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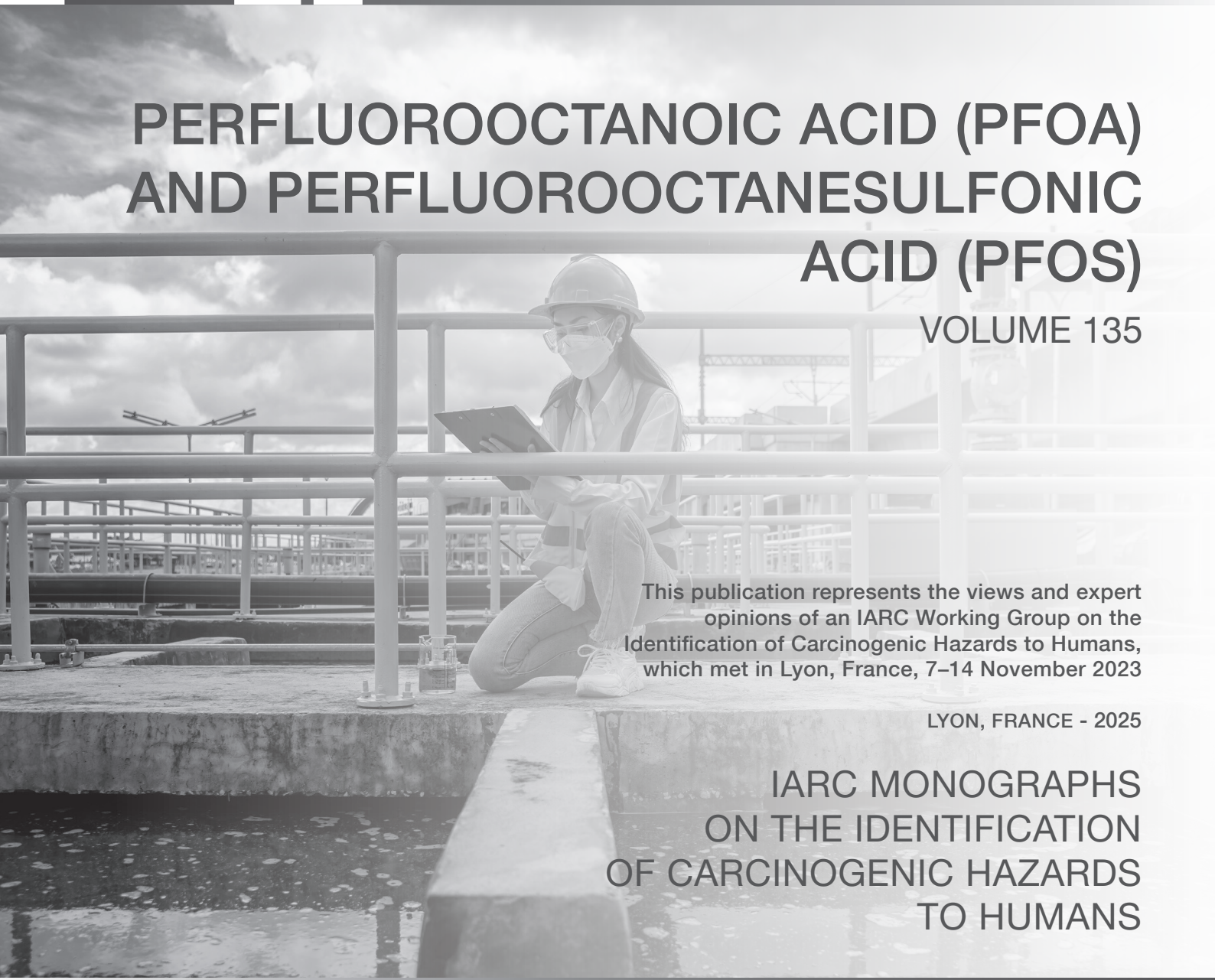

PERFLUOROOCTANOIC ACID (PFOA) AND PERFLUOROOCTANESULFONIC ACID (PFOS)

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Table S4.26 End-points relevant to modulation of receptor-mediated effects (endocrine) in experimental systems in vivo exposed to PFOA and PFOS

Species, strain, sex	Dosing regimen	Relevant finding	Reference
Thyroid hormone effects			
Cynomolgus monkey (F, M)	PFOS, 0 or 9 mg/kg (once) or 11 to 17.2 mg/kg (three doses total), dosing was spaced 70 to 245 days apart, oral	No statistically significant change in serum TSH, FT4, or TT3. ↓ Serum TT4 concentration was not deemed to be clinically significant.	Chang et al. (2017)
CD-1 mice (PF)	PFOS, 0, 1, 5, 10, 15, or 20 mg/kg/day, GD 1–17, oral	No change in pup serum TT4 concentration.	Lau et al. (2003)
CD-1 mice (PF)	PFOS, 0, 1.5, 3, or 6 mg/kg/day, GD 6–18, oral	No change in maternal serum TT4, TT3, FT3, or FT4 concentrations.	Fuentes et al. (2006)
ICR mice (F)	PFOS, 0 or 10 mg/kg/day, 14 days, oral	↓ Serum T3 and T4 concentrations.	Wang et al. (2018b)
Sprague-Dawley rat (F)	PFOS, 0 or 5 mg/kg/day, 3 days, oral	↓ Serum FT4 and TT4 concentrations. No statistically significant change in serum TSH concentration.	Chang et al. (2007)
Sprague-Dawley rat (F)	PFOS, 0 or 15 mg/kg, oral	↓ Serum TT4, TT3, rT3 concentrations. No statistically significant change in serum TSH concentration 24 h past treatment.	Chang et al. (2008)
Sprague-Dawley rat (PF)	PFOS, 0, 0.1, 0.3, or 1 mg/kg/day, GD 0 to PND 20, oral	No statistically significant change in dam or pup serum TSH concentration.	Chang et al. (2009)
Sprague-Dawley rat (PF)	PFOS, 0, 0.1, 0.3, 1, 3, 10, or 30 mg/kg/day, GD 14 to GD 18, oral	↓ Maternal serum TT3 and TT4 concentrations at ≥ 10 mg/kg/day.	Conley et al. (2022)
Sprague-Dawley rat (M)	PFOS, 0 or 3 mg/kg/day, 7 days, oral	↓ Serum TT4, TT3, and rT3 concentrations. No statistically significant change in serum TSH concentration.	Davidsen et al. (2022)
Sprague-Dawley rat (F, M)	PFOS, 0, 2, 20, 50, or 100 ppm (equivalent to 0, 0.14, 1.33, 3.21, or 6.34 mg/kg/d in males and 0, 0.15, 1.43, 3.73, 7.58 mg/kg/d in females), 28 days, diet	↑ Relative thyroid/body weight at 100 ppm; ↓ T3 concentration at 100 ppm (M); ↓ T3 concentration at ≥ 50 ppm (F); ↓ T4 concentration at ≥ 20 ppm (F and M).	Curran et al. (2008)

