

(®Aciclovir (Zovirax®) / Valaciclovir (Valtrex

:Selected References

- Ahrens KA, et al. 2013. Antiherpetic Medication Use and the Risk of Gastroschisis: Findings From the National Birth Defects Prevention Study, 1997-2007. Paediatric and Perinatal Epidemiology. 27(4):340-345
- Braig S, et al. 2001. Acyclovir prophylaxis in late pregnancy prevents recurrent genital herpes and viral shedding. Eur J Obstet Gynecol Reprod Biol. 96(1):55-58. Centers for Disease Control. 1993. Pregnancy outcomes following systemic prenatal acyclovir exposure – June 1, 1984-June 30, 1993. MMWR. 42(41):806-809
- Douglas JM Jr, et al. 1988. A double-blind, placebo-controlled trial of the effect of chronically administered oral acyclovir on sperm production in men with frequently recurrent genital herpes. J Infect Dis. 157(3):588-593
- Drake AL, et al. 2012. Infant Safety During and After Maternal Valacyclovir Therapy in Conjunction with Antiretroviral HIV-1 Prophylaxis in a Randomized Clinical Trial. PloS One. 7(4):e34635
- Drake AL, et al. 2012. Valacyclovir Suppressive Therapy Reduces Plasma and Breast Milk HIV-1 RNA Levels During Pregnancy and Postpartum: A Randomized Trial. J Infect Dis. 205(3):366-375
- Kallia V, et al. 2025. Efficacy and Safety of Antivirals in Lactating Women with Herpesviridae Infections: A Systematic Review. Viruses. 17(4):538
- Kimberlin DF, et al. 1998. Pharmacokinetics of oral valacyclovir and acyclovir in late pregnancy. Am J Obstet Gynecol. 179(4):846-851
- Longbottom K, et al. 2024. Neonatal varicella. Arch Dis Child. 109(8):610-615
- Pasternak B, et al. 2010. Use of acyclovir, valacyclovir, and famciclovir in the first trimester of pregnancy and the risk of birth defects. JAMA 304(8):859-866
- Prober CG. 2001. Management of the neonate whose mother received suppressive acyclovir therapy during late pregnancy. Pediatr Infect Dis J. 20(1):90-91
- Ratanajamit C, et al. 2003. Adverse pregnancy outcome in women exposed to acyclovir during pregnancy: a population-based observational study. Scand J Infect Dis. 35(4):255-259
- Sheffield JS, et al. 2002. Acyclovir concentrations in human breast milk after valaciclovir administration. Am J Obstet Gynecol. 186(1):100-102

