

UNIVERSITY OF PENNSYLVANIA—SCHOOL OF MEDICINE  
**CURRICULUM VITAE**

January 11

**Rodney M. Camire, PhD**

**Office Address:**

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**Education:**

1990-1994 B.A. Saint Anselm College (Biochemistry)  
1994-1998 Ph.D. University of Vermont (Biochemistry)

**Postgraduate Training and Fellowship Appointments:**

1998-2001 **Post-Doctoral Fellow (NRSA, Funded)**, University of Pennsylvania and  
The Children's Hospital of Philadelphia (Mentor: Katherine A. High, MD)

**Military Service:**

None

**Faculty Appointments:**

2002-2009 **Assistant Professor of Pediatrics**, University of Pennsylvania School of  
Medicine  
2009- **Associate Professor of Pediatrics (with tenure)**, University of  
Pennsylvania School of Medicine

**Hospital and Administrative Appointments:**

2001-2002 **Research Associate**, The Children's Hospital of Philadelphia

- 2002- **Assistant Member**, The Joseph Stokes Jr. Research Institute, The Children's Hospital of Philadelphia
- 2002- **Member**, Graduate Group in Pharmacological Sciences, University of Pennsylvania School of Medicine
- 2006- **Member**, Cardiovascular Institute, University of Pennsylvania School of Medicine

**Specialty Certification:**

None

**Licensure:**

None

**Awards, Honors and Membership in Honorary Societies:**

- 1994 *Magna cum laude*, Saint Anselm College
- 1994 Saint Anselm College, Biology Department Award
- 1995 UVM Graduate Research Forum, First Prize
- 1995 Young Investigator Award, 37<sup>th</sup> Annual Meeting of the American Society of Hematology
- 1996 UVM Graduate Research Forum, First Prize
- 1997 Young Investigator Award, XVI<sup>th</sup> Congress of the International Society on Thrombosis and Haemostasis
- 1997 UVM Graduate Research Forum, Second Prize
- 1997 Young Investigator Award, 39<sup>th</sup> Annual Meeting of the American Society of Hematology
- 1999 Young Investigator Award, XVII<sup>th</sup> Congress of the International Society on Thrombosis and Haemostasis
- 2000 Ruth L. Kirschstein National Research Service Award
- 2000 Best Poster Presentation by a Postdoctoral Fellow, Cardiovascular Biology Retreat, University of Pennsylvania
- 2000 Young Investigator Award, 42<sup>nd</sup> Annual Meeting of the American Society of Hematology
- 2001 Young Investigator Award, XVIII<sup>th</sup> Congress of the International Society on Thrombosis and Haemostasis
- 2001 Young Investigator Award, 43<sup>rd</sup> Annual Meeting of the American Society of Hematology
- 2003 American Heart Association (Penn/Del) Research Award, President's Reception.
- 2005 Young Investigator Award, XX<sup>th</sup> Congress of the International Society on Thrombosis and Haemostasis
- 2005 Early Career Investigator Award, The Bayer Hemophilia Awards Program, Bayer Corporation.

- 2009 Copernicus Visiting Scientist, IUSS-Ferrara 1391, University of Ferrara, Ferrara, Italy.  
2009 Alumni Academic Achievement Award, Saint Anselm College

**Membership in Professional & Scientific Societies and Other Professional Activities:**

***National Societies:***

- 1994- Delta Epsilon Sigma  
2001- American Society of Hematology  
2002- American Society of Biochemistry and Molecular Biology  
2004- American Chemical Society  
2006- American Heart Association

***International Societies:***

- 2006- International Society of Thrombosis and Hemostasis

***Grant Reviewer:***

- 2003 National Science Foundation, Molecular Biochemistry (MCB) Grant Review  
2007 NIH Hemostasis and Thrombosis Study Section, *ad hoc member*  
2009 NIH Special Emphasis Panel: Challenge Grant Reviewer (NHLBI)  
2009 NIH Special Emphasis Panel: M-Vascular and Endothelial Cell Biology  
2010 NIH Special Emphasis Panel: RC-4 Challenge Grant Reviewer (NHLBI)  
2010 NIH Special Review Committee: Program Project Grant Review (NHLBI)

