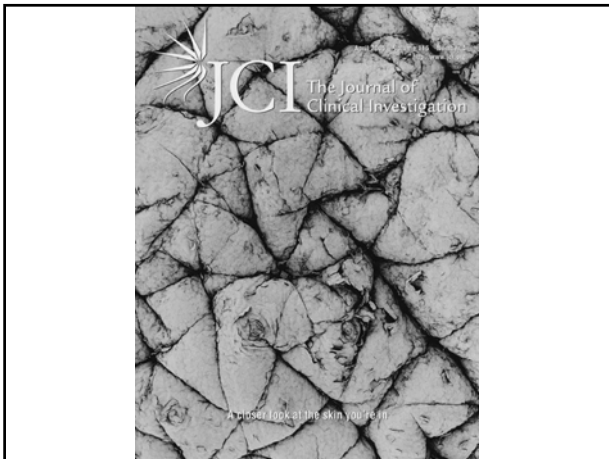
PEFR, peak expiratory flow rate.

\*n = 812, 960 and 1019 12 year old children survey conducted in schools in South Wales in 1973, 1988 and 2003, respectively.



## Th1/Th2

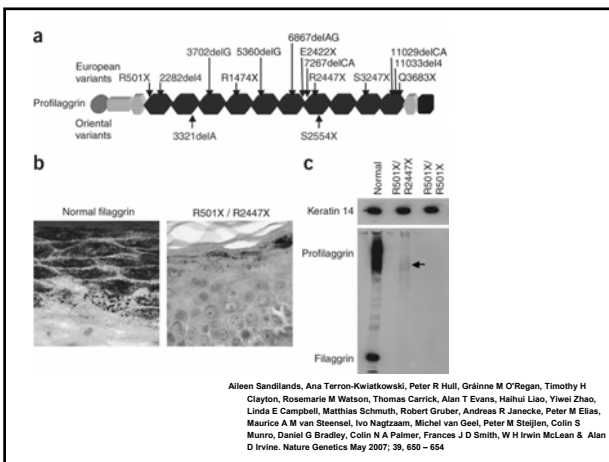
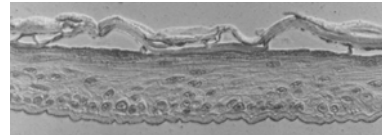




### Common loss-of-function variants of the epidermal barrier protein filaggrin are a major predisposing factor for atopic dermatitis.

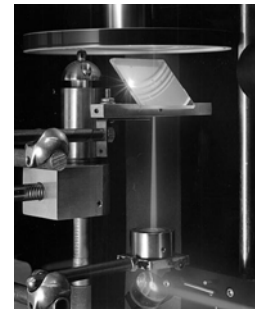
Palmer CN et al.  
Nat Genet 2006 March 19

"Filaggrin is a key protein that facilitates terminal differentiation of the epidermis and formation of the skin barrier. Here we show that two independent loss-of-function genetic variants (R501X and 2282del4) in the gene encoding filaggrin (FLG) are very strong predisposing factors for atopic dermatitis. These variants are carried by approximately 9% of people of European origin. These variants also show highly significant association with asthma occurring in the context of atopic dermatitis. This work establishes a key role for impaired skin barrier function in the development of atopic disease."

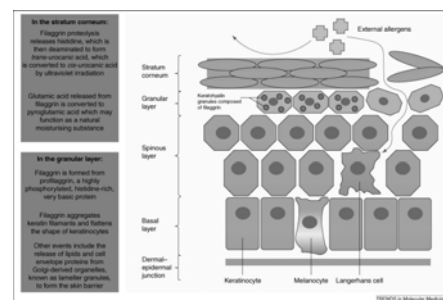
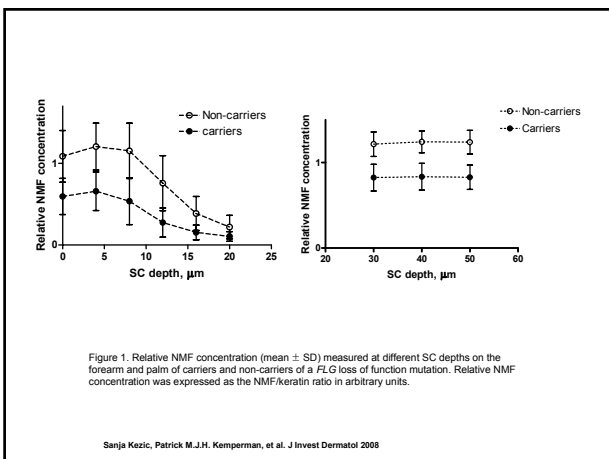