(®Aciclovir (Zovirax®) / Valaciclovir (Valtrex

:Selected References

- Akhtar NH et. al. 2022. The use of dupilumab in severe atopic dermatitis during pregnancy: a case report. *Allergy Asthma Clin Immunol.* 18(1):9
- Avallone G, et al. 2024. Association between maternal dupilumab exposure and pregnancy outcomes in patients with moderate-to-severe atopic dermatitis: A nationwide retrospective cohort study. *J Eur Acad Dermatol Venereol.* 6(1):1-10
- Bosma AL, et al. 2021. Paternal and maternal use of dupilumab in patients with atopic dermatitis: a case series. *Clin Exp Dermatol.* 46(6):1089-1092
- Center for Drug Evaluation and Research (CDER). Dupilumab pharmacology review. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2017/761055Orig1s000PharmR.pdf. Accessed 23 June 2026
- Chan T, et al, 2020. Taiwanese Dermatological Association consensus for the management of atopic dermatitis: A 2020 update. *J Formos Med Assoc.* 120(1:Pt2):429-442
- Chopra CR, et al. 2025. Maternal, Fetal, and Labour Outcomes of Dupilumab Use for Atopic Dermatitis During Pregnancy: A Systematic Review. *J Cutan Med Surg.* 29(1):51-55
- Costley M, Murphy B. 2022. Severe atopic dermatitis treated successfully with dupilumab throughout pregnancy. 2022. *Clin Exp Dermatol* 47(5):960-961
- Di Lernia V, Peccerillo F, 2024. Long-Term Follow-Up of Dupilumab Treatment During Conception, Pregnancy and Lactation. *Indian J Dermatol.* 69(2):193-195
- Escolà H, et al. 2023. Dupilumab for atopic dermatitis during pregnancy and breastfeeding: Clinical experience in 13 patients. *J Eur Acad Dermatol Venereol.* 37(9):e1156-e1160
- Gracia-Darder I, et al. 2022). Patient with atopic dermatitis, hyper IgE syndrome and ulcerative colitis, treated successfully with dupilumab during pregnancy. *Dermatol Ther.* 35(2) e15247
- Hong N, et al. 2024. Atopic dermatitis treated safely with dupilumab during pregnancy and lactation: A case series of four patients. *Australas J Dermatol.* 00:1-4
- Heilskov S, et al. 2020. Immunosuppressive and Immunomodulating Therapy for Atopic Dermatitis in Pregnancy: An Appraisal of the Literature. *Dermatol Ther (Heidelb)* 10(6): 1215-1228
- Jang W, et al. 2025. Use of Biologics to Treat Asthma during Pregnancy and Adverse Events in Pregnant Women and Newborns: A Global Pharmacovigilance Analysis. *Int Arch Allergy Immunol.* 186(9):875-888
- Kage P, et al. 2020. A case of atopic eczema treated safely with dupilumab during pregnancy and lactation. *Journal of the European Academy of Dermatology and Venereology: JEADV,* 34(6), e256-e257
- Kage P, et al. 2021. Case of atopic eczema treated with dupilumab throughout conception, pregnancy, and lactation. *J Dermatol* 48(10):E484-E485
- Khamisy-Farah R, et al. 2021. Safety profile of Dupilumab during pregnancy: a data mining and disproportionality analysis of over 37,000 reports from the WHO individual case safety reporting database

- (VigiBase™) Eur Rev Med Pharmacol Sci. 25(17):5448-5451
- Lobo Y, et al. 2021. Atopic Dermatitis Treated Safety with Dupilumab during Pregnancy: A Case Report and Review of the Literature. Case Rep Dermatol. 13:248-256
- Metko, D. et al. 2024. A real-world study of dupilumab in patients with atopic dermatitis including patients with malignancy and other medical comorbidities. JAAD Int. 15:5-11
- Mian M, et al. 2020. Dupilumab for the treatment of severe atopic dermatitis in a pregnant patient: A case report. JAAD Case Reports. 6(10), 1051-1052
- Napolitano M, et al. 2021. New emergent therapies for atopic dermatitis: A review of safety profile with respect to female fertility, pregnancy, and breastfeeding. Dermatol Ther. 34:e14475
- Preuß S, et al. 2025. Dupilumab shows no elevated risk for maternal adverse pregnancy outcomes: A propensity-matched cohort study. J Eur Acad Dermatol Venereol. 39(9):1576-1587
- Riquelme-Mc Loughlin C, Mascaró JM Jr. 2021. Treatment of pemphigoid gestationis with dupilumab. Clin Exp Dermatol. 46(8):1578-1579
- Sánchez-García V, et al 2025. Safety of dupilumab therapy for atopic dermatitis during pregnancy: A systematic review and meta-analysis. Acta Derm Venereol.105:adv41307
- Sanofi-Aventis U.S. Dupixent® Prescribing Information. Available online at <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?>. Accessed on 23 June 2026
- Vestergaard C, et al. 2019. European task force on atopic dermatitis position paper: treatment of parental atopic dermatitis during preconception, pregnancy and lactation period. J Eur Acad Dermatol Venereol. 33(9):1644-1659

أستلثة؛ اتصل بـ 866.626.6847 اقم بإرسال رسالة نصية 855.999.3525 البريد الإلكتروني أو الدردشة على MotherToBaby.org.

Disclaimer: MotherToBaby Fact Sheets are meant for general information purposes and should not replace the advice of your health care provider. MotherToBaby is a service of the non-profit Organization of Teratology Information Specialists (OTIS). Copyright by OTIS, 1 يونيو، 2026.

