

PUBLICATIONS OF DRS JOHN J. BILLINGS AND EVELYN THOMAS L. BILLINGS
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1. Billings EL, Brown JB, Billings JJ, Burger HG. Symptoms and hormonal changes accompanying ovulation. *Lancet*. 1972 Feb 5;1(7745):282-284.
2. Weissmann MC, Foliaki L, Billings EL, Billings JJ. A trial of the ovulation method of family planning in Tonga. *Lancet*. 1972 Oct 14;2(7781):813-816.
3. Billings JJ. Ovulation method of family planning. *Lancet*. 1972 Dec 2;2(7788):1193-4.
4. Natural family planning. *Med J Aust*. 1978 Oct 21;2(9):436.
5. Billings JJ, Bennett LA. Quality of cervical mucus and Huhner's test. *Br Med J*. 1978 Aug 26;2(6137):640.
6. Billings JJ. Natural family planning. *P N G Med J*. 1978 Dec;21(4):286-7.
7. Currie JN, Billings JJ. Strokes and contraceptive medication. *Med J Aust*. 1980 Jan 26;1(2):58.
8. Billings JJ. Two methods of natural family planning. *Am J Obstet Gynecol*. 1980 Mar 1;136(5):697-8.
9. Cervical mucus: the biological marker of fertility and infertility. *Int J Fertil*. 1981;26(3):182-95.
10. Billings JJ. Ovulation method of contraception. *Med J Aust*. 1981 Jan 10;1(1):45-6.
11. Billings JJ. Natural family planning methods. *Am J Obstet Gynecol*. 1982 May 1;143(1):114-5.
12. Billings JJ. Cervical mucus as a biological sign of fertility and infertility] *Contracept Fertil Sex (Paris)*. 1984 Feb;12(2):379-80. French.
13. Brown JB, Blackwell LF, Billings JJ, Conway B, Cox RI, Garrett G, Holmes J, Smith MA. Natural family planning. *Am J Obstet Gynecol*. 1987 Oct;157(4 Pt 2):1082-9.
14. Billings JJ. Cervical mucus as a biological sign of fertility and infertility] *Contracept Fertil Sex (Paris)*. 1984 Feb;12(2):379-80. French.
15. Billings JJ, Billings E. The Billings Ovulation Method. An update. *Aust Fam Physician*. 1988 Oct;17(10):843-6. No abstract available. Erratum in: *Aust Fam Physician* 1988 Dec;17(12):following 1028.
16. Billings JJ. The validation of the Billings ovulation method by laboratory research and field trials. *Acta Eur Fertil*. 1991 Jan-Feb;22(1):9-15.
17. Billings JJ. Natural family planning. Natural methods have cross cultural appeal. *BMJ*. 1993 Nov 20;307(6915):1357.
18. Billings E., Westmore A.: Scientific research on the Billings Method. *The Billings Method*. Anne O'Donovan Pty Ltd, pp. 198-211, Rev. Ed. 1992.

19. Billings E.L., Westmore A.: Il Metodo Billings. Arnoldo Mondadori Editore, Milano 1991 (IV ed.).
20. Billings E.L., Billings J.J., Catarinich M, Billings: Il Metodo della Ovulazione – Atlante. Libreria della Famiglia, Milano 1979 (IV Ed.).
21. Billings J.J.: Il Metodo dell'Ovulazione. Edizioni Paoline, Cinisiello Balsamo (Milano) 1992.

<p>OTHER PUBLICATIONS ASSESSING THE SCIENTIFIC BASIS OF THE BILLINGS OVULATION METHOD</p>
---

1. Odeblad E. The biophysical aspects of cervical mucus. In: Jordan JA, Singer A, eds. The cervix. London: W.B. Saunders, 1976. p.45-58.
2. Flynn AM, Lynch SS. Cervical mucus and identification of the fertile phase of the menstrual cycle. Br J Obstet Gynaecol. 1976 Aug;83(8):656-9.
3. Odeblad E.: Physical properties of cervical mucus. Adv Exp Med Biol. 1977, 89:217-25.
4. Pepperell RJ, Brown JB, Evans JH. Management of female infertility. Med J Aust. 1977 Dec 3;2(23):774-80.
5. Odeblad E. Cervical factors. Contrib Gynecol Obstet. 1978; 4:132-42.
6. Brown JB, Harrison P, Smith MA. Oestrogen and pregnanediol excretion through childhood, menarche and first ovulation. J Biosoc Sci Suppl. 1978;(5):43-62.
7. Hilgers TW, Abraham GE, Cavanagh D. Natural family planning. I. The peak symptom and estimated time of ovulation. Obstet Gynecol. 1978 Nov;52(5):575-82.
8. Hilgers TW, Prebil AM. The ovulation method-vulvar observations as an index of fertility/infertility. Obstet Gynecol. 1979 Jan;53(1):12-22.
9. Lofdahl CG, Odeblad E. Biophysical variables relating to viscoelastic properties of mucus secretions, with special reference to NMR-methods for viscosity measurement. Eur J Respir Dis Suppl. 1980;110:113-27.
10. Hilgers TW. Two methods of natural family planning. Am J Obstet Gynecol. 1980 Mar 1;136(5):696-7.
11. Brown JB, Harrison P, Smith MA, Burger HG: Correlations between the mucus symptom and the hormonal markers of fertility throughout reproductive life. Ovulation Method Research and Reference Centre of Australia. Melbourne. Advocate Press. 1981.
12. Hilgers TW, Daly KD, Prebil AM, Hilgers SK. Natural family planning III. Intermenstrual symptoms and estimated time of ovulation. Obstet Gynecol. 1981 Aug;58(2):152-5.

13. [Cervical mucus as a biological sign of fertility and infertility] *Contracept Fertil Sex* (Paris). 1984 Feb;12(2):379-80.
14. Ecochard R, Ecochard I, Dumeril B, Guibaud S, Leger A, Dumont M. [Self-examination of cervical mucus to determine the fertile period] *Contracept Fertil Sex* (Paris). 1984 Mar;12(3):475-8. French.
15. Garcea N, Giacchi E, Campo S, Messina M, Panetta V, Moneta E. Canalization of human cervical mucus. *Obstet Gynecol*. 1984 Aug;64(2):164-9.
16. Brown JB, Harrison P, Smith MA. A study of returning fertility after childbirth and during lactation by measurement of urinary oestrogen and pregnanediol excretion and cervical mucus production. *J Biosoc Sci Suppl*. 1985; 9:5-23.
17. Brown JB, Blackwell LF, Billings JJ, Conway B, Cox RI, Garrett G, Holmes J, Smith MA. Natural family planning. *Am J Obstet Gynecol*. 1987 Oct;157(4 Pt 2):1082-9.
18. Odeblad E., Hoglund et Al.: The dynamic mosaic model of the human ovulatory cervical mucus. *Proc. Nord. Fert. Soc.Meeting*. Umea, January 1988.
19. Odeblad E. Biological rhythms: fundamental aspects. *Arctic Med Res*. 1988; 47 Suppl 1:199-200.
20. Odeblad E.: The human cervix: its secretion and fertility. For a responsible transmission of life. *Atti del IV Congresso Internazionale per la Famiglia d'Africa e d'Europa*. a cura di Cappella A. pp 133-143. Roma, 12-15 marzo 1988.
21. Brown JB, Blackwell LF, Holmes J, Smyth K. New assays for identifying the fertile period. *Suppl Int J Gynecol Obstet*. 1989;1:111-22.
22. Odeblad E.: The cervix, the vagina and fertility; in Billings J.J. et Al.: *The Billings Atlas of the Ovulation Method*, pp. 85-94. 5th Ed., 1989. Ovulation Method Research & Reference Centre of Australia - Melbourne.
23. Flynn AM, Docker M, Brown JB, Kennedy KI. Ultrasonographic patterns of ovarian activity during breastfeeding. *Am J Obstet Gynecol*. 1991 Dec;165(6 Pt 2):2027-31.
24. Brown JB, Holmes J, Barker G. Use of the Home Ovarian Monitor in pregnancy avoidance. *Am J Obstet Gynecol*. 1991; 165:2008-2011.
25. Kennedy KI, Parenteau-Carreau S, Flynn A, Gross B, Brown JB, Visness C. The natural family planning-lactational amenorrhea method interface: observations from a prospective study of breastfeeding users of natural family planning. *Am J Obstet Gynecol*. 1991 Dec;165(6 Pt 2):2020-6.
26. Odeblad E. Natural family planning. *Jordmodern*. 1992 Jun;105(6):214-5, 218-9. Swedish.
27. Odeblad E. The discovery of different types of mucus and the Billings Ovulation Method. *Bull. Nat. Fam. Plann, Council of Victoria* 1994, 21(1-34).

28. Visness CM, Kennedy KI, Gross BA, Parenteau-Carreau S, Flynn AM, Brown JB. Fertility of fully breast-feeding women in the early postpartum period. *Obstet Gynecol.* 1997 Feb; 89(2):164-7
29. Odeblad E. Cervical mucus and their functions. *Irish College Physicians and surgeons* 1997, 26: 27-32.
30. Guida M, Tommaselli GA, Palomba S, et al. Efficacy of methods for determining ovulation in a natural family planning program. *Fertil Steril* 1999; 72: 900-4.
31. Brown JB. Ovarian activity and fertility with the Billings Ovulation Method. *Ovulation Method Research and Reference Centre of Australia.* Melbourne, July 2000
32. Ecochard R, Boehringer H, Rabilloud M, Marret H. Chronological aspects of ultrasonic, hormonal, and other indirect indices of ovulation. *BJOG.* 2001 Aug;108(8):822-9.
33. Odeblad E. Investigation on the physiological basis of fertility awareness. *Bull. Ovul. Method Res. Ref. Cent. Aust., Council of Victoria* 2002, 29(1): 2-11.
34. Odeblad E. Morphological characterization of different human cervical mucus types using light and scanning electron microscopy. *Hum Reprod.* 2003 Sep;18(9):1782-9.

**Bibliography performed March 1 2017 from available articles of Dr Pilar Vigil, Dr Len Blackwell and Dr François Chrétien**

**Updated June 2017 with references from Pilar Vigil's book: "Ovulation a sign of health" copy taken by Dr Caroline Terrenoir in a FEMM meeting in Rome, 2017. References of the book are colored in blue.**

Guttmacher AF, Shettles LB. Cyclic changes in cervical mucus and its practical importance. Hum Fertil 1940; 5: 4–9.

Papanicolaou, G. N. A general survey of the vaginal smear and its use in research and diagnosis. Am. J. Obstet. Gynecol. 51, 316–328 (1946).

Cohen MR, Stein IF, Kaye BM. 'Spinnbarkeit': a characteristic of cervical mucus. Significance at ovulation time. Fertil Steril 1952; 3: 201–9.