**Editorial Positions:**

- 2007 Journal of Thrombosis and Haemostasis, Advisory Board  
2010 ISRN Hematology, Editorial Board

**Ad Hoc reviewer of manuscripts:**

- The Journal of Clinical Investigation  
Blood  
The Journal of Biological Chemistry  
Biochemistry  
FEBS Letters  
Journal of Thrombosis and Haemostasis  
Thrombosis and Haemostasis  
Thrombosis Research  
Blood Coagulation and Fibrinolysis  
American Journal of Hematology  
Haematologica  
Journal of Cellular and Molecular Medicine  
Protein Peptide Letters  
Reviews on Recent Clinical Trials

**Academic and Institutional Committees:**

- 2006- Interviewer, Pharmacology Graduate Group, The University of Pennsylvania, School of Medicine

**Major Academic and Clinical Teaching Responsibilities:**

1. Biochemistry (MOD100B: *Metabolism*) for first year medical students. Problem Solving Session Group Leader. Fifteen 1-1/2 hr sessions with 18-21 students. (Course Director: Mitchell Lewis, D. Phil.). **2003-present.**
2. PHRM 590, ~10 BGS students (Course Director: Vladimir R. Muzykantov, M.D., Ph.D.) **Fall/Spring 2003.**
3. Bioethics Workshop, Faculty Facilitator. One 1-1/2 hr session, ~10 students (Colleen Dunn, Curriculum Coordinator). **2004, 2005, 2008.**
4. CHOP Hematology/Oncology Fellowship Committee. Evaluate Hem/Onc fellows research progress. 3 fellows. **2008.**
5. Coagulation/Molecular Pathology Resident Rotation. One 1-1/2 hr lecture, "Biochemistry and Molecular Genetics of Coagulation", 2 residents. (Rotation Director, Doug Cines, M.D. and Eleanor Pollak, M.D.). **March 2005.**
6. Journal Club, Macromolecular interactions. Once/week. (~15 Post-docs and undergraduate students). **2002-present.**
7. Postdoctoral Supervision:
  - Raffaella Toso, Ph.D. (2003-2006)
  - Mettine Bos, Ph.D. (2005-present): **2008 Recipient of the Judith Graham Pool Postdoctoral Fellowship, National Hemophilia Foundation**
  - Matthew Bunce, Ph.D. (2008-present)
  - Lacramioara Ivanciu, Ph.D. (2008-present): **2010 Recipient of the Judith Graham Pool Postdoctoral Fellowship, National Hemophilia Foundation**
  - Marcello Baroni, Ph.D. (2009-2011)
8. Graduate Student Rotations:
  - Laura Castellano, University of Pennsylvania (2010)
9. Undergraduate Student Rotations:
  - Jordan Newmark, University of Maryland (2002)
  - Chuma Chike-Obi, University of Pennsylvania (2002)
  - Calvin Lew, University of Pennsylvania (2004-05)
  - Deborah Bloch, Columbia University, (2005-08)
  - Jeffery Mojica, The College of New Jersey (2007)
  - Audrey Dos Santos, University of Campinas (2007)
  - Allison Hannan, Carnegie Mellon University (2008-09)
  - Roisin Walshe, Villanova University (2009-)
  - Haerin Kim, Haverford College (2009-)

Samir Bhandutia, Gannon University (2010-)

10. High School Student Rotations:  
Caitlin Leone, Winslow Twp. High School (2007, 2008)
11. Ph.D. Thesis Examining Committee:  
Xia Yang, Dept. of Biochemistry, Temple University (2004)  
Tara Miller, Dept. of Biochemistry, Temple University (2007)  
Rudy Fuentes, Dept. of Pharmacology, UPENN (2008-2010)  
Gabriel Krigsfeld, Dept. of Pharmacology, UPENN (2010-)

