
Curriculum Vitae

NAME David F. J. Tees, Ph.D.	POSITION TITLE <ul style="list-style-type: none"> • Associate Professor of Physics, Ohio University. • Adjunct Member of the Graduate Faculty in Chemical & Biomolecular Engineering, Ohio U. • Adjunct Member of the Graduate Faculty in Biomedical Engineering, Ohio U.
ADDRESS Department of Physics & Astronomy, 251A Clippinger Labs, Ohio University, Athens, OH 45701	CONTACT INFORMATION Tel: (740) 593-1694 Fax: (740) 593-0433 E-mail: tees@ohio.edu Web: http://www.phy.ohiou.edu/~tees

Education and Training

INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
McGill University, Montreal, Canada	B.Sc.	1986	Physics
McGill University, Montreal, Canada	M.Sc.	1989	Atmospheric Physics
McGill University, Montreal, Canada	Ph.D.	1996	Physics (Biophysics)
Cornell University, Ithaca, NY	Post Doc	12/95-8/96	Chemical Engineering
University of Pennsylvania, Philadelphia, PA	Post Doc	9/96-10/00	Chemical Engineering

Positions and honors

Professional Experience

08/1986 – 08/1989	Graduate Research Assistant – M. Sc. McGill University, Montreal, QC, Canada. Thesis: Range dependence of radar estimates of rainfall: a simulation. (supervisor: Geoffrey L. Austin)
08/1989 – 11/1995	Graduate Research Assistant – Ph.D. McGill University, Montreal, QC, Canada. Thesis: On the time and force dependence of antigen-antibody mediated cell adhesion. (supervisor: Harry L. Goldsmith)
12/1995 – 08/1996	Postdoctoral Researcher Chemical Engineering, Cornell University, Ithaca, NY, U.S.A. Research on the force dependence of reverse reaction rates for selectin-carbohydrate bonds. (supervisor: Daniel A. Hammer)
08/1996 – 10/2000	Postdoctoral Researcher Chemical Engineering, University of Pennsylvania, Philadelphia, PA Research on the force dependence of reverse reaction rates for selectin-carbohydrate bonds (supervisor: Daniel A. Hammer)
10/2000 – 09/2001	Research Associate Chemical Engineering, University of Pennsylvania, Philadelphia, PA Research on biophysics of cell adhesion. (supervisor: Daniel A. Hammer)
09/2001 – 08/2007	Assistant Professor of Physics Ohio University, Athens, OH
01/2003 – present	Adjunct Professor of Chemical and Biomolecular Engineering Ohio University, Athens, OH
09/2007 – present	Associate Professor of Physics Ohio University, Athens, OH

Honors

July, 1995 – **Whitaker Foundation Travel Award** from the North American Society of Biorheology for travel to 9th International Conference of Biorheology in Big Sky, Montana.

1997-1999 – **Postdoctoral fellowship** from Quebec research funding agency **Fonds pour la Formation de Chercheurs et l'Aide à la Recherche (FCAR)**.

2005 – Ohio University Arts and Sciences Dean's Outstanding Teacher Award

2005-2006 – American Heart Association Ohio Valley Affiliate Beginning Grant in Aid Recipient

2006-2011 – National Science Foundation **CAREER Award** Recipient

Funding**Current:**

National Science Foundation, CAREER Award, PI, \$400,000, July, 2006 – June, 2011, *CAREER: Leukocyte Adhesion and Mechanical Arrest in a Model Capillary*.

Ohio University Biomimetic Nanoscience and Nanotechnology (BNNT) program. Co-PI (with Marcia Kieliszewski), \$6900, July 2009 – June, 2010, *Defining the Interactions that Drive Hydroxyproline-rich Glycoprotein Self-Assembly using Single Molecule Forced Unbinding*.

Ohio University Biomimetic Nanoscience and Nanotechnology (BNNT) program. Co-PI (with Ido Braslavsky) *Development of a Biophysics Lab Course*, \$100,000, March, 2006-June, 2010

Previous:

American Heart Association Ohio Valley Affiliate, Beginning Grant in Aid, PI, \$121,000, July 2004-June 2006, *Leukocyte Adhesion & Mechanical Arrest in a Micropipette*.