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Species, strain, sex	Dosing regimen	Relevant finding	Reference
Sprague-Dawley rat (M)	PFOS, 0 or 50 ppm, 28 days, diet	Altered expression of genes involved in TH conversion, metabolism, and clearance.	Dong et al. (2016)
Sprague-Dawley rat (PF)	PFOS, 0, 1, 2, 3, or 5 mg/kg/day, GD 2–21, oral	↓ Pup TT4 concentration at PND 2; ↓ pup FT4 concentration at PND 2–35 (in all dosage groups). No change in pup T3, TSH, or TT4 concentration at PND 21.	Lau et al. (2003)
Wistar rat (PF)	PFOS, 0 or 3.2, 32 ppm, GD 1-PND 14, diet	↓ Maternal TT4 concentration at PND1, neonatal TT4 concentration at PND7 and maternal and neonatal TT4 concentration at PND 14. No effect on TT3 concentration.	Wang et al. (2011b)
Sprague-Dawley rat (M)	PFOS, 0, 1.7, 5.0, or 15.0 mg/L, 91 days, oral (dw)	No effect on relative thyroid weight, ↑ serum TT3 concentration at 1.7 mg/L only, ↓ serum TT4 concentration at ≥ 1.7mg/L, ↓ serum FT4 concentration at 5 mg/L only, no effect on serum TSH concentration or TSH receptor mRNA.	Yu et al. (2009a)
Wistar rat (M, F)	PFOS, 0, 3.2 ppm, GD 1 – PND 21, diet	↓ Pup serum TT4 concentration at PND 21 and 35. No effect on pup serum TT3 concentration.	Yu et al. (2009b)
Wistar rat (F)	PFOS, 0, 0.2, 1.0, or 3.0 mg/kg/day, 5 days, oral	No effect on relative thyroid weight at 3 mg/kg/day. ↓ Serum TT4 concentration at ≥ 1 mg/kg/day, ↓ serum TT3 concentration at 3 mg/kg/day. No effect on biliary TT4 or TT3 concentrations.	Yu et al. (2011)

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Species, strain, sex	Dosing regimen	Relevant finding	Reference
Cynomolgus monkey (M)	Ammonium perfluorooctanoate (APFO), 0, 3, 10, 20/30 mg/kg/day, 26 weeks, oral	↑ Serum FT3 and TT3 concentrations. No changes in serum TSH, FT4, TT4 concentrations.	Butenhoff et al. (2002)
CD-1 mouse (PF)	PFOA, 0, 1 or 5 mg/kg/day, 10 or 16 days, oral	No effect on placental T3, T4, or rT3 concentrations.	Blake et al. (2020)
Crl:CD rat (M, F)	PFOA, 0 or 30 mg/kg/day, 28 days, oral	↓ Serum TT4 and FT4 concentrations. ↓ Serum TSH in males. ↓ Serum TSH levels in males and TT4 and FT4 levels in females recovered after 3 wk recovery period. ↑ Liver Thrsp mRNA.	Butenhoff et al. (2012a)
Estrogenic hormone effects			
ICR mice (M)	PFOS, 0, 0.5, 5, or 10 mg/kg/day, 4 wk, oral	No effect on serum or testicular estradiol concentration.	Huang et al. (2022a)