**Lectures by Invitation (past five years):**

- July 13, 2005 “Structure and function of factors V and Va.” *2005 FASEB Summer Research Conference*, Saxtons River, VT.
- February 21, 2006 “Mechanism regulating the factor V procofactor to cofactor transition.” *Sol Sherry Thrombosis Research Center Seminar Series*, Temple University, Philadelphia, PA.
- March 13, 2006 “Targeting common pathway factors for improving hemostasis in hemophilia.” *Bayer Healthcare, Biological Products Division*, Berkeley, CA.
- March 21, 2007 “Zymogen-like factor Xa variants for improving hemostasis in hemophilia.” *Bayer Healthcare, Biological Products Division*, Berkeley, CA.
- June 6, 2007 “Molecular basis of factor V procofactor activation.” *2007 FASEB Summer Research Conference*, Indian Wells, CA.
- June 9, 2007 “Mechanisms regulating the procofactor to cofactor transition.” *US Hemophilia Clinical Advisory Board*, Denver, CO.
- September 11, 2007 “Molecular basis of procofactor activation.” *BloodCenter of Wisconsin*, Milwaukee, WI
- November 8, 2007 “New Concepts on blood coagulation and hemostasis.” *2007 Congresso Brasileiro de Hematologia e Hemoterapia*, São Paulo, Brazil.
- November 10, 2007 “Targeting common pathway factors for improving hemostasis in hemophilia.” *2007 Congresso Brasileiro de Hematologia e Hemoterapia*, São Paulo, Brazil.
- February 8, 2008 “Zymogen-like factor Xa variants for improving hemostasis.” *Wyeth Pharmaceutical Division*, Cambridge, MA.
- February 23, 2008 “Factor Xa Muteins.” *National Hemophilia Foundation 9<sup>th</sup> Workshop on Novel Technologies and Gene Transfer for Hemophilia*, Philadelphia, PA.
- April 11, 2008 “Factor Xa Muteins as Bypass Agents for Improving Hemostasis in Hemophilia.” *Stokes Research Institute 2008 Scientific Symposium*, Philadelphia, PA.

- April 15, 2008 “Targeting the Common Pathway for Improving Hemostasis in Hemophilia.” *Sol Sherry Thrombosis Research Center Seminar Series*, Temple University, Philadelphia, PA.
- May 18, 2008 “Novel factor Xa variants for improving hemostasis in hemophilia.” *6<sup>th</sup> Bari International Conference on Hemophilia, von Willebrand Factor and ADAMTS-13*. Pugnochiuso (Vieste del Gargano), Foggia, Italy.
- June 6, 2008 “Molecular mechanisms governing FV procofactor and FX zymogen activation: New biochemical insights and therapeutic implications.” *University of North Carolina, Division of Hematology/Oncology*, Chapel Hill, NC.
- August 14, 2008 “Molecular mechanisms governing FV procofactor and FX zymogen activation: New biochemical insights and therapeutic implications.” *Emory University School of Medicine, Aflac Cancer Center and Blood Disorder Service*, Atlanta, GA.
- October 2, 2008 “Novel Factor Xa Variants for the Treatment of Hemophilia.” *2008 Annual Meeting of the British Society for Haemostasis and Thrombosis*, Nottingham, United Kingdom.
- October 2, 2008 “Molecular Basis of FV and FVIII Procofactor Activation.” *2008 Annual Meeting of the British Society for Haemostasis and Thrombosis*, Nottingham, United Kingdom.
- November 12, 2008 “Molecular mechanisms governing FV procofactor and FX zymogen activation: New biochemical insights and therapeutic implications.” *University of British Columbia, Center for Blood Research*, Vancouver, BC.
- February 19, 2009 “Zymogen-like factor Xa variants as novel bypass agents for the treatment of hemophilia.” *Wyeth Pharmaceutical Division*, Cambridge, MA.
- March 18, 2009 “Targeting the common pathway for improving hemostasis in hemophilia.” *Thomas Jefferson University, Department of Medicine and Cardeza Foundation*, Philadelphia, PA.
- March 27, 2009 “Molecular mechanisms governing FV procofactor and FX zymogen activation: New biochemical insights and therapeutic implications.” *The University of Vermont, Department of Biochemistry*, Burlington, VT.
- May 18, 2009 “Targeting the Common Coagulation Pathway for Improving Hemostasis in Hemophilia—Novel FXa Variants.” *The University of Ferrara*, Ferrara, Italy.
- July 12, 2009 “Novel factor Xa variants for improving hemostasis in hemophilia.” *Symposia Lecture, XXII Congress of The International Society of Thrombosis and Haemostasis*, Boston, MA.
- December 5, 2009 “The Development of Novel Hemostatic Bypassing Molecules.” *Scientific Committee on Hemostasis, 51<sup>th</sup> Annual Meeting of the American Society of Hematology*, New Orleans, LA.

