Citation classics in *Fertility and Sterility*, 1975–2004

The Science Citation Index of the Institute for Scientific Information was searched to identify the 102 most frequently cited articles in the *Fertility and Sterility* journal for the past 30 years. Identification of the citation classic articles provides resourceful perspectives on the evolution of *Fertility and Sterility* and reproductive medicine. (Fertil Steril® 2006;86:795–7. ©2006 by American Society for Reproductive Medicine.)

Reproductive medicine has seen many exciting developments in recent years. The evolution of reproductive medicine can be mapped through the scientific literature. The number of citations an article receives after its publication reflects its recognition by the scientific community. Various specialties have analyzed their so-called "citation classics" to show the development of their specialties and the value of their publications. For example, Key and Kempers in 1987 listed 58 frequently cited articles in *Fertility and Sterility* from 1950 to 1985 (1). They described the distribution of these most-cited articles over the decades and cited frequency, research institutes, and the authors. The results showed that "the citation classic articles of *Fertility and Sterility* appear to have a continuing influence in the field of reproductive medicine" and that "citation frequency in the identification of these classics seems to be an important and useful indicator." Because of the continuing development of reproductive medicine, research topics change, as do the number of articles and of their cited frequency; therefore, a further analysis should be made.

The purpose of this article is to identify and analyze the features of the top 100 most frequently cited articles in *Fertility and Sterility* from 1975 to 2004 and to provide an insight into the evolution of reproductive medicine during this period of time. To achieve this, all articles published in *Fertility and Sterility* from 1975 to 2004 were collected from the Science Citation Index, the database of the Institute for Scientific Information (ISI), update of March 31, 2006. The ISI database provides the capability for cited reference searches of a multidisciplinary database of bibliographic information from more than 8,500 journals. The 102 most frequently cited articles were selected for further analysis. Data collected included the year of publication, topic covered, author, institution and country of origin, and number of citations. The study was approved by the Institutional Review Board of our hospital.

As a result, 12,411 articles were retrieved, excluding meeting abstracts, news, and case reports. With the increased number of published papers each year, the number of citation also increased. For instance, 178 articles in 1975 were cited 3,769 times (21.17 times per article), 350 articles in 1985 were cited 10,712 times (30.61 times per article), and 488 articles in 1995 were cited 11,176 times (22.90 per article). Of the 12,411 articles, 260 (2.10%) were cited over 100 times and 31 (0.25%) more than 200 times. The top 102 of these most frequently cited articles were listed in Table 1. The number of citations for these articles ranged from 143 to 512; the average number of citations per article was 202.24 citations.

These citation classics were published from 1976 to 1998, including 91 journal articles, 6 reviews, 4 notes, and 1 editorial comment. The second decade (1985 to 1994) produced the most citation classics: 52 articles (50.98%) with an average of 201.94 citations per article. The first decade (1975 to 1984) produced 38 articles (37.25%), and the average was 208.45 citations per articles. There were only 12 citation classics (11.76%) in the third decade (1995 to 2004), and the average was 183.83 citations per paper. Except for a few exceptions, the most frequently cited papers were published during the first two decades, and the more recent publications received fewer citations.

The 102 classic articles originated from 14 countries, with the United States contributing 59 articles (57.84%), followed by Australia and the United Kingdom with 9 articles each. The others included Belgium (6), France (5), Canada (3), Israel (3), The Netherlands (2), and, with 1 each, Japan, Denmark, China, South Africa, South Korea, and Sweden. Within the U.S., Virginia led the list with 9 articles, followed by New York, California, and North Carolina and Maryland with 8, 7, and 5 articles each. Twelve states contributed more than 1 article to the top 102 classic articles. According to the first author's institution, these 102 classics were produced by 67 different institutions. Forty-four classics originated from multi-institutional collaboration, of which 11 articles were from multinational collaborations. Fifty-eight articles were from individual institutions. The Eastern Virginia Medical School led in the list with 8 classic articles, followed by Monash University, Cornell University, Harvard University, and Catholic University, Leuven (Belgium), with 6, 5, 4, and 3 classics, respectively.