ICR mice (M)	PFOS, 0, 0.5, 5, or 10 mg/kg/day, 4 wk, oral	No effect on serum or testicular estradiol concentration.	Qiu et al. (2021)
C57BL/6 mice (M)	PFOS, 0, 0.5, or 10.0 mg/kg/day, 5 weeks, oral	No effect on serum estradiol concentration.	Qu et al. (2016)
BALB/c mice (M)	PFOS, 0, 5, or 20 mg/kg/day, 14 days, oral	No effect on serum estradiol concentration.	Wang et al. (2014b)
ICR mice (F)	PFOS, 0 or 10 mg/kg/day, 14 days, oral	↓ Serum estradiol concentration on day14.	Wang et al. (2018b)
C57BL/6 mice (PF)	PFOS, 0, 0.1, 1.0, or 5.0 mg/kg/day, GD 1–17, oral	↑ Serum estradiol concentration in male pups at 5 mg/kg/day on PND 28. No effect on female pup serum estradiol concentration.	Zhong et al. (2016)
Sprague-Dawley rat (M)	PFOS, 0, 0.5; 1.0, 3.0, or 6.0 mg/kg/day, 28 days, oral	↓ Serum estradiol concentration at ≥ 1 mg/kg/day.	López-Doval et al. (2015)
Sprague-Dawley rat (F)	PFOS, 0 or 15 mg/kg/day, 28 days, oral	↑ Serum estradiol concentration for both PFOS and PFOA.	Qiu et al. (2020)

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Species, strain, sex	Dosing regimen	Relevant finding	Reference
Sprague-Dawley rat (M)	PFOS, 0, 3, or 6 mg/kg/day, 28 days, oral	↓ Serum estradiol concentration at ≥ 3 mg/kg/day	Salgado et al. (2015)
Cynomolgus monkey (M)	Ammonium perfluorooctanoate (APFO), 0, 3, 10, 20/30 mg/kg/day, 26 weeks, oral	No effect on serum estradiol concentration	Butenhoff et al. (2002)
Crl:CD rat (M)	Ammonium perfluorooctanoate (APFO), 0, 1, 10, 30 or 100 ppm (equivalent to 0, 0.06, 0.64, 1.94, and 6.5 mg/kg/day), up to 90 days, oral	No effect on serum estradiol concentration.	Perkins et al. (2004)
Wistar rat (M)	PFOA, 0, 0.015, or 0.15 mg/kg/day, 2 months, oral	↑ Serum estradiol concentration at ≥ 0.015 mg/kg/day.	Han et al. (2022)
CD-1 mice (PF) C57Bl/6 mice (PF)	PFOA, 0, 0.01, 0.1, 0.3 or 1.0 mg/kg/day, GD 1–17, oral	No effect on female offspring serum estradiol concentration.	Tucker et al. (2015)
CD-1 mice (F)	PFOA, 0, 1, 5, 10 or 20 mg/kg/day, 10 days, oral	No effect on serum estradiol concentration.	Yang et al. (2022)
ICR mice (F)	PFOA, 0, 0.5, 2, or 5 mg/kg/day, 28 days, oral	↓ Serum estradiol concentration at 5 mg/kg/day	Zhang et al. (2020b)
Crl:CD rat (M)	PFOA, 0 or 300 ppm, 3 to 24 months, diet	↑ Serum estradiol concentration between 1 and 12 months	Biegel et al. (2001)
Sprague-Dawley rat (F)	PFOA, 0 or 15 mg/kg/day, 28 days, oral	↑ Serum estradiol concentration	Qiu et al. (2020)
