Emily Barron-Casella, Ph.D.

Assistant Professor of Pediatrics, Division of Hematology
The Johns Hopkins University School of Medicine

DEMOGRAPHIC INFORMATION

Current Appointment:

Assistant Professor of Pediatrics, Division of Hematology

Personal Data:

Address:
Department of Pediatrics, Division of Hematology
Ross 1129
720 Rutland Avenue
Baltimore, MD 21205

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Education and Training:

Degree/Year	Institution	Discipline
B.A./1976	Austin College	Biology
M.S./1981	Texas Tech U. Health Science Center	Anatomy
Ph.D./1988	UT Health Science Center at San Antonio	Cellular and Structural Biology

Predoctoral Training

1976-1977	Laboratory Technician Department of Biochemistry Texas Tech University Health Sciences Center Lubbock, Texas
1980-1981	Graduate Assistant Department of Anatomy Texas Tech University Health Sciences Center Lubbock, Texas
1981-1983	Research Assistant Department of Genetics Wadley Institutes of Molecular Medicine

Dallas, Texas

1983-1988 Teaching Assistant
Department of Cellular and Structural Biology
University of Texas Health Science Center
San Antonio, Texas

Postdoctoral Training

1988-1992 Postdoctoral Fellow
Department of Molecular Biology and Genetics
Johns Hopkins University School of Medicine
Baltimore, Maryland

Postdoctoral Associate
Howard Hughes Medical Institute
Baltimore, Maryland

Professional Experience:

Positions	Institution	Dates
Adjunct Investigator	Pediatric Oncology Branch, Division of Clinical Sciences, NCI, Bethesda, Maryland	1995-2003
Assistant Professor	Johns Hopkins U. School of Medicine	1992-present

RESEARCH ACTIVITIES

Publications:

Peer reviewed

1. Morrow, J., Stocco, D., and **Barron, E.A.** Spontaneous mutation rate to thioguanine resistance is decreased in polyploid hamster cells. J. Cell Physiol. 96: 81-86, 1978.

2. Morrow, J., Sammons, D. and **Barron, E.A.** Puromycin resistance in Chinese hamster cells: Genetic and biochemical studies of partially resistant, unstable clones. Mutation Res. 69: 333-346, 1980.

3. Nathan, R.D., Fund, S.J., Stocco, D.M., **Barron, E.A.,** and Markwald, R.R. Sialic Acid: Regulation of electrogenesis in cultured heart cells. Am. J. Physiol. 239: C197-207, 1980.

4. **Barron, E.A.,** Markwald, R.R., and Nathan, R.D. Structural analysis on the surface of in vitro embryonic myocardial cell aggregates. J. Mol. Cell. Cardiol. 14: 382-395, 1983.

5. **Barron, E.A.,** Sidhu, R.S., and Bollon, A.P. Construction of a yeast-bacterial DNA cloning vector. J. Clin. Hematol. and Oncol. 13: 53-64, 1983.

6. Cao, Z., **Barron, E.A.,** Carillo, A.J., and Sharp, Z.D. Reconstitution of cell-type-specific transcription of the rat prolactin gene in vitro. Mol. Cell. Biol. 7: 3402-3408, 1986.

7. Cao, Z., **Barron, E.A.,** and Sharp, Z.D. Prolactin upstream factor I mediates cell-specific transcription. Mol. Cell. Biol. 8: 5432-5438, 1988.

8. **Barron, E.A.,** Cao, Z., Schneider, K.E., Carillo, A.J., and Sharp, Z.D. Dual functions of a cis-acting element within the rat prolactin gene promoter. Mol. Cell. Biol. 9:817-819, 1989.

9. Sharp, Z.D., Helsel, S., Cao, A., **Barron, E.A.**, and Sanchez, Y. DNA recognition element required for PUF-I medicated cell-type-specific transcription of the rat prolactin gene. Nucl. Acid Res. 17: 2705-2722, 1989.

10. **Barron, E.A.**, and Corden, J. Conservation of the mammalian RNA polymerase II largest-subunit C-terminal domain. J. Mol. Evol. 35: 405-410, 1992.

11. **Barron-Casella, E.A.**, Kickler, T.S., Rogers, O.C., and Casella, J.F. Expression and purification of functional recombinant epitopes for the platelet antigens, Pl^{A1} and Pl^{A2}. Blood 84: 1157-1163, 1994.

12. Casella, J.F., **Barron-Casella, E.A.**, and Torres, M.A. Quantitation of Cap Z in conventional preparations and methods for further purification of actin. Cell Motil. Cytoskele-ton 30: 164-170, 1995.