Citation analysis has been used as an objective measure of the quality of an article in that the number of times an article has been cited suggests the impact the article has on the relevant scientific community (2). As the official journal of

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TABLE 1

***Fertility and Sterility* articles most frequently cited in the science citation index, 1975 through 2004.**

No. of citations	Bibliographic data
512	Buttram VC, Reiter RC. Uterine leiomyomata—etiology, symptomatology, and management. Fertil Steril 1981;36:433–45 (Baylor Coll Med, Dept Obstet & Gynecol, Div Endocrinol Fertil, Houston)
508	Kruger TF, Menkveld R, Stander FSH, Lombard CJ, Vandermerwe JP, Vanzyl JA, Smith K. Sperm morphological features as a prognostic factor in in vitro fertilization. Fertil Steril 1986; 46:1118–22 (MRC, Inst Biostat, Tygerberg, South Africa)
504	Kruger TF, Acosta AA, Simmons KF, Swanson RJ, Matta, JF, Oehninger S. Predictive value of abnormal sperm morphology in in vitro fertilization. Fertil Steril 1988;49:112–7 (Eastern Virginia Med Sch, Dept Biol Sci, Androl Lab, Norfolk)
422	Quinn P, Kerin JF, Warnes GM. Improved pregnancy rate in human in vitro fertilization with the use of a medium based on the composition of human tubal fluid. Fertil Steril 1985;44: 493–8 (Univ Adelaide, Queen Elizabeth Hosp, Dept Obstet & Gynaecol, Australia)
344	Bronson R, Cooper G, Rosenfeld D. Sperm antibodies—their role in infertility. Fertil Steril 1984;42:171–83 (Cornell Univ Med Ctr, Coll Med, New York)
328	Schenker JG, Weinstein D. Ovarian hyperstimulation syndrome—current survey. Fertil Steril 1978;30:255–68 (Hebrew Univ Jerusalem, Hadassah Med Ctr, Dept Gynecol & Obstet, Israel)
317	Munne S, Alikani M, Tomkin G, Grifo J, Cohen J. Embryo morphology, developmental rates, and maternal age are correlated with chromosome abnormalities. Fertil Steril 1995;64:382–91 (Cornell Univ, Med Ctr, New York Hosp, Coll Med, New York)
315	Edmonds DK, Lindsay KS, Miller JF, Williamson E, Wood PJ. Early embryonic mortality in women. Fertil Steril 1982;38:447–53 (Univ Southampton, Dept Chem Pathol & Hum Metab, Hants, England)
313	Jones R, Mann T, Sherins R. Peroxidative breakdown of phospholipids in human-spermatozoa, spermicidal properties of fatty-acid peroxides, and protective action of seminal plasma. Fertil Steril 1979;31:531–7 (NICHHD, Endocrinol & Reprod Res Branch, Baltimore, Md)
307	Overstreet JW, Yanagimachi R, Katz DF, Hayashi K, Hanson FW. Penetration of human-spermatozoa into the human zona pellucida and the zona-free hamster egg—a study of fertile donors and infertile patients. Fertil Steril, 1980;33:534–42 (Univ Calif Davis, Sch Med, Dept Obstet & Gynecol, Davis)

Note: The complete table is available online.

Yang. Citation classics in Fertility and Sterility. Fertil Steril 2006.

the American Fertility Society, Society of Reproductive Endocrinologists, Society of Reproductive Surgeons, Pacific Coast Fertility Society, and the Canadian Fertility and Andrology Society, *Fertility and Sterility* has published some important articles and made significant contribution to reproductive medicine. The impact factor of the journal was 1.96 in 1975, and rose to 3.17 in 2004, indicating the journal's increasing influence.

