

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

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|---------------------------------|--|
| NAME Alejandro Colman-Lerner | POSITION TITLE Senior Research Fellow |
| eRA COMMONS USER NAME | |

| EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.) | | | |
|--|---------------------------|-----------|----------------|
| INSTITUTION AND LOCATION | DEGREE (if applicable) | YEAR(s) | FIELD OF STUDY |
| University of Buenos Aires, Argentina | B.S. | 1988-1992 | Biology |
| University of Buenos Aires, Argentina | Ph.D. | 1992-1997 | Biology |
| Biology and Experimental Medicine Institute, Buenos Aires | | 1997 | Biology |

NOTE: The Biographical Sketch may not exceed four pages. Items A and B (together) may not exceed two of the four-page limit. Follow the formats and instructions on the attached sample.

A. Positions and Honors.Positions

3/1990-3/1992

University of Buenos Aires, Undergraduate Student Research Fellow. Research Institution: Biology and Experimental Medicine Institute (IBYME), Buenos Aires 1428. Supervisor: Dr J. Lino Baraño.
Subject: Regulation of bovine granulosa cell proliferation and differentiation in vitro by growth factors and hormones. Characterization of a newly developed granulosa cell line.

3/1992-3/1997

National Council for Research and Technology (CONICET) Graduate Student Fellow. Research Institution: Biology and Experimental Medicine Institute (IBYME), Buenos Aires 1428. Supervisor: Dr J. Lino Baraño
Subject: Interaction of growth factors and extracellular matrix on the regulation of ovarian follicular development: functional role of alternatively spliced variants of fibronectin.

3/1997-12/1997

National Council for Research and Technology (CONICET) Postdoctoral Fellow. Research Institution: Biology and Experimental Medicine Institute (IBYME), Buenos Aires 1428. Supervisor: Dr J. Lino Baraño
Subject: Molecular mechanism of action of ED-I containing fibronectin on granulosa cell growth.

2/1998-5/2001

Research Fellow The Molecular Sciences Institute, Berkeley, CA.
Subject: Development of peptide aptamer libraries suitable for forward genetic studies in mammalian cells.

5/2001- present

Senior Research Fellow, The Molecular Sciences Institute, Berkeley, CA.
Subject: Signal transduction at the single cell level and cell fate determination in *S.cerevisiae*.

Honors

None

B. Selected peer-reviewed publications (in chronological order). Do not include publications submitted or in preparation.

1. Colman-Lerner, A.A., Salamone, D.F., Chiappe, M.E., and Baranao, J.L. Comparative studies between freshly isolated and spontaneously immortalized bovine granulosa cells: protein secretion, steroid metabolism, and responsiveness to growth factors. *J Cell Physiol* 1995 Aug;164(2): 395-403.
2. Colman-Lerner, A.A., Fischman, M.L., Lanuza, G., Cramer, P., Kornblihtt, A., and Baranao, J.L. Role of different forms of fibronectin in in vitro bovine follicular development. *Medicina (B Aires)* 1997; 57(3):332-336.
3. Pignataro, L., Colman-Lerner, A.A., Baranao, J.L., and de Plazas, S.F. Biosynthesis of progesterone derived neurosteroids by developing avian CNS: in vitro effects on the GABAA receptor complex. *Int J Dev Neurosci* 1998 Aug; 16(5):433-441.
4. Colman-Lerner, A., Fischman, M.L., Lanuza, G.M., Bissell, D.M., Kornblihtt, A.R., and Baranao, J.L. Evidence for a role of the alternatively spliced ED-I sequence of fibronectin during ovarian follicular development. *Endocrinology* 1999 Jun; 140(6):2541-2548.
5. Geyer, C.R., Colman-Lerner, A., and Brent, R. "Mutagenesis" by peptide aptamers identifies genetic network members and pathway connections. *PNAS U S A* 1999 Jul 20;96(15):8567-8572.
6. Pomata, P.E., Colman-Lerner, A.A., Baranao, J.L., Fischman, M.L. In vivo evidences of early neurosteroid synthesis in the developing rat central nervous system and placenta. *Brain Res Dev Brain Res* 2000 Mar 15;120(1):83-86.
7. Colman-Lerner, A. and Brent, R. Using peptide aptamers to analyze the proteome. In "New technologies for the life sciences: a Trends Guide" supplement to *Trends in Cell Biology* 2000 Dec; 56-60.
8. Novaro V, Colman-Lerner A, Ortega FV, Jawerbaum A, Paz D, Lo Nostro F, Pustovrh C, Gimeno MF, Gonzalez E. Regulation of metalloproteinases by nitric oxide in human trophoblast cells in culture. *Reprod Fertil Dev.* 2001;13(5-6):411-20.
9. Colman-Lerner, A. Chin, T. and Brent, R. Yeast Cbk1 kinase activates distinct daughter-specific genetic programs that induce asymmetric cell fates. *Cell* 2001 Dec 14; 107:739-750.
10. Chiappe, ME., Lattanzi, ML., Colman-Lerner, AA., Baranao, JL., Saragueta, P. Expression of 3 beta-hydroxysteroid dehydrogenase in early bovine embryo development. *Mol Reprod Dev.* 2002 Feb;61(2):135-41.
11. Novaro, V., Pustovrh, C., Colman-Lerner, A., Radisky, D., Lo Nostro, F., Paz, D., Jawerbaum, A., Gonzalez, E. Nitric oxide induces gelatinase A (matrix metalloproteinase 2) during rat embryo implantation. *Fertil Steril.* 2002 Dec;78(6):1278-87.
12. Fung, T.H., Ball, G.I., McQuaide, S.C., Chao, S.-H., Colman-Lerner, A., Holl, M.R., and Meldrum, D.R., (2004), "Microprinting of On-chip CultureS: Patterning of Yeast Cell Microarrays using Concanavalin A Adhesion". Proceedings of IMECE04, ASME International Mechanical Engineering Congress, November 13-20, 2004, Anaheim, California, USA.
13. Colman-Lerner, A., Gordon, A., Serra, E., Chin, T., Resnekov, O., Endy, D., Pesce, G., and Brent, R. Regulated cell-to-cell variation in a cell-fate decision system. *Nature* 2005 Sept 29; 437(7059):699-706.
14. Fazzini, M., Vallejo, G., Colman-Lerner, A., Trigo, R., Campo, S., Baranao, J.L., and Saragueta, PE. Transforming growth factor beta1 regulates follistatin mRNA expression during in vitro bovine granulosa cell differentiation. *J Cell Physiol.* 2006 Apr;207(1):40-8.

C. Research Support. List selected ongoing or completed (during the last three years) research projects (federal and non-federal support). Begin with the projects that are most relevant to the research proposed in this application.

Principal Investigator/Program Director (Last, First, Middle): **Brent, Roger**

Briefly indicate the overall goals of the projects and your role (e.g. PI, Co-Investigator, Consultant) in the research project. Do not list award amounts or percent effort in projects.

Ongoing Research Support

5 P50 P50HG2370

07/22/02 – 6/30/07

NIH/NHGRI

Title: Center for Genomic Experimentation and Computation

Role: Co-Investigator

Completed Research Support

None