

Supplemental Table 1 – Krishnan et al.

**A. F2 Adult USVs and F2 Maternal Care Correlations**

<b>Maternal VEH</b>		<b>F2 Adult USV</b>						
		Total Calls	FM Calls	Flat Calls	Mean Frequency	Duration	Power	Bandwidth
<b>F2 Maternal Care</b>	Time on Nest	0.48	0.55	0.19	0.09	0.13	0.25	0.07
	Time LG Pups	0.00	-0.13	0.24	-0.17	0.08	-0.10	-0.18
	Total Time Nursing	0.50	0.55	0.24	0.08	0.07	0.19	0.03
	Time Active Nursing	0.50	0.41	0.51	0.05	-0.36	-0.13	-0.20
	Time Passive Nursing	0.39	0.52	0.01	0.08	0.33	0.36	0.17

<b>Maternal PCB</b>		<b>F2 Adult USV</b>						
		Total Calls	FM Calls	Flat Calls	Mean Frequency	Duration	Power	Bandwidth
<b>F2 Maternal Care</b>	Time on Nest	-0.28	-0.28	-0.23	-0.03	-0.30	-0.05	-0.38
	Time LG Pups	0.15	0.13	0.19	0.04	-0.14	-0.15	-0.28
	Total Time Nursing	-0.34	-0.35	-0.27	-0.14	-0.30	-0.12	-0.51
	Time Active Nursing	-0.04	-0.11	0.18	0.03	-0.26	-0.29	-0.17
	Time Passive Nursing	-0.33	-0.31	-0.34	-0.04	-0.32	-0.06	-0.54

<b>Maternal VIN</b>		<b>F2 Adult USV</b>						
		Total Calls	FM Calls	Flat Calls	Mean Frequency	Duration	Power	Bandwidth
<b>F2 Maternal Care</b>	Time on Nest	0.28	0.15	0.47	0.11	0.21	0.36	-0.50
	Time LG Pups	0.12	0.19	-0.03	-0.24	0.07	0.35	-0.04
	Total Time Nursing	-0.21	-0.21	-0.22	0.21	-0.07	0.14	-0.32
	Time Active Nursing	-0.03	-0.04	0.00	-0.33	0.04	0.03	-0.88
	Time Passive Nursing	-0.18	-0.21	-0.11	0.34	-0.08	0.15	-0.09

<b>Paternal VEH</b>		<b>F2 Adult USV</b>						
		Total Calls	FM Calls	Flat Calls	Mean Frequency	Duration	Power	Bandwidth
<b>F2 Maternal Care</b>	Time on Nest	0.41	0.43	0.25	0.31	-0.49	0.05	0.73
	Time LG Pups	-0.12	-0.24	0.12	-0.19	-0.06	-0.26	-0.14
	Total Time Nursing	0.51	0.46	0.50	0.10	-0.40	-0.37	-0.01
	Time Active Nursing	0.08	0.00	0.22	-0.39	-0.30	-0.63	-0.40
	Time Passive Nursing	0.56	0.57	0.40	0.52	-0.22	0.16	0.38

<b>Paternal PCB</b>		<b>F2 Adult USV</b>						
		Total Calls	FM Calls	Flat Calls	Mean Frequency	Duration	Power	Bandwidth
<b>F2 Maternal Care</b>	Time on Nest	-0.09	-0.01	-0.21	0.37	-0.05	-0.09	0.32
	Time LG Pups	-0.42	-0.40	-0.37	-0.19	-0.81	-0.17	0.64
	Total Time Nursing	-0.03	0.04	-0.14	0.37	0.01	-0.07	0.33
	Time Active Nursing	0.30	0.34	0.16	0.15	0.57	0.11	-0.32
	Time Passive Nursing	-0.23	-0.17	-0.30	0.39	-0.37	-0.17	0.65

<b>Paternal VIN</b>		<b>F2 Adult USV</b>						
		Total Calls	FM Calls	Flat Calls	Mean Frequency	Duration	Power	Bandwidth
<b>F2 Maternal Care</b>	Time on Nest	0.40	0.50	0.01	0.38	0.47	0.76	0.05
	Time LG Pups	0.15	0.07	0.31	0.04	0.36	0.14	-0.11
	Total Time Nursing	0.49	0.56	0.12	0.44	0.46	0.71	0.04
	Time Active Nursing	-0.31	-0.39	0.02	0.04	0.20	0.29	-0.19
	Time Passive Nursing	0.39	0.49	-0.03	0.34	0.38	0.59	0.09