Making a list of the most frequently cited articles may help in identifying authors and topics that reflect major advances in reproductive medicine. Assessment of the citation rates of an article or author has also been suggested as a method of reviewing the historical developments in a medical or scientific area (3). For example, in the present study, at position 1 of the list is Buttram and Reiter's paper on uterine leiomyoma. As it is known, uterine leiomyoma is the most common gynecologic tumor for women in their reproductive age. Buttram and Reiter's study was based on a large number of cases. In addition, the authors gave a very comprehensive description for management of leiomyoma. Importantly, the article is still being cited, e.g., 23 times in 2006, 29 in 2005, 37 in 2004, indicating that their elegant work more than two decades ago still has a value for today's practice in gynecology.

At positions 2 and 3 are two papers by Kruger and others on sperm morphology. In fact, Kruger was the first one to develop Tygerberg strict criteria for sperm morphology classification. Tygerberg strict criteria now has been widely accepted and has been adopted by the World Health Organization since 1999. It has been shown to be useful for

identification of subfertile men in the general population and for predicting outcomes of IUI and IVF-ET (4). These two papers represent Kruger's important initial work. At position 4 is Quinn et al.'s paper on improvement of pregnancy rate by using a culture medium based on the composition of human tubal fluid (HTF). That paper showed the authors' pioneering work on improving results of IVF by manipulating the in vitro culturing condition. Culture medium based on the HTF formula is still widely used for fertilization of oocyte and culture of human embryos today. Finally, assisted reproductive technology (ART) has witnessed several major breakthroughs over the past three decades and has become a rapidly developing field. In this regard, it is worthy of notice that out of the 102 classic articles, 43 were directly related to ART, indicating that the classic articles represent developments in reproductive medicine.

In comparison with the previous research, only five of Key and Kempers's classics could be found in our list. We think the reason may be "obliteration by incorporation" (5), i.e., the original work is absorbed in current knowledge and it is no longer explicitly cited. Other reasons may be the shifting of research topics and the influence of publication types; for example, citation period of case reports usually is shorter than that of papers on methodology and review articles. Regarding the author institutions, Cornell University and Harvard University were in both lists, but New York University and University of Michigan were not found in the present list, even though we listed more citation classics than the previous study. This finding of changing academic productivity was not expected and lacks a good explanation. On the other hand, Eastern Virginia Medical School, Monash University, and Catholic University, Leuven (Belgium), published more most frequently cited articles than they did before.

One limitation of this study is the inherent problems of citation analyses, such as "incomplete citing," biased citing, and national or language preferences. Further limitations include the "obliteration by incorporation" mentioned above and the time span of cited half-life of an article. In addition, the number of the citations of an article is dependent on its publication year, because citations accumulate over time: The articles published recently can not be evaluated equally.

Finally, we were able to observe occasional discrepancies between publication year and the number of citations of an article. For instance, although only 12 articles published in the third decade were listed as the most frequently cited articles, 3 of them were at the top: Munne et al. (1995) with 317 citations ranking 7, Gardner et al. (1998) with 226 citations ranking 25, and Canis et al. (1997) with 194 citations ranking 34. Those three articles touched on the very important issues in IVF (maternal age on embryo development), a current trend of research and clinical practice (blastocyst culture and transfer), and a standard for clinical practice (ASRM endometriosis classification), respectively. It is reasonable to suggest that the discrepancy of this kind may suggest the importance of the article.

In conclusion, we identified and analyzed the characteristics of the top 102 most frequently cited articles published in *Fertility and Sterility* during the past 30 years. Limited analysis of the articles has shown that the citation classic articles have had important impact on the development of reproductive medicine. Bibliometric review of the most frequently cited articles of a journal helps us better understand how the scientific fields have evolved.

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2. Hall GM. BJA citation classics 1945–1992. Br J Anaesth 1998;80:4–6.
3. Garfield E. 100 citation classics from the Journal of the American Medical Association. JAMA 1987;257:52–9.
4. van der Merwe FH, Kruger TF, Oehninger SC, Lombard CJ. The use of semen parameters to identify the subfertile male in the general population. Gynecol Obstet Invest 2005;59:86–91.
5. Cole S. Citation and the evaluation of individual scientists. Trends Biochem Sci 1989;14:8–12.

