Coder Initials	HLM	HLM	HLM	HLM	HLM	HLM	HLM	HLM	HLM	HLM	HLM	HLM	HLM	HLM	HLM	HLM
Date Started	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019
Date Completed	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019	4/03/2019
Study Identification																
Study ID	Ozkan 2019	Kisioglu 2018	Zhang 2018	Feng 2017	Gu 2018	He 2017	Toop 2017	Yuruk 2017	Wu 2016	Kendig 2015	Toop 2015	Kuang 2014	Wu 2014	Borcarsly 2012	Wu 2011
Author/s	Ozkan, H., Topsakal, S., Ozmen, O.	Kisioglu, K., Nerigiz-Ünal, R.	Zhang, P., Zhu, D., Zhang, Y., Li, L., Chen, X., Zhang, W., Shi, R., Tao, J., Han, B., Xu, Z.	Feng, X., Xuwen, Z., Zhang, W., Xiang, L., He, A., Liu, B., Shi, R., Wu, J., Zhu, D., Sun, M., Xu, Z.	Gu, X., He, A., Fan, X., Shi, R., Feng, X., Bo, L., Jiang, L., Li, H., Wu, J., Yang, Y., Gao, Q., Xu, Z.	He, A., Zhang, Y., Yang, Y., Li, H., Feng, X., Wei, B., Zhu, D., Liu, Y., Wu, L., Zhang, L., Xu, Z., Sun, M.	Toop, C.R., Muhlhausler, B.S., O'Dea, K., Gentili, S.	Yuruk, A.A., Nergiz-Ünal, R.	Wu, L., Shi, A., Zhu, D., Bo, L., Zhong, Y., Wang, J., Zu, Z., Mao, C.	Kendig, M.D., Ekayanti, W., Stewart, H., Boakes, R.A., Rooney, K.	Toop, C.R., Muhlhausler, B.S., O'Dea, K., Gentili, S.	Kuang, H., Sun, M., Lv, J., Li, J., Wu, C., Chen, N., Bo, L., Wei, X., Gu, X., Liu, Z., Mao, C., Xu, Z.	Wu, C., Li, J., Bo, L., Gao, Q., Zhu, Z., Li, D., Shigang, L., Sun, M., Mao, C., Xu, Z.	Borcarsly, M.E., Barson, J.R., Hauca, I.M., Hoebel, B.G., Leibowitz, S.F., Avena, N.M.	Wu, L., Mao, C., Liu, Y., Shi, A., Xu, F., Zhang, L., Xu, Z
Year of Publication	2019	2018	2018	2017	2017	2017	2017	2017	2016	2015	2015	2014	2014	2012	2011
Title of Publication	Investigation of the diabetic effects of maternal high-glucose on rats	Potential effect of maternal dietary sucrose or fructose syrup on CD36, leptin, and ghrelin-mediated fetal programming of obesity	Synergetic Effects of Prenatal and Postnatal High Sucrose Intake on Glucose Tolerance and Hepatic Insulin Resistance in Rat Offspring	Maternal high-sucrose diets altered vasacular large-conductance Ca^{2+}-activated K+ channels via reactive oxygen species in offspring rats	Regulation of cerebral arterial BKCa channels by angiotensin II signaling in adult offspring exposed to prenatal high sucrose diets	Prenatal high sucrose intake affected learning and memory of aged rat offspring with abnormal oxidative stress and NMDARs/Wnt signaling in the hippocampus	Impact of perinatal exposure to sucrose or high fructose corn syrup (HFCS-55) on adiposity and hepatic lipid composition in rat offspring	Maternal dietary free or bound fructose diversely influence developmental programming of lipogenesis	High sucrose intake during gestation increases angiotensin II type 1 receptor-mediated vascular contractility associated with epigenetic alterations in aged offspring rats	Metabolic effects of access to sucrose drink in female rats and transmission of some effects to their offspring	Consumption of sucrose, but not high fructose corn syrup, leads to increased adiposity and dyslipidaemia in the pregnant and lactating rat	Hippocampal apoptosis involved in learning deficits in the offspring exposed to maternal high sucrose diets	High-sucrose diets in pregnancy alter angiotensin II-mediated pressor response and microvessel tone via the PKC/Ca v 1.2 pathway in rat offspring	Effects of perinatal exposure to palatable diets on body weight and sensitivity to drugs of abuse in rats	Altered dispogenic response and expression of angiotensin receptors in the offspring exposed to prenatal high sucrose
Journal	Biomedicine & Pharmacotherapy	Nutritional Neuroscience	Molecular Nutrition and Food Research	Biology of Reproduction	Bioscience Reports	Brain Research	Journal of Physiology	Lipids in Health and Disease	Peptides	PLoS One	Journal of developmental origins of health and disease	Journal of Nutritional Biochemistry	Hypertension Research	Physiology & Behaviour	Peptides