\*,  $p < 0.001$  ( $\alpha_{\text{altered}} = 0.05/35$ )

## B. F2 Adult & F3 Pup USVs Correlation

Maternal VEH		F2 Adult USV					
		Total Calls	FM Calls	Flat Calls	Mean Frequency	Duration	Power
F3 Pup USV	Totalcalls	-0.03	-0.14	0.19	-0.36	-0.21	-0.35
	FM Calls	-0.11	-0.21	0.11	-0.18	-0.44	-0.30
	Flat Calls	0.08	-0.03	0.25	-0.53	0.13	-0.35
	Mean Frequency	0.10	-0.10	0.43	-0.21	-0.27	-0.30
	Duration	-0.42	-0.63	0.10	-0.33	-0.91	-0.71
	Power	-0.23	-0.35	0.06	-0.60	-0.57	-0.67

Maternal PCB		F2 Adult USV					
		Total Calls	FM Calls	Flat Calls	Mean Frequency	Duration	Power
F3 Pup USV	Totalcalls	-0.41	-0.39	-0.41	-0.76	-0.40	-0.43
	FM Calls	-0.39	-0.36	-0.42	-0.76	-0.37	-0.36
	Flat Calls	-0.41	-0.40	-0.38	-0.73	-0.41	-0.47
	Mean Frequency	0.32	0.35	0.19	-0.20	0.55	0.44
	Duration	-0.68	-0.61	-0.82	-0.61	-0.86	-0.74
	Power	-0.35	-0.36	-0.28	0.00	-0.45	-0.47

Maternal VIN		F2 Adult USV					
		Total Calls	FM Calls	Flat Calls	Mean Frequency	Duration	Power
F3 Pup USV	Totalcalls	-0.69	-0.61	-0.72	-0.58	-0.66	-0.72
	FM Calls	-0.24	-0.15	-0.34	-0.49	-0.30	-0.29
	Flat Calls	-0.70	-0.69	-0.61	-0.24	-0.59	-0.70
	Mean Frequency	0.29	0.36	0.12	-0.01	0.21	0.49
	Duration	-0.17	-0.23	-0.04	0.12	-0.08	-0.15
	Power	0.30	0.21	0.39	-0.79	0.10	0.00

Paternal VEH		F2 Adult USV					
		Total Calls	FM Calls	Flat Calls	Mean Frequency	Duration	Power
F3 Pup USV	Totalcalls	-0.52	-0.41	-0.59	0.59	-0.03	0.00
	FM Calls	-0.42	-0.32	-0.51	0.14	0.37	0.03
	Flat Calls	-0.45	-0.37	-0.48	0.77	-0.33	-0.02
	Mean Frequency	-0.28	-0.38	-0.01	0.04	-0.08	-0.15
	Duration	0.21	0.27	0.03	-0.10	0.54	0.15
	Power	-0.38	-0.33	-0.38	0.14	0.19	-0.14

Paternal PCB		F2 Adult USV					
		Total Calls	FM Calls	Flat Calls	Mean Frequency	Duration	Power
F3 Pup USV	Totalcalls	-0.23	-0.21	-0.22	-0.86	0.10	0.61
	FM Calls	-0.05	0.06	-0.21	-0.45	0.32	0.74
	Flat Calls	-0.28	-0.30	-0.17	-0.88	-0.04	0.39
	Mean Frequency	-0.10	-0.23	0.14	0.58	-0.37	-0.78
	Duration	-0.55	-0.44	-0.62	-0.66	-0.25	0.48
	Power	0.03	0.07	-0.05	-0.61	0.28	0.68

Paternal VIN		F2 Adult USV					
		Total Calls	FM Calls	Flat Calls	Mean Frequency	Duration	Power
F3 Pup USV	Totalcalls	-0.08	-0.05	-0.12	-0.12	-0.17	-0.06
	FM Calls	-0.16	-0.14	-0.15	-0.11	-0.19	-0.08
	Flat Calls	0.06	0.09	-0.04	-0.08	-0.08	0.00
	Mean Frequency	-0.03	0.01	-0.13	-0.04	-0.15	-0.15
	Duration	-0.17	-0.15	-0.19	-0.02	-0.08	-0.08
	Power	-0.07	-0.03	-0.14	-0.03	0.09	0.05