TABLE 1

Continued.

No. of citations	Bibliographic data
269	Toner JP, Philput CB, Jones GS, Muasher SJ. Basal follicle-stimulating hormone level is a better predictor of in vitro fertilization performance than age. Fertil Steril 1991;55:784–91 (Eastern Virginia Med Sch, Jones Inst Reprod Med, Dept Obstet & Gynecol, Norfolk)
264	Fakih H, Baggett B, Holtz G, Tsang KY, Lee JC, Williamson HC. Interleukin-1—a possible role in the infertility associated with endometriosis. Fertil Steril 1987;47:213–7 (SK&F Labs, Swedeland, Pa; Med Univ S Carolina, Dept Obstet & Gynecol, Charleston)
260	Dahlgren E, Johansson S, Lindstedt G, Knutsson F, Oden A, Son PO, Mattson LA, Crona N, Lundberg PA. Women with polycystic-ovary-syndrome wedge resected in 1956 to 1965—a long-term follow-up focusing on natural history and circulating hormones. Fertil Steril 1992; 57:505–13 (Gothenburg Univ, Sahlgrens Hosp, Dept Clin Chem, Sweden)
259	Haney AF, Muscato JJ, Weinberg JB. Peritoneal fluid cell populations in infertility patients. Fertil Steril 1981;35:696–8 (Veterans Admin Med Ctr, Dept Obstet & Gynecol, Div Reprod Endocrinol & Infertil, Durham, NC)
257	Rogers BJ, Vancampen H, Ueno M, Lambert H, Bronson R, Hale R. Analysis of human spermatozoal fertilizing ability using zona-free ova. Fertil Steril 1979;32:664–70 (Univ Hawaii, Pacif Biomed Res Ctr, Honolulu)
256	Burkman LJ, Kruger TF, Coddington CC, Rosenwaks Z, Franken DR, Hodgen GD. The hemizona assay (hza)—development of a diagnostic-test for the binding of human spermatozoa to the human hemizona pellucida to predict fertilization potentia. Fertil Steril 1988;49:688–97 (Eastern Virginia Med Sch, Jones Inst Reprod Med, Dept Obstet & Gynecol, Norfolk)
244	Navot D, Bergh PA, Laufer N. Ovarian hyperstimulation syndrome in novel reproductive technologies—prevention and treatment. Fertil Steril 1992;58:249–61 (Hadassah Med Ctr, Dept Obstet & Gynecol, Jerusalem, Israel)
244	Iwasaki A, Gagnon C. Formation of reactive oxygen species in spermatozoa of infertile patients. Fertil Steril 1992;57:409–16 (McGill Univ, Royal Victoria Hosp, Fac Med, Urol Res Lab, Quebec, Canada)
237	Palermo G, Joris H, Derde MP, Camus M, Devroey P, Vansteirteghem A. sperm characteristics and outcome of human assisted fertilization by subzonal insemination and intracytoplasmic sperm injection. Fertil Steril 1993;59:826–35 (Vrije Univ Brussels Hosp, Ctr Reprod Med, Belgium)
235	Jones HW, Jones GS, Andrews MC, Acosta A, Bundren C, Garcia J, Sandow B, Veeck L, Wilkes C, Witmyer J, Wortham JE, Wright G. The program for in vitro fertilization at Norfolk. Fertil Steril 1982;38:14–21 (Eastern Virginia Med Sch, Dept Anat, Norfolk)
231	Barbieri RL, Niloff JM, Bast RC, Schaetzl E, Kistner RW, Knapp RC. Elevated serum concentrations of Ca-125 in patients with advanced endometriosis. Fertil Steril 1986;45:630–4 (Duke Univ, Sch Med, Durham, NC)
230	Veeck LL, Wortham JWE,Witmyer J, Sandow BA, Acosta AA, Garcia JE, Jones GS, Jones HW. Maturation and fertilization of morphologically immature human oocytes in a program of in vitro fertilization. Fertil Steril 1983;39:594–602 (Eastern Virginia Med Sch, Dept Obstet & Gynecol, Norfolk)
228	Scott RT, Oehninger S, Toner JP, Robinson S, Muasher SI, Rosenwaks Z. Follicle-stimulating hormone levels on cycle day 3 are predictive of in vitro fertilization outcome. Fertil Steril 1989;51:651–4 (Eastern Virginia Med Sch, Howard & Georgeanna Jones Inst Reprod Med, Norfolk)
228	Barbieri RL, Smith S, Ryan KJ. The role of hyperinsulinemia in the pathogenesis of ovarian hyperandrogenism. Fertil Steril 1988;50:197–212 (Harvard Univ, Sch Med, Hum Reprod & Reprod Biol Lab, Boston, Mass)