(®Aciclovir (Zovirax®) / Valaciclovir (Valtrex

:Selected References

- Barrau M, et al. 2023. What should we know about drug levels and therapeutic drug monitoring during

- .pregnancy and breastfeeding in inflammatory bowel disease under biologic therapy? J Clin Med; 12(23):7495
- Bell C, et al. 2021. Systematic review and meta-analysis: Safety of vedolizumab during pregnancy in patients with inflammatory bowel disease. J Gastroenterol Hepatol; 36(10):2640-2648
- Caballero-Mateos AM, et al. 2023. IBD and motherhood: A journey through conception, pregnancy and beyond. J Clin Med; 12(19):6192
- Chambers CD, et al. 2026. Birth outcomes in women who have taken vedolizumab in pregnancy: Results from the vedolizumab pregnancy exposure registry. Am J Gastroenterol; 1;121(3):720-732
- Chugh R. 2023. Maternal and neonatal outcomes in vedolizumab and ustekinumab exposed pregnancies: Results from the PIANO registry. Am J Gastroenterol; 1;119(3):468-476
- Ding N, et al. 2022. Management of biologics in pregnant, lactating patients with inflammatory bowel disease and the impact on neonatal vaccination: A systematic review of clinical practice guidelines and consensus statements. J Clin Pharm Ther; 47(12):1952-1965
- Ernest-Suarez K, et al. 2025. Live rotavirus vaccination appears low-risk in infants born to mothers with inflammatory bowel disease on biologics. Clin Gastroenterol Hepatol; 23(5):835-845
- Gisbert JP, et al. 2023. Vaccines in children exposed to biological agents in utero and/or during breastfeeding: Are they effective and safe? J Crohns Colitis; 17 (6):995-1009
- Gisbert JP, et al. 2020. Safety of new biologics (vedolizumab and ustekinumab) and small molecules (tofacitinib) during pregnancy: A review. Drugs; 80(11):1085-1100
- Honap S, et al. 2023. An update on the safety of long-term vedolizumab use in inflammatory bowel disease. Expert Opin Drug Saf; 22 (9):767-776
- Julsgaard M, et al. 2017. Vedolizumab safety in pregnancy and newborn outcomes. Gut; 66(10):1866-1867
- Julsgaard M, et al. 2018. Vedolizumab concentrations in the breast milk of nursing mothers with inflammatory bowel disease. Gastroenterology; 154: 752-765
- Lahat A, et al. 2018. Vedolizumab levels in breast milk of nursing mothers with inflammatory bowel disease. J Crohns Colitis; 12:120-3
- Lamb CA, et al. 2019. British Society of Gastroenterology consensus guidelines on the management of inflammatory bowel disease in adults. Gut; 68(Suppl 3):s1-s106
- Laube R, et al. 2021. Use of medications during pregnancy and breastfeeding for Crohn's disease and ulcerative colitis. Expert Opin Drug Saf; 20(3):275-292
- Mahadevan U, et al. 2017. Vedolizumab exposure in pregnancy: Outcomes from clinical studies in inflammatory bowel disease. Aliment Pharmacol Ther; 45:941-950
- Mahadevan U, et al. 2017. Editorial: vedolizumab in pregnancy – is gut selectivity as good for baby as it is for mum? Authors' reply. Aliment Pharmacol Ther; 45(9):1284
- Meyer A, et al. 2025. Safety of vedolizumab and ustekinumab compared with anti-TNF in pregnant women with inflammatory bowel disease. Clin Gastroenterol Hepatol; 23(1):144-153.e22
- Mitrova K, et al. 2022. Safety of ustekinumab and vedolizumab during pregnancy-Pregnancy, neonatal, and infant outcome: A prospective multicentre study. J Crohn's Colitis; 16(12):1808-1815
- Moens A, et al. 2019. Outcome of pregnancies in female patients with inflammatory bowel diseases treated with vedolizumab. J Crohns Colitis; 13(1):12-13
- Moens A, et al. 2020. Pregnancy outcomes in inflammatory bowel disease patients treated with vedolizumab, anti-TNF or conventional therapy: results of the European CONCEIVE study. Aliment Pharmacol Ther; 51(1):129-138
- Nguyen B, et al. 2026. Safety of vedolizumab in pregnancy: An updated systematic review and comprehensive meta-analysis. Journal of Clinical Gastroenterology; 60(3):225-231
- Nielsen OH. 2022. Biologics for inflammatory bowel disease and their safety in pregnancy: A systematic review and meta-analysis. Clin Gastroenterol Hepatol; 20(1):74-87
- Pingeon O, et al. 2026. Safety of advanced therapies during pregnancy in women with immune-mediated inflammatory diseases: a systematic review and meta-analysis. J Crohns Colitis; 8;20(5):jjag045
- Prentice R, et al. 2025. Vedolizumab and ustekinumab levels in pregnant women with inflammatory bowel

