

Curriculum Vitae

PERSONAL DATA

Name: LAURENCE ANTHONY COLE

Sex: Male

Date of Birth: February 8, 1953

Citizenship: U.S.A.

Marital Status: Married to Linda S. Friedman.
Two children

Office Address: Department of Obstetrics and Gynecology
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EDUCATION

Ph.D., 1982, Biochemistry, Medical College of Wisconsin

2/82→10/83 University of Michigan, Ann Arbor, Michigan.
Postdoctoral Research Fellow, Department of Pharmacology

PROFESSIONAL APPOINTMENTS

10/83→3/86	University of Michigan, Ann Arbor, Michigan Assistant Research Scientist in Internal Medicine and in the Reproductive Endocrinology Program
3/86→5/92	Yale University, New Haven, Connecticut Assistant Professor in Department of Obstetrics & Gynecology.
5/93→10/99	Yale University, New Haven, Connecticut. Associate Professor in Obstetrics & Gynecology, and in Yale Cancer Center
11/99→present	University of New Mexico, Albuquerque, New Mexico Professor of Obstetrics & Gynecology and Biochemistry & Molecular Biology Chief, Division of Women's Health Research
11/99→present	Yale University, New Haven, Connecticut. Affiliate Professor in Obstetrics & Gynecology

PATENTS AND PATENTS PENDING

US patent	hCG free β -subunit and β -core fragment in detecting the onset, progression and regression of gynecologic cancers
US patent	Gonadotropin β -subunit nicking enzyme, a marker of early stage malignancies
World patent	Prenatal screening for Down syndrome using hyperglycosylated gonadotropin
World patent	hCG β -core fragment in the detection of ectopic pregnancy
World patent	Invasive trophoblast antigen in the treatment of gestational trophoblastic diseases
World patent	Invasive trophoblast antigen as a better pregnancy test, Home pregnancy tests and IVF pregnancy applications

World patent	Antibodies against hyperglycosylated hCG (Invasive trophoblast antigen in the treatment of choriocarcinoma, testicular and germ cell malignancies, and other cancers.
US Patent	Hyperglycosylated hCG-2 in the detection of Down syndrome pregnancies
World patent	Use of invasive trophoblast antigen (hyperglycosylated hCG) and progesterone in predicting outcome of pregnancies.

PRIZES AND AWARDS

- October 95 Institute for Anticancer Research, symposium "Tumor Markers from Biology to therapy". Biannual Prize
- February 96 American Association for Clinical Chemistry, Outstanding Speaker Award 1995
- July 2000 American Association for Clinical Chemistry, Most Outstanding Contributor to Clinical Chemistry, Prize.
- April 2003 American Association for Clinical Chemistry, Outstanding Speaker Award 2002

TEACHING AWARDS

- Mar 2002 Award for outstanding teaching of Medical Students, awarded by students.
- Mar 2004 Award for outstanding teaching of Medical Students, awarded by students.

ACTIVE GRANTS

Quest Diagnostics, Industrial Grant,
 Variant glycoproteins in cultures of Down syndrome trophoblast tissue
 First year direct costs: \$70,000,
 Effective dates: July 2003 to June 2004, with renewal option for one more year

Church and Dwight, Industrial grant
 Evaluation of home pregnancy tests using early pregnancy urines
 Direct costs: \$176,000
 Effective dates: May 2004 to April 2005

JOURNAL EDITORIAL BOARDS

1994-10/2001 Editor "Trophoblast Disease Update" (annual journal of the International Society for the Study of Trophoblastic Disease).