Volume/Pages	110/ 609-617		Volume 62 Issue 5 No oaeination	Volume 96 Issue 6 no1085-1095	Volue 37 Issue 3 No oaeination	Volume 1669 pp114-121	Volume 595, Issue 13 pp 4379-4398	Volume 16 Issue 226 No oaeination	Volume86 pp133-144	Volume 10 Issue 7	Volume 6 Issue 1 pp 38-46	Volume 25 Issue 9 pp985-990	Volume 37 Issue 9 pp818-823	Volume 107 pp568-575	Volume 32 Issue 1 pp 104-111
Language	English	English	English	English	English	English	English	English	English	English	English	English	English	English	English
Location (Country)	Turkey	Turkey	China	China	China	China	Australia	Turkey	China	Australia	Australia	China	China	United States	China
Study Design															
Primary aim of study	Examine the effects of the exposure of high - does sucrose to rats and pups during pregnancy and lactation	Determine the effects of HFCS or sucrose on the peptide-mediated appetite in fetal programming of obesity	Determine whether prenatal high sucrose intake alleviateds the detrimental effects of high postnatal sugar consumption in the offspring	How ROS may influence functions of large-conductance Ca2+ - activated K+ channels in the offspring exposed to prenatal high sucrose	Determine if high sucrose intake in pregnancy affected central vascular functions in middle cerebral arter of offspring	Determine the effect of prenatal high sucrose diets on hippocampal NMDARs/Wnt signalling	Determine the impact of exposure to maternal consumption of sucrose or HFCS-55 during prenatal and/orsucking periods on offspring	Determine the impact of maternal dietary free or bound fructose in added sugars on developmental programming of lipogenesis	Determine if maternal high sucrose diet in pregnancy can further deteriorate the Ang II-induced cardiovascular response in aged offspring	Examine the metabolic consequences for female rats having unrestricted sucrose and the effects on their offspring	Investigate and compare the impact of maternal consumption of sucrose or HFCS-55 during pregnancy and lactation on the metabolic health of the dam and her offspring	Determine the influence of maternal high sucrose diets on behaviour and hippocampal neurons in the young offspring	Determines the influence of prenatla high sucrose diet on Ang II-mediated pressor response and determine the underlying mechanism	Determine the effects of fat and sugar rich diets in utero and during pre-weaning period on body weight and responses to drugs of abuse	Determine the water and salt intate as well as expression of AT1 and AT2 receptors in the brain and kidney in the adult offspring prenatally exposed to high sucrose
Study design	10, 20 & 30% sucrose vs Control	Maltodextrin vs Sucrose vs Fructose vs HFCS vs Control	Sucrose vs Control	Sucrose vs Control	Sucrose vs Control	Sucrose vs Control	Sucrose vs HFCS-55 vs Control; cross fostering model during lactation - CC (con-con); SS (suc-suc); SC (suc-con); CS (con-suc)	Maltodextrin vs Sucrose vs Fructose vs HFCS vs Control	Sucrose vs Control	Sucrose vs Control	Sucrose vs HFCS-55 vs Control	Sucrose vs Control	Sucrose vs Control	Sucrose vs HFCS vs Control; Cross fostering model - in utero sucrose, pre-weaning sucrose	Sucrose vs Control
Experimental conditions	Individually housed dam with two pups and administered compulsory drinking of allocated sucrose solution and standard chow	Individually housed; assigned to one of 5 groups plus standard chow	Dam and offspring housed together until weaning; assigned sucrose or control plus standard chow	Dam and offspring housed together until weaning; assigned sucrose or control plus standard chow	Dam and offspring housed together until weaning; assigned sucrose or control plus standard chow	Housing not reported; assigned to sucrose or control plus standard chow	Individually housed; assigned to sucrose, HFCS-55 or control and administered compulsory drinking of allocated solution plus standard chow	Individually housed; assigned to one of 5 groups plus standard chow	Individually housed and assigned to either sucrose or control