\*,  $p < 0.001$  ( $\alpha_{\text{altered}} = 0.05/36$ )

**C. F2 Maternal Care and F3 Pup USVs by Day**

<b>P3 Maternal VEH</b>		<b>F2 Maternal Care</b>				
		Time on Nest	Time LG Pups	Total Time Nursing	Time Active Nursing	Time Passive Nursing
<b>F3 Pup USVs</b>	Total Calls	-0.70	-0.05	-0.56	-0.91	-0.37
	FM Calls	-0.68	-0.10	-0.37	-0.81	-0.19
	Flat Calls	-0.59	-0.02	-0.56	-0.81	-0.40
	Power	-0.06	0.52	0.17	-0.49	0.32
	Mean Frequency	-0.57	-0.06	-0.31	-0.51	-0.20
	Duration	-0.10	0.56	0.00	0.08	-0.03

  

<b>P3 Maternal PCB</b>		<b>F2 Maternal Care</b>				
		Time on Nest	Time LG Pups	Total Time Nursing	Time Active Nursing	Time Passive Nursing
<b>F3 Pup USVs</b>	Total Calls	0.23	0.25	0.08	0.13	0.24
	FM Calls	-0.05	0.04	0.07	0.02	-0.01
	Flat Calls	0.29	0.29	0.08	0.17	0.30
	Power	0.16	0.08	-0.82	-0.34	0.01
	Mean Frequency	-0.46	-0.66	0.15	0.41	-0.42
	Duration	0.50	0.17	-0.30	0.03	0.48

  

<b>P3 Maternal VIN</b>		<b>F2 Maternal Care</b>				
		Time on Nest	Time LG Pups	Total Time Nursing	Time Active Nursing	Time Passive Nursing
<b>F3 Pup USVs</b>	Total Calls	-0.74	-0.25	-0.77	-0.15	-0.53
	FM Calls	-0.62	-0.33	-0.57	-0.52	-0.35
	Flat Calls	-0.72	-0.20	-0.78	0.00	-0.57
	Power	-0.09	-0.77	-0.56	-0.13	-0.23
	Mean Frequency	0.41	-0.12	0.48	-0.19	0.21
	Duration	-0.03	-0.87	-0.08	-0.24	0.45

  

<b>P3 Paternal VEH</b>		<b>F2 Maternal Care</b>				
		Time on Nest	Time LG Pups	Total Time Nursing	Time Active Nursing	Time Passive Nursing
<b>F3 Pup USVs</b>	Total Calls	-0.01	-0.29	-0.16	-0.05	0.40
	FM Calls	-0.10	-0.16	-0.48	-0.02	0.21
	Flat Calls	0.00	-0.31	-0.09	-0.05	0.43
	Power	0.39	0.17	0.40	0.87	0.24
	Mean Frequency	0.29	0.02	0.44	0.03	-0.24
	Duration	-0.17	0.13	-0.47	-0.25	0.53

  

<b>P3 Paternal A1221</b>		<b>F2 Maternal Care</b>				
		Time on Nest	Time LG Pups	Total Time Nursing	Time Active Nursing	Time Passive Nursing
<b>F3 Pup USVs</b>	Total Calls	-0.35	0.65	-0.38	-0.39	-0.04
	FM Calls	-0.47	0.48	-0.03	-0.25	-0.21
	Flat Calls	-0.25	0.68	-0.53	-0.43	0.06
	Power	-0.75	-0.03	-0.43	-0.01	-0.70
	Mean Frequency	-0.47	-0.29	0.13	-0.12	-0.57
	Duration	-0.23	0.58	-0.28	-0.20	-0.03

  

