

Table S1 – Composition of internal standard added to the lipid extracts

Molecular phospholipids	nmol per sample
LPC 17:0	15
PC 19:0_19:0	80
LPE 14:0	15
PE 17:0_17:0	50
PIn 18:0_18:0	10
PS 17:0_17:0	15

LPC: Lysophosphatidylcholine; LPE: lysophosphaethanolamine; PC: phosphatidylcholine; PE: phosphatidylethanolamine; PIn: phosphatidylinositol; PS: phosphatidylserine. Concentrations are for post-emergent bee samples. For larvae and pupae, 50 % of the concentration values were used (e.g. 7.5 nmol for LPC 17:0).

Table S2 – List of precursor ion scans used for the lipidomics

	Ion Mode	Scan	DP	EP	CE	CXP	Mass Range	Da/ second
<i>Phospholipid class scans</i>								
PC	Positive	PI 184.1	100	10	40	8	640-850	200
lyso-PC	Positive	PI 184.1	100	10	40	8	490-590	200
PE	Positive	NL 141	100	10	30	8	685-950	200
Lyso-PE	Positive	NL 141	100	10	30	8	420-540	200
PS	Positive	NL 185	100	10	25	8	730-850	200
PIn	Negative	PI 241	100	10	30	8	750-1040	200
<i>Fatty acid chain scans</i>								
14:0	Negative	PI 227.2	100	10	55	11	580-900	1000
16:1	Negative	PI 253.2	100	10	55	11	600-900	1000
16:0	Negative	PI 255.2	100	10	55	11	600-900	1000
17:0	Negative	PI 269.3	100	10	55	11	560-900	1000
18:3	Negative	PI 277.2	100	10	40	11	600-900	1000
18:2	Negative	PI 279.2	100	10	40	11	600-900	1000
18:1	Negative	PI 281.3	100	10	55	11	600-900	1000
18:0	Negative	PI 283.3	100	10	55	11	600-900	1000
19:0	Negative	PI 297.3	100	10	55	11	600-900	1000
20:5	Negative	PI 301.2	100	10	40	11	500-1000	1000
20:4	Negative	PI 303.2	100	10	40	11	600-1000	1000
20:3	Negative	PI 305.2	100	10	40	11	600-1000	1000
20:2	Negative	PI 307.2	100	10	40	11	600-1000	1000
20:1	Negative	PI 309.2	100	10	55	11	600-1000	1000
20:0	Negative	PI 311.2	100	10	55	11	600-1000	1000
22:6	Negative	PI 327.2	100	10	40	11	700-1000	1000
22:5	Negative	PI 329.2	100	10	40	11	700-1000	1000
22:4	Negative	PI 331.2	100	10	40	11	700-1000	1000
22:3	Negative	PI 333.3	100	10	40	11	600-1000	1000
22:2	Negative	PI 335.2	100	10	40	11	700-1000	1000
22:1	Negative	PI 337.3	100	10	55	11	700-1000	1000
22:0	Negative	PI 339.3	100	10	55	11	600-1000	1000
24:1	Negative	PI 365.3	100	10	55	11	700-1000	1000
24:0	Negative	PI 367.3	100	10	55	11	700-1000	1000

Mass shifting was prevented in negative ion mode by increasing number of summed scans. *PI* precursor ion, *NL* neutral loss, *DP* declustering potential, *EP* entrance potential, *CE* collision energy, *CXP* collision cell exit potential, *PC* phosphatidylcholine; *PE* phosphatidylethanolamine; *PS* phosphatidylserine, *PIn* phosphatidylinositol, *Lyso* Lysophospholipids.

Table S3 – Main molecular phospholipids characterised in phosphatidylcholine (PC) and phosphatidylethanolamine (PE) of bee extract. Phospholipids in this table contain only saturated (SFA) and monounsaturated fatty acid (MUFA).