### Raman Spectroscopy

Raman measurements were performed using the model 3510 Skin Composition Analyzer (River Diagnostics, Rotterdam, The Netherlands). The instrument is optimized for rapid *in vivo* measurements on human skin and offers an axial spatial resolution of less than 5  $\mu$ m. The instrument comprises a dispersive spectrometer and two different continuous-wave solid state lasers, one emitting light with a wavelength of 671nm, the other emitting light with a wavelength of 785nm. Excitation at 785 nm is used to record Raman spectra in the 400-1800  $cm^{-1}$  spectral range and excitation at 671 nm for measurements in the 2600-3800  $cm^{-1}$  range.



The spectrometer is connected to a confocal measurement stage, which is essentially an inverted microscope.



Mc Grath JA, Ulitto J. Trends Mol Med 2008; 14: 20-27

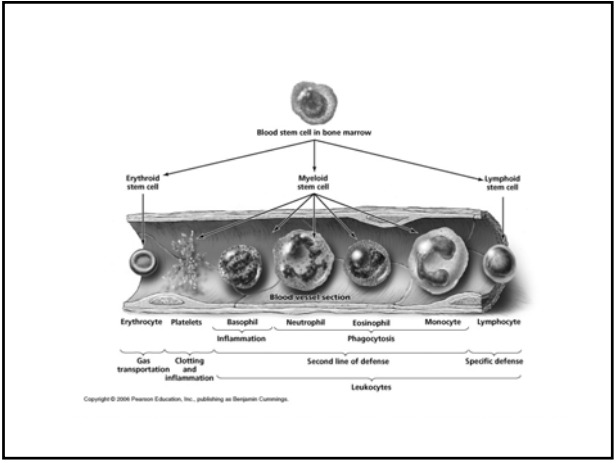


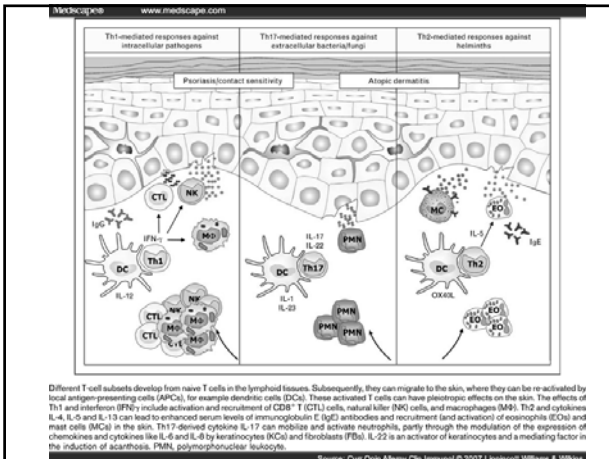
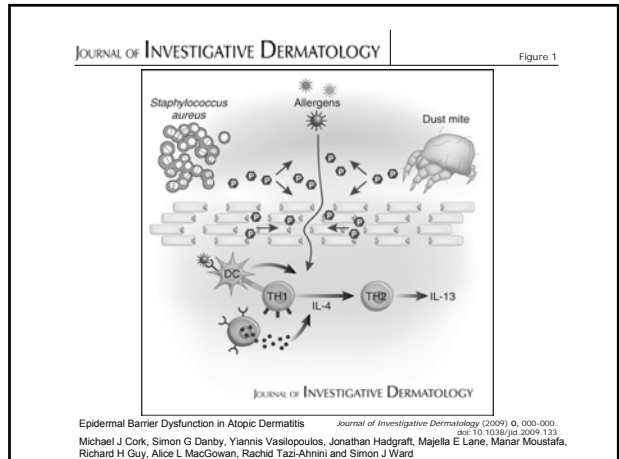
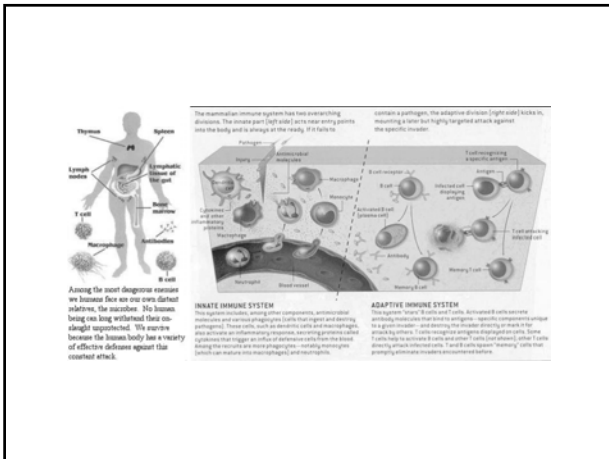
Breaking the (Un)Sound Barrier: Filaggrin Is a Major Gene for Atopic Dermatitis.  
 Alan D Irvine and W H Irwin McLean. *Journal of Investigative Dermatology* (2006) 126, 1200–1202.



