

Title: Early queen development in honey bees: Social context and queen breeder source affects gut microbiota and associated metabolism

Authors: Duan C. Copeland, Kirk E. Anderson and Brendon M. Mott

Corresponding author. Email: kirk.anderson@ars.usda.gov

Table S1: Primers used in this study

Gene (accession number)	Forward 5'-3'	Reverse 5'-3'	Study
<i>actin</i> (XM_623378)	TGCCAACACTGTCCTTTCTG	AGAATTGACCCACCAATCCA	Alaux et al., 2011
<i>vitellogenin (vg)</i> (AJ517411)	GTTGGAGAGCAACATGCAGA	TCGATCCATTCTTGATGGT	Salmela et al., 2016
<i>vg-like-B</i> (XM_006561115.1)	ATTGCAACAATGCAGTTTGAA TCAT	GCAAATCAGCCACATCTTTAGGA	Salmela et al., 2016
<i>Glucose oxidase</i> (NM_001011574.1)	GAGGGCGGAAAATCATCAGA CC	AGGATTACCCGAGATCACCTGC	Ohashi et al., 1999
IRP30 (JN104327)	TTGTGAGCGATGTCCCAAAC TT	GCCGGTCTCGGCAAATTAAG	Albert et al., 2011
ILP1 (GB17332)	GCTCAGGCTGTGCTCGAAAA GT	CGTTGTATCCACGACCCTTGC	Ament et al, 2008
<i>abaecin</i> (GB18323)	CAGCATTTCGCATACGTACCA	GACCAGGAAACGTTGGAAAC	Evans et al., 2006
<i>apidaecin</i> (GB17782)	TAGTCGCGGTATTTGGGAAT	TTTCACGTGCTTCATATTCTTCA	Evans et al., 2006
<i>Bgluc1</i> (GB19492)	GGACAACCACCTTTTGAACG	AGGAGCTTCCTCTGCACTGA	Evans et al., 2006
<i>defensin2</i> (GB10036)	GCAACTACCGCCTTTACGTC	GGGTAACGTGCGACGTTTTA	Evans et al., 2006
<i>Dredd</i> (GB17683)	GCGTCATAAAGAAAAAGGAT CA	TTTCGGGTAATTGAGCAACG	Evans et al., 2006
<i>DSCAM</i> (GB11871)	TTCAGTTCACAGCCGAGATG	ATCAGTGTCCCGCTAACCTG	Evans et al., 2006
<i>Hymenoptaecin</i> (GB17538)	CTCTTCTGTGCCGTTGCATA	GCGTCTCCTGTCATTCCATT	Evans et al., 2006
<i>Imd</i> (GB18606)	TGTTAACGACCGATGCAAAA	CATCGCTCTTTTCGGATGTT	Evans et al., 2006
<i>Lysozyme1</i> (GB10231)	GAACACACGGTTGGTCACTG	ATTTCCAACCATCGTTTTCG	Evans et al., 2006
<i>lysozyme2</i> (GB15106)	CCAAATTAACAGCGCCAAGT	GCAATTCTTCACCCAACCAT	Evans et al., 2006
<i>PGRPLC</i> (GB17188)	TCCGTCAGCCGTAGTTTTTC	CGTTTTGTGCAAATCGAACAT	Evans et al., 2006
<i>PPO</i> (GB18767)	GTTTGGTCGACGGAAGAAAA	CCGTCGACTCGAAATCGTAT	Evans et al., 2006
<i>Relish</i> (GB13742)	GCAGTGTTGAAGGAGCTGAA	CCAATTCTGAAAAGCGTCCA	Evans et al., 2006
<i>Toll</i> (GB18520)	TAGAGTGGCGCATTGTCAAG	ATCGCAATTTGTCCCAAAC	Evans et al., 2006
CuZn Sod (NM_001178027)	TCAACTTCAAGGACCACATA GTG	ATAACACCACAAGCAAGACGAG	Li et al., 2014
Mn Sod (NM_001178048)	GTCGCCAAAGGTGATGTCAA TAC	CGTCTGGTTTACCGCCATTTG	Li et al., 2014

<i>catalase</i> (NM_001178069)	TTCTACTGTGGGTGGCGAAA G	GTGTGTTGTTACCGACCAAATCC	Li et al., 2014
Gst-1 (NM_001178028)	AGGAGAGGTGTGGAGAGATA GTG	CGCAAATGGTCGTGTGGATG	Li et al., 2014

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