Sprague-Dawley rat (F)	PFOA, 0 or 0.01 mg/kg/day, 21 days, oral	No effect on serum estradiol concentration	Su et al. (2022a)
C57Bl/6 mice (F)	PFOA, 0 or 5 mg/kg/day, 4 weeks after ovulation at 3 week-age, oral	No effect on serum estradiol concentration.	Zhao et al. (2010)
Androgen hormone effects			
ICR mice (M)	PFOS, 0, 0.5, 5, or 10 mg/kg/day, 4 weeks, oral	↓ Serum and testicular testosterone concentration at ≥ 5 mg/kg/day.	Huang et al. (2022a)
CD-1 mice (M)	PFOS, 0, 1, or 5 mg/kg/day, 21 days, oral	No effect on serum testosterone concentrations.	Li et al. (2022e)
C57BL/6 mice (M)	PFOS, 0, 0.5, or 10.0 mg/kg/day, 5 weeks, oral	↓ Serum testosterone concentration at 10 mg/kg/day.	Qu et al. (2016)

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Species, strain, sex	Dosing regimen	Relevant finding	Reference
ICR mice (M)	PFOS, 0, 0.5, 5, or 10 mg/kg/day, 4 weeks, oral	↓ Serum and testicular testosterone at ≥ 5 mg/kg/day.	Qiu et al. (2021)
CD-1 mice (M)	PFOS, 0, 1, 5, or 10 mg/kg/day, up to 21 days, oral	↓ Epididymal sperm count and serum testosterone at 10 mg/kg/day	Wan et al. (2011)
BALB/c mice (M)	PFOS, 0, 5, or 20 mg/kg/day, 14 days, oral	No effect on serum testosterone concentration	Wang et al. (2014b)
C57BL/6 mice (PF)	PFOS, 0, 0.1, 1.0, or 5.0 mg/kg/day, GD 1–17, oral	↓ Serum testosterone concentration in male pups at 5 mg/kg/day on PND 28 and at 1 mg/kg/day on PND56. No effect on female pup serum testosterone concentration	Zhong et al. (2016)
Wistar rat (M)	PFOS, 0, 0.015, or 0.15 mg/kg/day, 60 days, oral	↑ Serum testosterone concentration at ≥ 0.015 mg/kg/day	Alam et al. (2021)
Wistar (M)	PFOS, 0, 0.015, or 0.15 mg/kg/day, 2 months, oral	↑ Serum testosterone concentration at ≥ 0.015 mg/kg/day.	Han et al. (2022)
Sprague-Dawley rat (M)	PFOS, 0, 5; or 10, mg/kg/day, 21 days, oral	↓ Serum testosterone concentration at ≥ 5 mg/kg/day	Li et al. (2018d)
Sprague-Dawley rat (M)	PFOS, 0, 0.5; 1.0; 3.0, or 6.0 mg/kg/day, 28 days, oral	↓ Serum testosterone concentration at ≥ 0.5 mg/kg/day	López-Doval et al. (2014)
Sprague-Dawley rat (M)	PFOS, 0, 0.5; 1.0; 3.0, or 6.0 mg/kg/day, 28 days, oral	↓ Serum testosterone concentration at ≥ 0.5 mg/kg/day	López-Doval et al. (2015)
Sprague-Dawley rat (M)	PFOS, 0 or 20 mg/kg/day, 56 days, oral	↓ Plasma testosterone concentration.	Umar Ijaz et al. (2022)
