/HSWLQ LV D KRUPRQH WKDW FRPHV IURP *UHHN ZRUG PHDQLQJ WKLQ LW LV DOVR NQRZQ DV 2E JHQH WKDW LV ORFDWHG RQ FKURPRVRPH QXPEHU &\WRJHQHWLF ORFDWLRQ LV T DQG FRQVLVWV RI WKUHH H[RQV DQG \ DQG FRQVLVWV RI WKUHH H[RQV DQG WZR &\WRJHQHWLF ORFDWLRQ LV NE RI'1\$ LQWURQV WKDW VSDQ NLOREDVHV ODLQ UROH RI OHSWLQ LV WR DFKLHYH DQ HQHUJ\ EDODQFH LQ WKH ERG\ > @ /HSWLQ ELQGV WR UHFHSWRUV I EUDLQ DQG SHUIRUPV VHYHUDO DFWLRQV WKDW PD\ SURYH WKDW OHSWLQ LV LPSRUWDQW LQ WUHDWLQJ REHVLW > @ 7KLV KRUPRQH LV SURGXFHG E\ WKH DGLSRVH WLVVXH PDLQO\ E\ WKH ZKLWH DGLSRVH WLVVXH RI WKH KXPDQ ERG\ LW LV FRPSULVHG RI DPLQR DFLGV 7KH DPRXQW RI OHSWLQ FLUFXODWLQJ LQ WKH ERG\ LV SURSRUWLRQDO WR WKH DPRXQW RI IDW RI DQ LQGLYLGXDO > @ 5HVHDUFKHUV WKRXJKW WKDW OHSWLQ ZRXOG EH WKH NH\ LQ FRQWUROOLQJ REHVLW\ %XW UHVHDUFK UHYHDOHG WKDW LI JUHDWHU DPRXQW RI OHSWLQ UH(WKHQ LW LV OHVV HIIHFWLYH LQ WKH EUDLQ IRU FRQWUROOLQJ KXQJHU DQG IF 7KH UHVXOW LV XQFRQWUROOHG IHHGLQJ OHDGLQJ WR JUHDWHU IRF LQWDNH LQWDNH DQG IDW VWRUDJH > @ , WLVD N'D FLUFXODWLQJ KRUPRQH WKDW UHJXODWHV HQHUJ\ KRPHRVWDVLV YLD K\SRWKDODPLF QHXURQDO SDWKZD\V H[SUHVVLQJ WKH OHSWLQ UHFHSWRU > @ 7KH GHILFLHQF\ RI OHSWLQ RU OHSW UHFHSWRU LQ KXPDQV UHVXOWV LQ H[WUHPH REHVLW\ DQG LPSOLFDWHV OHSWL PHGLDWHG VLJQDOLQJ LQ WKH UHJXODWLRQ RI IRRG LQWDNH HQHUJ\ HISHQGLWXUH UHSURGXFWLYH WK\URLG DQG LPPXQH IXQFWLRQV > @ /HYHO RI OHSWLQ LV SRVLWLYHO\ FRUUHODWHG ZLWK IDW PDVV EHLQJ LQFUHDVHG LQ RE %XW VRPH VWXGLHV VXJJHVW WKDW OHSWLQ PD\ KDYH D VWLPXODWLQJ 0 HIIHFW RQ IDW R[LGDWLRQ LQ REHVH VXEMHFWV > @ /HSWLQ LV DOVR SURGXFH(IHZHU DPRXQWV LQ WKH SODFHQWD DQG SUREDEO\ LQ WKH VWRPDFK > @ , W L V UHSRUWHG WKDW ODUJH IDW FHOOV SURGXFH PRUH OHSWLQ WKDQ VPDOO RQF 6HUXP OHSWLQ FRQFHQWUDWLRQV DUH KLJKO\ FRUUHODWHG ZLWK ERG\ IDW FRQWHQW LQ QHZERUQ LQIDQWV FKLOGUHQ DQG DGXOWV > @)LUVW JHQHWL GHIHFW RQ@@pÀ `p •@ @ 0@pd@p€Uâ• 0>•áP •áP @`•0W@ P£0EO\ •å•?HO€ŏÄQV PDF[

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Institute of Biochemistry and Biotechnology, University of Veterinary and Animal Sciences, Lahore, Pakistan * T`@æ{ { æå Yæ•i {, 0}•cic`c^ [- Bi[&@^{i•c!^ æ}å Bi[c^&@}[[[*^, W]iç^\•ic^ [- X^c^\i]æ\^ æ}å A}i { æ| Ù&i^}&^•, Šæ@[!^, Úæ\i•cæ}, V^|:

Role of Leptin in Obesity

5HJXODWLRQ RI (QHUJ\ ([SHQGLWXUH)RRG ,QWDNH DQG %RG\ :HLJKW E\ /HSWLQ

/HSWLQ LV DQ LPSRUWDQW FRPSRQHQW LQ WKH ORQJ WHUP UHJXODWLRQ RI ERG\ ZHLJKW 5HFHQW VWXGLHV ZLWK REHVH DQG QRQ REHVH KXPDQV GHPRQVWUDWHG D VWURQJ SRVLWLYH FRUUHODWLRQ RI VHUXP OHSWLQ FRQFHQWUDWLRQV ZLWK SHUFHQWDJH RI ERG\ IDW ,W DSSHDUV WKDW DV DGLSRF\WHV LQFUHDVH LQ VL]H GXH WR DFFXPXODWLRQ RI WULJO\FHULGH WKH V\QWKHVL]H PRUH DQG PRUH OHSWLQ /HSWLQ V HIIHFWV RQ ERG\ ZHLJKW DUH PHGLDWHG WKURXJK HIIHFWV RQ K\SRWKDODPLF FHQWHUV WKDW FRQWURO IHHGL EHKDYLRU DQG KXQJHU ERG\ WHPSHUDWXUH DQG HQHUJ\ H[SHQGLWXUH > @