		Workers	Queens	Drones			Workers	Queens	Drones
PC 16:0_18:1	Early larva	3.6 ± 0.4	3.9 ± 1.4	3.5 ± 0.2	PE 16:0_18:1	Early larva	1.1 ± 0.1***	1.0 ± 0.4	0.9 ± 0.03
	Late larva	3.5 ± 0.1 ^a	1.8 ± 0.1 ^b	2.8 ± 0.1 ^{c***}		Late larva	0.6 ± 0.02*	0.4 ± 0.02***	0.6 ± 0.03***
	Pupa	1.8 ± 0.1 ^{a***}	1.5 ± 0.2 ^{ab}	2.3 ± 0.2 ^b		Pupa	0.3 ± 0.01	0.3 ± 0.04	0.4 ± 0.04
	Emergent adult	1.5 ± 0.1 ^a	1.6 ± 0.6 ^{ab}	2.1 ± 0.1 ^b		Emergent adult	0.3 ± 0.01	0.3 ± 0.06	0.3 ± 0.01
	Young adult	0.6 ± 0.02 ^{a***}	3.1 ± 0.2 ^b	2.1 ± 0.2 ^b		Young adult	0.1 ± 0.04 ^a	0.8 ± 0.06 ^{b***}	0.4 ± 0.03 ^c
	Old adult	1.5 ± 0.1 ^{a*}	2.3 ± 0.1 ^b	1.9 ± 0.1 ^b		Old adult	0.30 ± 0.03	0.5 ± 0.04	0.4 ± 0.02
PC 18:0_18:1	Early larva	0.5 ± 0.05	0.5 ± 0.1	0.5 ± 0.03	PE 18:0_18:1	Early larva	1.9 ± 0.2	1.5 ± 0.4	1.6 ± 0.1
	Late larva	0.5 ± 0.02 ^a	0.3 ± 0.1 ^b	0.7 ± 0.04 ^c		Late larva	1.2 ± 0.1***	0.8 ± 0.1	1.4 ± 0.1
	Pupa	0.4 ± 0.02	0.3 ± 0.04	0.5 ± 0.07		Pupa	1.0 ± 0.04	0.8 ± 0.1	1.1 ± 0.1
	Emergent adult	0.5 ± 0.01 ^a	0.4 ± 0.05 ^{ab}	0.6 ± 0.02 ^b		Emergent adult	1.3 ± 0.01	1.0 ± 0.2	1.1 ± 0.05
	Young adult	0.4 ± 0.02 ^{a***}	0.9 ± 0.1 ^{b*}	0.6 ± 0.03 ^c		Young adult	0.8 ± 0.03 ^{a*}	1.9 ± 0.1 ^{b***}	1.6 ± 0.05 ^b
	Old adult	1.0 ± 0.1 ^{a***}	0.8 ± 0.05 ^{ab}	0.6 ± 0.02 ^b		Old adult	1.5 ± 0.1***	1.7 ± 0.1	1.6 ± 0.07