Sprague-Dawley rat (PF)	PFOS, 0, 5; or 20, mg/kg/day, GD 11–19, oral	↓ Male offspring testicular testosterone concentration at 20 mg/kg/day.	Zhao et al. (2014)
Cynomolgus monkey (M)	Ammonium perfluorooctanoate (APFO), 0, 3, 10, 20/30 mg/kg/day, 26 weeks, oral	No effect on serum testosterone concentration.	Butenhoff et al. (2002)
mPPARα mice (M) PPARα$^{-/-}$ mice (M)	Ammonium perfluorooctanoate (APFO), 0, 1, or 5 mg/kg/day for 42 days, oral	↓ Plasma testosterone concentration in mPPARα mice at 5 mg/kg/day.	Li et al. (2011)

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Species, strain, sex	Dosing regimen	Relevant finding	Reference
hPPARα mice (M)		↓ Plasma testosterone concentration in hPPARα mice at ≥ 1 mg/kg/day. No effect plasma testosterone concentration in PPARα$^{-/-}$ mice.	
ICR mice (F)	PFOA, 0 or 10 mg/kg/day, 14 days, oral	↓ Serum testosterone concentration	Wang et al. (2018b)
Kunming mice (PF)	PFOA, 0, 1, 2.5, or 5.0 mg/kg/day, GD 1–17, oral	↓ Serum testosterone concentration in male offspring mice at ≥ 1 mg/kg/day; except on PND7, ↓ at 1 mg/kg/day	Song et al. (2018)
CD-1 mice (F)	PFOA, 0, 1, 5, 10 or 20 mg/kg/day, 10 days, oral	↑ Serum testosterone concentration at 1 mg/kg only.	Yang et al. (2022)
Crl:CD rat (M)	PFOA, 0 or 300 ppm, 3 to 24 months, diet	↑ Serum testosterone concentration at 6 months only.	Biegel et al. (2001)
Sprague-Dawley rat (M)	PFOS, 0, 20, or 100 ppm, 7 days, diet	↑ Liver testosterone 6 β-hydroxylase activity at 100 ppm.	Elcombe et al. (2012a)
Sprague-Dawley rat (M)	PFOS, 0, 20, or 100 ppm, up to 28 days, diet	↑ Liver testosterone 6 β-hydroxylase activity at ≥ 20 ppm at 28 days.	Elcombe et al. (2012b)
Wistar rat (M)	PFOA: 0 or 5 mg/kg/day for 4 wk, oral	↓ Serum testosterone concentration.	Owumi et al. (2021b)
Crl:CD rat (M)	PFOA (as APFO), 0, 1, 10, 30 or 100 mg/kg/day (equivalent to 0, 0.06, 0.64, 1.94, and 6.5 mg/kg/day), up to 21 weeks, oral	No effect on serum testosterone concentration.	Perkins et al. (2004)
Pituitary hormone effects (LH, FSH, PRL)			
ICR mice (M)	PFOS, 0, 0.5, 5, or 10 mg/kg/day, 4 weeks, oral	No effect on serum FSH or LH concentrations.	Huang et al. (2022a)
CD-1 mice (PF)	PFOS, 0, 0.5, 2.0 or 8.0 mg/kg/day, GD 11–16, oral	↓ Maternal serum mPLP-Cα and mPLP-K at ≥ 0.5 mg/kg.	Lee et al. (2015b)

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Species, strain, sex	Dosing regimen	Relevant finding	Reference
		↓ Maternal serum mPL-II at ≥ 2 mg/kg.	