### ATOPIC MARCH

Nature Genetics 38, 399 - 400 (2006)  
 Skin barrier function and allergic risk  
 Thomas J Hudson

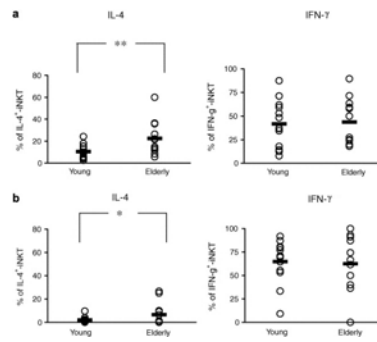




## LEVENSLIJP CONSTITUTIONEEL ECZEEM

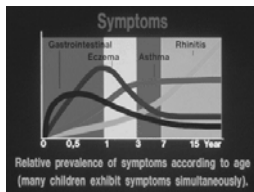
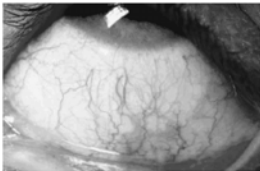


## Ouder wordend immuunsysteem is Th2 minded

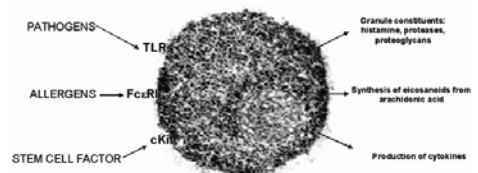


Jing Y. et al. Exp Gerontol 2007; 42: 719-32

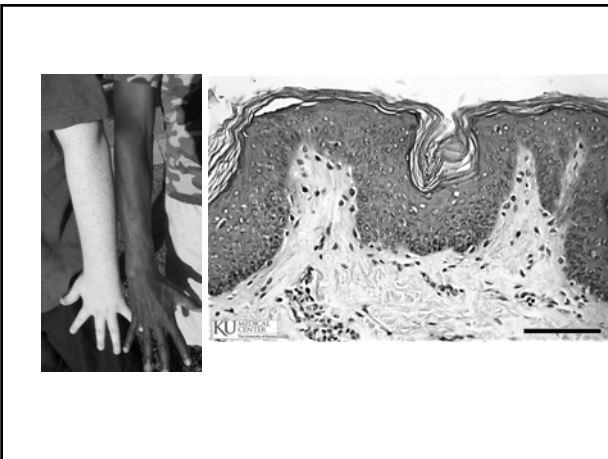
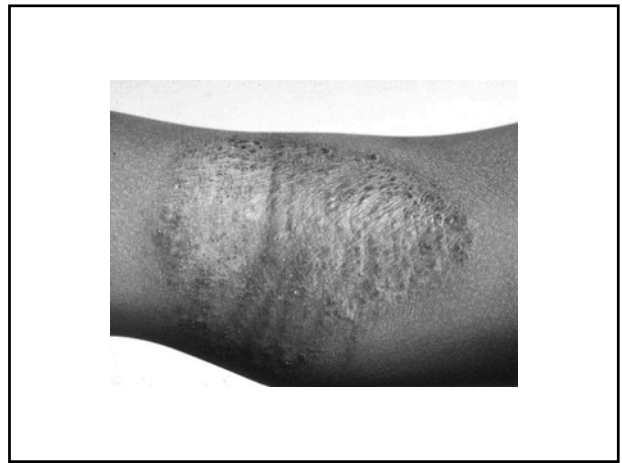
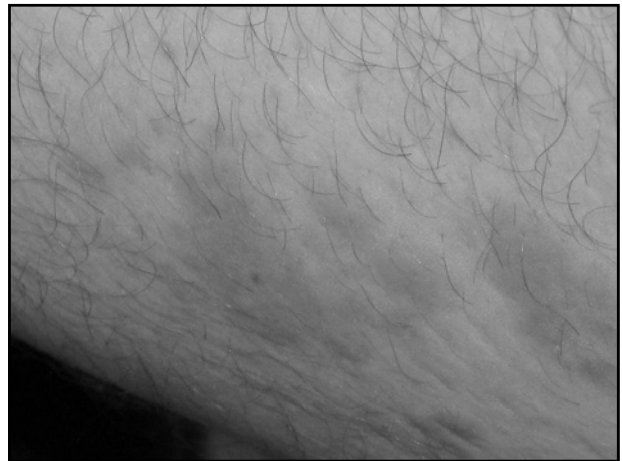
## Atopisch syndroom



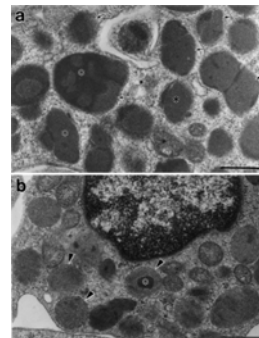
## MESTCEL



1953 - Researchers James F. Riley and Geoffrey B. West discovered the mast cell granule to be the major source of histamine in the body. In this fundamental contribution to the understanding of inflammatory and allergic reactions, Riley and West depended on a valued partner and experimental subject named Judy. This ten-year-old cocker spaniel earned a place in canine history thanks to her mast cell tumour, which had the highest histamine content ever recorded.

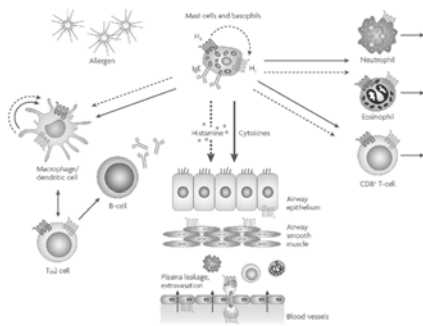


Conventional ultrastructure of mast cell granules in black and white skin. A mast cell of black skin contains a number of giant granules showing a predominantly amorphous structure (asterisks) or parallel-linear striations (arrows; panel a), while that of white skin contains small granules frequently displaying curved lamellae (arrow heads) and a central amorphous structure (asterisk). Bar = 0.5  $\mu$ m.