<b>P3 Paternal VIN</b>		<b>F2 Maternal Care</b>				
		Time on Nest	Time LG Pups	Total Time Nursing	Time Active Nursing	Time Passive Nursing
<b>F3 Pup USVs</b>	Total Calls	-0.39	-0.11	-0.56	-0.23	0.34
	FM Calls	-0.46	-0.03	-0.58	-0.37	0.33
	Flat Calls	-0.35	-0.13	-0.54	-0.17	0.33
	Power	-0.91	-0.03	-0.84	-0.31	0.07
	Mean Frequency	0.00	-0.18	-0.07	0.04	-0.26
	Duration	0.17	-0.30	0.11	-0.19	0.39

  

<b>P6 Maternal VEH</b>		<b>F2 Maternal Care</b>				
		Time on Nest	Time LG Pups	Total Time Nursing	Time Active Nursing	Time Passive Nursing
	Total Calls	-0.48	-0.02	-0.53	-0.44	-0.15

<b>F3 Pup USVs</b>	FM Calls	-0.41	-0.04	-0.46	-0.36	-0.08
	Flat Calls	-0.57	0.00	-0.61	-0.55	-0.27
	Power	0.27	-0.21	0.24	0.02	-0.10
	Mean Frequency	-0.31	-0.49	-0.36	-0.05	0.42
	Duration	-0.04	0.48	-0.04	0.16	0.76

<b>P6 Maternal PCB</b>		<b>F2 Maternal Care</b>				
		Time on Nest	Time LG Pups	Total Time Nursing	Time Active Nursing	Time Passive Nursing
<b>F3 Pup USVs</b>	Total Calls	0.27	-0.32	0.28	0.18	0.18
	FM Calls	0.29	-0.25	0.30	0.13	0.31
	Flat Calls	0.23	-0.38	0.24	0.24	0.00
	Power	0.20	0.11	0.23	0.07	0.60
	Mean Frequency	-0.10	0.52	-0.10	-0.53	0.41
	Duration	-0.07	-0.15	-0.07	-0.31	0.04

<b>P6 Maternal VIN</b>		<b>F2 Maternal Care</b>				
		Time on Nest	Time LG Pups	Total Time Nursing	Time Active Nursing	Time Passive Nursing
<b>F3 Pup USVs</b>	Total Calls	-0.49	0.44	-0.54	-0.02	-0.07
	FM Calls	-0.54	0.51	-0.62	0.03	-0.02
	Flat Calls	-0.41	0.35	-0.41	-0.06	-0.10
	Power	-0.48	0.65	-0.70	0.30	-0.02
	Mean Frequency	0.31	0.35	0.15	0.19	0.52
	Duration	-0.30	-0.40	-0.14	0.44	-0.43

<b>P6 Paternal VEH</b>		<b>F2 Maternal Care</b>				
		Time on Nest	Time LG Pups	Total Time Nursing	Time Active Nursing	Time Passive Nursing
<b>F3 Pup USVs</b>	Total Calls	-0.03	0.02	0.08	0.03	0.08
	FM Calls	0.05	-0.32	0.15	-0.07	0.25
	Flat Calls	-0.10	0.27	0.02	0.11	-0.06
	Power	0.09	-0.09	0.72	0.22	0.77
	Mean Frequency	-0.26	0.23	-0.48	-0.41	-0.30
	Duration	0.19	-0.33	0.54	0.61	0.22

<b>P6 Paternal PCB</b>		<b>F2 Maternal Care</b>				
		Time on Nest	Time LG Pups	Total Time Nursing	Time Active Nursing	Time Passive Nursing
<b>F3 Pup USVs</b>	Total Calls	-0.17	-0.58	-0.11	0.21	-0.36
	FM Calls	0.28	-0.56	0.31	0.35	0.15
	Flat Calls	-0.14	-0.28	-0.08	0.24	-0.35
	Power	0.65	0.29	0.69	0.58	0.54
	Mean Frequency	-0.33	-0.24	-0.31	-0.12	-0.37
	Duration	0.60	-0.02	0.61	0.37	0.61

<b>P6 Paternal VIN</b>		<b>F2 Maternal Care</b>				
		Time on Nest	Time LG Pups	Total Time Nursing	Time Active Nursing	Time Passive Nursing
<b>F3 Pup USVs</b>	Total Calls	-0.11	0.10	-0.26	0.37	-0.40
	FM Calls	-0.26	0.17	-0.38	0.33	-0.55
	Flat Calls	0.14	0.12	0.01	0.46	-0.16
	Power	-0.07	-0.12	-0.18	0.33	-0.46
	Mean Frequency	-0.55	-0.36	-0.53	0.02	-0.45
	Duration	0.00	0.26	-0.04	0.33	-0.19