Brown JB, Bulbrook RD, Greenwood FC. An evaluation of a chemical method for the estimation of oestriol, oestrone and oestradiol-17<sub>β</sub> in human urine. J Endocrinol 1957; 16:41–48.

Brown JB, Bulbrook RD, Greenwood FC. An additional purification step for a method for estimating oestriol, oestrone and oestradiol-17<sub>β</sub> in human urine. J Endocrinol 1957; 16:49–56. Available.

Brown JB. The relationship between urinary oestrogens and oestrogens produced in the body. J. Endocrinol 1957; 16:202–212. Available.

Brown JB. The metabolism of oestrogens and the measurement of the excretory products in urine. J Obstet Gynaecol Br Empire 1959; 66:795–803.

Odeblad E. Micro N.M.R. in high permanent magnetic field. Acta Obstet Gynecol Scand 1961; 45: 127–31.

Odeblad E. Undulations of macromolecules in cervical mucus. Int J Fertil 1962; 7: 313–9.

Beller FK, Vogler H. Die Bestimmung des Ovulationstermines bzw. der praeovulationischen Phase unter besonderer Berücksichtigung der physikalischen Eigenschaften des Zervixschleimes. Z Geburtsh Gynäk 1962; 158: 58–66.

Tampion D, Gibbons RA. Orientation of the spermatozoa in mucus of the cervix uteri. Nature 1962; 194: 381.

Moghissi KS. Cyclic changes of cervical mucus in normal and progestin-treated women. Fertil Steril 1966; 17: 663–75.

Odeblad E. The functional structure of human cervical mucus. Acta Obstet. Gynecol. Scand. (1968) 47: 57–79.

Odeblad E. Biophysical investigations in oral contraception. Acta Obstet. Gynecol. Scand. (1968) 47(Suppl 8): 7–19.

Brown JB, MacLeod SC, Macnaughtan C, Smith MA, Smyth B. A rapid method for estimating oestrogens in urine using a semi-automatic extractor. J Endocrinol 1968; 42:5–15. Available.

Macdonald, R. R. Cyclic changes in cervical mucus. 1. Cyclic changes in cervical mucus as an indication of ovarian function. *J. Obstet. Gynaecol. Br. Commonw.* 76, 1090-1094 (1969).

Barrett SA, Brown JB. An evaluation of the method of Cox for the rapid analysis of pregnanediol in urine by gas-liquid chromatography. *J Endocrinol* 1970; 47(4):471-80. Available.

Moghissi KS, Syner FN. The effect of seminal protease on sperm migration through the cervical mucus. *Int J Fertil* 1970; 15: 43-9.

Yen SSC, Tsai CC: The biphasic pattern in the feedback action ethynyl estradiol on the release of FSH and LH. *J Clin Endocrinol Metab* 1971; 33:882.

Moghissi KS, Syner FN, Evans TN. A composite picture of the menstrual cycle. *Am J Obstet Gynecol* 1972; 114:405-418.

Chrétien FC, Gernigon C, David G, Psychoyos A. The ultrastructure of human cervical mucus under scanning electron microscopy. *Fertil Steril* 1973; 24: 746-57.

Kopito L E, Kosasky H J, Sturgis S H, Lieberman B L, Shwachman H. Water and electrolytes in human cervical mucus. *Fertil. Steril.* (1973) 24: 499-506.

Chrétien FC, Cohen J, Psychoyos A. A scanning electron microscope study of changes in Baboon cervical mucus during the menstrual cycle. *J Reprod Fertil* 1974; 40: 447-9.

Eliezer N. Viscoelastic properties of mucus. *Biorheology* 1974; 11: 61-8.

Chrétien FC. Préparation du mucus cervical à l'observation au microscope électronique à balayage. *J Microsc Biol Cell* 1975; 24: 23-44.

David G, Bisson JP, Czyglick F, Jouannet P. Anomalies morphologiques du sperme humain. (I) Propositions pour un système de classification. *Gynecol Obstet Biol Reprod* 1975; 4: 17-36.

Dodson KS, Coutts JR, MacNaughton MC. Plasma sex steroid and gonadotrophin patterns in human menstrual cycles. *Br J Obstet Gynaecol* 1975; 82:602-614.

Kesserü, E. & Westphal, N. Variación de la relación del ácido sialico y proteína en el moco cervical humano. *Reproduccion* 2, 131 (1975).

Nimrod, A. & Ryan, K. J. Aromatization of androgens by human abdominal and breast fat tissue. *J. Clin. Endocrinol. Metab.* 40, 367- 372 (1975).

Pepperell RJ, Brown JB, Evans JH, Rennie GC, Burger HG. The investigation of ovarian function by measurement of urinary oestrogen and pregnanediol excretion. *Br J Obstet Gynaecol* 1975; 82:321-332.

Chrétien FC, Cohen J, Psychoyos A. L'évolution de la trame ultra-structurale de la glaire cervicale au cours du cycle ovarien: étude au microscope électronique à balayage. *J Gyn Obst Biol Repr* 1976; 5: 313-33.

Litt M, Kahn MA, Work DP. Mucus rheology: relation to structure and function. *Biorheology* 1976; 13: 37–47.

Elstein M, Daunter B: The structure of cervical mucus. In: *The Cervix*. Edited by JA Jordan, A Singer. London, W.B. Saunders, 1976.

Brown JB. Timing of ovulation. *Med J Aust* 1977; 2:780–783.

Chrétien FC, Cohen J. The effects of classical and lowdose oral contraceptives on cervical mucus framework 1977: In: Insler V, Bettendorf G (eds). *Workshop conference on the uterine mucus in reproduction*. Stuttgart: Rottach-Egern, Georg Thieme, 1977: 298–308.

Insler V, Melmed H, Eichenbrenner I, Serr DM, Lunenfeld B. The cervical score. *Int J Gynecol Obstet* 1977; 10: 223–7.

[Macgregor, C., Maldonado, D., Canales, E. S., Soria, J. & Zarate, A. Prolactin responsiveness to trh in amenorrheic women with and without galactorrhea. 3, 333-336 \(1977\).](#)

Vollman RF: The menstrual cycle. In: *Major Problems in Obstetrics and Gynecology*, (1st ed.). Edited by EA Friedman. Toronto, W.B. Saunders, 1977, pp 11–193.

Wolf D P, Blasco L, Khan M A, and Litt M (1977) Human cervical mucus: I. Rheologic characteristics. *Fertil. Steril.* 28: 41–46.

[Wolf, D. P., Blasco, L., Khan, M. A. & Litt, M. Human cervical mucus. II. Changes in viscoelasticity during the ovulatory menstrual cycle. \*Fertil. Steril.\* 28, 47-52 \(1977\).](#)

Wolf D P, Sokoloski J, and Khan M A (1977) Human cervical mucus: III. Isolation and characterization of rheologically active mucin. *Fertil. Steril.* 28: 53–58.

Catt KJ, Pierce JG. Gonadotropin hormones of the adenohypophysis. In: *Reproductive Endocrinology: Physiology, Pathophysiology and Clinical Management*. Edited by SSC Yen, RB Jaffe. Philadelphia, W.B. Saunders, 1978, pp 75–113

Chrétien FC. The evolution of cervical mucus infrastructure in normal cyclic Baboons and in castrated females receiving hormonal supplies. A SEM study. *Acta Obstet Gynecol Scand* 1978; 59: 55–68.

Chrétien FC. Ultrastructure and variations of cervical mucus during pregnancy and the menopause. *Acta Obstet Gynecol Scand* 1978; 57: 337–48.

Chrétien FC, David G. Temporary occlusive effect of human cervical mucus on spermatozoa throughout reproductive life: a scanning electron microscope study. *Eur J Obstet Gynecol Reprod Biol* 1978; 8/6: 307–21.

Elstein M. Cervical mucus: its physiological role and clinical significance. *Br. Med. Bull.* (1978) 34: 83–88.

Hume K. *The Scientific Basis for the Ovulation Method*. (1978) Fourth Annual International Institute of the Ovulation Method, Los Angeles.

Chrétien FC, Engelmann P, Dubois R. The variation of the mean spinnability of human cervical mucus throughout the reproductive life. Automatic measurement and statistical study. *Eur J Obstet Gynec Reprod Biol* 1979; 9/5: 289–97. [Available.](#)

Drake T, Grunert G. A cyclic pattern of sexual dysfunction in the fertility investigation. *Fertil Steril* 1979; 32:542–545.

Chrétien FC, Sureau C, Neau C. Experimental study of cervical blockage induced by continuous low-dose oral progestogens. *Contraception* 1980; 22: 445–56.

Katz DF, Berger SA. Flagellar propulsion of human sperm in human cervical mucus. *Biorheology* 1980; 17: 169–75.

Miyake A, Kawamura Y, Aono T, et al: Changes in plasma LRH during the normal menstrual cycle in women. *Acta Endocrinol (Copenh)* 1980; 93:257.

Renaud RL, Macler J, Dervain I, Ehret MC, Aron C, Plas-Roser S, Spira A, Pollack H. Echographic study of follicular maturation and ovulation during the normal menstrual cycle. *Fertil Steril* 1980; 33:272–276.

WHO Task force on Methods for Determination of the Fertile Period. Temporal relationships between ovulation and defined changes in the concentration of plasma estradiol-17b, luteinising hormone, follicle stimulating hormone and progesterone. I. Probit analysis. *Am J Obstet Gynaecol* 1980; 138:383–390.

[Arrau, J., Bustos, E., Hoecker, G. & Ramos, A. \*Biología de la Reproducción Animal\*. \(Ediciones Andrés Bello, 1981\).](#)

diZerega GS, Hodgen GD. Folliculogenesis in the primate ovarian cycle. *Endocr Rev* 1981; 2:27–49.

[Gershengorn, M. C. et al. \*Thyrotropin-releasing Hormone Stimulation of Prolactin Release from Clonal Rat Pituitary Cells\*. 67, \(1981\).](#)

Holstein AF, Roosen-Runge EC. Atlas of human spermatogenesis. Berlin: Grosse Verlag, 1981.

McNatty KP. Hormonal correlates of follicular development in the human ovary. *Aust J Biol Sci* 1981; 34:249–268.

Adlercreutz H, Brown J, Collins W, Goebelsman U, Kellie A, Campbell H, et al. The measurement of urinary steroid glucuronides as indices of the fertile period in women. *J Steroid Biochem* 1982; 17(6):695–702.

[Elstein, M. \*Cervical mucus: its physiological role and clinical significance\*. \*Adv. Exp. Med. Biol.\* 144, 301-318 \(1982\).](#)

Gaton E, Zejdel L, Bernstein D, Glezerman M, Czernobilsky B, Insler V (1982) The effect of oestrogen and gestagen on the mucus production of human endocervical cells: a histochemical study. *Fertil. Steril.* 38: 580–585.