Yang. Citation classics in Fertility and Sterility. Fertil Steril 2006.

TABLE 1

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No. of citations	Bibliographic data
226	Gardner DK, Vella P, Lane M, Wagley L, Schlenker T, Schoolcraft WB. Culture and transfer of human blastocysts increases implantation rates and reduces the need for multiple embryo transfers. Fertil Steril 1998;69:84–8 (Colorado Ctr Reprod Med, Englewood)
216	Koninckx PR, Meuleman C, Demeyere S, Lesaffre E, Cornillie FJ. Suggestive evidence that pelvic endometriosis is a progressive disease, whereas deeply infiltrating endometriosis is associated with pelvic pain. Fertil Steril 1991;55:759–65 (Catholic Univ Leuven, Hosp Gasthuisberg, Dept Epidemiol, Belgium)
214	Pouly JL, Mahnes H, Mage G, Canis M, Bruhat MA. Conservative laparoscopic treatment of 321 ectopic pregnancies. Fertil Steril 1986;46:1093–7 (CHU Clermont Ferrand, Polyclin, Serv Gynecol Obstet, France)
212	Lopata A, Johnston IWH, Hoult IJ, Speirs AI. Pregnancy following intrauterine implantation of an embryo obtained by in vitro fertilization of a preovulatory egg. Fertil Steril 1980;33:117–20 (Royal Womens Hosp, Reprod Biol Unit, Carlton, Australia)
212	Buttram VC, Gibbons WE. Mullerian anomalies—proposed classification (analysis of 144 cases). Fertil Steril 1979;32:40–6 (Baylor Univ, Coll Med, Texas Med Ctr, Dept Obstet & Gynecol, Houston)
211	Jones GS. Luteal phase defect. Fertil Steril 1976;27:351–6 (John Hopkins Univ, Sch Med, Dept Gynecol & Obstet, Baltimore)
211	Lessey BA, Castelbaum AJ, Buck CA, Lei Y, Yowell CW, Sun JH. Further characterization of endometrial integrins during the menstrual cycle and in pregnancy. Fertil Steril 1994;62:497–506 (Univ Pa, Med Ctr, Dept Obstet & Gynecol, Philadelphia)
197	Goldzieher JW. Polycystic ovarian disease. Fertil Steril 1981;35:371–94 (SW Found Res & Educ, Dept Clin Sci & Reprod Biol, San Antonio)
194	Cramer DW, Walker AM, Schiff I. Statistical methods in evaluating the outcome of infertility therapy. Fertil Steril 1979;32:80–6 (Harvard Univ, Sch Publ Hlth, Dept Epidemiol, Boston, Mass)
194	Canis M, Donnez JG, Guzick DS, Halme JK, Rock JA, Schenken RS, Vernon MW. Revised American Society for Reproductive Medicine classification of endometriosis: 1996. Fertil Steril 1997;67:817–21 (Am Soc Reprod Med, Birmingham, Ala)
194	Tournaye H, Devroey P, Liu JE, Nagy Z, Lissens W, Vansteirteghem A. Microsurgical epididymal sperm aspiration and intracytoplasmic sperm injection—a new effective approach to infertility as a result of congenital bilateral absence of the vas deferens. Fertil Steril 1994;61:1045–51 (Free Univ Brussels, Hosp & Med Sch, Brussels, Belgium)
192	Lassalle B, Testart J, Renard JP. Human embryo features that influence the success of cryopreservation with the use of 1,2 propanediol. Fertil Steril 1985;44:645–51 (Hop Antoine Beclere, Inserm, U187, Dept Gynecol & Obstet, France)
192	Giudice LC. Growth factors and growth modulators in human uterine endometrium—their potential relevance to reproductive medicine. Fertil Steril 1994;61:1–17 (Stanford Univ, Med Ctr, Dept Gynecol & Obstet, Div Reprod Endocrinol, Calif)
190	Siddle N, Sarrel P, Whitehead M. The effect of hysterectomy on the age at ovarian failure—identification of a subgroup of women with premature loss of ovarian function and literature review. Fertil Steril 1987;47:94–100 (Kings Coll, Sch Med & Dent, Acad Dept Obstet & Gynaecol, Denmark Hill, London, UK)
187	Cohen J, Edwards R, Fehilly C, Fishel S, Hewitt J, Purdy J, Rowland G, Steptoe P, Webster J. In vitro Fertilization—a treatment for male infertility. Fertil Steril 1985;43:422–32 (Univ Cambridge, Physiol Lab, Cambridge, UK)
186	Rosenfield RL, Barnes RB, Cara JF, Lucky AW. Dysregulation of cytochrome p450c17 alpha as the cause of polycystic ovarian syndrome. Fertil Steril 1990;53:785–91 (Univ Cincinnati, Dept Dermatol, Ohio)

