



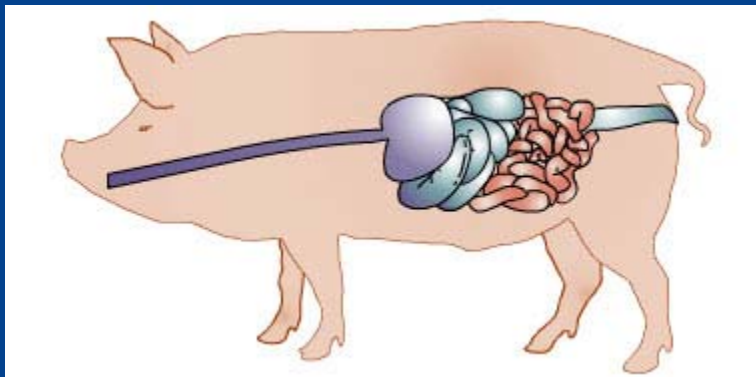
# HIIHF WR I#KHP S SUR GXF WV#R Q #D VWUIF XOF HUV IQ #D UR Z IQ J #S L J V

F #Dxubgvhq<sup>4</sup> #P #F xwvdx<sup>4</sup> #P #P #D#Shghwuhq<sup>5</sup> #M#e #Dhghj dduq<sup>5</sup> #

P #E#H#Q Ihohq<sup>5</sup> #D#M#Auj hqvuhq<sup>5</sup> # Q #F dqlh<sup>4</sup>

<sup>4</sup>Ghsdup hqw# #D q p d#Wf hqfh #D dukxv#Kqlyhuw|

<sup>5</sup>VHJ HV #S L j #Jhvndufk#F hqwh #F rshqkdj hq #G hqp dun#



HDDS#D qqxdop hhwqj #q#Ehadw  
5<2; 05349 #dewd fw#5738;



# EDFNJUR XQG

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<sup>3</sup>Dssur { p dwd rgh#k l g#r i#k h#j urz hu#d g g#k d a#r i#  
w k h#r z v#q#G h q p d u n#k d y h#d#f u x e r s w p d a j d w u l f#  
k h d o k

<sup>3</sup>Wk l v#d#h y h u#d q l p d e z h a d u h#s u r e d p #d g g#d q#  
p s r u d g w#f r q r p l f d e#k d o n q j h#q#k h#z l q h#  
s u r g x f w r q

<sup>3</sup>krz w r#h g x f h j d w u l f x o f h u z l k r x w m r s d u g l } b j  
w k h#h h g h i l f l n q f | B



DDUKXV  
XQ IYHUVIWHW  
VF IHQ F H#DQG #HF KQR OR J \

*Sdu#vrskdjhd*

394 J.T. Yen

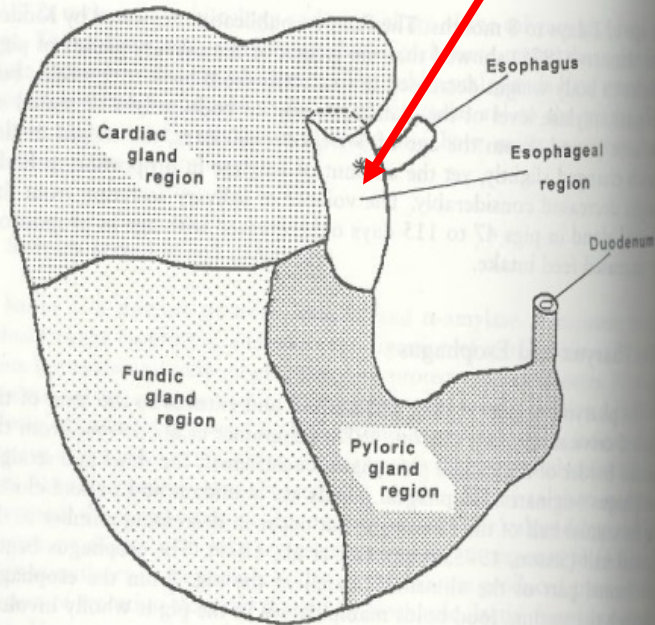
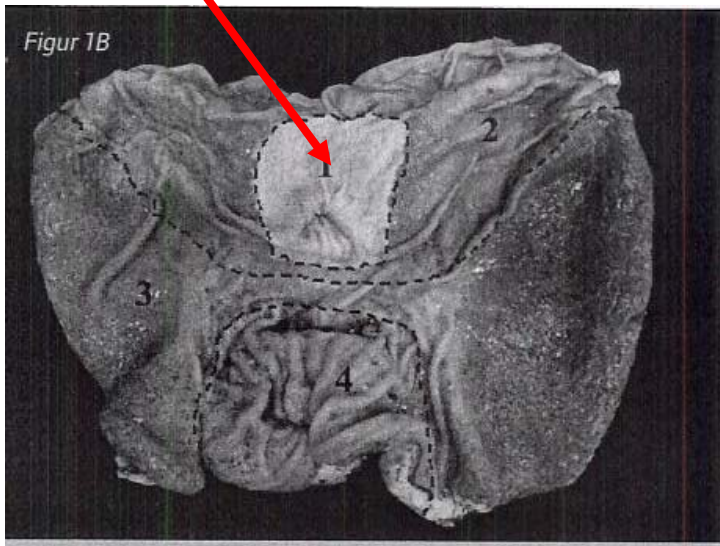