Katz DF, Brofeldt BT, Overstreet JW, Hanson FW. Alteration of cervical mucus by vanguard human spermatozoa. *J Reprod Fertil* 1982; 65: 171–5.

Barros C, Vigil P, Herrera E, Pérez A, Guadarrama A, Bustos-Obregon E. In vitro interaction between human spermatozoa and human cervical mucus. *Microsc. Electron. Biol. Celular* (1983) 7, 13–18.

Hoff JD, Quigley ME, Yen SS: Hormonal dynamics at midcycle: a reevaluation. *J Clin Endocrinol Metab* 1983; 57:792.

Odeblad E, Ingelman-Sundberg A, Hallström L, Höglund A, Leppänen U, Rudolfsson-Åsberg K, Lisspers K, Perenyi E, Sahlin K, Lindström-Sjögren C. The biophysical properties of cervical-vaginal secretions. *Int Rev Nat Fam Plann* 1983; 7:1-56.

Sowers, J. R., Viosca, S. P., Windsor C. & Korenman, S. G. Influence of dopaminergic mechanisms on 24-hour secretory patterns of prolactin, luteinizing hormone and testosterone in recumbent men. *J. Endocrinol. Investig. Off. J. Ital. Soc. Endocrinol.* 6, 9-15 (1983).

Barros C, Vigil P, Herrera E, Argüello B, and Walker R (1984) Selection of morphologically abnormal sperm by human cervical mucus. *Arch. Androl. Suppl*, 12: 95–107.

Ferin MD, Van Vugt D, Warlaw S: The hypothalamic control of the menstrual cycle and the endogenous opioid peptides. *Rec Prog Horm Res* 1984; 40:441.

Higuchi, K. et al. Prolactin has a direct effect on adrenal androgen secretion. *J. Clin. Endocrinol. Metab.* 59, 714-8 (1984)

Singh M, Baxena B, Rathnam P. Clinical validation of enzyme immunoassay of human luteinizing hormone (hLH) in the detection of the pre-ovulatory luteinizing hormone (LH) surge in urine. *Fertil Steril* 1984; 41:210–217.

Barros C, Argüello B, Jedlicki A, Vigil P, and Herrera E (1985). Scanning electron microscopy study of human cervical mucus. *Gamete Res.* 1985; 12:85-89.

Collins W. Hormonal indices of ovulation and the fertile period. *Adv Contracept* 1985; 1:279–294.

Gagner, J.-P. & Drouin, J. Opposite regulation of pro-opiomelanocortin gene transcription by glucocorticoids and CRH. *Mol. Cell. Endocrinol.* 40, 25-32 (1985).

Lincoln DW, Fraser HM, Lincoln GA: Hypothalamic pulse generators. *Rec Prog Horm Res* 1985; 41:369.

Manolagas, S. C., Provvedini, D. M. & Tsoukas, C. D. Interactions of 1,25-dihydroxyvitamin D<sub>3</sub> and the immune system. *Mol. Cell. Endocrinol.* 43, 113-122 (1985).

Poon, W. W. & McCoshen, J. A. Variances in mucus architecture as a cause of cervical factor infertility. *Fertil. Steril.* 44, 361-365 (1985).

Ringstrom, S. J. & Schwartz, N. B. Cortisol Suppresses The LH, But Not The FSH, Response To Gonadotropin-Releasing Hormone After Orchidectomy. *Endocrinology* 116, 472-474 (1985)

Conway B. Evaluation of a home test kit for the measurement of urinary pregnanediol-3-glucuronide for application to natural family planning. Melbourne: Monash University; 1986 p. 44.

Ishijima S, Oshio S, Mori H. Flagellar movement of human spermatozoa. *Gam Res* 1986; 13: 185–97.

Kass-Annese B, and Danzer H. (1986) *The Fertility Awareness Workbook* (Printed Matter, Atlanta, GA).

Lapertosa G, Baracchini P, Fulcheri E, and Tanzi R. Patterns of mucous secretion in normal and pathological conditions of the endocervix. *Eur. J. Gynaecol. Oncol.* (1986) 7: 113–119.

Gross BA. Natural family planning indicators of ovulation. *Clin Reprod Fertil* 1987; 5:91–117.

Silberberg A. A model for mucus glycoprotein structure. *Biorheology* 1987; 24: 605–14.

Brown JB, Blackwell LF, Cox RI, Holmes JM, Smith MA. Chemical and homogeneous enzyme immunoassay methods for the measurement of estrogens and pregnanediol and their glucuronides in urine. *Prog Clin Biol Res* 1988; 285:119–138.

Sufi S, Ahsan R, Crocombe KJ, Shapton RA. *Laboratory method manual for radioimmunoassay of pregnanediol-3<sub>β</sub>-glucuronide and estrone-3-glucuronide*. 1st ed. London; 1988. p. 15–22.

Volochine B, Cazabat AM, Chrétien FC, Kuntsmann JM. Structure of human cervical mucus from light scattering measurements. *Hum Reprod* 1988; 3: 577–82.

Brown JB, Blackwell LF, Holmes J, Smyth K. New assays for identifying the fertile period. *Int J Gynecol Obstet—Suppl* 1989; 1:111–122.

Brown JB, Blackwell LF. *The Ovarian Monitor instruction manual*. Canberra: National Library of Australia; 1989. p. 1–37.

Chrétien FC, Berthou J. A new crystallographic approach to fern-like microstructures in human ovulatory cervical mucus. *Hum Reprod* 1989; 4: 359–8.

Collins WP. Biochemical indices of potential fertility. *Suppl Int J Gynecol Obstet* 1989; 1:35–43.

Gilks C B, Young R H, Aguirre P, DeLellis R A, and Scully R E (1989) Adenoma malignum (minimal deviation adenocarcinoma) of the uterine cervix. A clinicopathological and immunohistochemical analysis of 26 cases. *Am. J. Surg. Pathol.* 13: 717–729.

Johannisson E, Oberholzer M, Swahn ML, et al: Vascular changes in the human endometrium following the administration of the progesterone antagonist RU 486. *Contraception* 1989; 39:103.

Silberberg A (1989) Mucus glycoproteins, its biophysical and gelforming properties. In: Chantler E and Ratcliffe N A (eds), *Mucus and Related Topics*, pp 43–63 (Society for Experimental Biology, Cambridge).

Vigil P, and Valdez E. Bases científicas de la planificación natural de la familia. *Actual Ginecol. Obstet.* (1989) 3: 59–67.

Yudin A I, Hanson F W, and Katz D F. Human cervical mucus and its interaction with sperm: a fine-structural view. *Biol. Reprod.* (1989) **40**: 661–671.

Krasnow, J. S., Hickey, G. J. & Richards, J. S. Regulation of aromatase mRNA and estradiol biosynthesis in rat ovarian granulosa and luteal cells by prolactin. *Mol. Endocrinol.* 4, 13-21 (1990).

Takefman J, Brender W, Boivin J, Tulandi T. Sexual and emotional adjustment of couples undergoing infertility investigation and the effectiveness of preparatory information. *J Psychosom Obstet Gynecol* 1990;11:275–290.

Thornton SJ, Pepperell RJ, Brown JB. Home monitoring of gonadotropin ovulation induction using the Ovarian Monitor. *Fertil Steril* 1990; 54(6):1076–82.

Verdugo, P. Goblet cells secretion and mucogenesis. *Annu. Rev. Physiol.* 52, 157-176 (1990).

Brown JB, Holmes J, Barker G. Use of the Home Ovarian Monitor in pregnancy avoidance. *Am J Obstet Gynecol* 1991; 165:2008–2011.

Chrétien FC, Dubois R. Effect of Nomegestrol acetate on spinability, ferning and mesh dimension of midcycle cervical mucus. *Contraception* 1991; 43: 55–65.

Foecking, E. M., McDevitt, M. A., Acosta-Martínez, M., Horton, T. H. & Levine, J. E. Neuroendocrine consequences of androgen excess in female rodents. *Horm. Behav.* 53, 673-692 (2008).

Holick, M. F. & Chen, T. C. Vitamin D deficiency: a worldwide problem with health consequences. *Am. J. Clin. Nutr.* 87, 1080S-6S (2008).

Koike, K. et al. Effect of prolactin on the secretion of hypothalamic GnRH and pituitary gonadotropins. *Horm. Res.* 35, 5-12 (1991).

Vigil P, Pérez A, Neira J, Morales P. Post-partum cervical mucus: biological and rheological properties. *Hum Reprod* 1991; 6:457-479.

Yamagata S, Yamamoto K, Tsuchida S, Kawamura N, Nakamura T, and Sugawa T (1991) Clinicopathological, ultrastructural and immunohistochemical study on adenoma malignum of the uterine cervix. *Nippon Sanka Fujinka Gakkai Zasshi* **43**: 57–64.

Yen SSC: The human menstrual cycle. In: *Reproductive Endocrinology: Physiology, Pathophysiology and Clinical Management*, (2nd ed.). Edited by SSC Yen, RB Jaffe. Philadelphia, W.B. Saunders, 1991, pp 273–308.

Munro CJ, Stabenfeldt GH, Cragun JR, Addiego LA, Overstreet JW, Lasley BL. Relationship of serum estradiol and progesterone concentrations to the excretion profiles of their major urinary

metabolites as measured by enzyme immunoassay and radioimmunoassay. *Clin Chem* 1991; 37:838–844.

Kopitzke E, Berg B, Wilson J, Owens D. Physical and emotional stress associated with components of the infertility investigation: perspectives of professionals and patients. *Fertil Steril* 1991; 55:1137–1143.

Blackwell LF, Brown JB. Application of time-series analysis for the recognition of increases in urinary estrogens as markers for the beginning of the potentially fertile period. *Steroids* 1992; 57(11):554–562.

Boivin J, Takefman J, Brender W, Tulandi T. The effects of female sexual response in coitus on early reproductive processes. *J Behav Med* 1992; 15:509–518.

Hilgers T, Daly K, Prebil A, Hilgers S. Cumulative pregnancy rates in patients with apparently normal fertility and fertility-focused intercourse. *J Reprod Med* 1992; 37:864–866.

Sasaki A (1992) Clinicopathological and histochemical study of adenoma malignum of the uterine cervix. *Nippon Sanka Fujinka Gakkai Zasshi* 44: 427–432.

Vigil P, Garcia M, Villalobos T, Córdova A, and Morales P (1992) Predicción de ovulación en mujeres normales. *Rev. Latinoam. Esteril. Fertil.* 5: 31–35.

Bergh, C., Carlsson, B., Olsson, J. H., Selleskog, U. & Hillensjo, T. Regulation of androgen production in cultured human thecal cells by insulin-like growth factor I and insulin. *Fertil. Steril.* 59, 323-331 (1993).