Yang. Citation classics in Fertility and Sterility. Fertil Steril 2006.

TABLE 1

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No. of citations	Bibliographic data
186	Alexander NJ, Anderson DJ. Immunology of semen. Fertil Steril 1987;47:192–205 (Oregon Reg Primate Res Ctr, Beaverton)
184	Tanaka T, Hayashi H, Kutsuzawa T, Fujimoto S, Ichinoe K. Treatment of interstitial ectopic pregnancy with methotrexate—report of a successful case. Fertil Steril 1982;37:851–2 (Hokkaido Univ, Sch Med, Dept Obstet & Gynecol, Japan)
184	Cha KY, Choi DH, Koo JJ, Han SY, Ko JJ, Yoon TK. Pregnancy after in vitro fertilization of human follicular oocytes collected from nonstimulated cycles, their culture in vitro and their transfer in a donor oocyte program. Fertil Steril 1991;55:109–13 (Cha Womens Hosp Seoul, Dept Obstet & Gynecol, South Korea)
181	Lemay A, Maheux R, Faure N, Jean C, Fazekas ATA. Reversible hypogonadism induced by a luteinizing hormone–releasing hormone (LHRH) agonist (buserelin) as a new therapeutic approach for endometriosis. Fertil Steril 1984;41:863–71 (Hop St Francois Assise, Dept Pathol, Canada)
181	Lopata A. Concepts in human in vitro fertilization and embryo transfer. Fertil Steril 1983;40: 289–301 (Royal Womens Hosp, Reprod Biol Unit, Australia)
180	Strathy JH, Molgaard CA, Coulam CB, Melton LJ. Endometriosis and infertility—a laparoscopic study of endometriosis among fertile and infertile women. Fertil Steril 1982;38: 667–72 (Mayo Clin & Mayo Found, Dept Med Stat & Epidemiol, Rochester, Minn)
180	Katz DF, Overstreet JW. Sperm motility assessment by videomicrography. Fertil Steril 1981; 35:188–93 (Univ Calif Davis, Sch Med, Dept Human Anat)
180	Garcia J, Jones GS, Wentz AC. Use of clomiphene citrate. Fertil Steril 1977;28:707–17 (Johns Hopkins Univ Hosp, Sch Med, Dept Gynecol & Obstet, Baltimore, Md)
180	Oosterlynck DJ, Cornillie FJ, Waer M, Vandeputte M, Koninckx PR. Women with endometriosis show a defect in natural-killer activity resulting in a decreased cytotoxicity to autologous endometrium. Fertil Steril 1991;56:45–51 (Catholic Univ Leuven, Hosp Gasthuisberg, Dept Obstet & Gynecol, Belgium)
179	Devroey P, Liu J, Nagy Z, Tournaye H, Silber SJ, Vansteirteghem AC. Normal fertilization of human oocytes after testicular sperm extraction and intracytoplasmic sperm injection. Fertil Steril 1994;62:639–41 (St Lukes Hosp, Dept Urol, St Louis, Mo)
179	Pickering SJ, Braude PR, Johnson MH, Cant A, Currie J. Transient cooling to room-temperature can cause irreversible disruption of the meiotic spindle in the human oocyte. Fertil Steril 1990;54:102–8 (Univ Cambridge, Dept Obstet & Gynaecol, UK)
178	Scott RT, Hofmann GE. Prognostic assessment of ovarian reserve. Fertil Steril 1995;63:1–11 (Bethesda Ctr Reprod Health & Fertil, Cincinnati, Ohio)
176	Dizerega GS, Barber DL, Hodgen GD. Endometriosis—role of ovarian steroids in initiation, maintenance, and suppression. Fertil Steril 1980;33:649–53 (NICHHD, Pregnancy Res Branch, Bethesda, Md)
174	Mahadevan MM, Trounson AO. The influence of seminal characteristics on the success rate of human in vitro fertilization. Fertil Steril 1984;42:400–5 (Monash Univ, Queen Victoria Med Ctr, Dept Obstet & Gynaecol, Australia)
173	Queenan JT, O'Brien GD, Bains LM, Simpson J, Collins WP, Campbell S. Ultrasound scanning of ovaries to detect ovulation in women. Fertil Steril 1980;34:99–105 (Univ London Kings Coll Hosp, Sch Med, WHO, Collaborating Ctr Clin Res Human Reprod, UK)
173	Honore EK, Williams JK, Anthony MS, Clarkson TB. Soy isoflavones enhance coronary vascular reactivity in atherosclerotic female macaques. Fertil Steril 1997;67:148–54 (Wake Forest Univ, Winston Salem, NC)
173	Nisolle M, Donnez J. Peritoneal endometriosis, ovarian endometriosis, and adenomyotic nodules of the rectovaginal septum are three different entities. Fertil Steril 1997;68:585–96 (Univ Catholique Louvain, Brussels, Belgium)

Yang. Citation classics in Fertility and Sterility. Fertil Steril 2006.

TABLE 1

Continued.

