Heterophilic Dsg3-Dsg2 interactions as a compensatory mechanism in pemphigus

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Introduc2on: desmosomes, epidermis and pemphigus

Heterophilic Dsg3-Dsg2 interac2ons behave similar to homophilic

Pemphigus autoan2bodies induce upregulation of Dsg2 in human epidermis

Dsg2 is upregulated in pemphigus patients

Summary I

Dsg2 was upregulated in:
• ex vivo human pemphigus model
• pemphigus patients

Dsg3 knock out keratinocytes show altered expression pattern of desmosomal proteins and disturbed intercellular cohesion

Summary II and Conclusion

• Dsg3 ko keratinocytes show an upregulation of Dsg2
• Dsg3 and Dsg2 interact heterophilically
• Heterophilic Dsg3-Dsg2 interaction was less susceptible to AK23
• a-Dsg2 antibody disrupted intercellular cohesion of Dsg3 ko keratinocytes

Autobody induced upregulation of Dsg2 could serve as a compensatory mechanism in pemphigus