- February 8, 2010 “Zymogen-like FXa.” *National Hemophilia Foundation 10<sup>th</sup> Workshop on Novel Technologies and Gene Transfer for Hemophilia*, Chapel Hill, NC.
- February 24, 2010 “Targeting the Common Pathway for Improving Hemostasis in Hemophilia.” *Eleven Biotherapeutics*, Cambridge, MA.
- April 20, 2010 “Zymogen-like FXa variants as bypass agents for the treatment of hemophilia.” *Sol Sherry Thrombosis Research Center Seminar Series*, Temple University, Philadelphia, PA.
- July 12, 2010 “Molecular mechanisms governing FV procofactor and FX zymogen activation: New biochemical insights and therapeutic implications.” *Genomic Medicine Institute, The Lerner Research Institute, The Cleveland Clinic*, Cleveland, OH.
- July 27, 2010 “The Molecular Basis of Factor V Procofactor Activation.” *2010 Gordon Research Conference in Hemostasis*, Waterville Valley, NH.

**Organizing Roles in Scientific Meetings:**

- July 2001 Co-Chair, Scientific Oral Communication Session on “Rare Bleeding Disorders” XVIII<sup>th</sup> Congress of the International Society on Thrombosis and Haemostasis, July 6-12, 2001 Paris, France.
- June 2005 Abstract Reviewer, American Heart Association 2005 Scientific Sessions, Dallas, TX.
- August 2005 Co-Chair, Scientific Oral Communication Session on “Factor VIII and Factor V Function” XX<sup>th</sup> Congress of the International Society on Thrombosis and Haemostasis, August 6-12, 2005 Sydney, Australia.
- September 2005 Abstract Reviewer, 47<sup>th</sup> Annual Meeting of the American Society of Hematology, December 10-13, 2005 Atlanta, GA.
- December 2005 Co-Chair, Simultaneous Session on “Blood Coagulation and Fibrinolytic Factors I” 47<sup>th</sup> Annual Meeting of the American Society of Hematology, December 10-13, 2005 Atlanta, GA.
- June 2006 Abstract Reviewer, American Heart Association 2006 Scientific Sessions, Chicago, IL.
- September 2006 Coordinating Abstract Reviewer, 48<sup>th</sup> Annual Meeting of the American Society of Hematology, December 9-12, 2006 Orlando, FL.
- November 2006 Co-Chair, Scientific Oral Session: “Sol Sherry Distinguished Lecture in Thrombosis: Regulation of Blood Coagulation and Fibrinolysis” American Heart Association Scientific Sessions, November 12-15, 2006, Chicago, IL.
- December 2006 Co-Chair, Simultaneous Session on “Coagulation Factor Biochemistry” 48<sup>th</sup> Annual Meeting of the American Society of Hematology, December 9-12, 2006 Orlando, FL.

February 2007	International Scientific Advisory Board and Abstract Reviewer, XXI <sup>th</sup> Congress of the International Society on Thrombosis and Haemostasis, July 6-12, 2007 Geneva, Switzerland.
June 2007	Abstract Reviewer, American Heart Association 2007 Scientific Sessions, Orlando, FL.
February 2008	International Scientific Advisory Board, XXII <sup>th</sup> Congress of the International Society on Thrombosis and Haemostasis, July 11-17, 2009 Boston, MA.
February 2009	Abstract Reviewer, XXII <sup>th</sup> Congress of the International Society on Thrombosis and Haemostasis, July 11-17, 2009 Boston, MA.
July 2009	Chairperson, Symposia Session on "Proteases: Structure/Function" XXII <sup>th</sup> Congress of the International Society on Thrombosis and Haemostasis, July 11-17, 2009 Boston, MA.
December 2009	Co-Chair, Simultaneous Session on "Structure-Function of Coagulation Proteins" 51 <sup>st</sup> Annual Meeting of the American Society of Hematology, December 5-8, 2009 New Orleans, LA.
March 2010	Scientific Program Committee, XXIII <sup>th</sup> Congress of the International Society on Thrombosis and Haemostasis, July 23-28, 2011 Kyoto, Japan.