PC 16:1_18:1	Early larva	1.1 ± 0.1 ^a	0.7 ± 0.2 ^b	0.5 ± 0.01 ^a	PE 16:1_18:1	Early larva	0.28 ± 0.04 ^a	0.17 ± 0.05 ^{ab}	0.12 ± 0.003 ^b
	Late larva	0.1 ± 0.01 ^{**}	0.2 ± 0.02 ^{***}	0.3 ± 0.02		Late larva	0.02 ± 0.002 ^{***}	0.02 ± 0.002	0.05 ± 0.004
	Pupa	0.2 ± 0.03	0.1 ± 0.02	0.2 ± 0.01		Pupa	0.01 ± 0.001	0.04 ± 0.003	0.03 ± 0.003
	Emergent adult	0.3 ± 0.01	0.3 ± 0.05	0.4 ± 0.01		Emergent adult	0.05 ± 0.001	0.04 ± 0.01	0.05 ± 0.002
	Young adult	0.1 ± 0.01 ^a	1.6 ± 0.2 ^{b***}	1.5 ± 0.1 ^{b***}		Young adult	0.03 ± 0.002 ^a	0.34 ± 0.05 ^{b***}	0.27 ± 0.01 ^{b***}
	Old adult	0.3 ± 0.02 ^a	1.0 ± 0.1 ^b	1.5 ± 0.1 ^c		Old adult	0.07 ± 0.001 ^a	0.16 ± 0.01 ^{a***}	0.28 ± 0.03 ^b
PC 18:1_18:1	Early larva	6.6 ± 0.7	6.0 ± 2.0	5.6 ± 0.2	PE 18:1_18:1	Early larva	3.1 ± 0.3	2.7 ± 0.8	2.7 ± 0.1
	Late larva	4.4 ± 0.2 ^{***}	3.2 ± 0.2 [*]	4.6 ± 0.2		Late larva	1.7 ± 0.1 ^{a***}	0.8 ± 0.1 ^{b***}	2.0 ± 0.1 ^a
	Pupa	3.1 ± 0.2	3.0 ± 0.4	4.2 ± 0.3		Pupa	1.0 ± 0.1	0.9 ± 0.1	1.2 ± 0.1
	Emergent adult	3.6 ± 0.1 ^a	5.2 ± 0.5 ^{b*}	4.4 ± 0.1 ^b		Emergent adult	2.0 ± 0.03 ^{**}	1.7 ± 0.4	1.7 ± 0.1
	Young adult	2.3 ± 0.1 ^a	6.8 ± 0.7 ^b	6.3 ± 0.2 ^b		Young adult	2.0 ± 0.1 ^a	3.9 ± 0.3 ^{b***}	4.4 ± 0.3 ^b
	Old adult	5.2 ± 0.3 ^{***}	7.1 ± 0.3	6.8 ± 0.2		Old adult	3.4 ± 0.1 ^{a***}	3.2 ± 0.2 ^a	4.6 ± 0.2 ^b