Courses**Ohio University (Evaluations on 1 to 5 scale with 1 the best)**

Quarter	Evaluation	Course
Spring 2009	1.85	PHYS 203 – Introductory Physics: optics, modern physics
Winter 2009	1.51	PHYS 202 – Introductory Physics: oscillations, waves, E&M, thermo
Fall 2008	1.00	PHYS 461/561 – Cell & Molecular Biophysics
Spring 2008	1.31	PHYS 299T – Tutorial in Introductory Physics
Winter 2008	1.31	PHYS 201 – Introductory Physics: mechanics, fluids
Fall 2007	1.12	PHYS 601 – Graduate Laboratory
Winter 2007	1.46	PHYS 202 – Introductory Physics: oscillations, waves, E&M, thermo
Fall 2006	1.00	PHYS 461/561 – Cell & Molecular Biophysics
Spring 2006:	1.09	PHYS 200 Labs – Introductory Physics lab supervision
Winter 2006:	1.42	PHYS 202 – Introductory Physics: oscillations, waves, E&M, thermo
Fall 2005:	1.85	PHYS 201 – Introductory Physics: mechanics, fluids
Spring 2005:	-	PHYS 299T – Tutorial in Introductory Physics
Winter 2005:	1.75	PHYS 202 – Introductory Physics: oscillations, waves, E&M, thermo
Fall 2004:	1.20	PHYS 461/561 – Cell & Molecular Biophysics: New course
Spring 2004:	1.23	PHYS 202 – Introductory Physics: oscillations, waves, E&M, thermo
Winter 2004:	1.60	PHYS 202 – Introductory Physics: oscillations, waves, E&M, thermo
Fall 2003:	1.69	PHYS 201 – Introductory Physics: mechanics, fluids
Spring 2003:	2.56	PHYS 202 – Introductory Physics: oscillations, waves, E&M, thermo
Winter 2003:	1.13	PHYS 262 – Introductory Physics with Biological Applications
Fall 2002:	1.20	PHYS 469/569 – Cell & Molecular Biophysics: Experimental course
Spring 2002:	-	PHYS 299T – Tutorial in Introductory Physics
Winter 2002:	2.32	PHYS 201 – Introductory Physics: mechanics, fluids

Pre-Ohio University

Instructor, University of Pennsylvania: CHE 410 – Chemical Engineering senior Unit Operation laboratory – Fall, 1999 & 2000

Students Supervised**Graduate Students:**

Young-Eun Choi, Ph.D., Physics & Astronomy. Neutrophil adhesion in micropipettes. (ongoing)

Yang Liu, Masters., Physics & Astronomy. Microcantilever calibration for biosensors. (ongoing)

Prithu Sundd, Ph.D., Chemical Engineering: Leukocyte adhesion in receptor-coated micropipettes as a model of adhesion in capillaries. Completed: November, 2007. Now doing postdoc with Klaus Ley at Institute of Allergy and Infectious Disease, U. of California, San Diego.

Anand Pai, M.S. (thesis), Chemical Engineering: Microrheological assessment of neutrophil mechanical properties following adhesion in a model capillary. Completed: August, 2006. Now doing Ph.D. at Duke University, NC.

Undergraduate Summer Students:

Steven Rogers, Summer, 2007 and 2008 and ongoing: Neutrophil activation in small micropipettes (Supported by Provost's Undergraduate Research Fund)

Joel Smith, Summer, 2006: Adhesion in tapering micropipettes

Nick Malise, Summer, 2003: Characterization of pulled optical fiber microcantilevers

Jessica Benson, Summer, 2002: Development of systems for pulled optical fiber microcantilevers

Special Study Graduate Students:

Sulaiman Kareem, 2004-2007. Worked on single molecule forced unbinding of adhesive glycoproteins from the plant cell wall.