Figure 8-2 Mucosal regions of the stomach of the pig. (Adapted from Sisson [1975] and Moran [1982].)





DDUKXV  
XQ IYHUVIWHW  
VF IHQFH#DQG#HF KQR OR J \

# P HF KDQ IVP V

Sdu#vrskdjhd l#grw#urwfwg e |# xfrvd#

F rqwdfwz lk#kh#dfg j dwulf frqwhqwsuryrnhv j dwulf xdfhu#####

Orz #K #kjk frqfhqwdwtrq  
r#j dwulf dfg #hsvq#lqg#  
elh#dfgv



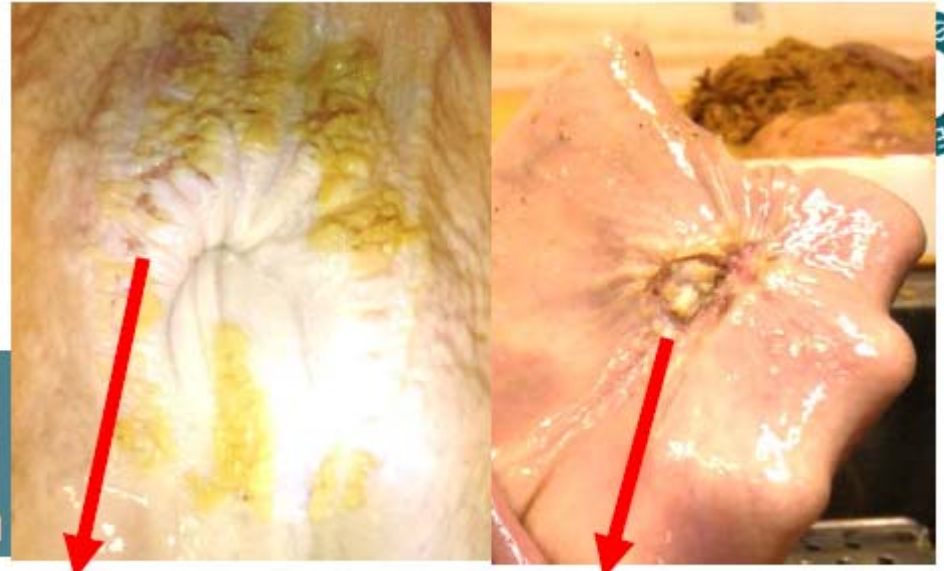
Ip sruwqfh r#qalp p dwru| undfwtrqv dgg# {gdwlyh wwhv#hdfwtrqv

l#kh#s lkhdxp B#####



# Diagnostics - gastric score

Score 6:  
Ulcer in <10 % of the white  
part or slight scar formation



0 1 2 3 4 5 6 7 8 9 10





# HI IHF W R I # G I V I Q W H J U D W I R Q # P H W K R G R Q # W R P D F K V F R U H # Q I H O V H Q # P Q G # Q J Y D U W V H Q # <<< ,

G l v b w h j u d w l r q	J u r x q g		U r o n u p l o n g	
G l v b w h j u d w l r q o n y h o	I l q h	F r d u h	I l q h	F r d u h
Q r i r i s l j v # e d u r z v , #	; 3	; 3	; 3	; 3
Q r u p d o # 3 Y , #	4 1 6	: 5 1 7	9 : 1 :	: 6 1 6
S d u d n h u d w r v l v # 4 0 6 Y , #	9 5 1 :	5 9 1 4	5 : k	5 7 1 3
J d w u l f o n v l r q # 7 0 9 Y , #	6 3 1 :	3	5 k	5 1 :
V h y h u h o n v l r q # : 0 4 3 Y , #	8 1 6	4 1 8	4 1 8	3
D y u # w r p d f k v f r u h	5 1 :	3 1 6	3 1 9	3 1 7