plus standard chow	Group housed for pre-gestation dietary intervention; Individually housed with litter on assigned sucrose in addition to water and chow;	Individually housed; assigned to sucrose, HFCS-55 or control and administered compulsory drinking of allocated solution plus standard chow	Housing not reported; assigned to sucrose or control plus standard chow	Housing not reported; assigned to sucrose or control plus standard chow	Individually housed; assigned to sucrose, HFCS in addition to water and standard chow	Housing not reported; assigned to sucrose or control plus standard chow
Control	Standard chow and water	standard chow and water	standard chow and water	standard chow and water	standard chow and water	standard chow and water	standard chow and water	standard chow and water	standard chow and water	standard chow and water	standard chow and water	standard chow and water	standard chow and water	standard chow and water	standard chow and water
Number of animals in control group (dams)	7	5	6	20	10	11	25	7	NR	11	25	10	7	5	8
Number of animals in sucrose group (dams)	10% - 7 20% - 7	7	6	20	10	11	19	7	NR	11	19	10	8	5	8
Number of animals in control group (offspring)	14 6 to 7	8 to 10	Male n = 3 to 5	males n =10	n= 11 male post weaning to 18mth	CC males n=32 females n=32	6 to 7 per group		6 male n=50 female n=34	At 3 weeks: male n=8 female n=8 At 12 weeks: males n=8 female n=8		10	8	12	8
Number of animals in sucrose group (offspring)	10% - 14 20% - 14	6 to 7	8 to 10	Male n = 3 to 5	males n =11	n= 11 male post weaning to 18mth	SS males n=44; females n=44 SC males n=32; females n=32 CS males n=32; females n=32	6 to 7 per group	6 male n=48 female n=12	At 3 weeks: male n=8 female n=11 At 12 weeks: males n=5 female n=5		10	8 in utero sucrose males n=10 females n=12 Pre-weaning sucrose male n= 10 female n=12		8
Unit of measurement	unclear	litter	unclear	individual animal	individual animal	litter	litter	litter	litter	litter	litter	individual	?	?	?
Animal Model Characteristics															
Rodent species	rat	rat	rat	rat	rat	rat	rat	rat	rat	rat	rat	rat	rat	rat	rat
Rodent strain (as stated by author)	NR	sprague dawley	sprague dawley	sprague dawley	sprague dawley	sprague dawley	wistar	sprague dawley	sprague dawley	wistar	wistar	sprague dawley	sprague dawley	sprague dawley	sprague dawley
Maternal age at conception (weeks +/- SD)	12 weeks	17 weeks	NR	NR	10 - 12 weeks	NR	12 weeks	14 weeks	25 weeks	13-14 weeks	13 weeks	NR	NR	NR	NR
Maternal weight at intervention (grams +/- SD)	NR	NR	250-280g	220-250g	NR	250-280g	216-221g	50-60g	200-250g	300-350g	NR	250-280g	NR	NR	NR
Litter standardisation	NR	no standardisation reported	no standardisation reported	Standardised to 3-5 male offspring only	Standardised to male offspring only	standardised to 1 male offspring per litter	standardised to four males and four females per litter at birth	no standardisation reported	no standardisation reported	standardised to 5 males:3 females	two males & two females per litter culled at partution	no standardisation reported	no standardisation reported	Standardised to 8 pups per litter	no standardisation reported
Dietary Intervention Characteristics															
How did study define dosage?	% w/v	% w/v	% w/v	% w/v	% w/v	% w/v	% w/v	% w/v	% w/v	% w/v	% w/v	% w/v	% w/v	% w/v	% w/v
Concentration/s used?	10% and 20% sucrose	20%	20%	20%	20%	20%	10%	20%	20%	20%	10%	20%	20%	10%	20%
Timing and duration of maternal dietary intervention															
Pre-gestation	no	12 weeks	-	no	no	no	4 weeks	12 weeks	no	4 weeks	4 weeks	no	no	no	no
Gestation	yes	Yes	Yes	yes	yes	yes	yes SS and SC; no CS	yes	yes	yes	Yes	yes	yes	yes - in utero sucrose; no pre-weanine sucrose	yes
Lactation	yes	Yes	no	no	no	no	yes SS and CS; no SC	yes	no	yes	Yes	no	no	yes - pre-weaning sucrose; no in utero sucrose	no