Fortune, J. E. Follicular dynamics during the bovine estrous cycle: A limiting factor in improvement of fertility? *Anim. Reprod. Sci.* 33, 111-125 (1993).

Lunenfeld B, Insler V: Follicular development and its control. *Gynecol Endocrinol* 1993; 7:285-291.

Morales P, Rocco M, Vigil P: Human cervical mucus: relationship between biochemical characteristics and ability to allow migration of spermatozoa. *Hum Reprod* 1993; 8:78-83.

Parodi, M. B. & Giusto, D. D. Ocular fluid ferning test and fractals. *Ophthalmic Res.* 25, 307 (1993).

Roth B. Fertility awareness as a component of sexuality education. Preliminary research findings with adolescents. *Nurse Pract.* (1993) 18: 40–48.

Stephenson LA, Kolka MA. Thermoregulation in women. *Exercise Sport Sci Rev* 1993;21:231–262.

Vigil P, Rodriguez-Rigau L, Palacios X, et al: Diagnosis of menstrual disorders in adolescence. In: *Reproductive Medicine*. Frajese G, Steinberger E, Rodriguez-Rigau LJ, editors. New York, Raven Press, 1993, pp 149–154.

Lewis JG, Manley L, Whitlow JC, Elder PA. Re-examining steroid hormone metabolites as ovulation markers using monoclonal antibodies. *Steroids* 1994; 59:288–291.

Odeblad, E. The Discovery of Different Types of Cervical Mucus and the Billings Ovulation Method. *Bull. Nat. Fam. Plan. Coun. Vic.* 1-31(1994).

Vigil P, Rubio V, Prado S, Socías T, Salgado A M, and Morales P. Migration of human sperm through the Fallopian tube. (1994) in vitro. In: Rodriguez-Armas O, Baumgartner W, and Burgos-Briceño L (eds), *Fertility and Sterility: Progress in Research and Practice. The Proceedings of the XIV World Congress on Fertility and Sterility*, pp. 19–30 (Parthenon Publishing Group, New York).

Bansil R, Stanley E, and LaMont J T (1995) Mucin biophysics. *Annu. Rev. Physiol.* 57: 635–657.

Boivin J, Takefman J. Stress level across stages of in vitro fertilisation in subsequently pregnant and nonpregnant women. *Fertil Steril* 1995; 64:802–810.

Cavero C. Using an ovarian monitor as an adjunct to natural family planning. *J Nurse Midwifery* 1995; 40:269–276.

Dunaif, A., Xia, J., Book, C. B., Schenker, E. & Tang, Z. Excessive insulin receptor serine phosphorylation in cultured fibroblasts and in skeletal muscle: A potential mechanism for insulin resistance in the polycystic ovary syndrome. *J. Clin. Invest.* 96, 801-810 (1995).

Ehrman, D., Barnes, R. & Rosenfield, R. Polycystic Ovary Syndrome as a Form of Functional Ovarian Hyperandrogenism Due to Dysregulation of Androgen Secretion. *Endocr. Rev.* 16, (1995).

Goodyear, L. J. et al. Insulin receptor phosphorylation, insulin receptor substrate-1 phosphorylation, and phosphatidylinositol 3-kinase activity are decreased in intact skeletal muscle strips from obese subjects. *J. Clin. Invest.* 95, 2195-2204 (1995).

Gore MA, Nayudu PL, Vlasisavljevic V, Thomas N. Prediction of ovarian cycle outcome by follicular characteristics, stage 1. *Hum Reprod* 1995; 10:2313–2319.

Kennedy KI, Gross BA, Parenteau-Carreau S, Flynn AM, Brown JB, Visness CM. Breastfeeding and the symptothermal method. *Stud Family Plan* 1995; 26(2):107–15.

Kesner JS, Knecht EA, Krieg EF Jr. Stability of urinary female reproductive hormones stored under various conditions. *Reprod Toxicol* 1995; 9:239–244.

Martinez AR, Zinaman MJ, Jennings VH, Lamprecht VM. Prediction and detection of the fertile period: the markers. *Int J Fertil Menopausal Stud* 1995; 40:139–155.

Odeblad E (1995) The spread out technique. Advantages, pitfalls and biological interpretation. In: *Actas IV Symposium Internacional de Métodos Naturales*, ed. by Asociación Española de Profesores de Planificación Familiar Natural, pp 295–303 (Esin, Barcelona).

Lee, G. H. et al. Abnormal splicing of the leptin receptor in diabetic mice. *Nature* 379, 632-635 (1996).

Roche JF: Control and regulation of folliculogenesis – a symposium in perspective. *Rev Reprod* 1996; 1:19

Rosenfield, R. L. Editorial: Evidence that idiopathic functional adrenal hyperandrogenism is caused by dysregulation of adrenal steroidogenesis and that hyperinsulinemia may be involved. *J. Clin. Endocrinol. Metab.* 81, 878-880 (1996).

Schwartz, M. W., Seeley, R. J., Campfield, L. A., Burn, P. & Baskin, D. G. Identification of targets of leptin action in rat hypothalamus. *J. Clin. Invest.* 98, 1101-6 (1996).

Armstrong DG, Webb R: Ovarian follicular dominance: the role of intraovarian growth factors and novel proteins. *Rev Reprod* 1997; 2:139.

Couce, M. E., Burguera, B., Parisi, J. E., Jensen, M. D. & Lloyd, R. V. Localization of leptin receptor in the human brain. *Neuroendocrinology* 66, 145-150 (1997).

Gipson I K, Ho S B, Spurr-Michaud S J, Tisdale A S, Zhan Q, Torlakovic E, Pudney J, Anderson D J, Toribara N W, and Hill J A. Mucin genes expressed by human female reproductive tract epithelia. *Biol. Reprod.* (1997) 56: 999–1011.

Panitsa-Fafli, C. & Batrinos, M. L. Late-Onset Congenital Adrenal Hyperplasia. *Ann. new york Acad. Sci.* 816, 230-234 (1997).

Sanders K, Bruce N. A prospective study of psychosocial stress and fertility in women. *Hum Reprod* 1997; 12:2324–2329.

Zhang, F. et al. Crystal structure of the obese protein leptin-E100. *Nature* 387, 206-209 (1997).

Apter, D. How possible is the prevention of polycystic ovary syndrome development in adolescent patients with early onset of hyperandrogenism. [Review] [30 refs]. *J. Endocrinol. Invest.* 21, 613-617 (1998).

Blackwell LF, Brown JB, Cooke D. Definition of the potentially fertile period from urinary steroid excretion rates. Part II. A threshold value for pregnanediol glucuronide as a marker for the end of the potentially fertile period in the human menstrual cycle. *Steroids* 1998; 63:5–13.

Jones, G. Strugnell, S. A. & DeLuca, H. F. Current understanding of the molecular actions of vitamin D. *Physiol. Rev.* 78, 1193-1231 (1998).

Hume K, Odeblad E. The biology of the cervix. *Bull. Ovul. Method Res. Ref. Cent. Aust* (1998) 25: 17–24.

Menárguez M. Caracterización Morfológica de Diversos Tipos de Moco Cervical Humano Mediante Microscopia de Luz y Microscopia Electrónica de Barrido. (1998) Doctoral Thesis (Universidad de Murcia, Murcia).

Miki K, Sudo A. Effect of urine pH, storage time and temperature on stability of catecholamines, cortisol and creatinine. *Clin Chem* 1998; 44:1759–1762.



Milad M, Klock S, Moses S, Chatterton R. Stress and anxiety do not result in pregnancy wastage. *Hum Reprod* 1998; 13:2296–2300.

Misao R, Nakanishi Y, Iwagaki S, et al: Expression of progesterone receptor isoforms in corpora lutea of human subjects: correlation with serum estrogen and progesterone concentrations. *Mol Hum Reprod* 1998; 4:1045.

Mizuno, T. M. et al. Hypothalamic pro-opiomelanocortin mRNA is reduced by fasting in ob/ob and db/db mice, but is stimulated by leptin. *Diabetes* 47, 294-297 (1998).

Price, M. L., Curtis, A. L., Kirby, L. G., Valentino, R.J. & Lucki, I. Effects of corticotropin-releasing factor on brain serotonergic activity. *Neuropsychopharmacology* 18, 492-502 (1998).

Elias, C. F. et al. Leptin differentially regulates NPY and POMC neurons projecting to the lateral hypothalamic area. *Neuron* 23, 775-786 (1999).

Hjollund N, Jenson T, Bonde J, Henriksen T, Andersson A, Kolstad H, Skakkebaek N, Olsen J. Distress and reduced fertility: a follow-up study of first-pregnancy planners. *Fertil Steril* 1999; 72:47–53.

Gejman, R., Gallegos, M., Oddó, H. & A., P. in *Obstetricia* (eds. Pérez Sánchez, A. & Donoso, E.) 19-44 (Editorial Mediterraneo, 1999).

Gipson I K, Spurr-Michaud S, Moccia R, Zhan Q, Toribara N, Ho SB, Gargiulo A R, and Hill J A (1999) MUC4 and MUC5B transcripts are the prevalent mucin messenger ribonucleic acids of the human endocervix. *Biol. Reprod.* 60: 58–64.

Krieg EF Jr, Kesner JS, Knecht EA. An algorithm for detecting features of the hormone profiles of the human menstrual cycle. *Comput Biol Med* 1999; 29:229–242.

Rivera R, Yacobson I, and Grimes D (1999) The mechanism of action of hormonal contraceptives and intrauterine contraceptives devices. *Am. J. Obstet. Gynecol.* 181: 1263–1269.

Vigil P, Riquelme R, Pinto E, and Ceric F (1999) Secreción cervical: relación entre las características bioquímicas y la penetración de los espermatozoides. *Rev. Chil. Obstet. Ginecol.* 64: 228–232.

Warren, M. P. et al. Functional hypothalamic amenorrhea: Hypoleptinemia and disordered eating. *J. Clin. Endocrinol. Metab.* 84, 873-877 (1999).

Ahima, R. S., Saper, C. B., Flier, J. S. & Elmquist, J. K. Leptin regulation of neuroendocrine systems. *Front. Neuroendocrinol.* 21, 263-307 (2000).

Behre HM, Kuhlage J, Gassner C, Sonntag B, Schem C, Schneider HP, et al. Prediction of ovulation by urinary hormone measurements with the home use ClearPlan Fertility Monitor: comparison with transvaginal ultrasound scans and serum hormone measurements. *Hum Reprod* 2000; 15(12):2478–82.

Brown J: Ovarian activity and fertility and the Billings ovulation method. In: *Studies on Human Reproduction*. Melbourne, Ovul Meth Res Ref Centre Australia, 2000.

Brüning, J. C. et al. Role of brain insulin receptor in control of body weight and reproduction. *Science* (80-). 289, 2122-2125 (2000).