PROFESSIONAL SOCIETIES

Since 2001 Secretary, Intl. Society for the Study of Trophoblastic Disease

since 1992 Executive Committee, Intl. Society for the Study of Trophoblastic Disease

since 2003 Associate Member, Society of Gynecologic Oncologists

since 1983 Member of the Endocrine Society

since 1993 Member of the American Association for Clinical Chemistry

OTHER HONORS

since 2001 Member of National Committee on Clinical Laboratory Standards: Subcommittee on Pregnancy Tests

BIBLIOGRAPHY

1. Cole, L.A., Husa, R.O., and Rao, C.V. Discordant synthesis and secretion of human chorionic gonadotropin and subunits by cervical cancer cells. *Cancer Res.* 41:1615-1619, 1981.
2. Cole, L.A., and Husa, R.O. Use of glycosidase digested human chorionic gonadotropin β -subunit to explain the partial binding of glycoprotein hormones to Con A. *Endocrinology*, 109:2276-2279, 1981.
3. Story, M.T., Cole, L.A., and Husa, R.O. A procedure using immobilized antibody for the isolation of the β -subunit of human chorionic gonadotropin from the culture fluids of a β -subunit-secreting nontrophoblastic cell line. *J.Clin.Endocrinol.Metab.* 53:1090-1095, 1981.

4. Cole, L.A., Birken, S., Sutphen, S., Husa, R.O., and Pattillo, R.A. Absence of the COOH-terminal peptide on ectopic human chorionic gonadotropin β -subunit (HCG- β). *Endocrinology* 110:2198-2200, 1982.
5. Cole, L.A., Hartle, R.J., Laferla, J.J., and Ruddon, R.W. Detection of the free β subunit of human chorionic gonadotropin in cultures of normal and malignant trophoblast cells, pregnancy sera, and sera of patients with choriocarcinoma. *Endocrinology* 113:1176-1178, 1983.
6. Pattillo, R.A., Husa, R.O., Cole, L.A., and Yorde, D.E. Hormone synthesis by normal and neoplastic trophoblast. In: *Biology of Trophoblast* (eds: Loke and Whyte), Elsevier Science, pp. 283-316, 1983.
7. Cole, L.A., Kroll, T.G., Ruddon, R.W., and Husa, R.O. Differential occurrence of free β and free alpha subunits of human chorionic gonadotropin (hCG). *J.Clin.Endocrinol.Metab.* 58:1200-1202, 1984.
8. Cole, L.A., and Husa, R.O. The carbohydrate on human chorionic gonadotropin produced by cancer cells. *Adv.Exper.Med.Biol.* 176:245-270, 1984.
9. Cole, L.A., Perini, F., Birken, S., and Ruddon, R.W. An oligosaccharide of the O-linked type distinguishes the free from the combined form of hCG alpha-subunit. *Biochem.Biophys.Res.Comm.* 122:1260-1267, 1984.
10. Husa, R.O., and Cole, L.A. New horizons in clinical hCG detection. *Adv.Exper.Med.Biol.* 176:217-244, 1984.
11. Nagelburg, S.B., Cole, L.A., and Rosen, S.W. A novel form of the free β -subunit of chorionic gonadotropin in the serum of a woman with epidermoid carcinoma. *J.Endocrinol.* 107:403-408, 1985.
12. Cole, L.A., Birken, S., and Perini, F. The structures of the serine-linked sugar chains on human chorionic gonadotropin. *Biochem.Biophys.Res.Comm.* 126:333-339, 1985.
13. Cole, L.A., Scheid, J.M., and Tannen, R.L. Induction of mitochondrial metabolism and pH-modulated ammoniogenesis in LLC-PK1 cells. *Am.J.Physiol.*, 251 (Cell Physiology 20) C293-C298, 1986
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gonadotropin β -subunit -like material produced by cervical carcinoma cells. *Cancer Res.* 46, 1948-1954, 1986.

16. Cole, L.A., Restrepo-Candelo, H., Lavy, G., and DeCherney, A. hCG free β -subunit an early marker of outcome of in vitro fertilization clinical pregnancies. *J.Clin.Endocrinol.Metab.*, 64:1328-1330, 1987.

17. Cole, L.A. O-Glycosylation of proteins in the normal and neoplastic trophoblast. *Troph.Res.*, 2:139-148, 1987.

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