F r q f o x v l r q # w k h # g l v b w h j u d w l r q # h w k r g + j u r x q g r u # r o n g , # e h i r u h

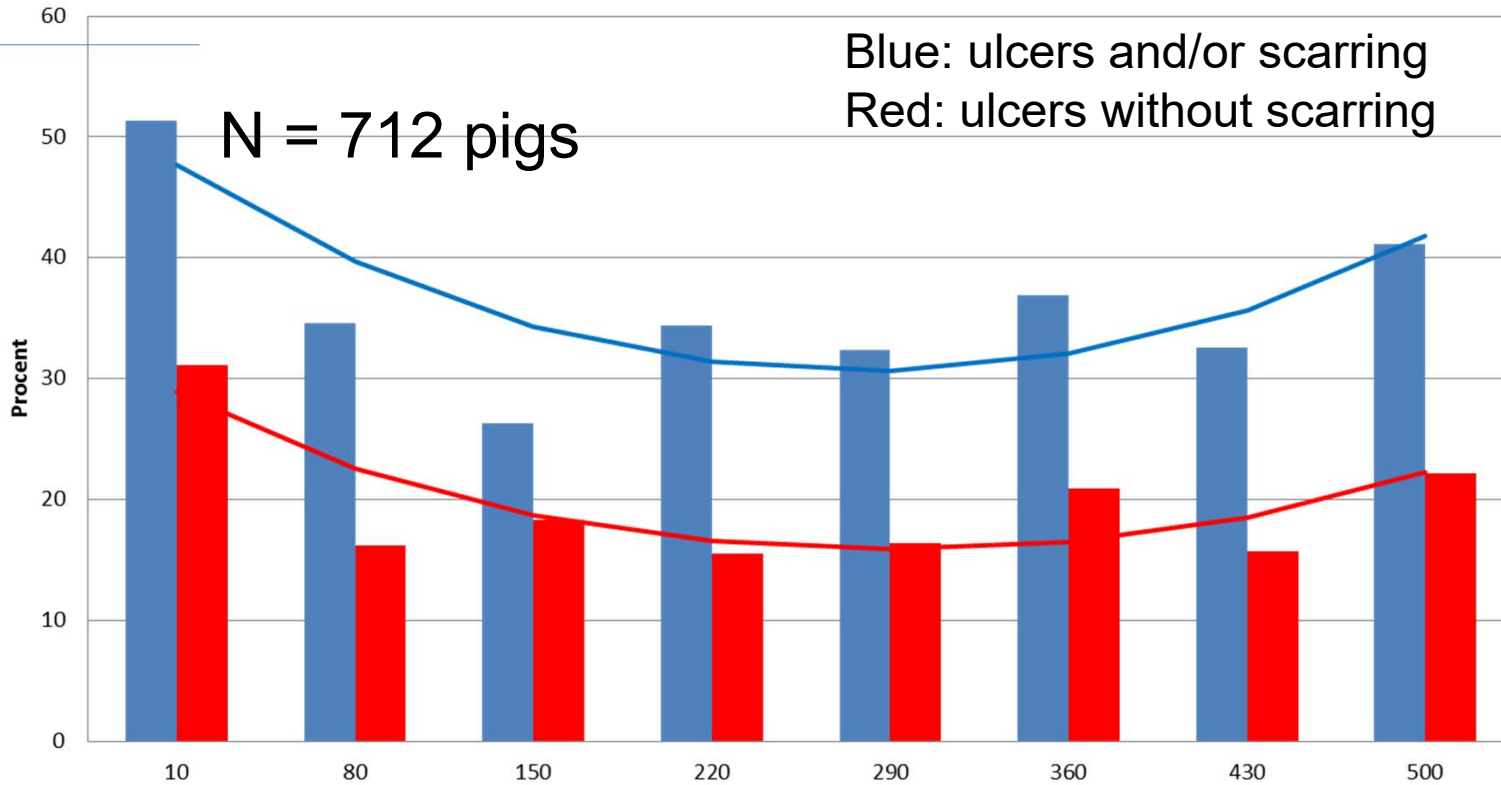
s h o n w l q j # l v g h f l v y h # i r u h # g h y h o r s p h q w r i # j d w u l f o n v l r q v #