CD-1 mice (M)	PFOS, 0, 1, or 5 mg/kg/day, 21 days, oral	↓ Serum LH at 5 mg/kg/day, no effect on serum FSH.	Li et al. (2022e)
ICR mice (M)	PFOS, 0, 0.5, 5, or 10 mg/kg/day, 4 weeks, oral	No effect on serum LH or FSH concentrations.	Qiu et al. (2021)
CD-1 mice (M)	PFOS, 0, 1, 5, or 10 mg/kg/day, up to 21 days, oral	↓ Testicular mRNA for growth hormone receptor at 5 (not significant) and at 10 mg/kg/day.	Wan et al. (2011)
ICR mice (F)	PFOS, 0 or 10 mg/kg/day, 30 days, oral	↓ Serum LH concentration.	Wang et al. (2018b)
Wistar rat (M)	PFOS, 0, 0.015, or 0.15 mg/kg/d, 60 days, oral	↓ Testicular LHR mRNA at 0.15 mg/kg/day.	Alam et al. (2021)
Sprague-Dawley rat (M)	PFOS, 0, 5; or 10, mg/kg/day, 21 days, oral	No effect on serum LH or FSH concentrations.	Li et al. (2018d)
Sprague-Dawley rat (M)	PFOS, 0, 0.5; 1.0; 3.0, or 6.0 mg/kg/day, 28 days, oral	↑ Hypothalamic LH mRNA at 0.5 and 3 mg/kg/day. ↑ Hypothalamic FSH mRNA at 0.5 and 1 mg/kg/day. ↓ Serum LH concentration at ≥ 0.5 mg/kg/day. ↑ FSH concentration at ≥ 0.5 mg/kg/day.	López-Doval et al. (2014)
Sprague-Dawley rat (M)	PFOS, 0, 0.5; 1.0; 3.0, or 6.0 mg/kg/day, 28 days, oral	↓ Serum LH concentration at ≥ 0.5 mg/kg/day.	López-Doval et al. (2015)
Sprague-Dawley rat (M)	PFOS, 0 or 20 mg/kg/day, 56 days, oral	↓ Serum LH and FSH concentration.	Umar Ijaz et al. (2022)
CD-1 mice (PF)	PFOA, 0, 2, 10, or 25 mg/kg/day, GD 11–16, oral	↓ Placental mPLP-II, mPLP-E, and mPLP-E mRNA at ≥ 2 mg/kg.	Suh et al. (2011)
ICR mice (F)	PFOA, 0, 0.5, 2, or 5 mg/kg/day, 28 days, oral	↓ Serum LH concentration at ≥ 2 mg/kg/day.	Zhang et al. (2020b)

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Species, strain, sex	Dosing regimen	Relevant finding	Reference
CD rat (M)	PFOA, 0 or 300 ppm, 3 to 24 months, oral	↑ Serum LH concentrations at 6 and 18 months only. ↑ Serum FSH concentration at 6 months only. ↓ Serum prolactin concentration at 3 and 6 months only.	Biegel et al. (2001)
Crl:CD rat (M)	Ammonium perfluorooctanoate (APFO), 0, 1, 10, 30 or 100 mg/kg/day (equivalent to 0, 0.06, 0.64, 1.94, and 6.5 mg/kg/day), up to 90 days, oral	No effect on serum LH concentration.	Perkins et al. (2004)
Wistar rat (M)	PFOA: 0 or 5 mg/kg/day for 4 weeks, oral	↓ Serum FSH ↓ Serum LH	Owumi et al. (2021b)
Other hormone effects			
CD-1 mice (PF)	PFOS, 0, 1.5, 3, or 6 mg/kg/day, GD 6–18, oral	No change in maternal serum corticosterone concentration.	Fuentes et al. (2006)