Sueki H et al. British Journal of Dermatology 2001; 144 : 85-93



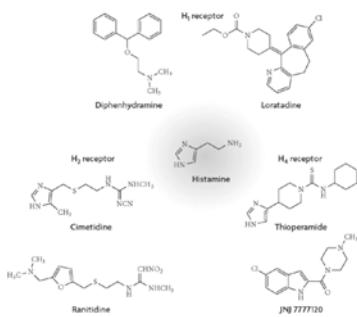


The role of histamine H1 and H4 receptors in allergic inflammation: the search for new antihistamines  
 Robin L. Thurmond, Erwin W. Gelfand & Paul J. Dunford  
 Nature Reviews Drug Discovery 7, 41-53 (January 2008)

Nature Reviews | Drug Discovery

## Histamine receptoren

- H1 receptor: inflammatie, allergie.
- H2 receptor: maagzuursecretie.
- H3 receptor: lichaamsactiviteit regulatie in CZS
- H4 receptor: immuunregulatie.

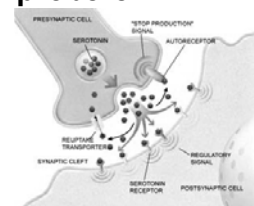


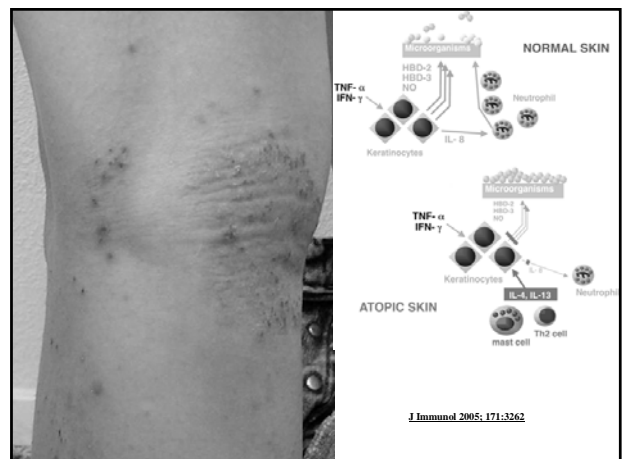
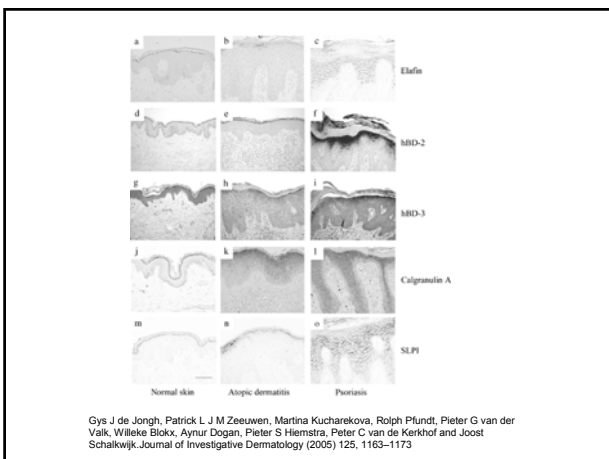
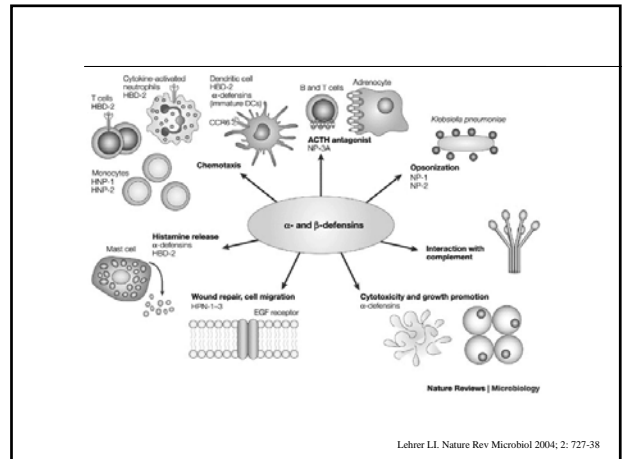