## **Bibliography:**

### **Research publications, peer reviewed:**

1. **Camire, R.M.**, Kalafatis, M., Cushman, M., Tracy, R.P., Mann, K.G., and Tracy, P.B. The mechanism of inactivation of human platelet factor Va from normal and activated protein C-resistant individuals. *J. Biol. Chem.* **270**, 20794-20800, 1995.
2. **Camire, R.M.**, Kalafatis, M., Simioni, P., Girolami, A., and Tracy, P.B. Platelet-derived factor Va and factor Va<sup>Leiden</sup> cofactor activities are sustained on the surface of activated platelets despite the presence of activated protein C. *Blood.* **91**, 2818-2829, 1998.
3. Larson, P.J., **Camire, R.M.**, Wong, D., Fasano, N.C., Monroe, D.M., Tracy, P.B., and High, K.A. Structure/function analyses of recombinant variants of human factor Xa: Factor Xa incorporation into prothrombinase on the activated platelet surface is not mimicked by synthetic phospholipid vesicles. *Biochemistry.* **37**, 5029-5038, 1998.
4. **Camire, R.M.**, Kalafatis, M., and Tracy, P.B. Proteolysis of factor V by cathepsin G and elastase indicates that cleavage at Arg<sup>1545</sup> optimizes cofactor function by facilitating factor Xa binding. *Biochemistry.* **37**, 11896-11906, 1998.

5. **Camire, R.M.**, Pollak, E.S., Kaushansky, K., and Tracy, P.B. Secretable human platelet-derived factor V originates from the plasma pool. *Blood. (Rapid Communication)* **92**, 3035-3041, 1998.
6. **Camire, R.M.**, Larson, P.J., Stafford D.W., and High, K.A. Enhanced  $\gamma$ -carboxylation of recombinant factor X using a chimeric construct containing the prothrombin propeptide. *Biochemistry*. **39**, 14322-14329, 2000.
7. Arruda, V.R., Hagstrom, J.N., Deitch, J., Patterson-Heiman, T., **Camire, R.M.**, Chu, K., Fields, P.A., Herzog, R.W., Couto, L.B., Larson, P.J., and High, K.A. Posttranslational modifications of recombinant myotube-synthesized human factor IX. *Blood*. **97**, 130-138, 2001.
8. **Camire, R.M.** Prothrombinase assembly and S1 site occupation restores the catalytic activity of FXa impaired by mutation at the sodium-binding site. *J. Biol. Chem.* **277**, 37863-37870, 2002.
9. Toso, R., Tidd, T., Pinotti, M., **Camire, R.M.**, Marchetti, G., High, K.A., Bernardi, F., and Pollak, E.S. Factor VII V17G models a zymogen-like form of factor VIIa. *Biochem. J.* **369**, 563-571, 2003.
10. Pinotti, M., **Camire, R.M.**, Baroni, M., Marchetti, G., Rajab, A., and Bernardi, F. Impaired prothrombinase activity of Factor X Gly381Asp results in severe familial CRM<sup>+</sup> FX deficiency. *Thromb. Haemost.* **89**, 243-248, 2003.
11. **Camire, R.**, Denchy, R.A., Day, G.A., Lanzano, S., Sheth, S., and Brown, S. Prenatal diagnosis of Factor X deficiency using a combination of direct mutation detection and linkage analysis with an intragenic single nucleotide polymorphism. *Prenat. Diagn.* **23**, 457-460, 2003.
12. Yarovoi, H., Kufirin, D., Eslin, D.E., Thornton, M.A., Haberickter, S.L., Zhu, H., **Camire, R.M.**, Fakharzadeh, S.S., Kowalska, A., Wilcox, D.A., Montgomery, R.R., and Poncz, M. Factor VIII ectopically expressed in platelets: Efficacy in hemophilia A treatment. *Blood*. **102**, 4006-4016, 2003.
13. Margaritis, P., Arruda, V.R., Aljamali, M., **Camire, R.M.**, Schlachterman, A., and High, K.A. Novel therapeutic approach for hemophilia using gene delivery of an engineered secreted activated factor VII. *J. Clin. Invest.* **113**, 1025-1031, 2004.