13. **Barron-Casella, E.A.**, Torres, M.A., Scherer, S.W., Heng, H.H.Q., Tsui, L-C, Casella, J.F. Sequence analysis and chromosomal localization of human Cap Z: Conserved residues within actin-binding domain may link Cap Z to the gelsolin/severin and profilin protein families. J. Biol. Chem., 20: 21472-21479, 1995.

14. Nachmius, V.T., Golla, R., Casella, J.F., and **Barron-Casella, E.A.** Cap Z, a calcium insensitive protein in resting and activated platelets. FEBS Letters 378: 258-262, 1996.

15. Okamoto, N., Kennedy, S.D., **Barron-Casella, E.A.**, Casella, J.F., Inoko, H., Kickler, T.S. Identification of a human heavy chain antibody fragment directed against human platelet alloantigen 1a by phage display library. Tissue Antigens 51:156-163, 1998.

16. **Barron-Casella, E.A.**, Nebbia, G., Rogers, O.C., King, K.E., Kickler, T.S., Casella, J.F. Construction of a Human Platelet Alloantigen-1a epitope(s) within murine glycoprotein IIIa:

Identification of residues critical to the conformation of the antibody binding site(s). Blood 93:2959-2967, 1999.

17. Lu, J.F., **Barron-Casella, E.**, Deering, R., Heinzer, A.K., Moser, A.B., deMesy Bentley, K.L., Wand, G.S., McGuinness, M., Pei, Z., Watkins, P.A., Pujol, A., Smith, K.D., Powers, J.M. The role of peroxisomal ABC transporters in the mouse adrenal gland: the loss of Abcd2 (ALDR), not Abcd1 (ALD), causes oxidative damage. Lab Invest. 87:261-272, 2007.

Book Chapter

Bollon, A.P., **Barron, E.A.**, Berent, S.L., Bragg, P.W., Dixon, D., Fuke, M., Hendrix, C., Mahmoudi, M., Sidhu, R.S., Torczynski, R.M. Recombinant DNA techniques: Isolation, Cloning, and Expression of Genes. In: Recombinant DNA Products: Insulin, Interferon, Growth Hormone, A.P. Bollon, Ed. (CRC Press, Inc., Boca Raton, FL), 1984.

Extramural Sponsorship:

Past Awards
Identification of the Epitopes and Antibodies Involved in the HPA-3 (Bak) and HPA-4 (Pen) Alloantigen Systems, 07//01/96-06/30/97, National Blood Foundation grant (E. Barron-Casella, PI)

American Heart Established Investigator Award (E. Barron-Casella, PI)
Returned/overlap

Modeling of Platelet Alloantigens, 07/01/1998-06/30/2003, NHLBI R29HL59955 (E. Barron-Casella, PI

Fetal-Maternal Incompatibility of Platelets, 07/01/1999-06/30/02, Advanced Transfusion Practices and Blood Research grant (E. Barron-Casella, PI

Active

U01-NS-042804 (DeBaun M, PI) 10/01/2003-11/30/2012
5.16 calendar months
NINDS/NIH
Silent Cerebral Infarct Multi-Center Clinical Trial

1 R01 HL091759-01 (Casella J, PI) 12/01/2007-11/30/2011
1.2 calendar months
NIH/NHLBI
Longitudinal SIT Trial Plasma Proteomic Biomarker Discovery and Validation in SCI

Pending

RO1(Smith KD, Co-PI, E. Barron-Casella, Co-PI) 07/01/08-06/30/13
6.0 calendar months
NIH
XALD: Pathophysiology and Therapy

EDUCATIONAL ACTIVITIES

Teaching:

Faculty member of the Cellular and Molecular Medicine graduate program from 10/1999-10/2002.

Training grant participation:

Laboratory Research Training in Pediatric Oncology-Hematology
8/98-5/03
National Institutes of Health
National Cancer Institute
T32CA60441
Principal Investigator: Curt Civin, M.D.
Program Faculty: Emily Barron-Casella, Ph.D.

Advisees
Swati Jain, MD
Neil Littman
Katherine Dix
Jamey Ingraham
Anthony Law

ORGANIZATIONAL ACTIVITIES

Institutional Administrative Appointments:

1999-2003	Pediatric Core Laboratory Director
2006-present	SITT Repository Supervisor

RECOGNITION

Invited talks

March 1994	*Fetal-Maternal Incompatibility of Platelets* Austin College Lectureship

Sherman, Texas

December 1997

Development of an HPA-1a Epitope within Murine GPIIIa: Identification of Residues Necessary for Generating the Human Antigenic Determinant
Platform session
American Society of Hematology meeting
San Diego, California