Biographical Profile

Peter J. Quesenberry, MD

Position/Title

Director, Hematology Oncology at Rhode Island Hospital and The Miriam Hospital

Principle Investigator, Director, COBRE Center for Stem Cell Biology

Professor of Medicine, Brown University

Education

BA, University of Virginia, Charlottesville, VA; English
MD, University of Virginia, Charlottesville, VA; Medicine

In His Own Words

I am the PI and Director of the COBRE Center for Stem Cell Biology, which has close collaboration with the RI-CCRD COBRE Program in the Rhode Island IDeA community. In the past ten years, there have been significant exchanges between all of our COBREs and our diverse and talented pool of investigators continue to benefit from the varied core services that are offered and the excellent mentoring that we as a united group provide. I have extensive experience in studies of stem cell biology and have evolved the theory of the stem cell continuum which is largely based on the cell cycle status of long-term re-populating hematopoietic stem cells. In addition, I have specifically worked on and published work on 1.) tritiated thymidine suicide, 2.) stem cell FACS separations, 3.) BrdU cycle studies in vivo, 4.) circadian rhythms of murine progenitor/stem cells and 5.) determination of cell cycle status of hematopoietic cell lines and progenitor/stem cells. I work with a highly skilled and dedicated research group and have mentored many investigators. Throughout my career I have been a mentor to 57 trainees 42 of whom have obtained academic positions.

Work History

1973-1976	Assistant Professor of Medicine (70% research time), St. Elizabeth's Hosp. & Tufts Univ., Boston, MA
1976-1979	Assistant Professor of Medicine (60-70% research time), Peter Bent Brigham Hosp. & Harvard Medical School, Boston, MA
4/79-12/92	Professor of Medicine and Chief, Division of Hematology-Oncology, Univ. of VA Health Sciences Center, Charlottesville, VA
07/81-12/92	Byrd S. Leavell Prof. of Medicine, University of VA Health Sciences Center, Charlottesville, VA
1/93-12/99	Prof. Of Medicine & Director, Cancer Center, Univ. of MA Medical Center, Worcester, MA
6/99-12/00	Eleanor Eustis Farrington Chair, Cancer Research, Univ. of MA Med. School, Worcester, MA
12/99-12/00	Prof. Of Medicine, Univ. of MA Medical School, Worcester, MA
01/01-9/30/06	Chair, Dept of Research, Roger Williams Medical Center, Prof. Of Med., Boston Univ. School of Medicine, Head, The Center for Stem Cell Biology
06/04-9/30/06	Director, The Adele R. Decof Cancer Center and The Blood and Marrow Transplant Program
10/06-present	Division Director of Hematology/Oncology, Lifespan Medical Center, Paul Calabresi, MD Professorship in Oncology.
Honors:	Leukemia Society of America Kenny Award (1992)
	Leukemia Society of America National Leadership Award (1998)
	Leukemia Society Merit Award (1999)
	Lifetime Achievement Award, Leukemia/Lymphoma Society (2006)

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Selected Peer-reviewed Publications