Burguera, B. et al. The Long Form of the Leptin Receptor (OB-Rb) Is Widely Expressed in the Human Brain. *Neuroendocrinology* 71, 187-195 (2000).

Ceric F, Riquelme R, Pinto E, and Vigil P. Scanning electron microscopy study of cervical mucus during the periovulatory period. *J. Physiol. (London)* (2000) **523**: 125P–125P.

Doufas, A. G. & Mastorakos, G. The hypothalamic-pituitary-thyroid axis and the female reproductive system. *Ann. N. Y. Acad. Sci.* 900, 65-76 (2000).

Eggert-Kruse W, Botz I, Pohl S, Rohr G, and Strowitzki T. Antimicrobial activity of human cervical mucus. *Hum. Reprod.* (2000) 15:778–784.

Freeman, M. E., Kanyicska, B., Lerant, A. & György, N. Prolactin: Structure, function, and regulation of secretion. *Physiol. Rev.* 80, 1523-1631 (2000).

Kandel, E. R., Schwarz, J. H., Jessell, T. M., Siegelbaum, S. A. & Hudspeth, A. J. Principles of neural science. (McGraw Companies, 2000).

Kato, S. The function of vitamin D receptor in vitamin D action. *J. Biochem.* 127, 717-22 (2000).

Kinuta, K. et al. Vitamin D is an important factor in estrogen biosynthesis of both female and male gonads. *Endocrinology* 141, 1317-1324 (2000).

Krassas, G. E. Thyroid disease and female reproduction. *Fertil. Steril.* 74, 1063-1070 (2000).

Wilcox A, Dunson D, Baird D. The timing of the ‘fertile window’ in the menstrual cycle: day specific estimates from a prospective study. *Br Med J* 2000; 321:1259–1262.

Zähringer, S. et al. The influence of hyperthyroidism on the hypothalamic-pituitary-gonadal axis. *Exp. Clin. Endocrinol. Diabetes* 108, 282-289 (2000).

Zhang, J. & Lazar, M. A. The mechanism of action of the thyroid hormones. *Annu. Rev. Physiol.* 62, 439-466 (2000).

Christian, M. et al. Interferon- $\gamma$  Modulates Prolactin and Tissue Factor Expression in Differentiating Human Endometrial Stromal Cells. *Endocrinology* 142, 3142-3151 (2001).

Eppig, J. J. Oocyte control of ovarian follicular development and function in mammals. *Reproduction* 122, 829-838 (2001).

Gipson I K, Moccia R, Spurr-Michaud S, Argüeso P, Gargiulo AR, Hill J A, Offner G D, and Keutmann H T. The amount of MUC5B mucin in cervical mucus peaks at midcycle. *J. Clin. Endocrinol. Metab.* (2001) 86: 594–600.



- Gipson, I. K. Mucins of the human endocervix. *Front. Biosci.* 6, DI245-DI255 (2001).
- Miller, K. K. Androgen deficiency in women. *J. Clin. Endocrinol. Metab.* 86, 2395-2401 (2001).
- Moniaux N, Escande F, Porchet N, et al: Structural organization and classification of the human mucin genes. *Front Biosci* 2001; 6:D1192.
- Nussey, S. & Whitehead, S. in *Endocrinology: An integrated Approach* (2001).
- Rosic, M. A., Pantovic, S. B., Lucic, A. P., Ribarac-stepic, N. & Andjelkovic, I. Z. Kinetics of thyroxine (T4) and triiodothyronine (T3) transport in the isolated rat heart. (2001).
- Sabuncu, T., Arikan, E., Tasan, E. & Hatemi, H. Comparison of the effects of cabergoline and bromocriptine on prolactin levels in hyperprolactinemic patients. *Intern. Med.* 40, 857-861 (2001).
- Saltiel, A. R. & Kahn, C. R. Insulin signalling and the regulation of glucose and lipid metabolism. *Nature* 414, 799-806 (2001).
- Alliende ME. Mean versus individual hormonal profiles in the menstrual cycle. *Fertil Steril* 2002; 78:90–95.
- Argüeso P, Spurr-Michaud S, Tisdale A, and Gipson I K. Variation in the amount of T antigen and N-acetyllactosamine oligosaccharides in human cervical mucus secretions with the menstrual cycle. (2002) *J. Clin. Endocrinol. Metab.* 87: 5641–5648.
- Burger, H. G. Androgen production in women. *Fertil. Steril.* 77 Suppl 4, S3-S5 (2002).
- Gnoth C, Frank-Herrmann P, Freundl G. Opinion: natural family planning and the management of infertility. *Arch Gynecol Obstet* 2002; 267:67–71.
- Heinlein, C. A. & Chang, C. The Roles of Androgen Receptors and Androgen-Binding Proteins in Nongenomic Androgen Actions. *Mol. Endocrinol.* 16, 2181-2187 (2002).
- Hiort, O. Androgens and Puberty. *Best Pract. Res. Clin. Endocrinol. Metab.* 16, 31-41 (2002).
- Margetic, S., Gazzola, C., Pegg, G. G. & Hill, R. A. Leptin: a review of its peripheral actions and interactions. *Int. J. Obes. Relat. Metab. Disord.* 26, 1407-1433 (2002).
- McCartney, C. R., Eagleson, C. A. & Marshall, J. C. Regulation of Gonadotropin Secretion: Implications for Polycystic Ovary Syndrome SECRETION IN THE NORMAL. 20, 317-326 (2002).
- Murase, M., Uernura, T., Kondoh, Y., Funabashi, T. & Hirahara, F. Role of corticotropin-releasing hormone in ovarian steroidogenesis. *Endocrine* 18, 255-260 (2002).

- Notelovitz, M. Androgen effects on bone and muscle. *Fertil. Steril.* 77, S34-S41(2002).
- Obici, S., Feng, Z., Karkanias, G., Baskin, D. G. & Rossetti, L. Decreasing hypothalamic insulin receptors causes hyperphagia and insulin resistance in rats. *Nat. Neurosci.* 5, 566-572 (2002).
- Ruiz-Cortes, Z. T. Biphasic Effects of Leptin in Porcine Granulosa Cells. *Biol. Reprod.* 68, 789-796 (2002).
- Sahu, A. Resistance to the satiety action of leptin following chronic central leptin infusion is associated with the development of leptin resistance in neuropeptide Y neurones. *J. Neuroendocrinol.* 14, 796-804 (2002).
- Stanford J, White G, Hatasaka H. Timing intercourse to achieve pregnancy: current evidence. *Obstet Gynecol* 2002; 100:1333–1341.
- Tsigos, C. & Chrousos, G. P. Hypothalamic-pituitary-adrenal axis, neuroendocrine factors and stress. *J. Psychosom. Res.* 53, 865-871 (2002).
- Baerwald AR, Adams GP, Pierson RA. A new model for ovarian follicular development during the human menstrual cycle. *Fertil Steril* 2003; 80:116–122.
- Baerwald AR, Adams GP, Pierson RA, Baerwald AR, Adams GP, Pierson RA. Characterization of ovarian follicular wave dynamics in women. *Biol Reprod* 2003; 69:1023–1031.
- Blackwell LF, Brown JB, Vigil P, Gross B, Sufi S, d’Arcangues C. Hormonal monitoring of ovarian activity using the Ovarian Monitor, Part I. Validation of home and laboratory results obtained during ovulatory cycles by comparison with radioimmunoassay. *Steroids* 68 (2003) 465–476. Available.
- Çetinkaya, E., Ocal, G., Berberoğlu, M. & Adiyaman, P. The risk of functional ovarian hyperandrogenism and polycystic ovary syndrome in patients with hyperandrogenism. *J. Pediatr. Endocrinol. Metab.* 16, 1011-1016 (2003).
- Chrétien FC. Involvement of the glycoproteic meshwork of cervical mucus in the mechanism of sperm orientation. *Acta Obstet Gynecol Scand* 2003; 82: 449—461. Available.
- Choksi, N. Y, Jahnke, G. D., St. Hilaire, C. & Shelby, M. Role of Thyroid Hormones in Human and Laboratory Animal Reproductive Health. *Birth Defects Res. Part B - Dev. Reprod. Toxicol.* 68, 479-491 (2003).
- Davison, S. L. & Davis, S. R. Androgens in women. *J. Steroid Biochem. Mol. Biol.* 85, 363-366 (2003).
- Holick, M. F. Vitamin D: A Millenium Perspective. 307, 296-307 (2003).
- Kalme, T., Koistinen, H., Loukovaara, M., Koistinen, R. & Leinonen, P. Comparative studies on the regulation of insulin-like growth factor-binding protein-1 (IGFBP-1) and sex hormone-binding globulin (SHBG) production by insulin and insulin-like growth factors in human hepatoma cells. *J. Steroid Biochem. Mol. Biol.* 86, 197-200 (2003).

Menárguez M, Pastor L M, and Odeblad E. Morphological characterization of different human cervical mucus types using light and scanning electron microscopy. *Hum. Reprod.* (2003) 18: 1782–1789.

Ryan, N. K., Van Der Hoek, K. H., Robertson, S. A. & Norman, R. J. Leptin and Leptin Receptor Expression in the Rat Ovary. *Endocrinology* 144, 5006-5013 (2003).

Sheiner E, Sheiner E, Potashnik G, Carel R, Shoham-Vardi I. The relationship between occupational psychological stress and female fertility. *Occup Med* 2003; 53:265–269.

Santoro N, Isaac B, Neal-Perry G, Adel T, Weingart L, Nussbaum A, Thakur S, Jinnai H, Khosla N, Barad D et al. Impaired folliculogenesis and ovulation in older reproductive aged women. *J Clin Endocrinol Metab* 2003; 88:5502–5509.

Welt, C. K., Schneyer, A. L., Heist, K. & Mantzoros, C. S. Leptin and Soluble Leptin Receptor in Follicular Fluid. *J. Assist. Reprod. Genet.* 20, 495-501 (2003).

Azziz, R. et al. Androgen Excess in Women: Experience with over 1000 Consecutive Patients. *J. Clin. Endocrinol. Metab.* 89, 453-462 (2004).

Bigelow JL, Dunson DB, Stanford JB, Ecochard R, Gnoth C, Colombo B. Mucus observations in the fertile window: a better predictor of conception than timing of intercourse. *Hum Reprod* 2004; 19:889–892.

Bjørbaek, C. & Kahn, B. B. Leptin signaling in the central nervous system and the periphery. *Recent Prog. Horm. Res.* 59, 305-331 (2004).

Breen, K. M. & Karsch, F. J. Does Cortisol Inhibit Pulsatile Luteinizing Hormone Secretion at the Hypothalamic or Pituitary Level? *Endocrinology* 145, 692-698 (2004).

Chang, L., Chiang, S.-H. & Saltiel, A. R. Insulin Signaling and the Regulation of Glucose Transport. *Mol. Med.* 10, 65-71 (2004).