Exw # s d w u l f o n v l } h b i o x h q f h v w k h # h h g h i i l f h q f | q h j d w l y h o | #



DDUKXV  
 XQ IYHUVIWHW  
 VF IHQFH#DQG#HF KQR OR J \

# AU-ANIS & SEGES: EFFECT OF STRAW ON GASTRIC ULCERS



Dp rxqwr i#wdz l#suredp = j#wdz shu#lj

çrkhuw|shv#i#wdz B

Figure mod. from Jensen, K.H.



# HIIHF WR I#WUDZ R Q#D VWUIF KHDOWK +F DQ IEH#F 1#5346,

	Z lk#wdz	Z lkrxwwdz	S0ydxh
Vwrp dfk frqwhqw+j ,	;45#	8;7	3B8
Gul#p dwhu#( ,	53B	4:5	3B7
Dfhwf dflg #p p r2nj ,	;9	6I	?3B4
Odfwf dflg #p p r2nj ,	641:	459	3B;
sK	6I7	61;	3B<
Skdvh vhsduwlrq/#kullp q	<<	:<	?3B34
Skdvh vhsduwlrq/#57kullp q#	<;	:9	?3B34
Xdfhw+( #i#ljv,	6	68	3B6
Xdfhw dgg2ruvfdulqj	48	93	3B6

Conclusion: High content of straw has a positive effect on gastric health, and effects are similar as to those observed after feeding with coarse feed





DDUKXV  
 XQ IYHUVIWHW  
 VF IHQ F H#QG#HF KQR OR J \

# SUR MHF W#JHVHD UF K #D IP

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<sup>3</sup>Wr#wxg | wkh#ihfwr#g hwdul khp s surgxfw#rq#  
 suvhqfh r i#j dwuf xofhw b#j urz hw

Iggxwudk#khp s=  
 0 Hdv| wr#j urz #kdqgd#lqg#kduhw  
 0 G lhdvh suyhqwbqj srwhqwd  
 0 Qr#WKF #hwak | gurfdqqde lro





# VXJ J HVWHG P HF KDQ IVP V IR U#KHP SB

<sup>3</sup>Khp s#wudz =  
0P ruh#ihfwyh#q#  
devruebj #t xlg#kdq#  
rwkhu#wudz #w|shv  
0Yhu|#wurgj  
0F dq#qfuhdv#  
frqv|whqf|#r#wrp dfk#  
frqwhqw  
0dgg#hdg#wr#hw#  
wrp dfk#hvlrqv#  
ehfdxvh#r#hw#dflg#  
dgg#xlgw|#

<sup>3</sup>Khp s#fdnh=  
0F rqwdbv#sue lrwf#  
ileuhv#e lrdfwyh#  
vxewdqfhw#dgg#r#b#  
uhvlgxhv#  
0Wlvxh#surwfwqj#  
surshwhv##  
0Wkh#r#b#v#h#g#q#x#p#dq#  
p hglfbh#dvd#  
whudshxwf#p hglfd#  
djd|q#w#q|p p dwru|#  
g|hdvhv#



# J UR Z HU#H [ SHUIP HQ W#Z IWK #KHP S#SUR GX F WV

<sup>3</sup>0wr #qyhwtj dwn #i#khp s#surgxfw#frxg#shyhqw#  
j dwwf #kofhw#q#j urz hu#

<sup>3</sup>Ghv#j q# #Irxu#j urxs v#433#s lj v#q#hdfk #630443#hj ,

<sup>3</sup>G hw#1 #P hdo

<sup>3</sup>G hw#5 #Shonw

<sup>3</sup>G hw#6 #Shonw#z lk#7 ( #khp s#fdnh#ehiruh shonwqj ,

<sup>3</sup>G hw#7 #Shonw#z lk#7 ( #khp s#kxvn#dihushonwqj ,

<sup>3</sup>Ehiruh#o#xjkwu#dp shv#ri#v#d#y#d#) #hdfhv

<sup>3</sup>D ihu#o#xjkwu#f#q#f#d#h#y#d#o#d#w#r#q#r#i#w#r#p#d#f#k#v#d#q#g#  
v#d#p#s#d#q#j#r#i#f#r#q#w#h#q#w#d#q#g#s#l#k#h#d#x#p#1