3DWKZD\V,QYROYHG LQ/HSWLQ 3URGXFWLRQ

FRJQLWLYH SURILOH ZDV GRQH ZLWK WKHUKIHROS(RORGYHIHOUHROWQHH[SHSULXPLHOQWVS) 5HVXOWV VKRZHG VLJQLILFDQW GLIIHUHQ样的SUCHQWHQWHROOLQIAGFHLOHVAPOV %0, VXEJURXSV FDOFXODWHG E\:HFKVOHU)以OHWGHOOEUHFDFF6F6FOOVHOPQVS UHYLVHG :,6& 5 \$FFRUGLQJ WR UHJUHV9世代会XDOOEUHFDFF6F6FOOQVV-WXHURQO\ 6 YDULDEOH WKDW LV VLJQLILFDQWO\ UHODWHOKOVPPQVFEQWPOOHFWSWDOOCHHWWDO RXW LQWHOOHFWXDO OHYHO LQ REHVH BSOCOPRVFROOZHKEVRAWOLQKCOCHUHWWHD VRXWL QHXURFRJQLWLYH DVVHVVPHQW LV UHFRPF7FOGFPCHVVHQJBU ULERQXFOHLF DFLG DQ K\SRWKDODPLF DUFXDWH QXFOHXV RI WKH

& R Q F O X V L R Q

PRXVH (QGRFULQRORJ) 6KLPDGD 0 7ULWRV 1\$ /RZHOO %%)OLHU -

2EHVLW\ KDV EHHQ WKH SUREOHP LQ WRH FWRFLHWERQUDWHDGFWLRQ PDS RI OHSWLQ VGLDG %%)0LHU -2EHVLW\ KDV EHHQ WKH SUREOHP LQ WRHFWRFLHWERQUD RF FRENCH & FEGHER RI BEN AND REAL AN

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6FKZDUW] 0: :RRGV 6& 3RUWH '-U 6HHOH\ 5- %DVNLQ '* & HQWUDO QHUYRXV V/VWHP FRQWURO RI IRRG LQWDNH 1DWXUH ORQWDJX)BIU&R7,R6TL:KLWHKKRNB2026; -35 DX + HW DO & RQJHQLWDO OHSWLQ GHILFLHQF\ LV DVVRFLDWHG ZLWK VHYHUH HDUO\ RQVHW REHVLW LQ KXPDQV 1DWXUH &O«PHQWDLVVH & /DKORX 1 &DEURO 6 3HOORX[9 HW DO PXWDWLRQ LQ WKH KXPDQ OHSWLQ UHFHSWRU JHQH FDXVHV REHVLW\ DQG SLWXLWDU\ G\VIXQFWLRQ 1DWXUH 2]DW0D2]GHPL&ULFLQLR +XPDQ OHSWLQ GHILFLHQF\ FDXVHG E \ DPLVVHQEXKWDWLRQ PXOWLSOH HQGRFULQH GHIHFWV GHFUHDVHG V\PSDWKHWLF WRQH DQG LPPXQH V\VWHP G\VIXQFWLRQ LQGLFDWH QHZ WDUJHWV IRU OHSWLQ DFWLRQ JUHDWHU FHQWUDO WKDQ SHULSKHUDO UHVLVWDQFH WR WKH HII RI OHSWLQ DQG VSRQWDQHRXV FRUUHFWLRQ RI OHSWLQ PHGLDWHG GHIHFWV &OLQ (QGRFULQRO 0HWDE а 7DUWD\$JOLHDPEVNL 0 : HQJ ; 'HQJ 1 & XOSHSSHU - HW DO , GHQWLILFDWLRQ DQG H[SUHVVLRQ FORQLQJ RI D OHSWLQ UHFHSWRU 2% 5 & HOO 9HUG&FK7RXEUR 6 %XHPDQQ % +ROVW -- %¾ORZ - HW DO /HSWIQ OHYHOV DUH DVVRFLDWHG ZLWK IDW R[LGDWLRQ DQG GLHWDU\ LQGXFHG ZHLJKW ORVV L REHVLW\ 2EHV 5HV)U¾KE1HFN ,QWUDFHOOXODU VLJQDOOLQJ SDWKZD\V DFWLYDWHG E\ OHSWLQ % | RFKHP -)DWLPD : 6KDKLG \$,PUDQ 0 0DQ]RRU - +DVQDLQ 6 HW DO /HSWLO GHILFLHQF\ DQG OHSWLQ JHQH PXWDWLRQV LQ REHVH FKLOGUHQ IURP 3DNLVWDQ ,QW - 3HGLDWU 2EHV %UHQQDQ \$0 0DQW]RURV &6 'UXJ,QVLJKW WKH UROH RI OHSWLQ LQ KXPDQ SK\VLRORJ\ DQG SDWKRSK\VLRORJ\ HPHUJLQJ FOLQLFDO DSSOLFDWLRQV 1DW &OLQ 3UDFW (QGRFULQRO 0HWDE *UHHQ ØDIIHL 0 %UDGHQ 99 3URHQFD 5 'H6LOYD 8 HW DO 7 K H KXPDQ REHVH 2% JHQH 51\$ H[SUHVVLRQ SDWWHUQ DQG PDSSLQJ RQ WKH SK\VLFDO F\WRJHQHWLF DQG JHQHWLF PDSV RI FKURPRVRPH *HQRPH 5HV