Creinin M, Keverline SandMeyn L. How regular is regular? An analysis of menstrual cycle regularity. *Contraception* 2004; 70:289–292.

Fortune, J. E., Rivera, G. M. & Yang, M. Y. Follicular development: The role of the follicular microenvironment in selection of the dominant follicle. *Anim. Reprod. Sci.* 82-83, 109-126 (2004).

Hirshman, E. et al. Evidence that androgenic and estrogenic metabolites contribute to the effects of dehydroepiandrosterone on cognition in postmenopausal women. *Horm. Behav.* 45, 144-155 (2004).

Laven JS, Fauser BC: Inhibins and adult ovarian function. *Mol Cell Endocrinol* 2004; 225:37.

Quinkler, M. et al. Androgen generation in adipose tissue in women with simple obesity - A site-specific role for 17 $\beta$ -hydroxysteroid dehydrogenase type 5. *J. Endocrinol.* 183, 331-342 (2004).

Rotterdam ESHRE/ASRM-Sponsored PCOS Consensus Workshop Group (2004) Revised 2003 consensus on diagnostic criteria and long-term health risks related to polycystic ovary syndrome (PCOS). *Hum. Reprod.* 19: 41–47.

Rotterdam ESHRE/ASRM-Sponsored PCOS Consensus Workshop Group (2004) Revised 2003 consensus on diagnostic criteria and long-term health risks related to polycystic ovary syndrome. *Fertil. Steril.* 81: 19–25.

Thornton D J, and Sheehan J K (2004) From mucins to mucus: toward a more coherent understanding of this essential barrier. *Proc. Am. Thorac. Soc.* 1: 54–61.

Vigil P (2004) *La Fertilidad de la Pareja Humana* (Ediciones Universidad Católica, Santiago, Chile).

Alliende ME, Cabezon C, Figueroa H, Kottmann C. Cervicovaginal fluid changes to detect ovulation accurately. *Am J Obstet Gynecol* 2005; 193:71–75.

Cabezón C, Vigil P, Rojas I, Leiva ME, Riquelme R, Aranda W, García C. Adolescent pregnancy prevention: an abstinence-centered randomized controlled intervention in a Chilean public high school. *Journal of Adolescent Health* 36 (2005) 64–69.

Ceric F, Silva D, and Vigil P. Ultrastructure of the human periovulatory cervical mucus. *J. Electron. Microsc.* (2005) 54: 479–484.

[De Bellis, A., Bizzarro, A., Pivonello, R., Lombardi, G. & Bellastella, A. Prolactin and Autoimmunity. \*Pituitary\* 8, 25-30 \(2005\).](#)

Gipson IK. Human endocervical mucins. *Ernst Schering Res. Found. Workshop* (2005) 52: 219–244.

[Hopkins, R. L. & Leinung, M. C. Exogenous Cushing's syndrome and glucocorticoid withdrawal. \*Endocrinol. Metab. Clin. North Am.\* 34, 371-384 \(2005\).](#)

Krotz S, McKenzie LJ, Cisneros P, Buster J, Amato P, Carson S, Krotz S, McKenzie LJ, Cisneros P, Buster J et al. Prevalence of premature urinary luteinizing hormone surges in women with regular menstrual cycles and its effect on implantation of frozen-thawed embryos. *Fertil Steril* 2005; 83:1742–1744.

[Kühnel, W. Atlas color de citologia e histologia. \(Editorial Médica Panamericana, 2005\).](#)

[Merke, D. P. & Bornstein, S. R. Congenital Adrenal Hyperplasia. \*Lancet\* 365, 2125-2136 \(2005\)](#)

Miro F, Aspinall LJ: The onset of the initial rise in follicle-stimulating hormone during the human menstrual cycle. *Hum Reprod* 2005; 20:96.

Miro F, Parker S, Aspinall L, Coley J, Perry P, Ellis J. Sequential classification of endocrine stages during reproductive aging in women: the FREEDOM study. *Menopause* 2005; 12:281–290.

[Mitchell, M., Armstrong, D. T., Robker, R. L. & Norman, R. J. Adipokines: implications for female fertility and obesity. \*Reproduction\* 130, 583-97 \(2005\).](#)

Shen, Y., Xie, A., Zhang, J., Cui, F. & Zhu, H. Fractal structures precipitated from A gall of patient. *Phys. B Condens. Matter* 363, 61-68 (2005).

Ben-Jonathan, N., Hugo, E. R., Brandebourg, T. D. & LaPensee, C. R. Focus on prolactin as a metabolic hormone. *Trends Endocrinol. Metab.* 17, 110-116 (2006).

Brennan, A. M. & Mantzoros, C. S. Drug Insight: the role of leptin in human physiology and pathophysiology—emerging clinical applications. *Nat. Clin. Pract. Endocrinol. Metab.* 2, 318-327 (2006).

Blank, S. K., McCartney, C. R. & Marshall, J. C. The origins and sequelae of abnormal neuroendocrine function in polycystic ovary syndrome. *Hum. Reprod. Update* 12, 351-361 (2006).

Check J H (2006) Diagnosis and treatment of cervical mucus abnormalities. *Clin. Exp. Obstet. Gynecol.* 33: 140–142.

De Kloet, E. R., Vreugdenhil, E., Oitzl, M. S. & Joëls, M. Brain Corticosteroid Receptor Balance in Health and Disease. *Endocr. Rev.* 19, 269-301 (2006).

Riquelme J, Zúñiga A, Ceric F, and Vigil P. Influencia de niveles hormonales en las características del moco cervical en mujeres sanas y con SOP. *Int. J. Morphol.* (2006) **24**: 129.

Severy L, Robinson J, Findley-Klein C, McNulty J. Acceptability of a home monitor used to aid in conception: psychosocial factors and couple dynamics. *Contraception* 2006; 73:65–71.

Vigil P, Ceric F, Cortés ME, Klaus H. Usefulness of Monitoring Fertility from Menarche. *J Pediatr Adolesc Gynecol* (2006) 19:173–179. [Available.](#)

Análisis de resistencia insulínica, tolerancia a la glucosa y testosterona en mujeres jóvenes con síndrome de ovario poliquístico agrupadas por índice de masa corporal. *Rev Chil Obstet Ginecol* 2006 ; 71(5) : 2999-306. [Available.](#)

Boivin J, Bunting L, Collins J, Nygren G. International estimates of infertility prevalence and treatment-seeking: potential need and demand for infertility medical care. *Hum Reprod* 2007; 22:1506–1512.

Brunelli, R. et al. Globular structure of human ovulatory cervical mucus. *FASEB J.* 21, 3872-3876 (2007).

Bunting L, Boivin J. Decision-making about seeking medical advice in an internet sample of women trying to get pregnant. *Hum Reprod* 2007; 22:1662–1668.

Crown, A., Clifton, D. K. & Steiner, R. A. Neuropeptide signaling in the integration of metabolism and reproduction. *Neuroendocrinology* 86, 175-182 (2007).

Gregg, C. et al. White Matter Plasticity and Enhanced Remyelination in the Maternal CNS. *J. Neurosci.* 27, 1812-1823 (2007).

- Holick, M. F. M. F. Vitamin D deficiency. *N. Engl. J. Med.* 357, 266-81 (2007).
- La Torre, D. & Falorni, A. Pharmacological causes of hyperprolactinemia. *Ther. Clin. Risk Manag.* 3, 929-951(2007).
- Orbach, H. et al. Novel Biomarkers in Autoimmune Diseases: Prolactin, Ferritin, Vitamin D, and TPA Levels in Autoimmune Diseases. *Ann. N. Y. Acad. Sci.* 1109, 385-400 (2007).
- Smith, J. T. & Clarke, I. J. Kisspeptin expression in the brain: Catalyst for the initiation of puberty. *Rev. Endocr. Metab. Disord.* 8, 1-9 (2007)
- Tena-Sempere, M. Roles of ghrelin and leptin in the control of reproductive function. *Neuroendocrinology* 86, 229-41 (2007).
- Vigil P, Cortés M E, del Río M J, and Godoy A. Síndrome de ovario poliquístico. In: Guzmán E and Lalonde A B (eds), (2007) *Selección de Temas en Ginecoobstetricia, Tomo II*, pp 561–578 (Ediciones Publimpacto, Santiago, Chile).
- del Rio M J, Godoy A, Toro A, Orellana R, Cortés M E, Moreno R D, Vigil P. La reacción agronómica del espermatozoide: avances recientes. *Rev. Int. Androl.* (2007) 5: 368–373.
- Robinson J, Wakelin M, Ellis J. Increased pregnancy rate with use of the Clearblue Easy Fertility Monitor. *Fertil Steril* 2007; 87:329–334.
- Robinson J, Ellis J. Mistiming of intercourse as a primary cause of failure to conceive: results of a survey on use of a home-use fertility monitor. *Curr Med Res Opin* 2007; 23:301–306.
- Small C, Manatunga A, Marcus M. Validity of self-reported menstrual cycle length. *Ann Epidemiol* 2007; 17:163–170.
- Cooke DG, Binnie JE, Blackwell LF. Validation of a reference ELISA for estrone glucuronide using urine samples normalized by dilution to a constant rate of urine production. *Steroids* 2007; 72:580–591.
- Frank-Herrmann P, Heil J, Gnoth C, Toledo E, Baur S, Pyper C, Jenetzky E, Strowitzki T, Freundl G. The effectiveness of a fertility awareness based method to avoid pregnancy in relation to a couple's sexual behavior during the fertile time: a prospective longitudinal study. *Hum Reprod* 2007; 22:1310–1319.
- Guyen S, Kart C, Guvendag Guven ES, and Serdar Gunalp G. The underlying cause of cervical cancer in oral contraceptive users may be related to cervical mucus changes. *Med. Hypotheses* (2007) 69: 550–552.
- Park SJ, Goldsmith LT, Skurnick JH, Wojtczuk A, Weiss G. Characteristics of the urinary luteinizing hormone surge in young ovulatory women. *Fertil Steril* 2007; 88:684–690.
- Vigil P, Contreras P, Alvarado JL, Godoy A, Salgado AM, Cortés ME. Evidence of subpopulations with different levels of insulin resistance in women with polycystic ovary syndrome. *Human Reproduction* 2007, Vol.22, No.11 pp. 2974–2980. Available.



Vigil P, del Río MJ, Cortés ME. Síndrome de Ovario Poliquístico, In: Braguinsky J, *Obesidad: Saberes y Conflictos. Un tratado de Obesidad*, Editorial Alliance for World Wide Editing, 557–566, 2007.

Vigil, P., Toro, A. & Godoy, A. Physiological action of oestradiol on the acrosome reaction in human spermatozoa. *Andrologia* 73, 1430-4 (2007).