No. of citations	Bibliographic data
172	Trounson A, Wood C, Kausche A. In vitro maturation and the fertilization and developmental competence of oocytes recovered from untreated polycystic ovarian patients. Fertil Steril 1994;62:353–62 (Monash Univ, Monash In Vitro Fertilizat, Melbourne, Australia)
172	Hughes EG, Sagle MA, Fedorkow DM, Vandekoppel P, Daya S, Collins JA. The routine use of gonadotropin- releasing hormone agonists prior to in vitro fertilization and gamete intrafallopian transfer—a meta-analysis of randomized controlled trials. Fertil Steril 1992;58: 888–96 (St James Univ Hosp, Dept Obstet & Gynecol, UK)
172	Wolff H, Anderson DJ. Immunohistologic characterization and quantitation of leukocyte subpopulations in human-semen. Fertil Steril 1988;49:497–504 (Harvard Univ, Brigham & Womens Hosp, Sch Med, Dept Obstet Gynecol & Reprod Biol, Fearing Res Lab, Boston, Mass)
170	Neveu S, Hedon B, Bringer J, Chinchole JM, Arnal F, Humeau C, Cristol P, Viala JL. Ovarian stimulation by a combination of a gonadotropin-releasing hormone agonist and gonadotropins for in vitro fertilization. Fertil Steril 1987;47:639–43 (CHU Montpellier, Serv Endocrinol, France)
169	Allen NC, Herbert CM, Maxson WS, Rogers BJ, Diamond MP, Wentz AC. Intrauterine insemination—a critical-review. Fertil Steril 1985;44:569–80 (Vanderbilt Univ, Med Ctr, Ctr Fertil & Reprod Res, Dept Obstet & Gynecol, Nashville, Tenn)
169	Hodgen GD. The dominant ovarian follicle. Fertil Steril 1982;38:281–300 (NICHHD, Pregnancy Res Branch, Bethesda, Md)
168	Malter HE, Cohen J. Partial zona dissection of the human oocyte—a nontraumatic method using micromanipulation to assist zona pellucida penetration. Fertil Steril 1989;51:139–48 (Emory Univ, Dept Gynecol & Obstet, Gamete & Embryo Res Lab, Atlanta, Ga)
167	Paulson RJ, Sauer MV, Lobo RA. Embryo implantation after human in vitro fertilization—importance of endometrial receptivity. Fertil Steril 1990;53:870–4 (Calif Med Ctr, Los Angeles)
166	Polan ML, Daniele A, Kuo A. Gonadal-steroids modulate human monocyte interleukin-1 (IL-1) activity. Fertil Steril 1988;49:964–8 (Yale Univ, Sch Med, Dept Obstet & Gynecol, New Haven, Ct)