Data are expressed in nmol mg and as mean ± s.e.m. Letter indicates significant difference among the castes for the a given life-history stage with $p < 0.05$ (e.g. levels of PC 16:0_18:1 differ significantly among all caste at Late larva stage. Asterisk indicates significant change from previous life-history stages within the same caste (i.e. level of PC 16:0_18:1 increases from Late larva to Pupa stage, in workers) with * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Numbers of replicates per group are provided in Table 3.

Table S4 – Main molecular phospholipids characterised in phosphatidylinositol (PI_n) and phosphatidylserine (PS) of bee extract. Phospholipids in this table contain only saturated (SFA) and monounsaturated fatty acid (MUFA).

		Workers	Queens	Drones			Workers	Queens	Drones
PI _n 16:0_18:1	Early larva	0.14 ± 0.03 ^a	0.14 ± 0.05 ^a	ND	PS 16:0_18:1	Early larva	0.12 ± 0.01 ^a	0.09 ± 0.03 ^{ab}	0.07 ± 0.01 ^b
	Late larva	0.001 ± 0.0001 ^{***}	ND	ND		Late larva	0.05 ± 0.002 ^{***}	ND	0.07 ± 0.01
	Pupa	0.0004 ± 0.0001	ND	ND		Pupa	0.04 ± 0.002	ND	0.06 ± 0.01
	Emergent adult	0.02 ± 0.002	ND	ND		Emergent adult	0.03 ± 0.001 ^a	ND	0.06 ± 0.001 ^b
	Young adult	0.005 ± 0.0004	ND	ND		Young adult	0.01 ± 0.002 ^a	ND	0.05 ± 0.003 ^b
	Old adult	0.03 ± 0.01	ND	ND		Old adult	0.03 ± 0.003	ND	0.04 ± 0.002
PI _n 18:0_18:1	Early larva	0.15 ± 0.03	0.13 ± 0.03	0.20 ± 0.02	PS 18:0_18:1	Early larva	ND	0.010 ± 0.003	ND
	Late larva	0.002 ± 0.0003 ^{***}	0.20 ± 0.03	0.14 ± 0.03		Late larva	ND	0.003 ± 0.0002	ND
	Pupa	0.0003 ± 0.0001 ^a	0.32 ± 0.03 ^b	0.25 ± 0.09 ^b		Pupa	ND	0.002 ± 0.0005 ^a	0.03 ± 0.01 ^{b***}
	Emergent adult	0.05 ± 0.006 ^a	0.48 ± 0.1 ^b	0.25 ± 0.02 ^c		Emergent adult	0.004 ± 0.0003 ^a	0.004 ± 0.001 ^a	0.04 ± 0.001 ^b
	Young adult	0.02 ± 0.0005 ^a	0.60 ± 0.1 ^b	0.04 ± 0.004 ^{a***}		Young adult	0.002 ± 0.0003 ^a	0.02 ± 0.003 ^b	0.01 ± 0.002 ^{ab}