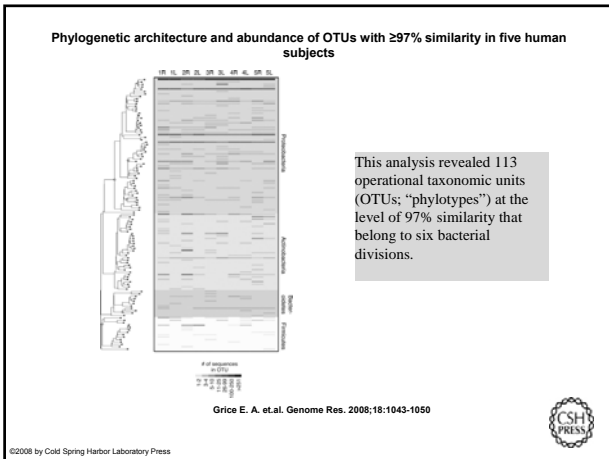
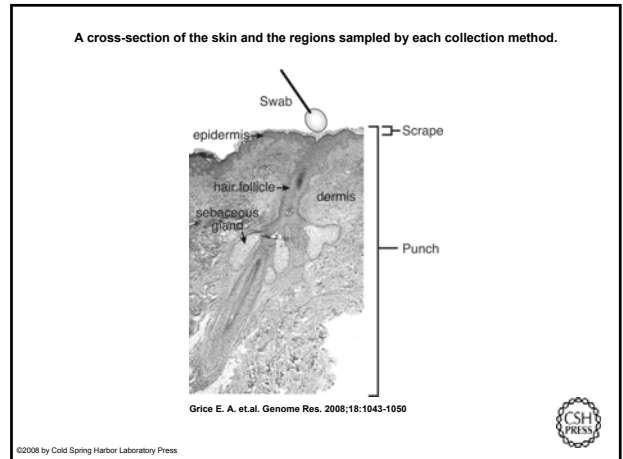
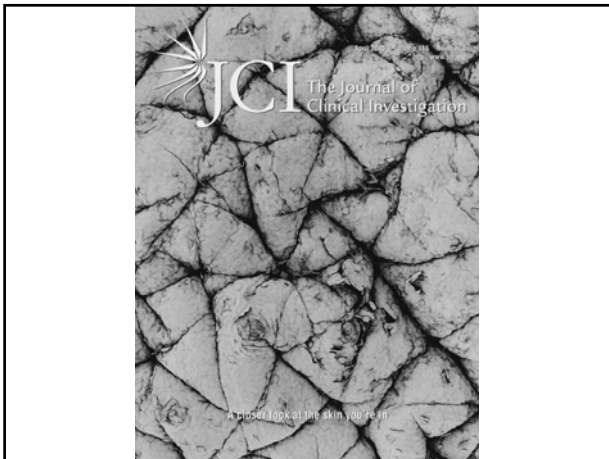
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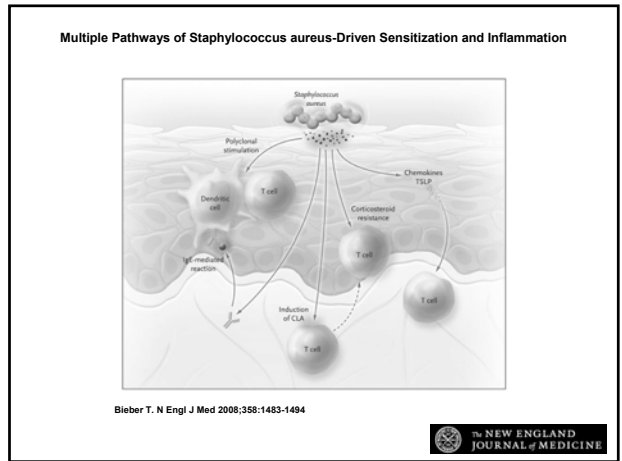
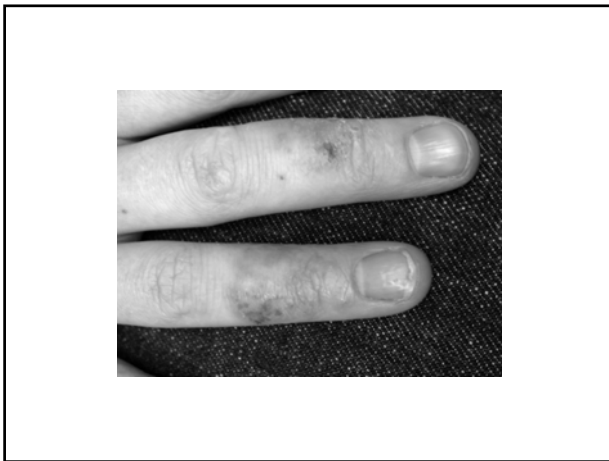
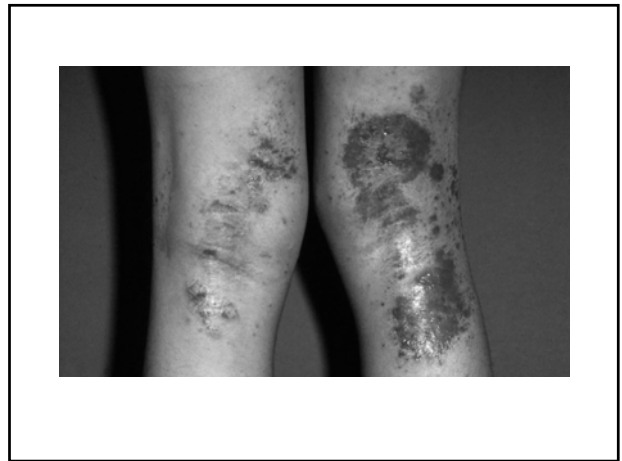
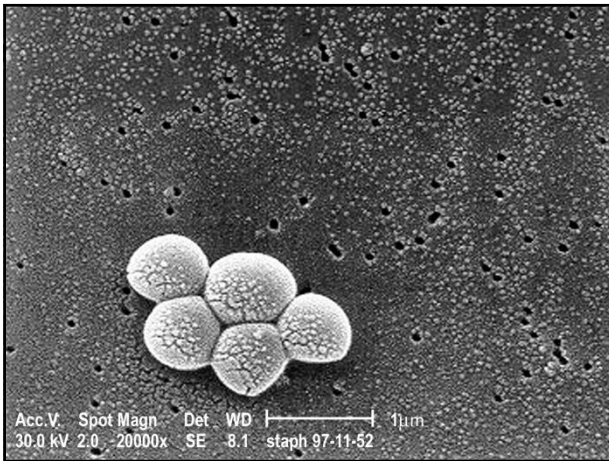
Nature Reviews | Drug Discovery