# OLT X IG #D EVR USWIR Q

F rduh p hdo

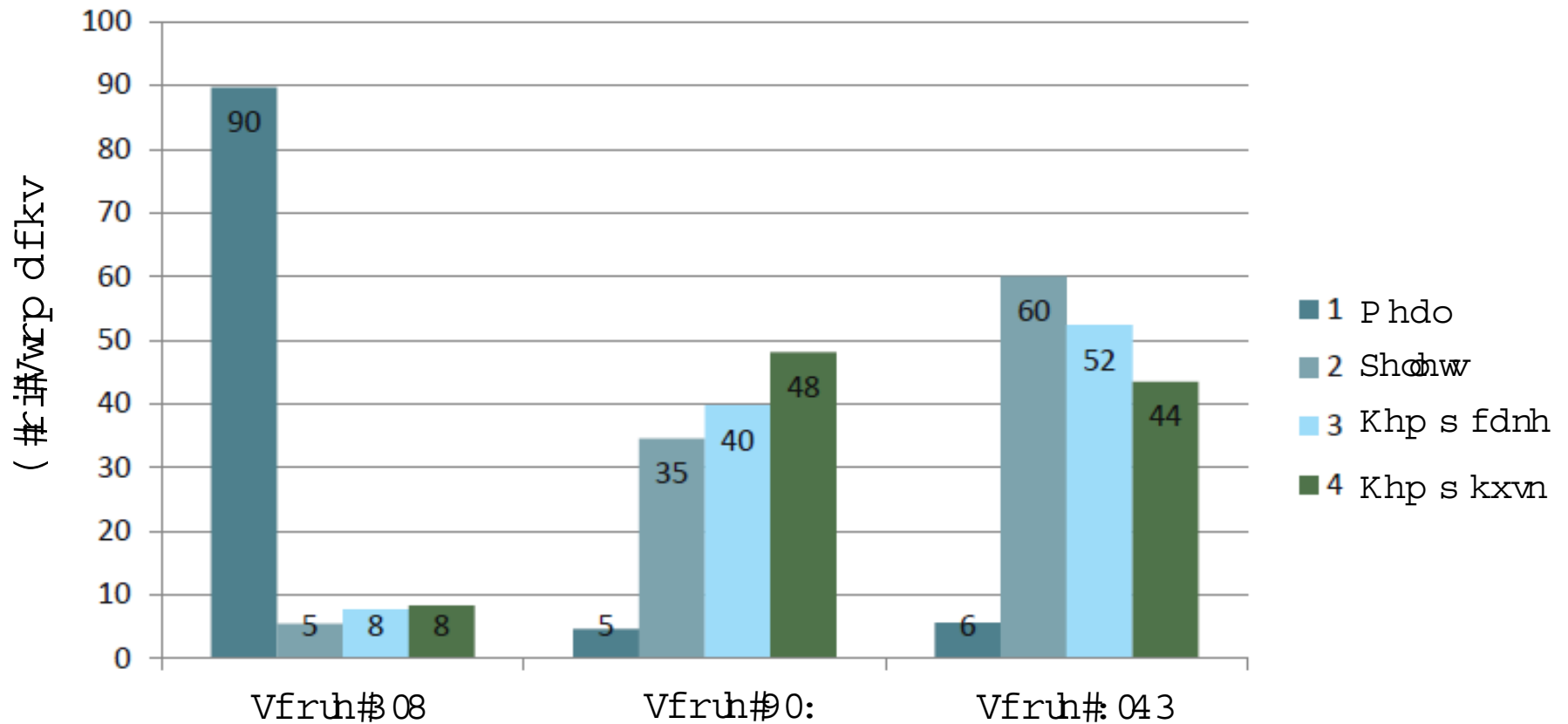


I bh #shonhg





# Vwrp dfk vfruh#ri#ghwdu| wndw hqw





DDUKXV  
 XQ IYHUVIWHW  
 VF IHQFH#DQG#HF KQR OR J \

# VWR P D F K F R Q VI\WHQ F \

	4 #P hdo	5 #Shohw	5 #Khp s fdnh	6 #Khp s kxvn
Q xp ehuri# wrp dfkv	43 :	443	436	43 ;
( #wrp dfkv z lk#t xhg wrp dfkv	<<-	7 ;	85	9 : -

