

Functional Ecology

Figure S1. Peptide fingerprint mapping by QSTAR- tandem MS revealed strong homology to the storage hexamerin proteins of the blow fly *Calliphora vicina*. Peptides within the upper and lower *Sarcophaga crassipalpis* arylphorin/LSP-1 bands and the LSP-2 band that matched the *C. vicina* storage hexamerins with greater than a 95% Scaffold probability score are in bold and underlined.

Upper Arylphorin/LSP-1 Band

>gi|2148169|gb|AAB58984.1| arylphorin/LSP-1 [*Calliphora vicina*]
MKIAIVLLAIVGLAASASITDKKVKIADKDFLAKQKFLFEIVYRVEDPLMFEEWIKMGKSFTFDK
ADYNHFDMYMDKFYEAYKYGAILPKGEFFYYAKNWEVFQRNVAFAARMHCNEGMFVYALTLAVIHR
DDFHGLILPSIYEIFPQYFFNSK**FVYEA EKFDYDVWSKY**IMYEKEYKDILYKDYATFYKNHDNHH
YYFFTKDFKTYQWWK**MMGLGEHWYSEDR**FMLRDNMDKYNKDSKYLEIFEGTKMFFMPVDYTRDIE
FFNKESVLSYFTEDVGFNAYWYYLNMDYAFFLDGKTYGLNKDR**RGEYWLYNVR**QLLSRYMERLS
HGFGEIPRFSFMYSIEYGYNPQLVYHNGVGFSYRKNYYEVESFGKFDYFYKVLDFNRMDEIITK
GVYVTYDGKTIDLRKPESIEYIGSIMQGNVDTFDSYFFKYWYMF AHMYFGDDNTHDFEVPHIFL
NYETMMRDPMFYMFYK KIASVYFQFFNYVKPYTHEELLFPGVTIKDKVSELVTYFDLVDVDFVTN
LMNDK**MTFVDGQFVWDK**TLLARQMRLN HKPFDFDFVIESDKAQKV VIRT YLGPKYDEFGRV**ISLT**
ENRENFME LDSFLYTLKSGVNEFKRYSKDFYWTVEDR**TTYTELYK**YVMLALQGK**YDFPLDISEPH**
CGFPDRLVLPHGWYK GMPMQFFFYVTPFTTEYEQFSTYDYSYSCGIGSGVRY**IDEMPFGYPFDRE**
IDEYEFFVPNMYFKDVKIFHQDTFEKYFEHKEYEKGHFDYNYHH

Lower Arylphorin/LSP-1 Band

>gi|2148169|gb|AAB58984.1| arylphorin/LSP-1 [*Calliphora vicina*]
MKIAIVLLAIVGLAASASITDKKVKIADKDFLAKQKFLFEIVYR**VEDPLMFEEWIKMGKSFTFDK**
ADYNHFDMYMDKFYEAYKYGAILPKGEFFYYAKNWEVFQRNVAFAARMHCNEGMFVYALTLAVIHR
DDFHGLILPSIYEIFPQYFFNSK**FVYEA EKFDYDVWSKY**IMYEKEYKDILYKDYATFYKNHDNHH
YYFFTKDFKTYQWWK**MMGLGEHWYSEDR**FMLRDNMDKYNKDSKYLEIFEGTKMFFMPVDYTRDIE
FFNKESVLSYFTEDVGFNAYWYYLNMDYAFFLDGKTYGLNKDR**RGEYWLYNVR**QLLSRYMERLS
HGFGEIPRFSFMYSIEYGYNPQLVYHNGVGFSYRKNYYEVESFGKFDYFYKVLDFNRMDEIITK
GVYVTYDGKTIDLRKPESIEYIGSIMQGNVDTFDSYFFKYWYMF AHMYFGDDNTHDFEVPHIFL
NYETMMRDPMFYMFYK KIASVYFQFFNYVKPYTHEELLFPGVTIKDKVSELVTYFDLVDVDFVTN
LMNDK**MTFVDGQFVWDK**TLLARQMRLN HKPFDFDFVIESDKAQKV VIRT YLGPKYDEFGRV**ISLT**
ENRENFME LDSFLYTLKSGVNEFKRYSKDFYWTVEDR**TTYTELYK**YVMLALQGK**YDFPLDISEPH**
CGFPDRLVLPHGWYK GMPMQFFFYVTPFTTEYEQFSTYDYSYSCGIGSGVRY**IDEMPFGYPFDRE**
IDEYEFFVPNMYFKDVKIFHQDTFEKYFEHKEYEKGHFDYNYHH

LSP-2 Band

>gi|1890114|gb|AAC24157.1| hexamerin LSP-2 [*Calliphora vicina*]
MKSFI AVAVIALAFFALASSKHIESK**VADKDFLVK**QKFM LDILQH VYQDDV FVKKYDES YV TYKP
WEHAEDYNEIDLKDF FELWQHDP IYDDEIFSPVYERHVEYAHYLTRLFYFAK**DWNSFTHAVYWA**
RTHVNKQLFIYSLTVAS IHRDDLKGI VLP AIYEIQPWHFFDADTLELA EKFRMHGFHN VKKLDNL
HNVV IKS NYS NVYGDVNYEHSLSYFLEDIGFN AFY YYYNLDYPHWANGPVGHELNKDRRGEFYLF
LHWQLLSRYYLRLSVDLGEIPHFNIYQPYEHGYF SNLHYYKGV SF PDRDNHYNFYEDNYQYAK
DIEYYGARLAQYVDTNDEYLVAVNKLGNMIQGNPDSVNFKKYGLDHL YREL VNEGRPYGK**YGE**
TLPAILMHYETSLRDPLFYSIYK**DIVSYWR**LMATYPEYKPKDLEFPGVKIDSVHMPEGLTTYFE
YFDADISNAVNVVPSSESSADALFKFGRNSQLHGQSFVIKARQLRLN HKPF EYTL DVTSEKSQK
AIVKVF IGPKYDENGLIHLEDNYMNF FELDHVVDLAAGVNHLKRSSDDFTWYVSDR**TTYLELY**
QKVMDATNSDYK FPLNQDEAHCGVPQRIMLPKGKKGMPFQFFYIVYPYHAPVQYQYSTYDPVIS
CGIGSGSRFVDTLPFGFPFNR**HDYFNVDNIK**FYDIKIYHKDDHTNLV

Hahn, James, Milne, & Hatle. Life history plasticity after attaining a dietary threshold for reproduction is associated with protein storage in flesh flies.