	Old adult	0.04 ± 0.005 ^a	0.35 ± 0.04 ^{b***}	0.05 ± 0.008 ^a		Old adult	0.003 ± 0.0005	0.01 ± 0.001	0.01 ± 0.001
PI _n 16:1_18:1	Early larva	ND	ND	ND	PS 16:1_18:1	Early larva	0.4 ± 0.04	0.3 ± 0.08	0.3 ± 0.1
	Late larva	ND	ND	ND		Late larva	0.3 ± 0.02	0.3 ± 0.02	0.3 ± 0.04
	Pupa	ND	ND	ND		Pupa	0.2 ± 0.01	0.2 ± 0.03	0.1 ± 0.1
	Emergent adult	ND	ND	ND		Emergent adult	0.3 ± 0.01	0.4 ± 0.18	0.02 ± 0.001
	Young adult	ND	ND	ND		Young adult	0.2 ± 0.01 ^a	0.5 ± 0.04 ^b	0.4 ± 0.01 ^{ab}
	Old adult	ND	ND	ND		Old adult	0.3 ± 0.02	0.4 ± 0.03	0.3 ± 0.01
PI _n 18:1_18:1	Early larva	0.16 ± 0.02	0.1 ± 0.03	0.16 ± 0.01	PS 18:1_18:1	Early larva	0.3 ± 0.03	0.3 ± 0.1	0.2 ± 0.04
	Late larva	0.001 ± 0.0002 ^{a***}	0.2 ± 0.02 ^b	0.07 ± 0.02 ^{c***}		Late larva	0.2 ± 0.01 ^{a***}	0.1 ± 0.01 ^{a***}	0.2 ± 0.03 ^b
	Pupa	0.0003 ± 0.0001 ^a	0.3 ± 0.01 ^{b***}	0.05 ± 0.01 ^a		Pupa	0.2 ± 0.01	0.1 ± 0.02	0.1 ± 0.06
	Emergent adult	0.04 ± 0.004 ^{a***}	0.4 ± 0.04 ^b	0.4 ± 0.01 ^{b***}		Emergent adult	0.2 ± 0.004 [*]	0.3 ± 0.15	0.02 ± 0.001
	Young adult	0.02 ± 0.001	0.006 ± 0.001 ^{***}	0.04 ± 0.003 ^{***}		Young adult	0.1 ± 0.002 ^a	0.3 ± 0.03 ^b	0.3 ± 0.01 ^{b***}
	Old adult	0.03 ± 0.003	0.004 ± 0.001	0.06 ± 0.01		Old adult	0.2 ± 0.01 ^{a***}	0.2 ± 0.02 ^{a***}	0.2 ± 0.01 ^b

Data are expressed in nmol mg and as mean ± s.e.m. Letter indicates significant difference among the castes for the a given life-history stage with $p < 0.05$ (e.g. levels of PI_n16:0_18:1 are similar between workers and queens at Early larva stage). Asterisk indicates significant change from previous life-history stages within the same caste (i.e. level of PI_n 16:0_18:1 increases from Early larva to Late larva stage, in workers) with * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Numbers of replicates per group are provided in Table 3.