Blouin, K., Boivin, A. & Tchernof, A. Androgens and body fat distribution. *J. Steroid Biochem. Mol. Biol.* 108, 272-280 (2008).

Foradori, C. D., Weiser, M. J. & Handa, R. J. Non-genomic Actions of Androgens. *Front. Neuroendocrinol.* 29, 169-181 (2008).

Grattan, D. R. & Kokay, I. C. Prolactin: A pleiotropic neuroendocrine hormone. *J. Neuroendocrinol.* 20, 752-763 (2008).

Henderson, H. L., Townsend, J. & Tortonese, D. J. Direct effects of prolactin and dopamine on the gonadotroph response to GnRH. *J. Endocrinol.* 197, 343-350 (2008).

Nakamura K, Sheps S, Arck P. Stress and reproductive failure: past notions, present insights and future directions. *J Assist Reprod Genet* 2008; 25:47–62.

Popa, S. M., Clifton, D. K. & Steiner, R. A. The role of kisspeptins and GPR54 in the neuroendocrine regulation of reproduction. *Annu. Rev. Physiol.* 70, 213-238 (2008).

Vigil P, Toro A, Godoy A. Physiological action of oestradiol on the acrosome reaction in human spermatozoa. *Andrologia* (2008) 40, 146–151 Available.

Walters, K. A., Allan, C. M. & Handelsman, D. J. Androgen actions and the ovary. *Biol. Reprod.* 78, 380-389 (2008).

Castellano, J. M. et al. KiSS-1/kisspeptins and the metabolic control of reproduction: Physiologic roles and putative physiopathological implications. *Peptides* 30, 139-145 (2009).

Cole LA, Ladner DG, Byrn FW. The normal variabilities of the menstrual cycle. *Fertil Steril* 2009; 91:522–527.

Hall N, White C, O’Sullivan AJ. The relationship between adiponectin, progesterone, and temperature across the menstrual cycle. *J Endocrinol Invest* 2009; 32:279–283.

Johnson S, Miro F, Barrett S, Ellis J. Levels of urinary human chorionic gonadotrophin (hCG) following conception and variability of menstrual cycle length in a cohort of women attempting to conceive. *Curr Med Res Opin* 2009; 25:741–748.

Oakley, A. E., Clifton, D. K. & Steiner R. A. Kisspeptin signaling in the brain. *Endocr. Rev.* 30, 713-743 (2009).

Vigil P, Orellana R, Godoy A, Barrientos V, del Río MJ. Effects of gamma-amino butyric acid, progesterone and oestradiol on human spermatozoa acrosome reaction. 9th International Congress of Andrology, 2009, Balleca Lagarda JL, 107-112. [Available.](#)

Vigil P, Contreras W, del Río MJ, Cortés ME. Androgenic Suppression in Insulin Sensitive and Insulin Resistant Polycystic Ovary Syndrome Women. 9th International Congress of Andrology, 2009. [Available.](#)

Vigil P, Cortés ME, Zúñiga A, Riquelme J, Ceric F. Scanning electron and light microscopy study of the cervical mucus in women with polycystic ovary syndrome. *Journal of Electron Microscopy* (2009), 58(1):21–27.

[Basson, R. Testosterone therapy for reduced libido in women. \*Ther. Adv. Endocrinol. Metab.\* 1, 155-64 \(2010\).](#)

[Boivin J, Lancaster D. Medical waiting periods: imminence, emotions and coping. \*Women's Health\* 2010; 6:59–69.](#)

[Ciechanowska, M., Lapot, M., Mateusiak, K. & Przekop, F. Neuroendocrine regulation of GnRH release and expression of GnRH and GnRH receptor genes in the hypothalamus-pituitary unit in different physiological states. \*Reprod. Biol.\* 10, 85-124 \(2010\).](#)

[D'Anglemont de Tassigny, X. & Colledge, W. H. The Role of Kiss-peptin signaling in Reproduction. \*Physiology\* 25, 207-217 \(2010\).](#)

[Dardeno, T. A. et al. Leptin in human physiology and therapeutics. \*Front. Neuroendocrinol.\* 31, 377-393 \(2010\).](#)

[DeSouza MJ, Toombs RJ, Scheid JL, O'Donnell E, West SL, Williams NI. High prevalence of subtle and severe menstrual disturbances in exercising women: confirmation using daily hormone measures. \*Hum Reprod\* 2010; 25:491–503.](#)

[Freundl G, Sivin I, Batar I. State-of-the-art of non-hormonal methods of contraception: IV. Natural family planning. \*Eur J Contracept Reprod Health Care\* 2010; 15:113–123.](#)

[Hrabovszky, E. et al. The kisspeptin system of the human hypothalamus: Sexual dimorphism and relationship with gonadotropin-releasing hormone and neurokinin B neurons. \*Eur. J. Neurosci.\* 31, 1984-1998 \(2010\).](#)

[Krassas, G. E., Poppe, K. & Glinoe, D. Thyroid Function and Human Reproductive Health. \*Endocr. Rev.\* 31, 702-755 \(2010\).](#)

[Nimkarn, S. & New, M. I. Congenital adrenal hyperplasia due to 21-hydroxylase deficiency: A paradigm for prenatal diagnosis and treatment. \*Ann. N. Y Acad. Sci.\* 1192, 5-11 \(2010\).](#)

[Parikh, G. et al. Vitamin D regulates steroidogenesis and insulin-like growth factor binding protein-1 \(IGFBP-1\) production in human ovarian cells. \*Horm. Metab. Res.\* 42, 754-757 \(2010\).](#)



Pralong, F. P. Insulin and NPY pathways and the control of GnRH function and puberty onset. *Mol. Cell. Endocrinol.* 324, 82-86 (2010).

Shayya, R. & Chang, R. J. Reproductive endocrinology of adolescent polycystic ovary syndrome. *BJOG* 117, 150-5 (2010).

Tena-Sempere, M. Kisspeptin signaling in the brain: Recent developments and future challenges. *Mol. Cell. Endocrinol.* 314, 164-169 (2010).

Boivin J, Griffiths E, Venetis C. Emotional distress in infertile women and failure of assisted reproductive technologies: meta-analysis of prospective psychosocial studies. *Br Med J* 2011; 342(d223):1–9.

Brown JB. Types of ovarian activity in women and their significance: the Continuum (a reinterpretation of early findings). *Hum Reprod Update* (2011) 17:141–158. Available.

Buck Louis G, Lum K, Sundaram R, Chen Z, Kim S, Lynch C, Schisterman E, Pyper C. Stress reduces conception probabilities across the fertile window: evidence in support of relaxation. *Fertil Steril* 2011;95:2184–2189.

Croxatto, H.B., Ortiz, M. E. & Morales, P. in *Obstetricia* (eds. Perez, A. & Donoso, E.) 89-107 (Mediterráneo, Santiago, 2011).

Directly, K. et al. Kisspeptin directly excites anorexigenic pomc neurons, but inhibits orexigenic npy cells by indirect synaptic mechanism. 30, 10205-10219 (2011).

Dittrich, R. et al. Thyroid hormone receptors and reproduction. *J. Reprod. Immunol.* 90, 58-66 (2011).

Jara, L. J., Medina, G., Saavedra, M. A., Vera-Lastra, O. & Navarro, C. Prolactin and autoimmunity. *Clin. Rev. Allergy Immunol.* 40, 50-59 (2011).

Johnson S, Ellis J, Godbert S, Ali S, Zinaman M. Comparison of a digital ovulation test with three popular line ovulation tests to investigate user accuracy and certainty. *Expert Opin Med Diagn* 2011; 5:467–473.

Lokuge S, Frey B, Foster J, Soares C, Steiner M. Depression in women: windows of vulnerability and new insights into the link between estrogen and serotonin. *J Clin Psychiatry* 2011; 72: e1563–e1569.

Melmed, S. et al. Diagnosis and Treatment of Hyperprolactinemia: An Endocrine Society Clinical Practice Guideline. *J. Clin. Endocrinol. Metab.* 96, 273-288 (2011).

Quennell, J. H. et al. Leptin deficiency and diet-induced obesity reduce hypothalamic kisspeptin expression in mice. *Endocrinology* 152, 1541-1550 (2011).

Schmidt L, Sobotka T, Bentzen J, Andersen A. Demographic and medical consequences of the postponement of parenthood. *Hum Reprod Update* 2011;18:29–43.

Vigil, P. et al. Endocrine modulation of the adolescent brain: A review. *J. Pediatr. Adolesc. Gynecol.* 24, 330-337 (2011).

Vigil, P., Orellana, R. F. & Cortés, M. E. Modulation of spermatozoon acrosome reaction. *Biol. Res.* 44, 151-159 (2011).

Blackwell LF, Vigil P, Gross B, d'Arcangues C, Cooke DG, Brown JB. Monitoring of ovarian activity by measurement of urinary excretion rates of estrone glucuronide and pregnanediol glucuronide using the Ovarian Monitor, Part II: reliability of home testing. *Human Reproduction* (2012) Vol.27, No.2 pp. 550–557. Available.

Cortés, M. E., Hauyón, R., González, F. & Vigil, P. Evidence of Fractality in a Pattern of Crystallization of Bovine Cervical Mucus Obtained at Oestrus Evidencia de Fractalidad en un Patrón de Cristalización de Moco Cervical Bovino Obtenido en Estro. *Int J Morphol* 30, 1461-1465 (2012).

Dennis, N. A. et al. The level of serum anti-müllerian hormone correlates with vitamin D status in men and women but not in boys. *J. Clin. Endocrinol. Metab.* 97, 2450-2455 (2012).

Garber, J. R. et al. Clinical practice guidelines for hypothyroidism in adults: cosponsored by the American Association of Clinical Endocrinologists and the American Thyroid Association. *Endocr. Pract.* 18, 988-1028 (2012).

Hausman, G. J., Barb, C. R. & Lents, C. A. Leptin and reproductive function. *Biochimie* 94, 2075-2081 (2012).

Lerchbaum, E. & Obermayer-Pietsch, B. Mechanisms in endocrinology - Vitamin D and fertility: A systematic review. *Eur. J. Endocrinol.* 166, 165-778 (2012).

Luk, J., Torrealday, S., Neal Perry, G. & Pal, L. Relevance of vitamin D in reproduction. *Hum. Reprod.* 27, 3015-3027 (2012).

Lynch C, Sundaram R, Buck-Louis G, Lum K, Pyper C. Are increased levels of self-reported psychosocial stress, anxiety, and depression associated with fecundity? *Fertil Steril* 2012; 98:453–458.

Perogamvros, I., Ray, D. W. & Trainer, P. J. Regulation of cortisol bioavailability-effects on hormone measurement and action. *Nat. Rev. Endocrinol.* 8, 717-727 (2012).