CD-1 mice (M)	PFOS, 0, 1, 5, or 10 mg/kg/day, up to 21 days, oral	↓ Testicular mRNA for growth hormone receptor GHR and insulin-like growth factor 1 receptor at ≥ 5 mg/kg/day.	Wan et al. (2011)
CD-1 mice (PF)	PFOS, 0, 0.3 or 3.0 mg/kg/day, GD 1–PND 21, oral	↑ Fasting serum insulin in PND 63 offspring at ≥ 3 mg/kg/day.	Wan et al. (2014)
ICR mice (F)	PFOS, 0 or 10 mg/kg/day, 14 days, oral	↓ Serum progesterone, ↓ Serum GnRH, ↓ Serum corticosteroid	Wang et al. (2018b)
Wistar rat (M)	PFOS, 0, 0.015, or 0.15 mg/kg/day, 60 days, oral	↑ Serum progesterone concentrations at ≥ 0.015 mg/kg/day.	Alam et al. (2021)
Wistar (M)	PFOA, 0, 0.015, or 0.15 mg/kg/day, 2 months, oral	↑ Serum progesterone concentration at ≥ 0.015 mg/kg/day.	Han et al. (2022)

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Species, strain, sex	Dosing regimen	Relevant finding	Reference
Sprague-Dawley rat (M)	PFOS, 0, 0.5; 1.0; 3.0, or 6.0 mg/kg/day, 28 days, oral	↓ Hypothalamic GnRH mRNA at ≥ 0.5 mg/kg, ↓ GnRH level at 1 and 3 mg/kg/day, ↑ GnRH level at 6 mg/kg/day.	López-Doval et al. (2014)
Sprague-Dawley rat (M)	PFOS, 0, 0.5; 1.0; 3.0, or 6.0 mg/kg/day, 28 days, oral	↓ Hypothalamus GnRH at 1 and 3 mg/kg/day. ↑ Hypothalamus GnRH at 6 mg/kg/day.	López-Doval et al. (2015)
Sprague-Dawley rat (M)	PFOS, 0, 1.0; 3.0, or 6.0 mg/kg/day, 28 days, oral	↓ Pituitary GnRH protein at ≥ 1 mg/kg/day, ↓ testis GnRH mRNA at ≥ 1 mg/kg/day, ↑ testis GnRH protein at ≥ 1 mg/kg/day	López-Doval et al. (2016)
Wistar rat (PF)	PFOS, 0, 0.5; or 1.5 mg/kg/day, GD 0– PND 21, oral	↑ Pup serum insulin and leptin at 18 weeks at 1.5 mg/kg/day.	Lv et al. (2013)
Sprague-Dawley rat (M)	PFOS, 0, 0.5, 1.0, 3.0, or 6.0 mg/kg/day, 28 days	↓ Adrenal gland weight, ↓ Serum corticosterone at ≥ 0.5 mg/kg/day, ↓ Serum ACTH at ≥ 0.5 mg/kg/day, ↓ hypothalamus CRH at ≥ 0.5 mg/kg/day, ↑ adrenal ACTH receptor mRNA at ≥ 1 mg/kg/day	Pereiro et al. (2014)
Balb/c mice (M)	PFOA, 0, 1, or 5 mg/kg/day, 3 weeks, oral	↑ Serum insulin concentrations at ≥ 1 mg/kg/day. ↓ Serum leptin concentration at ≥ 1 mg/kg/day. ↓ Serum adiponectin concentration at 5 mg/kg/day.	Du et al. (2018)
CD-1 mice (PF)	PFOA, 0, 0.01, 0.1, 0.3, 1, 3, or 5 mg/kg/day, GD 1–17, oral	↑ Serum insulin and leptin concentrations at 0.01 and 0.1 mg/kg at 21–33 weeks of age.	Hines et al. (2009)
