

Supplementary material

The endocrine control of reproductive suppression in an aseasonally breeding social mole-rat, the Mahali mole-rat (*Cryptomys hottentotus mahali*)

D.W. Hart^{1*}, A. K. Janse van Vuuren^{1*}, A. Erasmus¹, T. Süess¹, , N. Hagenah², A. Ganswindt², N. C. Bennett^{1,2}

¹Department of Zoology and Entomology, University of Pretoria, Private Bag X20, Hatfield 0028, South Africa

² Mammal Research Institute, University of Pretoria, Private Bag X20, Hatfield 0028, South Africa*

Equal contributions

●Corresponding author:

Dr Daniel W. Hart

Email: u10022725@tuks.co.za

Table S1. Comparison of general linear models tested to explain body mass (g) as a function of season and reproductive status in Mahali mole-rats (*Cryptomys hottentotus mahali*). Best model fits are ranked by AICc, while model weights are estimates across all models and add up to 1.

<i>Model</i>	<i>Df</i>	<i>AICc</i>	<i>Delta AICc</i>	<i>Model weight</i>	<i>logLik</i>
Reproductive status + Season	6	2031.8	0.00	0.874	-1009.703
Reproductive status * Season	9	2035.7	3.93	0.123	-1008.428
Reproductive status	5	2043.0	11.17	0.003	-1016.346
Season	3	2152.3	120.46	0.000	-1073.079
Null	2	2159.8	127.99	0.000	-1077.870

Table S2. Comparison of general linear models tested to explain variation in faecal glucocorticoid metabolite (fGCM, $\mu\text{g/g}$) concentrations as a function of season and reproductive status in Mahali mole-rats (*C. b. mahali*). Best model fits are ranked by AICc, while model weights are estimates across all models and add up to 1.

<i>Model</i>	<i>df</i>	<i>AICc</i>	<i>Delta AICc</i>	<i>Model weight</i>	<i>logLik</i>
Reproductive status	5	74.6	0.00	0.598	-32.108
Reproductive status + Season	6	76.7	2.14	0.205	-32.107
Null	2	77.7	3.18	0.122	-36.836
Season	3	79.7	5.17	0.045	-36.796
Reproductive status * Season	9	80.5	5.97	0.030	-30.735

Table S3. Comparison of generalised linear models tested to explain plasma testosterone concentrations (ng/dl) as a function of season and reproductive status in Mahali mole-rats (*C. b. mahali*). Best model fits are ranked by AICc, while model weights are estimates across all models and add up to 1.

<i>Model</i>	<i>df</i>	<i>AICc</i>	<i>Delta AICc</i>	<i>Model weight</i>	<i>logLik</i>
Reproductive status	5	1647.7	0.00	0.539	-818.719
Reproductive status+ Season	6	1648.7	0.95	0.335	-818.135
Reproductive status* Season	9	1650.6	2.92	0.125	-815.878
Season	3	1748.9	101.13	0.000	-871.371
Null	2	1755.9	108.15	0.000	-875.913

Table S4 Comparison of general linear models tested to explain plasma progesterone concentrations (ng/ml) as a function of season and reproductive status in Mahali mole-rat (*C. b. mahali*) females. Best model fits are ranked by AICc, while model weights are estimates across all models and add up to 1.

<i>Model</i>	<i>Df</i>	<i>AICc</i>	<i>Delta AICc</i>	<i>Model weight</i>	<i>logLik</i>
Reproductive status+ Season	4	226.4	0.00	0.747	-108.982
Reproductive status * Season	5	228.6	2.16	0.253	-108.942
Reproductive status	3	256.7	30.26	0.000	-125.210
Season	3	265.4	38.95	0.000	-129.553
Null	2	271.1	44.68	0.000	-133.490

Table S5. Comparison of general linear models tested to explain plasma prolactin concentrations (ng/ml) as a function of season and reproductive status in Mahali mole-rat (*C. b. mahali*) females. Best model fits are ranked by AICc, while model weights are estimates across all models and add up to 1.

<i>Model</i>	<i>Df</i>	<i>AICc</i>	<i>Delta AICc</i>	<i>Model weight</i>	<i>logLik</i>
Season	3	176.3	0.00	0.698	-84.935
Reproductive status + Season	4	178.5	2.27	0.225	-84.931
Reproductive status * Season	5	180.7	4.41	0.077	-84.828
Null	2	201.3	25.04	0.000	-98.556
Reproductive status	3	203.4	27.11	0.000	-98.491