14. Toso, R. and **Camire, R.M.** Removal of B-domain sequences from factor V rather than specific proteolysis underlies the mechanism by which cofactor function is realized. *J. Biol. Chem.* **279**, 21643-21650, 2004.
15. Sun, Y.M., Jin, D.Y., **Camire, R.M.** and Stafford, D.W. Vitamin K epoxide reductase significantly improves carboxylation in a cell line over-expressing factor X. *Blood* **106**, 3811-3815, 2005.
16. Schlachterman, A., Schuettrumpf, J., Liu, J., Furlan Freguia, C., Toso, R., Poncz, M., **Camire, R.M.**, and Arruda, V.R. Factor V Leiden improves hemostasis in murine hemophilia models. *J. Thromb. Haemost.* **3**, 2730-2737, 2005.
17. Pollak, E.S., Russell, T.T., Ptashkin, B., Smith-Whitley, K., **Camire, R.M.**, and Bauer, K.A. Asymptomatic factor VII deficiency in African Americans. *Am. J. Clin. Pathol.* **126**, 1-5, 2006
18. Toso, R. and **Camire, R.M.** Role of hirudin-like factor Va heavy chain sequences in prothrombinase function. *J. Biol. Chem.* **281**, 8773-8779, 2006.
19. Zhu, H., Toso, R. and **Camire, R.M.** Inhibitory sequences within the B-domain stabilize circulating factor V in an inactive state. *J. Biol. Chem.* **282**, 15033-15039, 2007.
20. Chen, L., Zhu, F., Li, J., Lu, H., Jiang, H., Sarkar, R., Arruda, V.R., Wang, J., Zhao, J., Pierce, G.F., Ding, Q., Wang, X., Wang, H., Pipe, S.W., Liu, X.Q., Xiao, X., **Camire, R.M.**, Xiao, W. The enhancing effects of the light chain on heavy chain secretion in split delivery of factor VIII gene. *Mol. Ther.* **15**, 1856-1862, 2007. PMID: PMC2596977
21. Hacisalihoglu, A., Panizzi, P., Bock, P.E., **Camire, R.M.**, and Krishnaswamy, S. Restricted active site docking by enzyme-bound substrate enforces the ordered cleavage of prothrombin by prothrombinase. *J. Biol. Chem.* **282**, 32974-32982, 2007. PMID: PMC2292459
22. Aljamali, M.N., Margaritis, P., Schlachterman, A., Tai, S.J., Roy, E., Bunte, R., **Camire, R.M.**, and High, K.A. Long-term expression of murine factor VIIa is safe but elevated levels result in premature mortality. *J. Clin. Invest.* **118**, 1825-1834, 2008. PMID: PMC2289790
23. Cao, W., Krishnaswamy, S., **Camire, R.M.**, Lenting, P.J., and Zheng, X.L. Factor VIII accelerates proteolytic cleavage of von Willebrand Factor by ADAMTS13. *Proc. Natl. Acad. Sci. U.S.A.* **105**, 7416-7421, 2008. PMID: PMC2396690