Balb/c mice (M)	PFOA, 0, 1.25, 5, or 20 mg/kg/day, 28 days, oral	↑ Serum corticosterone concentration at ≥ 5 mg/kg/day. ↓ Serum ACTH concentration at 20 mg/kg/day.	Sun et al. (2018)

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Species, strain, sex	Dosing regimen	Relevant finding	Reference
CD-1 mice (PF) C57Bl/6 mice (PF)	PFOA, 0, 0.01, 0.1, 0.3 or 1.0 mg/kg/day, GD 1–17, oral	No effect on female offspring serum progesterone concentration.	Tucker et al. (2015)
Kunming mice (M)	PFOA or 5.0 mg/kg, oral	No effect on serum insulin concentration.	Wu et al. (2017)
CD-1 mice (F)	PFOA, 0, 1, 5, 10 or 20 mg/kg/day, 10 days, oral	↓ Serum progesterone and pregnenolone concentrations at 5 mg/kg only.	Yang et al. (2022)
ICR mice (F)	PFOA, 0, 0.5, 2, or 5 mg/kg/day, 28 days, oral	↓ Hypothalamic GnRH at ≥ 2 mg/kg/day ↓ serum progesterone concentration at ≥ 2 mg/kg/day.	Zhang et al. (2020b)
C57Bl/6 mice (F)	PFOA, 0 or 5 mg/kg/day, 4 weeks, oral	↑ Serum progesterone concentration.	Zhao et al. (2010)
Wistar rat (PF)	PFOA, 0 or 20 mg/kg/day, 14 days (GD7-GD21), oral	No effect on plasma insulin or leptin concentration on GD21.	Boberg et al. (2008)
Sprague-Dawley rat (F)	PFOA, 0 or 0.01 mg/kg/day, 21 days, oral	No effect on serum progesterone concentration.	Su et al. (2022a)

ACTH, adrenocorticotropic hormone; APFO, ammonium perfluorooctanoate; AR, androgen receptor; bw, body weight; CRH, corticotrophin-releasing hormone; d, day(s); F, female; FSH, follicle-stimulating hormone; FT4, free thyroxine; GD, gestational day; GHR, growth hormone receptor; GnRH, gonadotropin-releasing hormone; hPPARα, humanized PPARα; IP, intraperitoneal; LH, luteinizing hormone; M, male; mPL-II, mouse placental lactogen, mPLP-Cα, mouse prolactin-like protein Cα; mPLP-K, mouse prolactin-like protein K; NS, not specified; PF, pregnant female; PFOA, perfluorooctanoic acid; PFOS, perfluorooctanesulfonic acid; PND, postnatal day; PPAR, peroxisome proliferator-activated receptor; ppm, parts per million; PXR, pregnane X receptor; PRL, prolactin; rT3, reverse triiodothyronine; TH, thyroid hormone; Thrsp, thyroid hormone responsive protein; T3, triiodothyronine; T4, thyroxine; TSH, thyroid-stimulating hormone (thyrotropin); TT4, thyroxine; total thyroxine; wk, week(s); WT, wildtype.

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