Pinilla, L., Aguilar, E., Dieguez, C., Millar, R. P. & Tena-Sempere, M. Kisspeptins and Reproduction: Physiological Roles and Regulatory Mechanisms. *Physiol. Rev.* 92, 1235-1316 (2012)

Varela, L. & Horvath, T. L. Leptin and insulin pathways in POMC and AgRP neurons that modulate energy balance and glucose homeostasis *EMBO Rep.* 13, 1079-86 (2012).

Vigil, P., Blackwell, L. & Cortés, M. E. The Importance of Fertility Awareness in the Assessment of a Woman's Health A Review. *Linacre Q.* 79, 426-450 (2012).

Zinaman M, Johnson S, Ellis J, Ledger W. Accuracy of perception of ovulation day in women trying to conceive. *Curr Med Res Opin* 2012; 28:1–6

Anagnostis, P., Karras, S. & Goulis, D. G. Vitamin D in human reproduction: A narrative review. *Int. J. Clin. Pract.* 67, 225-235 (2013).

Direito A, Bailly S, Mariani A, Ecochard R. Relationships between the luteinizing hormone surge and other characteristics of the menstrual cycle in normally ovulating women. *Fertil Steril* 2013; 99:279–285.

Blackwell LF, Vigil P, Cooke DG, d’Arcangues C, Brown JB. Monitoring of ovarian activity by daily measurement of urinary excretion rates of oestrone glucuronide and pregnanediol glucuronide using the Ovarian Monitor, Part III: Variability of normal menstrual cycle profiles. *Human Reproduction*, (2013) 28 (12): 3306-3315. Available.

Fu, Z., Gilbert, E. R. & Liu, D. Regulation of insulin synthesis and secretion and pancreatic Beta-cell dysfunction in diabetes. *Curr. Diabetes Rev.* 9, 25-53 (2013).

Gregoraszczyk, E. & Rak-Mardyla, A. Supraphysiological leptin levels shift the profile of steroidogenesis in porcine ovarian follicles toward progesterone and testosterone secretion through increased expressions of CYP11A1 and 17 $\beta$ -HSD: a tissue culture approach. *Reproduction* 145, 311-317 (2013).

Hiort, O. The differential role of androgens in early human sex development. *BMC Med.* 11, 152 (2013).

Majumdar, A. & Mangal, N. Hyperprolactinemia. *J. Hum. Reprod. Sci.* 6, 168 (2013).

Merkley, C. M. The role of kisspeptin and KNDy Cells in the reproductive neuroendocrine system. (2013).

Mondal, S. et al. A new logical insight and putative mechanism behind fluoxetine-induced amenorrhea, hyperprolactinemia and galactorrhea in a case series. *Ther. Adv. Psychopharmacol.* 3, 322-334 (2013).

Paper, W. & Fischer, M. G. The Case for FEMM. (2013).

Samuel, V. T. & Shulman, G. I. Integrating Mechanisms for Insulin Resistance: Common Threads and Missing Links. *Cell* 148, 852-871 (2013).

Taşikin, E. A., Atabekoğlu, C. S. & Sömezer, M. From primary follicle to ovulation. *Gazi Med. J.* 24, 142-146 (2013).

Thompson, I.R. et al. GnRH Pulse Frequency-Dependent Stimulation of FSH $\beta$  Transcription Is Mediated via Activation of PKA and CREB. *Mol. Endocrinol.* 27, 1-13 (2013).

Tiplady S, Jones G, Campbell M, Johnson S, Ledger W. Home ovulation tests and stress in women trying to conceive: a randomized controlled trial. *Human Reproduction*, 2013, Vol.28, No.1 pp. 138–151. Available.

Vigil, P. Fertilidad de la pareja humana. (2013).

Blázquez, E., Velásquez, E., Hurtado-Cameiro, V. & Ruiz-Albusac, J. M. Insulin in the brain: its pathophysiological implications for States related with central insulin resistance, type 2 diabetes and Alzheimer's disease. *Front. Endocrinol. (Lausanne)*. 5, 161 (2014).

De Bond, J.-A. P. & Smith, J. T. Kisspeptin and energy balance in reproduction. *Reproduction* 147, R53-R63 (2014).

Feldman, D. K. The role of vitamin D in reducing cancer risk and progression. *Nat. Rev. Cancer* 14, 342-357 (2014).

Freundl G, Frank-Herrmann P, Brown S, Blackwell L. A new method to detect significant basal body temperature changes during a woman's menstrual cycle. *Eur J Contracept Reprod Health Care* 2014; 19:392–400.

Hrabovszky, E. Neuroanatomy of the human hypothalamic kiss-peptin system. *Neuroendocrinology* 99, 33-48 (2014)

Irani, M. & Merhi, Z. Role of vitamin D in ovarian physiology and its implication in reproduction: A systematic review. *Fertil. Steril.* 102, 460-468.e3 (2014).

Kalló, I. et al. Gonadotropin-releasing hormone neurones innervate kisspeptin neurones in the female mouse brain. *Neuroendocrinology* 98, 281-289 (2014).

Merhi, Z., Doswell, A., Krebs, K. & Cipolla, M. Vitamin D alters genes involved in follicular development and steroidogenesis in human cumulus granulosa cells. *J. Clin. Endocrinol. Metab.* 99, 1137-1145 (2014).

Nazarians-Armavil, A., Chalmers, J. A., Lee, C. B., Ye, W. & Belsham, D. D. Cellular insulin resistance disrupts hypothalamic mHypA-POMC/GFP neuronal signaling pathways. *J. Endocrinol.* 220, 13-24 (2014)

Nestor, C. C., Kelly, M. J. & Rønnekleiv, O. K. Cross-talk between reproduction and energy homeostasis: central impact of estrogens, leptin and kisspeptin signaling. *Horm. Mol. Biol. Clin. Investig.* 17, 109-28 (2014).

Qiu, J. et al. Insulin excites anorexigenic proopiomelanocortin neurons via activation of canonical transient receptor potential channels. *Cell Metab.* 19, 682-693 (2014).

Skorupskaitė, K., George, J. T. & Anderson, R. A. The kisspeptin-GnRH pathway in human reproductive health and disease. *Hum. Reprod. Update* 20, 485-500 (2014).

Sliwowska, J. H. et al. Insulin: Its role in the central control of reproduction. *Physiol. Behav.* 133, 197-206 (2014).

Vigil, P., Cortés, M. E., Carrera, B., Hauyón, R. & Aravena, C. in *Selección en temas ginecoobstetricia* (eds. Guzman, E., Croxatto, H. & Lalonde, A.) 325-334 (Ediciones Publimpacto, 2014).

Vigil, P., Croxatto, H. B. & Cortes, M. E. in *Ginecologia* (ed. Pérez-Sánchez, A.) 37-60 (Editorial Mediterráneo, 2014).

Bernard, V., Young, J., Chanson, P. & Binart, N. New insights in prolactin: pathological implications. *Nat. Rev. Endocrinol.* 11, 1-11 (2015).

Bonnefond, A. & Froguel, P. Rare and common genetic events in type 2 diabetes: What should biologists know? *Cell Metab.* 21, 357-368 (2015).

Cortés, M. E., Carrera, B., Rioseco, H., Pablo del Rio, J. & Vigil, P. The Role of Kisspeptin in the Onset of Puberty and in the Ovulatory Mechanism: A Mini-review. *J. Pediatr. Adolesc. Gynecol.* 28, 286-291 (2015).

Goodman, N. F. et al. American Association of Clinical Endocrinologists, American College of Endocrinology, and Androgen Excess and Pcos Society Disease State Clinical Review: Guide To the Best Practices in the Evaluation and Treatment of Polycystic Ovary Syndrome – Part 1. *Endocr. Pract.* 21, 1291-300 (2015).

Lacroix, A., Feelders, R. A., Stratakis, C. A. & Nieman, L. K. Cushing's syndrome. *Lancet* 386, 913-927 (2015).

Lekarev, O. Lin-Su, K. & Vogiatzi, M. G. Infertility and Reproductive Function in Patients with Congenital Adrenal Hyperplasia. *Endocrinol. Metab. Clin. North Am.* 44, 705-722 (2015).

Mozos, I. & Marginean, O. Links between Vitamin D deficiency and cardiovascular diseases. *Biomed Res. Int.* 2015, (2015).

Qiu, X. et al. Insulin and Leptin Signaling Interact in the Mouse Kiss1 Neuron during the Peripubertal Period. *PLoS One* 10, 1-25 (2015).

Roos J, Johnson J, Weddell S, Godehardt E, Schiffner J, Freundl G, Gnoth C. Monitoring the menstrual cycle: comparison of urinary and serum reproductive hormones referenced to true ovulation. *Eur J Contracept Reprod Health Care* 2015; 20:43–50.

Rosenfield, R. L., Ehrmann, D. A. & Littlejohn, E. E. Adolescent polycystic ovary syndrome due to functional ovarian hyperandrogenism persists into adulthood. *J. Clin. Endocrinol. Metab.* 100, 1537-1543 (2015).

Skrapits, K. et al. Neuropeptide co-expression in hypothalamic kisspeptin neurons of laboratory animals and the human. *Front. Neurosci.* 9, 1-9 (2015) (2015).  
doi:10.3389/fnins.2015.00029

Triggianese, P., Perricone, C., Perricone, R. & De Carolis, C. Prolactin and natural killer cells: evaluating the neuroendocrine-immune axis in women with primary infertility and recurrent spontaneous abortion. *Am. J. Reprod. Immunol.* 73, 56-65 (2015).

Walters, K. A. Role of androgens in normal and pathological ovarian function. *Reproduction* 149, R193-R218 (2015).

Blackwell LF, Vigil P, Alliende ME, Brown S, Festin M, Cooke DG. Monitoring of ovarian activity by measurement of urinary excretion rates using the Ovarian Monitor, Part IV: the relationship of the pregnanediol glucuronide threshold to basal body temperature and cervical mucus as markers for the beginning of the post-ovulatory infertile period. *Hum Reprod* (2016) 31 (2): 445-453.

Available.

Foley, C. & Mitsiades, N. Moving Beyond the Androgen Receptor (AR): Targeting AR-Interacting Proteins to Treat Prostate Cancer. *Horm. Cancer* 7, 84-103 (2016).

Herbison, A. E. Control of puberty onset and fertility by gonadotropin-releasing hormone neurons. *Nat. Rev. Endocrinol.* 12, 452-466 (2016).

Nakashima, A., Yokoyama, K., Yokoo, T. & Urashima, M. Role of vitamin D in diabetes mellitus and chronic kidney disease. *World J. Diabetes* 7, 89 (2016).

Rotondo, F. et al. Arginine vasopressin (AVP): a review of its historical perspectives, current research and multifunctional role in the hypothalamo-hypophysial system. *Pituitary* (2016). doi:10.1007/s11102-015-0703-0

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