Table S5 – Main molecular phospholipids characterised in phosphatidylcholine (PC) and phosphatidylethanolamine (PE) of bee extract. Phospholipids in this table contain at least one polyunsaturated fatty acid (PUFA).

		Workers	Queens	Drones			Workers	Queens	Drones
PC 16:0_18:3	Early larva	0.04 ± 0.005	ND	0.03 ± 0.01	PE 16:0_18:3	Early larva	ND	ND	ND
	Late larva	0.06 ± 0.005	0.02 ± 0.002	0.03 ± 0.01		Late larva	ND	ND	ND
	Pupa	0.05 ± 0.004	0.01 ± 0.001	0.06 ± 0.01		Pupa	ND	ND	0.01 ± 0.001 ^b
	Emergent adult	0.06 ± 0.003	0.02 ± 0.004	0.04 ± 0.004		Emergent adult	ND	0.002 ± 0.001 ^a	0.004 ± 0.0004 ^{ab***}
	Young adult	0.2 ± 0.02 ^{***}	0.1 ± 0.01 [*]	0.09 ± 0.02		Young adult	ND	0.01 ± 0.001 ^{a***}	0.01 ± 0.001 ^b
	Old adult	0.4 ± 0.033 ^{a***}	0.1 ± 0.004 ^b	ND		Old adult	ND	0.02 ± 0.002 ^{a***}	0.01 ± 0.001 ^b
PC 18:0_18:3	Early larva	ND	ND	ND	PE 18:0_18:3	Early larva	ND	0.02 ± 0.001	0.03 ± 0.002
	Late larva	ND	0.01 ± 0.001	ND		Late larva	ND	0.02 ± 0.002	0.02 ± 0.002
	Pupa	0.02 ± 0.001	0.01 ± 0.001	0.02 ± 0.004		Pupa	ND	0.02 ± 0.002	0.03 ± 0.005
	Emergent adult	0.04 ± 0.001	0.01 ± 0.003	0.02 ± 0.003		Emergent adult	0.1 ± 0.003	0.02 ± 0.005	0.05 ± 0.005
	Young adult	0.08 ± 0.005 ^a	0.05 ± 0.004 ^a	0.4 ± 0.04 ^{a***}		Young adult	0.2 ± 0.01 [*]	0.10 ± 0.01 ^{***}	0.09 ± 0.01
	Old adult	0.35 ± 0.04 ^{a***}	0.06 ± 0.005 ^b	0.3 ± 0.02 ^a		Old adult	0.5 ± 0.04 ^{a***}	0.12 ± 0.01 ^b	0.08 ± 0.005 ^b
PC 18:1_18:2	Early larva	0.05 ± 0.01	0.06 ± 0.02	0.05 ± 0.002	PE 18:1_18:2	Early larva	0.20 ± 0.02 ^a	0.03 ± 0.001 ^b	0.02 ± 0.001 ^b
	Late larva	0.14 ± 0.01	0.02 ± 0.003	0.05 ± 0.01		Late larva	0.07 ± 0.01 ^a	0.003 ± 0.001 ^b	0.02 ± 0.001 ^b
	Pupa	0.10 ± 0.004	0.03 ± 0.004	0.16 ± 0.03		Pupa	0.07 ± 0.003 ^a	0.01 ± 0.001 ^b	0.03 ± 0.004 ^b
	Emergent adult	0.12 ± 0.01 ^a	0.05 ± 0.01 ^a	0.40 ± 0.05 ^{b***}		Emergent adult	0.04 ± 0.004 ^a	0.01 ± 0.003 ^a	0.07 ± 0.01 ^b
	Young adult	0.41 ± 0.02 ^{a***}	0.20 ± 0.01 ^{b*}	0.03 ± 0.003 ^{c***}		Young adult	0.16 ± 0.01 ^{a***}	0.07 ± 0.01 ^{b***}	0.10 ± 0.01 ^b
	Old adult	0.94 ± 0.06 ^{a***}	0.22 ± 0.02 ^b	0.04 ± 0.003 ^c		Old adult	0.25 ± 0.01 ^{a***}	0.08 ± 0.01 ^b	0.10 ± 0.01 ^b
PC 18:1_18:3	Early larva	0.11 ± 0.01	0.07 ± 0.002	0.16 ± 0.01	PC 18:1_18:3	Early larva	ND	0.04 ± 0.004	0.06 ± 0.002
	Late larva	0.21 ± 0.02	0.07 ± 0.01	0.13 ± 0.01		Late larva	ND	0.02 ± 0.002 ^a	0.05 ± 0.002 ^b
	Pupa	0.14 ± 0.01	0.04 ± 0.01	0.23 ± 0.1		Pupa	ND	0.01 ± 0.002	0.04 ± 0.01
	Emergent adult	0.19 ± 0.01	0.07 ± 0.01	0.14 ± 0.01		Emergent adult	0.07 ± 0.003 ^a	0.01 ± 0.004 ^b	0.04 ± 0.003 ^b
	Young adult	0.74 ± 0.04 ^{a***}	0.42 ± 0.04 ^{b***}	0.33 ± 0.04 ^b		Young adult	0.26 ± 0.01 ^{a***}	0.14 ± 0.02 ^{b***}	0.12 ± 0.01 ^b
	Old adult	1.58 ± 0.12 ^{a***}	0.55 ± 0.06 ^b	0.25 ± 0.02 ^c		Old adult	0.45 ± 0.03 ^{a***}	0.19 ± 0.03 ^b	0.11 ± 0.01 ^c