\*,  $p < 0.001$  ( $\alpha_{\text{altered}} = 0.05/30$ )

### D. F2 Maternal Care and F3 Anxiety-like Behavior Correlations

Maternal VEH		F2 Maternal Care				
		Total Time Nursing	Time On Nest	Time LG Pups	Time Active Nursing	Time Passive Nursing
<b>F3 Open Field</b>	# Line Crossings	0.16	0.24	-0.17	-0.08	0.26
	Mean Speed	0.01	0.10	-0.11	-0.18	0.10
	Time Immobile	-0.05	-0.12	0.22	0.12	-0.12
	Time Spent in Corners	-0.07	-0.22	-0.11	0.10	-0.14
	Time Spent Inside	-0.03	0.08	-0.23	-0.29	0.11
<b>F3 Light:Dark Box</b>	# Line Crossings	-0.08	-0.10	-0.18	-0.45	0.11
	Mean Speed	-0.30	-0.31	-0.16	-0.66	-0.07
	Time Immobile	0.20	0.14	0.27	0.24	0.14
	Distance Traveled	-0.30	-0.31	-0.16	-0.65	-0.07
	Time Spent in Light Box	-0.37	-0.33	-0.30	0.26	-0.62

Maternal PCB		F2 Maternal Care				
		Total Time Nursing	Time On Nest	Time LG Pups	Time Active Nursing	Time Passive Nursing
<b>F3 Open Field</b>	# Line Crossings	-0.60	-0.58	-0.58	-0.06	-0.56
	Mean Speed	-0.62	-0.54	-0.54	0.02	-0.66
	Time Immobile	0.62	0.65	0.38	0.07	0.57
	Time Spent in Corners	0.46	0.51	0.53	0.58	-0.01
	Time Spent Inside	-0.66	-0.66	-0.52	-0.39	-0.35
<b>F3 Light:Dark Box</b>	# Line Crossings	-0.50	-0.52	-0.65	-0.45	-0.15
	Mean Speed	-0.04	-0.06	-0.35	-0.01	-0.03
	Time Immobile	0.901*	0.9208*	0.35	0.35	0.64
	Distance Traveled	-0.04	-0.06	-0.35	-0.01	-0.03
	Time Spent in Light Box	-0.46	-0.46	-0.08	-0.36	-0.18

Maternal VIN		F2 Maternal Care				
		Total Time Nursing	Time On Nest	Time LG Pups	Time Active Nursing	Time Passive Nursing
<b>F3 Open Field</b>	# Line Crossings	0.25	0.30	-0.02	0.11	0.20
	Mean Speed	0.29	0.34	-0.01	0.07	0.30
	Time Immobile	-0.18	-0.18	0.20	-0.04	-0.18
	Time Spent in Corners	0.14	0.09	-0.23	-0.11	0.30
	Time Spent Inside	-0.11	-0.10	-0.13	0.12	-0.28
<b>F3 Light:Dark Box</b>	# Line Crossings	0.08	0.16	-0.45	-0.23	0.35
	Mean Speed	0.24	0.28	-0.56	-0.09	0.41
	Time Immobile	-0.08	-0.13	-0.18	-0.32	0.24
	Distance Traveled	0.25	0.29	-0.56	-0.09	0.41
	Time Spent in Light Box	-0.05	-0.02	0.26	0.15	-0.24

Paternal VEH		F2 Maternal Care				
		Total Time Nursing	Time On Nest	Time LG Pups	Time Active Nursing	Time Passive Nursing
<b>F3 Open Field</b>	# Line Crossings	-0.14	-0.05	-0.48	-0.68	0.44
	Mean Speed	-0.12	-0.08	-0.38	-0.69	0.49
	Time Immobile	0.36	0.30	0.52	0.73	-0.23
	Time Spent in Corners	-0.08	-0.06	0.23	0.18	-0.26
	Time Spent Inside	0.45	0.40	-0.42	-0.09	0.63
<b>F3 Light:Dark Box</b>	# Line Crossings	-0.44	-0.25	0.46	-0.34	-0.22
	Mean Speed	-0.08	0.11	0.05	-0.30	0.17
	Time Immobile	-0.15	-0.24	0.51	0.29	-0.45