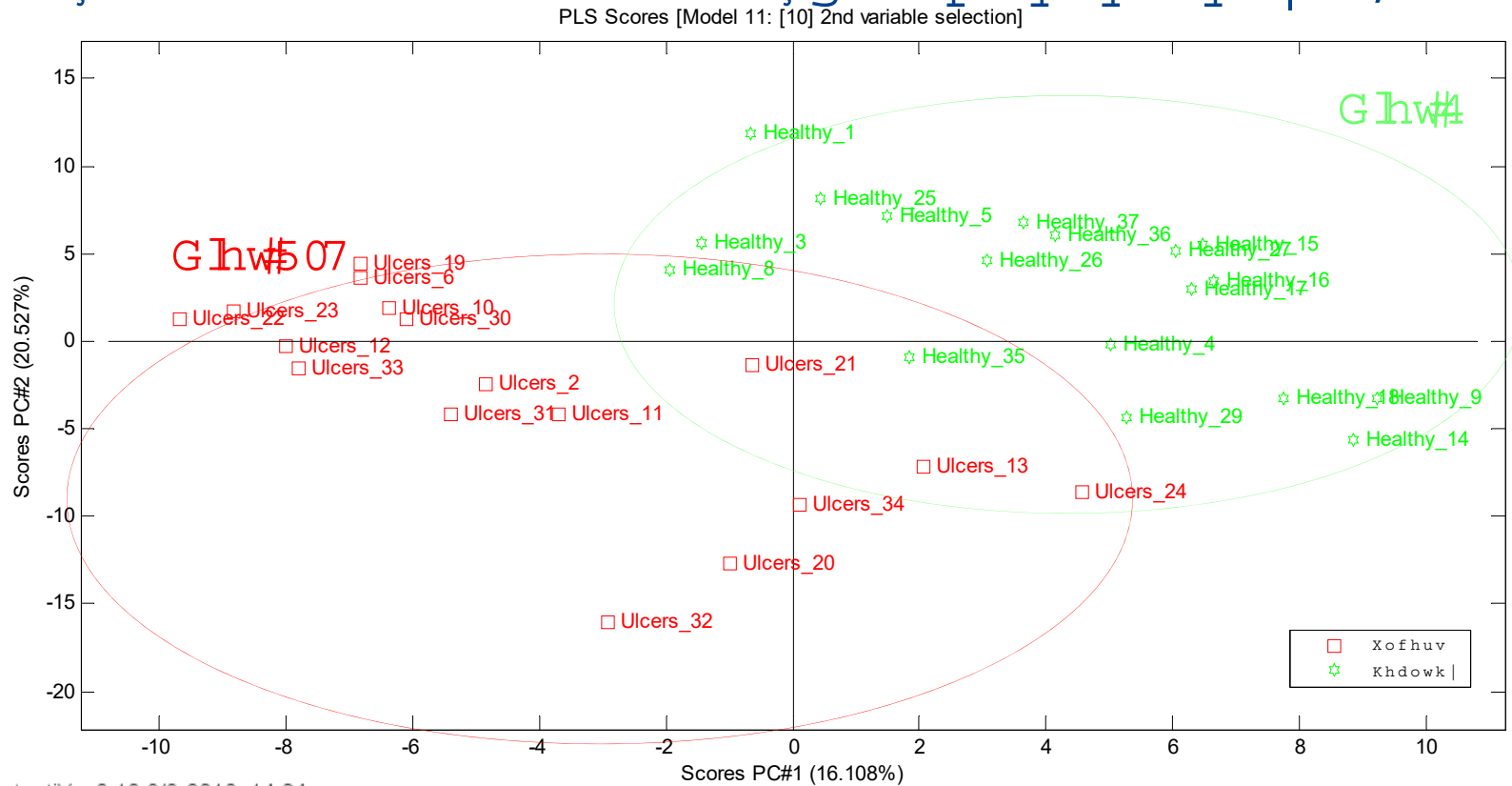
-Vdwlwfdw#ljqlfdqwrp #j urxs 5





# P H W D E R O R P I F S U R I I Q H # R I # V D O L Y D + O F O P V 2 P V , #

<sup>3</sup> S O V # G D # s d u d d e b d w t x d u h v # g l v f u p b d q w d q d d v l v ,