24. Toso, R., Zhu, H., and **Camire, R.M.** The conformational switch from the factor X zymogen to protease state mediates exosite expression and prothrombinase assembly. *J. Biol. Chem.* **283**, 18627-18635, 2008. PMID: PMC2441561
25. Jeimy, S.B., Fuller, N., Tasneem, S., Segers, K., Stafford, A.R., Weitz, J.I., **Camire, R.M.**, Nicolaes, G.A.F., and Hayward, C.P.M. Multimerin 1 binds factor V and activated factor V with high affinity and inhibits thrombin generation. *Thromb. Haemost.* **100/6**, 1058-1067, 2008.
26. Bos, M.H.A., Boltz, M., St. Pierre, L., de Jersey, J., Masci, P.P., Lavin, M.F. and **Camire, R.M.** Venom factor V from the common brown snake escapes hemostatic regulation through procoagulant adaptations. *Blood.* **114**, 686-692, 2009. **Cover Page of Journal.** PMID: PMC2713460
27. Sabatino, D.E., Furlan-Freguia, C., Toso, R., Santos, A., Merricks, E.P., Kazazian, H.H., Nichols, T.C., **Camire, R.M.**, and Arruda, V.R. Recombinant canine B-domain deleted FVIII exhibits high specific activity and is safe in the canine hemophilia A model. *Blood* **114**, 4562-4565, 2009. PMID: PMC2925478
28. Green, T.K., Wang, C., Hirsch, J.D., Zhai, L., Gewirtz, J., Thornton, M.A., Miao, H.Z., Pipe, S.W., Kaufman, R.J., **Camire, R.M.**, Arruda, V.R., Kowalska, M.A., and Poncz, M. *In vivo* efficacy of platelet-delivered, high specific activity factor VIII variants. *Blood* 2010;116:6114-22. PMID: PMC Journal - In Process.
29. Bunce, M.W., Toso, R., and **Camire, R.M.** Zymogen-like factor Xa variants restore thrombin generation and effectively bypass the intrinsic pathway *in vitro*. *Blood* 2011;117:290-298. PMID: PMC Journal - In Process

**Research publications, peer-reviewed reviews:**

1. **Camire, R.M.** and Bos, M.H.A. The Molecular Basis of Factor V and VIII Procofactor Activation. *J. Thromb. Haemost.* **7**, 1951-1961, 2009. PMID: PMC2993324
2. Bos, M.H.A. and **Camire, R.M.** Procoagulant adaptations of a blood coagulation prothrombinase-like enzyme complex in Australian elapid venom. *Toxins.* **2**, 1554-1567, 2010. PMID: PMC2994417

3. Bos, M.H.A. and **Camire, R.M.** Blood coagulation factors V and VIII: Molecular mechanism of procofactor activation. *Journal of Coagulation Disorders*. **2**, 19-27, 2010. PMID: PMC3001592

**Abstracts (past three years):**

1. Jeimy, S.B., Quinn-Allen, M.A., Fuller, N., Segers, K., Stafford, A.R., Weitz, J.I., **Camire, R.M.**, Nicolaes, G.A.F., Kane, W.H., and Hayward, C.P.M. R. Factor V Binding to Multimerin 1: Modulation by Factor V Activation and Binding Sites in the Factor V C1 and C2 Domains. 48<sup>th</sup> Annual Meeting of the American Society of Hematology, December 9-12, 2006 Orlando, FL. *Blood Supplement* 2006, 108, 61a (Abstract #193; ***Oral Presentation***)
2. Camire, R.M., Zhu, H., Bos, M.H.A., and Toso, R. Destabilization of the Factor V B-domain Results in Procofactor Activation. 48<sup>th</sup> Annual Meeting of the American Society of Hematology, December 9-12, 2006 Orlando, FL. *Blood Supplement* 2006, 108, 62a (Abstract #198; ***Oral Presentation***)
3. Bos, M.H.A., Boltz, M., and **Camire, R.M.** A Cluster of Basic Residues within the Factor V B-domain Contributes to Preserving the Procofactor State. Arteriosclerosis, Thrombosis, and Vascular Biology Annual Conference 2007, April 19-21, 2007 Chicago, IL. *Arterioscler. Thromb. Vasc. Biol.* Supplement June 2007, (Abstract #21; ***Oral Presentation***).
4. Bos, M.H.A., Boltz, M., and **Camire, R.M.** Evolutionary conserved B-domain sequences contribute to maintaining factor V as a procofactor. XXI<sup>th</sup> Congress of the International Society on Thrombosis and Haemostasis, July 6-12, 2007 Geneva, Switzerland. *Journal of Thrombosis and Haemostasis* 2007; 5; Supplement 1, (Abstract #P-S-028; ***Poster Presentation***).
5. Jeimy, S.B., Fuller, N., Tasnem, S., Quinn-Allen, M., Zhu, H., **Camire, R.M.**, Kane, W.H., and Hayward, C.P.M. The role of the factor V B-domain in factor V MMRN1 binding and dissociation. XXI<sup>th</sup> Congress of the International Society on Thrombosis and Haemostasis, July 6-12, 2007 Geneva, Switzerland. *Journal of Thrombosis and Haemostasis* 2007; 5; Supplement 1, (Abstract #P-M-029; ***Poster Presentation***).
6. Dos Santos, A., Montalvão, S.A.L., Furlan Freguia, C., de Paula, E.V., Annichino-Bizzacchi, J.M., **Camire, R.M.**, and **Ozelo, M.C.** Molecular and functional characterization of FVIII mutations in a female with severe hemophilia A. XXI<sup>th</sup> Congress of the International Society on Thrombosis and Haemostasis, July 6-12, 2007 Geneva, Switzerland. *Journal of*