	Distance Traveled	-0.08	0.10	0.06	-0.30	0.17
	Time Spent in Light Box	-0.35	-0.16	-0.27	-0.23	-0.21

<b>Paternal PCB</b>		<b>F2 Maternal Care</b>				
		Total Time Nursing	Time On Nest	Time LG Pups	Time Active Nursing	Time Passive Nursing
<b>F3 Open Field</b>	# Line Crossings	-0.35	-0.23	-0.05	-0.46	0.14
	Mean Speed	-0.49	-0.36	-0.02	-0.53	0.06
	Time Immobile	-0.29	-0.26	0.17	-0.13	-0.20
	Time Spent in Corners	-0.51	-0.39	0.09	-0.18	-0.38
	Time Spent Inside	0.12	-0.04	-0.14	0.16	-0.05
<b>F3 Light:Dark Box</b>	# Line Crossings	0.14	0.02	0.06	-0.22	0.44
	Mean Speed	-0.34	-0.32	-0.38	-0.26	-0.10
	Time Immobile	-0.26	-0.51	-0.02	0.15	-0.50
	Distance Traveled	-0.33	-0.31	-0.39	-0.25	-0.10
	Time Spent in Light Box	0.12	0.20	-0.21	0.28	-0.19

<b>Paternal VIN</b>		<b>F2 Maternal Care</b>				
		Total Time Nursing	Time On Nest	Time LG Pups	Time Active Nursing	Time Passive Nursing
<b>F3 Open Field</b>	# Line Crossings	-0.45	-0.43	-0.23	-0.16	-0.44
	Mean Speed	-0.69	-0.65	-0.25	-0.51	-0.36
	Time Immobile	0.50	0.48	0.19	0.26	0.40
	Time Spent in Corners	-0.02	0.03	0.17	-0.41	0.47
	Time Spent Inside	0.11	0.07	0.02	0.32	-0.24
<b>F3 Light:Dark Box</b>	# Line Crossings	0.11	0.20	0.47	0.30	-0.22
	Mean Speed	-0.13	0.05	0.53	-0.22	0.08
	Time Immobile	0.33	0.23	-0.08	0.08	0.37
	Distance Traveled	-0.14	0.05	0.53	-0.22	0.07
	Time Spent in Light Box	-0.28	-0.29	-0.13	-0.01	-0.40

\*,  $p < 0.001$  ( $\alpha_{\text{altered}} = 0.05/50$ )

### E. F2 and F3 Serum Hormone Level Correlations by Sex

#### F3 Females

Maternal VEH		F2	
		CORT	E2
F3	CORT	-0.25	0.21
	E2	-0.49	0.50

Maternal PCB		F2	
		CORT	E2
F3	CORT	0.24	-0.21
	E2	-0.08	0.34

Maternal VIN		F2	
		CORT	E2
F3	CORT	-0.07	0.38
	E2	0.40	-0.49

Paternal VEH		F2	
		CORT	E2
F3	CORT	0.26	0.03
	E2	0.21	-0.841*

Paternal PCB		F2	
		CORT	E2
F3	CORT	0.25	-0.19
	E2	-0.04	-0.68

Paternal VIN		F2	
		CORT	E2
F3	CORT	0.62	-0.38
	E2	0.04	-0.06

#### F3 Males

Maternal VEH		F2	
		CORT	E2
F3	CORT	0.31	0.07
	E2	0.36	0.50

Maternal PCB		F2	
		CORT	E2
F3	CORT	0.10	0.41
	E2	-0.45	-0.28

Maternal VIN		F2	
		CORT	E2
F3	CORT	0.49	0.38
	E2	0.04	0.05

Paternal VEH		F2	
		CORT	E2
F3	CORT	0.20	-0.45
	E2	-0.31	0.04

Paternal PCB		F2	
		CORT	E2
F3	CORT	-0.29	0.17
	E2	-0.66	0.54

Paternal VIN		F2	
		CORT	E2
F3	CORT	0.07	0.11
	E2	0.30	-0.43

\*,  $p < 0.012$  ( $\alpha_{\text{altered}} = 0.05/4$ )