1. Aliotta JM, Sanchez-Guijo FM, Dooner GJ, Johnson KW, Dooner MS, Greer KA, Greer D, Pimentel J, Kolankiewicz LM, Puente N, Faradyan S, Ferland P, Bearer EL, Passero MA, Abedi M, Colvin GA, Quesenberry PJ: Alteration of marrow cell gene expression, protein production, and engraftment into lung by lung-derived microvesicles: A novel mechanism for phenotype modulation. Stem Cells, 25(9):2245-2256, 2007. PMID: 17556595
2. Dooner GJ, Colvin GA, Dooner MS, Johnson KW, Quesenberry PJ: Gene expression fluctuations in murine hematopoietic stem cells with cell cycle progression. J Cell Physiol. 214(3):786-95, 2008. PMID: 17894410
3. Quesenberry PJ: Stem cell plasticity: clinical implications. Exp Hematol 36(6):669-71, 2008. PMID: 18410988
4. Dooner MS, Aliotta JM, Pimentel J, Dooner GJ, Abedi M, Colvin G, Liu Q, Weier HU, Johnson KW, Quesenberry PJ: Conversion potential of marrow cells into lung cells fluctuates with cytokine-induced cell cycle. Stem Cells Dev 17(2):207-19, 2008. PMID: 18447637
5. Quesenberry PJ, Aliotta JM: The paradoxical dynamism of marrow stem cells: considerations of stem cells, niches, and microvesicles. Stem Cell Rev 4(3):137-47, 2008. PMID:18665337
6. Quesenberry PJ, Dooner GJ, Dooner MS: Problems in the promised land: status of adult marrow stem cell biology. Exp Hematol. 37(7):775-83, 2009. PMID: 19447161
7. Quesenberry PJ, Dooner GJ, Del Tatto M, Aliotta JM, Colvin GA, Johnson KW, Dooner MS: Expression of cell cycle related genes with cytokine-induced cell cycle progression of primitive hematopoietic stem cells. Stem Cells Dev. 2010 Apr;19(4):453-60. PMID: 19788373
8. Aliotta JM, Pereira M, Johnson KW, de Paz N, Dooner MS, Puente N, Ayala C, Brilliant K, Berz D, Lee D, Ramratnam B, McMillan PN, Hixson DC, Josic D, Quesenberry PJ: Microvesicle entry into marrow cells mediates tissue-specific changes in mRNA by direct delivery of mRNA and induction of transcription. Exp Hematol, 38(3):233-245, 2010. PMID: 20079801
9. Quesenberry PJ, Aliotta JM. Cellular phenotype switching and microvesicles. Adv Drug Deliv Rev. 2010 Sep 30;62(12):1141-8. Epub 2010 Jun 15. Review. PMID: 20558219
10. Li M, Aliotta JM, Asara JM, Tucker L, **Quesenberry P**, Lally M, Ramratnam B. Quantitative proteomic analysis of exosomes from HIV-1-infected lymphocytic cells. Proteomics. 2012 Jul;12(13):2203-11. PMID:22807456
11. Liu L, Papa EF, Dooner MS, Machan JT, Johnson KW, Goldberg LR, Quesenberry PJ, Colvin GA. Homing and long-term engraftment of long- and short-term renewal hematopoietic stem cells. PLoS One. 2012;7(2):e31300. Epub 2012 Feb 9. PMID:22347459
12. Aliotta JM, Lee D, Puente N, Faradyan S, Sears EH, Amaral A, Goldberg L, Dooner MS, Pereira M, Quesenberry PJ. Progenitor/stem cell fate determination: interactive dynamics of cell cycle and microvesicles. Stem Cells Dev. 2012 Jul 1;21(10):1627-38. Epub 2012 Feb 15. PMID: 22214238
13. Del Tatto M, Ng T, Aliotta JM, Colvin GA, Dooner MS, Berz D, Dooner GJ, Papa EF, Hixson DC, Ramratnam B, Aswad BI, Sears EH, Reagan J, Quesenberry PJ. Marrow cell genetic phenotype change induced by human lung cancer cells. Exp Hematol. 2011 Nov;39(11):1072-80Epub 2011 Aug 22. PMID:21864488
14. Gao JS, Zhang Y, Tang X, Tucker LD, Tarwater PM, Quesenberry PJ, Rigoutsos I, Ramratnam B. The Evi1, microRNA-143, K-Ras axis in colon cancer. FEBS Lett. 2011 Feb 18;585(4):693-9. Epub 2011 Jan 26. PMID: 21276449
15. Renzulli JF 2nd, Del Tatto M, Dooner G, Aliotta J, Goldstein L, Dooner M, Colvin G, Chatterjee D, **Quesenberry P**. Microvesicle induction of prostate specific gene expression in normal human bone marrow cells. J Urol. 2010 Nov;184(5):2165-71. Epub 2010 Sep 18. PMID: 20850816

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Ongoing Support

8P20GM103468 (Peter Quesenberry, MD) 9/30/09 - 6/30/14
Agency: NIH/NIGMS $11,088,327

Stem Cell Biology: New Directions in Clinical and Basic Research COBRE

The major goal of the project is to develop junior investigators in Rhode Island. This supports core laboratories, seminar speakers, and the work of junior investigators who have not previously been funded.

1R01HL103726 (Peter Quesenberry, MD) 04/01/11 – 3/30/15
Agency: NIH/NHLBI $1,590,000

Genetic information transfer to hematopoietic cells: Role of microvesicles

The focus of this project is to determine if vesicles shed by lung cells are able to influence the identity of bone marrow cells that consume them to the point that they behave like lung cells.

1T32HL116249 (Peter Quesenberry, MD) 08/01/13 – 7/31/18
Agency: NIH/NHLBI $996,774

Intensive research training of doctors and scientists in blood diseases is critical for forming a base to develop treatments and cures for a wide variety of blood diseases including leukemia, lymphoma, myeloma, hemophilia, aplastic anemia and a wide variety of anemias and blood clotting disorders. This training program will prepare hematologists and scientists to develop new hypotheses on disease origins and scientifically developed treatment to improve the health and safety of patients with blood diseases.

8P20GM103421-09 (Bharat Ramratnam, MD) 07/01/09-06/30/14
Agency: NIH/NIGMS $11,124,783

COBRE Center for Cancer Research Development

The mission of the Center is to coalesce and foster outstanding, interactive, lab-based cancer research centered on the Molecular and Cellular Pathogenesis of Cancer. The goal will be to develop program projects with different but related themes, into interactive research groups composed of junior investigators supported by peer reviewed grants.