## Antidepressiva bij jeuk

- In een lage dosering werkzaam als anti-jeuk middel
- Tenminste 4 weken proberen
- TCA en SSRI







### Treatment of adult eczema / atopic dermatitis

- For every phase, additional/therapeutic options are given
- Add antiseptics / antibiotics in cases of superinfection
- Consider compliance and diagnosis, if therapy has no effect

Severe objective SCORAD > 40 / resistant eczema	Exclusion of contact allergens, phototherapy, systemic immunosuppressants, biologics
Moderate objective SCORAD 15-40 / recurrent eczema	Soothing emollients, bleach, hydrocortisone, UV therapy, DNFB, UV1, phototherapy, monitoring, clinical therapy
Mild objective SCORAD < 15 / transient eczema	Topical glucocorticosteroids of increasing or local infection, topical antiseptics, antiseptics and silver / AEGIS underwear, non-steroid anti-inflammatory compounds
Baseline Basic Therapy	Educational programmes, avoidance, both oral, avoidance (but in food allergy patients, allergen avoidance programs, if diagnosed by allergy tests)

Darsow U, Wollenberg A, Simon D, Tareb A, Werfel T, Oranje A, Gelmetti C, Svensson A, Deleuran M, Calza AM, Giusti F, Lübke J, Seidenari S, Ring J, for the European Task Force on Atopic Dermatitis/EADV Eczema Task Force. Eur Acad Dermatol Venereol. 2009 Aug 31