- .disease and infants exposed in utero. Clin Gastroenterol Hepatol; 23(1):124-133.e7
- Pugliese D, et al. 2024. New drugs for the treatment of IBD during conception, pregnancy, and lactation. Dig Liver Dis; 56(2):235-241
- Rosario M, et al. 2017. A review of the clinical pharmacokinetics, pharmacodynamics, and immunogenicity of vedolizumab. Clin Pharmacokinet; 56(11): 1287-1301
- .Sheridan J, et al. 2017. Letter: Vedolizumab in Pregnancy. J Crohns Colitis; 11(8):1025-1026
- Shitrit AB-G A, et al. 2019. Exposure to vedolizumab in IBD pregnant women appears of low risk for mother and neonate: A first perspective comparison study. Am J Gastroenterol; 114(7): 1172-1175
- Sun W, et al. 2021. Vedolizumab concentrations in breast milk: Results from a prospective, postmarketing, milk-only lactation study in nursing mothers with inflammatory bowel disease. Clin Pharmacokinet; 60:811-8
- Takeda Pharmaceuticals America, Inc. 2026. Entyvio product label. Available at <https://dailymed.nlm.nih.gov/dailymed/druginfo.cfm?setid=6e94621c-1a95-4af9-98d1-52b9e6f1949c>

أسئلة؟ اتصل بـ 866.626.6847 اقم بإرسال رسالة نصية 855.999.3525 البريد الإلكتروني أو الدردشة على MotherToBaby.org.

Disclaimer: MotherToBaby Fact Sheets are meant for general information purposes and should not replace the advice of your health care provider. MotherToBaby is a service of the non-profit Organization of Teratology Information Specialists (OTIS). Copyright by OTIS, 1 يونيو، 2026.

(®Aciclovir (Zovirax®) / Valaciclovir (Valtrex®)

:Selected References

- Ahn KH, et al. 2015. Pregnancy outcomes with paternal exposure to finasteride, a synthetic 5-alpha-reductase inhibitor: a case-series. J Clin Toxicol. 5:2
- AlSaad D, et al. 2018. Finasteride use during pregnancy and early neonatal outcome: a case report. Int J Clin Pharm. 40(4): 803-805
- Amory JK, et al. 2007. The effect of 5- alpha-reductase inhibition with dutasteride and finasteride on semen parameters and serum hormones in healthy men. J Clin Endocrinol Metab. 92:1659-1665
- Anderson CA, Clark RL. 1990. External genitalia of the rat: normal development and the histogenesis of 5 alpha-reductase inhibitor-induced abnormalities. Teratology. 42:483-496
- Bowman CJ, et al. 2003. Effects of in utero exposure to finasteride on androgen-dependent reproductive