D u f k b g r q l f d f b g f d v f d g h



# R WKHU +SUHOIP IQ DU \ ,#JHVX OWV

<sup>3</sup>Vwrp dfk#frqwhqw=

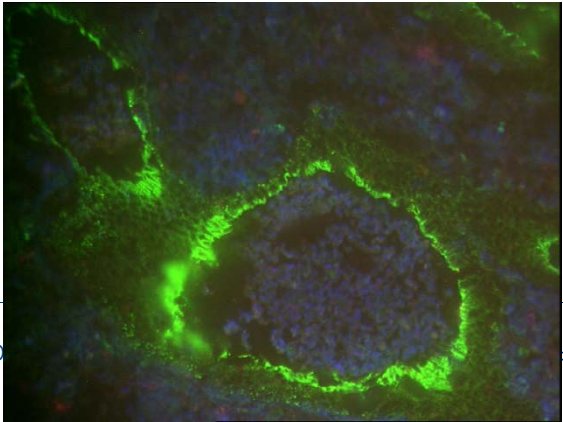
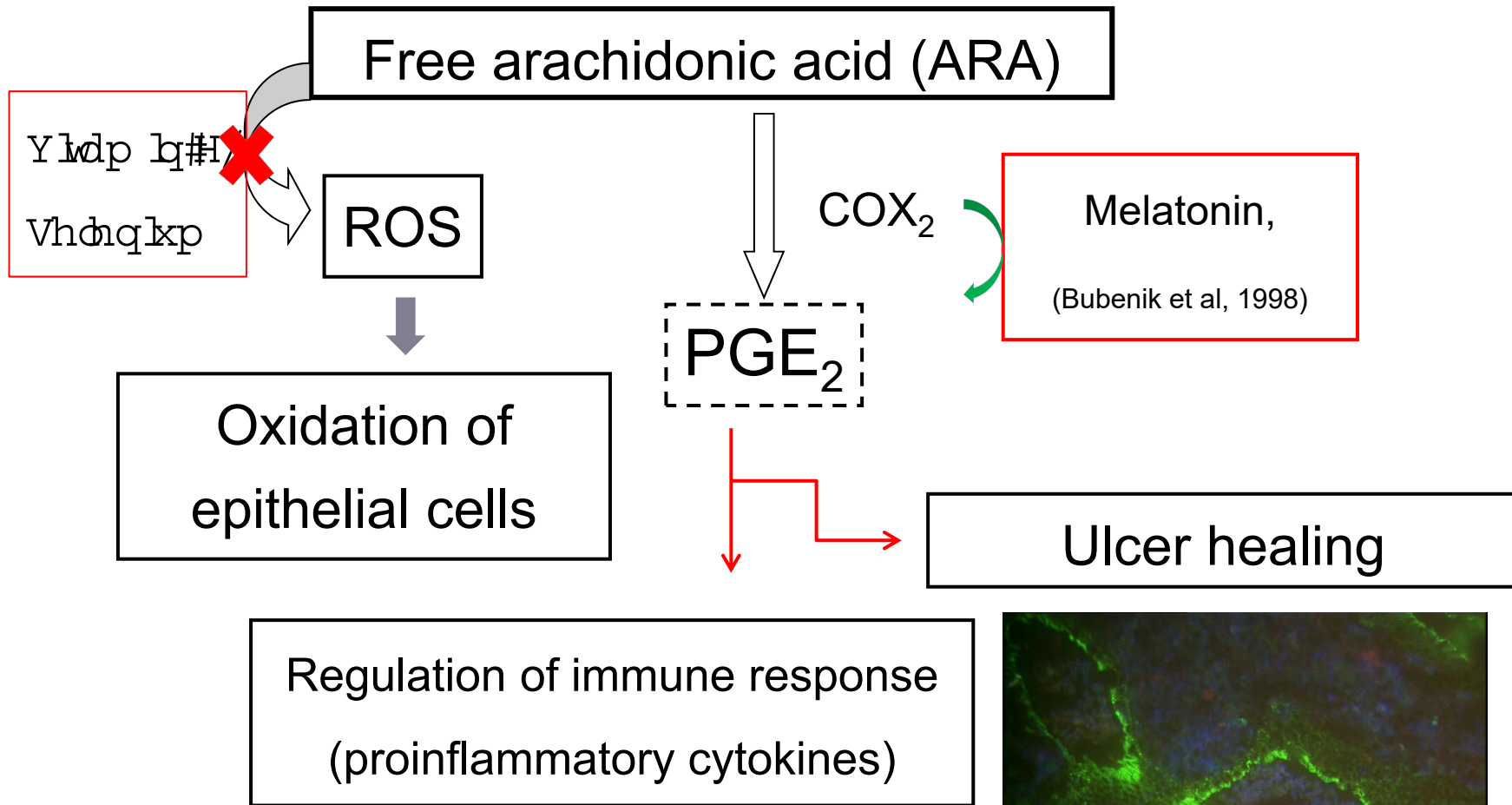
<sup>3</sup>0dhw#dfhwf#dfbg#p |ufwf dfbg#dfwf#dfbg#exw|ulf#  
dfbg#dqg#gul#p dwhu#q#Xofhu#s ljv