Administration of maternal dietary intervention	added to drinking water as only source of drinking fluid *ad libitum* 5 days per week (water given other 2 days)	Administered to drinking water as only source of drinking fluid ad libitum	Administered to drinking water as only source of drinking fluid ad libitum	Administered to drinking water as only source of drinking fluid ad libitum	Administered to drinking water as only source of drinking fluid ad libitum	Administered to drinking water as only source of drinking fluid ad libitum	Administered to drinking water as only source of drinking fluid ad libitum	Administered to drinking water as only source of drinking fluid ad libitum	Administered to drinking water as only source of drinking fluid ad libitum	administered as a solution ad libitum in addition to standard chow and water	Administered to drinking water as only source of drinking fluid ad libitum	Administered to drinking water as only source of drinking fluid ad libitum	Administered to drinking water as only source of drinking fluid ad libitum	in addition to chow and water ad libitum	Administered to drinking water as only source of drinking fluid ad libitum
Additional maternal intervention/s other than sucrose	-	HFCS, Fructose, Maltodextrin (vehicle)	-	-		-	-	HFCS, Fructose, Maltodextrin (vehicle)	-	-	HFCS-55	-	-	-	
Offspring dietary intervention/s	-	-	half offspring fed sucrose between 4-6 months aw	-	-	-	-	-	-	+/- activity	-	-	-	-	
Timing and duration of offspring dietary intervention	-	-	8 weeks of feeding	-	-	-	-	-	-	males - sucrose feeding PND 95-150	-	-	-	-	
Additional offspring intervention/s other than sucrose	-	-	-		-	-	-	-	-	wheel running	-	-	-	-	
List of all relevant measurable outcomes in study	**Maternal and offspring:** water consumption, body weight, BGL, serum insulin lewels	**Maternal and offspring:** Feed and drink intake, total body fat accumulation, leptin and ghrelin, daily energy intake and energy contributions of macronutrients	**Maternal outcomes:** BGL at delivery **Offspring outcomes:** Body weight, food and fluid intake, FBGL, GTT, TG, plasma insulin, HOMA-IR	**Maternal and offspring:** body weight and blood glucose levels	**Maternal** : plasma glucose levels Offspring outcomes: body weight, plasma glucose	**Offspring:** food and fluid intake, body weight and plasma glucose, plasma insulin, OGTT, HOMA-IR	**Offspring:** bodweight, visceral adipose mass, IPGTT (3 & 12 weeks), FBGL, plasma glucose, TG, TC, HDL, LDL, FFA, plasma insulin, leptin, hepatic lipid concentration,	**Maternal and offspring:** Maternal Feed and drink intake, maternal and offspring body weight, plasma glucose and insulin, HOMA-IR, QUICKI, blood and hepatic TG, NEFA	**Offspring:** Plamsa glucose concentration	**Maternal outcomes:** Body weight, chow intake, solution intake, total energy intake, OGTT, FBGT, plasma triglycerides, retorperitoneal fat pads **Offspring outcomes:** Body weight gain, OGTT, solution intake, chow intake, QUICKI, FBGL, retroperitoneal fat	**Maternal outcomes:** Chow and fluid intkae, IPGTT at baseline, pre-pregnancy and end of lactation, plasma glucose, insulin, NEFA, TC, HDL, LDL, leptin. **Offspring outcomes:** pup weight, plasma glucose, insulin, NEFA (all taken 24hrs after birth)	**Maternal outcomes:** chow and fluid intake, body weight and plasma glucose **Offspring outcomes:** Body weight	**Maternal outcomes:** **blood** glucose **Offspring outcomes:** body weight, blood glucose	**Maternal outcomes:** chow and fluid intake, body weight **Offspring outcomes:** pre-weaning body weight, serum TG, chow intake	**Offspring outcome:** body weight, plamsa glucose concentration
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Author/s conflict of interest	No conflicts of interest reported	No conflicts of interest reported	No conflict of interest reported	Not stated	No conflict of interest reported	No conflict of interest reported	No conflict of interest reported	No conflict of interest reported	No conflict of interest reported	No conflict of interest reported	No conflict of interest reported	Not stated	Not stated	Not stated	Not stated