Data are expressed in nmol·mg and as mean ± s.e.m.. Letter indicates significant difference among the castes for the a given life-history stage with $p < 0.05$ (e.g. levels of PC 16:0_18:3 differ between workers and queens at Old adult stage). Asterisk indicates significant change from previous life-history stages within the same caste (i.e. level of PC 16:0_18:3 increases from Emergent adult to Young adult stage, in workers) with * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Numbers of replicates per group are provided in Table 3.

Table S6 – Main molecular phospholipids characterised in phosphatidylinositol (PI_n) and phosphatidylserine (PS) of bee extract. Phospholipids in this table contain at least one polyunsaturated fatty acid (PUFA).

		Workers	Queens	Drones			Workers	Queens	Drones
PI _n 16:0_18:3	Early larva	0.04 ± 0.1	ND	0.03 ± 0.002	PS 16:0_18:3	Early larva	ND	ND	ND
	Late larva	0.0005 ± 0.0001	0.06 ± 0.01	0.02 ± 0.004		Late larva	ND	ND	ND
	Pupa	0.0003 ± 0.0001 ^a	0.05 ± 0.004 ^a	0.12 ± 0.03 ^{b***}		Pupa	ND	ND	ND
	Emergent adult	0.02 ± 0.002 ^a	0.02 ± 0.003 ^b	0.10 ± 0.01 ^b		Emergent adult	ND	ND	ND
	Young adult	0.02 ± 0.002 ^a	0.2 ± 0.03 ^{b***}	0.02 ± 0.003 ^{a***}		Young adult	ND	ND	ND
	Old adult	0.03 ± 0.005 ^a	0.11 ± 0.02 ^{b*}	0.02 ± 0.002 ^a		Old adult	ND	ND	ND
PI _n 18:0_18:3	Early larva	0.06 ± 0.01	ND	0.1 ± 0.01	PS 18:0_18:3	Early larva	ND	ND	ND
	Late larva	0.001 ± 0.0002	0.15 ± 0.02	0.06 ± 0.01		Late larva	0.01 ± 0.002	0.004 ± 0.000	ND
	Pupa	0.001 ± 0.0002	0.11 ± 0.01	0.40 ± 0.1 ^{***}		Pupa	0.02 ± 0.002	0.007 ± 0.001	0.01 ± 0.004
	Emergent adult	0.20 ± 0.02 ^{a***}	0.10 ± 0.01 ^a	0.60 ± 0.04 ^b		Emergent adult	0.03 ± 0.001	0.005 ± 0.002	0.01 ± 0.000
	Young adult	0.09 ± 0.01 ^a	0.96 ± 0.2 ^{b***}	0.11 ± 0.01 ^{a***}		Young adult	0.04 ± 0.003	0.03 ± 0.003	0.04 ± 0.003
	Old adult	0.30 ± 0.04 ^{a***}	0.65 ± 0.1 ^{b***}	0.10 ± 0.01 ^c		Old adult	0.11 ± 0.01 ^{a***}	0.04 ± 0.003 ^b	0.04 ± 0.002 ^b
PI _n 18:1_18:2	Early larva	ND	ND	ND	PS 18:1_18:2	Early larva	ND	ND	ND
	Late larva	ND	0.01 ± 0.001	ND		Late larva	ND	ND	ND
	Pupa	ND	0.03 ± 0.003	0.05 ± 0.02		Pupa	ND	0.001 ± 0.000	0.15 ± 0.04 ^{***}
	Emergent adult	ND	0.003 ± 0.003	0.09 ± 0.01		Emergent adult	0.01 ± 0.001 ^a	0.004 ± 0.001 ^a	0.17 ± 0.005 ^b
	Young adult	ND	0.05 ± 0.01	0.03 ± 0.003		Young adult	0.01 ± 0.002	0.01 ± 0.001	0.01 ± 0.001 ^{***}
	Old adult	ND	0.04 ± 0.01	0.03 ± 0.003		Old adult	0.02 ± 0.001	0.01 ± 0.000	0.01 ± 0.001
PI _n 18:1_18:3	Early larva	ND	ND	0.03 ± 0.003	PS 18:1_18:3	Early larva	ND	ND	ND
	Late larva	0.004 ± 0.001	0.05 ± 0.01	0.02 ± 0.003		Late larva	0.004 ± 0.001	0.003 ± 0.001	ND
	Pupa	0.01 ± 0.001 ^a	0.05 ± 0.005 ^a	0.13 ± 0.03 ^{b***}		Pupa	0.01 ± 0.001	0.004 ± 0.001	0.01 ± 0.003
	Emergent adult	0.02 ± 0.0004 ^a	0.04 ± 0.003 ^a	0.16 ± 0.01 ^b		Emergent adult	0.02 ± 0.001	0.01 ± 0.001	0.01 ± 0.000
	Young adult	0.02 ± 0.001 ^a	0.20 ± 0.03 ^{b***}	0.03 ± 0.003 ^{a***}		Young adult	0.02 ± 0.001	0.01 ± 0.001	0.02 ± 0.001
	Old adult	0.04 ± 0.002 ^a	0.16 ± 0.03 ^b	0.04 ± 0.005 ^a		Old adult	0.04 ± 0.002 ^{a***}	0.02 ± 0.003 ^b	0.02 ± 0.001 ^b

Data are expressed in nmol mg and as mean ± s.e.m. Letter indicates significant difference among the castes for the a given life-history stage with $p < 0.05$ (e.g. levels of PI_n 16:0_18:3 in workers and queens are different to drones at Pupa stage). Asterisk indicates significant change from previous life-history stages within the same caste (i.e. level of PI_n 16:0_18:3 increases from Emergent adult to Young adult stage, in queens) with * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Numbers of replicates per group are provided in Table 3.