<sup>3</sup>Xsuhjxodwtrqr#r#qiodp p dwru|#jhqhv#q#hs lkhdxp #r#  
Xofhu#s ljv

<sup>3</sup>exw#qr#g lihuhqfh#q#hdfdop hdvxuhp hqw#  
+Surwdjodqgq#dqg#dqg fdsurwnwq,#



F r q w r o r i s d k r o r j l f d o s u r f h w h v  
o d q g # d f w r u # h v h d u f k h g b # z b h





# F R Q F OX VIR Q D Q G #SHUVSHF WIY H

---

<sup>3</sup>Khp s#kxvn/#exw#qrw#khp s#fđnh/#f rxg#thgxfh#  
sur sruwrq#r i#hyhuh#j dwulf#kofhuw

<sup>3</sup>Slj v#z lk#hyhuh#j dwulf#kofhuw#dqg#s lj v#z lk#qr#  
j dwulf#kofhuw#f rxg#eh#g lful bdwng#p hwderorp lf  
surib#r i#vdyd,

<sup>3</sup>F rqlqxh#wxg hv#r q#kh#s dkrj hqhvl#q#j dwulf#kofhu#  
ghyharsp hqw

<sup>3</sup>Ihhgqj#p hđ#hp dbv#wr#eh#kh#ehw#wudwj|#wr#  
sunyhqw#kh#ghyharsp hqw#r i#j dwulf#kofhuw#q#s lj v



# Department of Animal Science, AU-Foulum, Aarhus University





Üöyduh	J uxssh# #P ho	J uxssh# #j # #S Iöhu	J uxssh# #S Iöhu
Kyhgh	84/5:	84/54	83/3
E   j	53/33	53/33	53/33
Vrödvnuö	< / >	< / >	43/73
Kyhghndg	8/4:	8/63	7/ ;
Üdsvnuö	8/33	8/33	4/33
Vrövhnhvnuö # #Ivndöhw	8/33	8/33	8/33
F d f k p f d u e r q d w # u g w	4/33	4/33	4/3:
S d ö h r ö h p l {	3/33	3/33	3/33
I r g h u d ö w	3/7 ;	3/7 ;	3/7 ;
O   v l g # ; # K F o	3/68	3/68	3/68
P r q r f d f k p i r v i d w	3/64	3/64	3/5 ;
G d # l # O 2 X V	3/53	3/53	3/53
W k u h r q l g # ;	3/45	3/45	3/45
G O # h w k l r q l g	3/36	3/36	3/36
U r q r }   p h # K S k r v # W # 3 3 3	3/36	3/36	3/36
P I f u r j u l w # u g	3/38	0	0
P I f u r j u l w # ö	0	0	3/38
K d p s h n d j h	0	0	7/33





# EIR D F WIYH IHHG F R P SR Q HQ WV

---

<sup>3</sup>D qwI0edfwhud0#Vxvfhswe lw| #r#j dwulf#kofhu#p d | #eh#  
 bixhqfng#e | #qihfwrxv#g lhdvhv#z lkrxw#p sdfdwrq#  
 r i#vshflilf#edfwhud1#DqwI0edfwhud0#erp srqhqw##h1j #  
 doj bqdwh #dw| #dfbgv,#p d | #qkle l#kh#s dkrjhqhv1  
<sup>3</sup>D qwI0r { bgdwyh#G lwxuedqfh#q#p xfrvd0ed0dqfh#  
 ehwz hhq#uhh#dg lfd0#dgg#dqwr { bgdqw##h1j #ywdp bq#  
 H#h0qxp ,  
<sup>3</sup>D qwI0bi0p p dwru| #xewdqfhw#kdw#fdq#e0r fndgh#  
 dgg#hngxfh#kh#bi0p p dwru| #dvfdgh##h1j #q06 #dw| #  
 dfbgv,