- .development in the male rat. *Toxicol Sci.* 74:393-406
- Carlin JR, et al. 1992. Disposition and pharmacokinetics of (14C) finasteride after oral administration in humans. *Drug Metab Dispos.* 20(2):148-155
- .Cather JC, et al. 1999. Finasteride – An update and review. *Cutis.* 64:167-172
- Ciotto L, et al. 1995. Clinical and endocrine effects of finasteride, a 5(alpha)-reductase inhibitor, in women with idiopathic hirsutism. *Fertil Steril.* 64:299-306
- Clark RL, et al: Critical developmental periods for effects on male rat genitalia induced by finasteride, a 5(alpha)-reductase inhibitor. *Toxicol Appl Pharmacol.* 119:34-40
- Clark RL, et al. 1990. External genital abnormalities in male rats exposed in utero to finasteride, a 5-alpha reductase inhibitor. *Teratology.* 42:91-100
- Falsetti L, et al. 1997. Treatment of hirsutism by finasteride and flutamide in women with polycystic ovary syndrome. *Gynecol Endocrinol.* 11(4):251-257
- Husmann DA, McPhaul MJ. 1991. Time-specific androgen blockade with flutamide inhibits testicular descent in the rat. *Endocrinology.* 129(3):1409-1416
- Gupta AK, Talukder M. 2022. Topical finasteride for male and female pattern hair loss: Is it a safe and effective alternative? *J Cosmet Dermatol.* 21(5), 1841-1848
- Khera M, et al. 2020. Penile vascular abnormalities in young men with persistent side effects after finasteride use for the treatment of androgenic alopecia. *Transl Androl Urol.* 9(3): 1201-1209
- Kohler C, et al. 2007. Effect of finasteride 5mg (Proscar) on acne and alopecia in female patients with normal serum levels of free testosterone. *Gynecol Endocrinol.* 23:142-145
- Kurzrock EA, et al. 2000. Urethral development in the fetal rabbit and induction of hypospadias: a model for human development. *J Urol.* 164(5):1786-1792
- Laborde E, Brannigan RE. 2010. Effect of 1-mg dose of finasteride on spermatogenesis and pregnancy. *J Androl.* 31(2): e1-2
- Lumachi F, Rondinone R. 2003. Use of cyproterone acetate, finasteride, and spironolactone to treat idiopathic hirsutism. *Fertil Steril.* 79(4):942-946
- Martinez AG, et al. 2011. Effects of in utero exposure to D-004, a lipid extract from Roystonea regia fruits, in the male rat: a comparison with finasteride. *J Med Food.* 14(12):1663-1669
- Nabil I, et al. 2024. Protective role of hesperidin in finasteride-induced testicular toxicity in adult male Wistar rats: Insights into oxidative stress, apoptosis, and ultrastructure of seminiferous tubules. *Reprod Toxicol.* 124:108535
- Overstreet JW, et al. 1999. Chronic treatment with finasteride daily does not affect spermatogenesis or semen production in young men. *J Urol.* 162:1295-1300
- Paris JJ, et al. 2011. Inhibition of 5 alpha reductase activity in late pregnancy decreases gestational length and fecundity and impairs object memory and central progesterone milieu of juvenile rat offspring. *J Neuroendocrinol.* 23(11):1079-1090
- Prahalada S, et al. 1997. Effects of finasteride, a type 2 5-alpha reductase inhibitor, on fetal development in the Rhesus monkey (Macaca mulatta). *Teratology.* 55(2):119-131
- Propecia prescribing information. 2020. Accessible from <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=4e07adb4-7807-47d3-b9a9-2332a3047410#S1> 2.3 Accessed June 2026
- Ricci G, et al. 2012. Finasteride and fertility: case report and review of the literature. *J Drugs Dermatol.* 11(12):1511-1513
- .Rittmaster, RS, 1994. Drug Therapy: Finasteride. *New Engl J Med* 330(2):120-125
- Salvarci A, Istanbuluoglu O. 2013. Secondary infertility due to use of low-dose finasteride. *Int Urol Nephrol.* 45(1):83-85
- Samplaski MK, et al. 2013. Finasteride use in the male infertility population: effects on semen and hormone parameters. *Fertil Steril.* 100:1528-1529
- Santana FFV, et al. 2023. Comparative effects of finasteride and minoxidil on the male reproductive organs: A

- .systematic review of in vitro and in vivo evidence. Toxicol Appl Pharmacol. 478:116710
- Spencer JR, et al. 1991. Effects of flutamide and finasteride on rat testicular descent. Endocrinology. 129(2):741-748
- Teichert M, et al. 2017. Contraindicated use of 5-alpha-reductase inhibitors in women. Br J Clin Pharmacol. 83(2): 429-431
- Wise LD, et al. 1991. Reversible decreases of fertility in male Sprague-Dawley rats treated orally with finasteride, a 5-alpha-reductase inhibitor. Reprod Toxicol. 5:353-362
- Zeng Y, et al. 2025. Safety concerns of paternal drug exposure on fertility, pregnancy and offspring: An analysis based on the FDA adverse event reporting system. Andrology. 13(6):1420-1431

أسئلة؟ اتصل بـ 866.626.6847 اقم بإرسال رسالة نصية 855.999.3525 | البريد الإلكتروني أو الدردشة على MotherToBaby.org.

Disclaimer: MotherToBaby Fact Sheets are meant for general information purposes and should not replace the advice of your health care provider. MotherToBaby is a service of the non-profit Organization of Teratology Information Specialists (OTIS). Copyright by OTIS, 1 يونيو، 2026.