166	Testart J, Lassalle B, Belaischallart J, Hazout A, Forman R, Rainhorn JD, Frydman R. High pregnancy rate after early human-embryo freezing. Fertil Steril 1986;46:268–72 (Hop Antoine Beclere, Serv Gynecol Obstet, France)
165	Aitken RJ, Best FSM, Richardson DW, Djahanbakhch O, Mortimer D, Templeton AA, Lees MM. An analysis of sperm function in cases of unexplained infertility—conventional criteria, movement characteristics, and fertilizing capacity. Fertil Steril 1982;38:212–21 (Ctr Reprod Biol, Dept Obstet & Gynaecol, Scotland)
165	Palermo GD, Cohen J, Alikani M, Adler A, Rosenwaks Z. Intracytoplasmic sperm injection—a novel treatment for all forms of male factor infertility. Fertil Steril 1995;63:1231–40 (Cornell Univ, Med Ctr, New York Hosp, Ctr Reprod Med & Infertil, NY)
165	Nagy Z, Liu J, Cecile J, Silber S, Devroey P, Vansteirteghem A. Using ejaculated, fresh, and frozen-thawed epididymal and testicular spermatozoa gives rise to comparable results after intracytoplasmic sperm injection. Fertil Steril 1995;63:808–15 (St Lukes Hosp, St Louis, Mo)
163	Kremer J, Jager S. Sperm-cervical mucus contact test—preliminary-report. Fertil Steril 1976; 27:335–40 (Univ Hosp Groningen, Dept Obstet & Gynaecol, Fertil Unit, Netherlands)
161	Irwin JC, Kirk D, King RJB, Quigley MM, Gwatkin RBL. Hormonal-regulation of human endometrial stromal cells in culture—an in vitro model for decidualization. Fertil Steril 1989; 52:761–8 (Huntington Med Res Inst, Pasadena, Calif)
161	Pittaway DE, Fayez JA. The use of Ca-125 in the diagnosis and management of endometriosis. Fertil Steril 1986;46:790–5 (Wake Forest Univ, Bowman Gray Sch Med, Dept Obstet & Gynecol, Reprod Endocrinol Sect, Winston Salem, NC)

Yang. Citation classics in Fertility and Sterility. Fertil Steril 2006.

TABLE 1

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No. of citations	Bibliographic data
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TABLE 1

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