*Thrombosis and Haemostasis* 2007; 5; Supplement 1, (Abstract #P-T-123; **Poster Presentation**).

7. Furlan Freguia, C., Schuettrumpf, J., Baila, S., Liu, J., Bunte, R., **Camire, R.M.**, and Arruda, V.R. Novel models of thrombophilia result in spontaneous peripheral thrombosis and pregnancy-related complications. XXI<sup>th</sup> Congress of the International Society on Thrombosis and Haemostasis, July 6-12, 2007 Geneva, Switzerland. *Journal of Thrombosis and Haemostasis* 2007; 5; Supplement 1, (Abstract #P-W-622; **Poster Presentation**).
8. Furlan Freguia, C., Sabatino, D.E., Santos, A., Lange, A., Toso, R., Nichols, T.C., **Camire, R.M.**, and Arruda, V. R. Successful production of canine FVIII: Biochemical and functional characterization in hemophilia A dogs. 49<sup>th</sup> Annual Meeting of the American Society of Hematology, December 8-11, 2007 Atlanta, GA. *Blood* Supplement 2007, 110, 153a (Abstract #495; **Oral Presentation**)
9. Bos, M.H.A., Boltz, M., St. Pierre, L., Lavin, M.F. and **Camire, R.M.** Venom-derived factor V from the common brown snake *P. textilis* is expressed as a constitutively active cofactor. 49<sup>th</sup> Annual Meeting of the American Society of Hematology, December 8-11, 2007 Atlanta, GA. *Blood* Supplement 2007, 110, 524a (Abstract #1765; **Poster Presentation**).
10. Song, J. Talbot, K., Hewitt, J., **Camire, R.M.**, MacGillivray, R.T.A., and Pryzdial, E.L. Single amino acid substitution (Asp111Ala) in coagulation factor Va causes subunit dissociation and disrupted calcium and copper binding. 49<sup>th</sup> Annual Meeting of the American Society of Hematology, December 8-11, 2007 Atlanta, GA. *Blood* Supplement 2007, 110, 792a (Abstract #2699; **Poster Presentation**)
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**Patents:**

1. “Enhanced Gamma-Carboxylation of Recombinant Vitamin K-dependent Clotting Factors.” **Rodney M. Camire, Ph.D.**, Katherine A. High, M.D., Peter Larson, M.D., and Darrel W. Stafford, Ph.D. U.S. Patent Number 7,220,849. Issued May 22, 2007 (Internal reference: *CHOP-0082*).
2. “Compositions and Methods for the Treatment of Hemophilia A.” **Rodney M. Camire, Ph.D.** and Katherine A. High, M.D. U.S. Patent Number 7,211,558 B2 Issued May 1, 2007 (Internal reference: *CHOP-0176*)
3. “Gene-based approach for treatment of bleeding disorders using a bypass strategy.” Katherine A. High, M.D., Paris Margaritis, Ph.D., and **Rodney M. Camire, Ph.D.** Patent Pending. Filed March 2001. (Internal reference: *CHOP-0105*).
4. “Anticoagulant protein for the treatment or prevention of thrombosis in high-risk patients with inherited or acquired hypercoagulability and method for *in vivo* study of proteins with short half-lives”, Valder R. Arruda, M.D., Ph.D., Joerg Schuettrumpf, M.D., and **Rodney M. Camire, Ph.D.** Patent Pending, Filed March 2005. (Internal reference: *CHOP-0264*).
5. “Compositions and Methods for Modulating Hemostasis.” **Rodney M. Camire, Ph.D.**, Patent Pending, Filed November 2005. (Internal reference: *CHOP-0267*).
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