(®Aciclovir (Zovirax®) / Valaciclovir (Valtrex

:Selected References

- Ajiji P, et al. 2021. Investigating the efficacy and safety of metronidazole during pregnancy; A systematic review and meta-analysis. Eur J Obstet Gynecol Repr Biol; X,11,100128
- Boissiere-O'Neill T, et al. 2026. Exposure to Systemic Antimicrobials During Pregnancy and Risk of Miscarriage: A Population-Based Registry Study. BJOG; 133(7):1394-1404
- Burtin P, et al. 1995. Safety of metronidazole in pregnancy: a meta-analysis. Am J Obstet Gynecol; 172(21):525-529
- Cantu JM, Garcia-Cruz D. 1982. Midline facial defect as a teratogenic effect of metronidazole. Birth Defects Orig Artic Ser; 18(3 Pt A):85-88
- Caro-Paton T, et al. 1997. Is metronidazole teratogenic? A meta-analysis. Br J Clin Pharmacol; 44:(2)179-182
- Cram LF, et al. 2015. Genitourinary infections and their association with preterm labor. Am Fam Physician; 65(2), 241-248
- Czeizel AE, Rockenbauer M. 1998. A population-based case-control teratologic study of oral metronidazole. Br

- J Obstet Gynaecol; 105(3):322-327
- Diav-Citrin O, et al. 2001. Pregnancy outcome after gestational exposure to metronidazole: a prospective controlled cohort study. *Teratology*; 63(5):186-192
- Einarson A, et al. 2000. Can we use metronidazole during pregnancy and breastfeeding? Putting an end to the controversy. *Can Fam Physician*; 46:1053-1054
- Finegold SM. 1980. Metronidazole. *Ann Intern Med*; 93:585-587
- Flagyl® Prescribing Information. Available online at: https://www.accessdata.fda.gov/drugsatfda_docs/label/2024/020334s015lbl.pdf. Accessed June 2025
- Gilbert NM, et al. 2013. Urinary tract infection as a preventable cause of pregnancy complications: Opportunities, challenges, and a global call to action. *Glob Adv Health Med*; 2(5):59-69
- Gray MS, et al. 1961. Further observations on metronidazole (Flagyl). *Br J Vener Dis*; 37:278-279
- Heisterberg L, Branebjerg PE. 1983. Blood and milk concentrations of metronidazole in mothers and infants. *J Perinat Med*; 11:114-120
- Kazy Z, et al. 2005. Teratogenic potential of vaginal metronidazole treatment during pregnancy. *Eur J Obstet Gynecol Reprod Biol*; 123(2):174-178
- Koss CA, et al. 2012. Investigation of Metronidazole Use during Pregnancy and Adverse Birth Outcomes. *Antimicrob Agents Chemother*; 56(9): 4800-4805
- Löfmark S, et al. 2010. Metronidazole is still the drug of choice for treatment of anaerobic infections. *Clin Infect Dis*; 50(S1):S16-S23
- Muanda FT, et al. 2017. Use of antibiotics during pregnancy and risk of spontaneous abortion. *CMAJ*; 189(17):E625-E633
- Nwosu OC, Bloom K. The safety of metronidazole in pregnancy. *Health Care Women Int*; 2021;42(4-6):726-738
- Omranipoor A et al. 2020. Association of antibiotics therapy during pregnancy with spontaneous miscarriage: a systematic review and meta-analysis. *Arch Gynecol Obstet*; 302(1): 5-22
- Passmore CM, et al. 1988. Metronidazole excretion in human breastmilk and its effect on suckling neonates. *Br J Clin Pharmacol*; 26(1):45-51
- Piper JM, et al. 1993. Prenatal use of metronidazole and birth defects: no association. *Obstet Gynecol*; 82(3):348-352
- Rosa FW, et al. 1987. Pregnancy outcomes after first trimester vaginitis drug therapy. *Obstet Gynecol*; 69(5):751-755
- Sheehy O, et al. 2015. The use of metronidazole during pregnancy: a review of evidence. *Curr Drug Saf*; 10(2):170-179
- Workowski KA, Bolan GA. 2015. Sexually transmitted diseases treatment guidelines, 2015. *MMWR Recomm Rep*; 64:1-137