Vasile-Iulian Clapa, 2004-2005: Development of quadrant photodiode systems (Now at Wesleyan University, CT).

Tariq Ali, 2003-2004: Developed pulled optical fiber microcantilever systems for single molecule biophysics research. (Now has passed comps at SUNY Buffalo, NY)

James Zuber, 2003: Developed quadrant photodiode systems

Timur Skeini, 2002-2004: Developed lab automation components and quadrant photodiode systems. (Now working with Dr. S.W. Hla, Ohio University)

Membership in Graduate Thesis Committees:

Yeliz Celik, Ph.D., Physics & Astronomy; supervisor: I. Braslavsky. Hyperactive antifreeze proteins and their interactions with ice crystals. (ongoing)

Sudeshna Chakraborty, Ph.D., Physics & Astronomy; supervisor: D. Drabold. Nanoscale inhomogeneities in amorphous materials and glasses. (ongoing)

Sudhir Deosarkar, M.S., Chemical Engineering; supervisor: D. Goetz. Targeting polymeric particles to sites of atherosclerosis. (ongoing)

Xiaoyan Zou, Ph.D., Chemical Engineering; supervisor: D. Goetz. Neutrophil adhesion in flow. (ongoing)

Tesfaye A. Abteu, Ph.D., Physics & Astronomy; supervisor: D. Drabold. Topics in the electronic structure of amorphous semiconductors (Completed: June, 2007)

John A. Means, Ph.D., Biochemistry; supervisor: J. Hines. Characterization of binding and structural aspects of the Bacillus subtilis antiterminator bulge/tRNA complex using fluorescence and NMR. (Completed: September, 2007)

Ghanim Ullah, Ph.D., Physics & Astronomy; supervisor: P. Jung. Computational modeling of calcium signaling from the nanoscale to multicellular systems (Ph.D. completed June, 2006)

Harsh Pratap, M.S., Chemical Engineering; supervisor: D. Goetz. Effect of Cytokines on TLR-4 Expression in Endothelial Cells. (M.S. completed March, 2006)

Douglas Wylie, M.S., Physics & Astronomy; supervisor: I. Braslavsky. Evidence for DNA oxidation in single molecule fluorescence studies. (M.S. completed November, 2005)

Harshad S. Sakhalkar, Ph.D., Chemical Engineering; supervisor: Doug Goetz, Targeting biodegradable particles to select segments of the endothelium in vitro and in vivo. (Ph.D. completed September, 2005)

Shangyou Zeng, Ph.D., Physics & Astronomy; supervisor: P. Jung. Spatial organization of ion channels and neuronal function. (Ph.D. complete February, 2005)

Hazel Tan, Ph.D., Chemistry; supervisor: Greg van Patten, Growth of polyelectrolyte multilayer structures. (Not completed due to student's death)

Deependra Kantha, M.S. Physics & Astronomy; supervisor: J. Heremans, Hydrodynamic pumping of a quantum Fermi liquid in a semiconductor heterostructure. (M.S. completed August, 2002)

Service

Committees:

Director of Studies: Honors Tutorial College Engineering Physics program: June 2005 – present.

Undergraduate Curriculum Committee (member; chair since Fall 2006): June 2005 – present

HTC Biophysics program committee (member): October 2005 – present

2005 World Year of Physics planning committee (member): 2004-2005

PHYS 200 level textbook selection committee (member): 2003-2004

Engineering Physics ad-hoc committee to develop new curriculum (member): 2002-2005

Colloquium committee (member): 2002-2004

Futures Committee (member): 2002-2003

Search committees:

Experimental Nuclear Physics faculty search committee (member) 2007-2008

Experimental Condensed Matter faculty search committee (member) 2006-2007

Biophysics NFI faculty search committee (consultant) 2002-2003

Nanoscience faculty search committee (member) 2002-2003

Interdisciplinary Math/Physics/BIOS faculty search committee (member) 2001-2002

Science Fair and Poster Judging:

Judge for CMSS/NQPI poster competition, Ohio University: 11/2/2006, 11/2/2007

Judge at Ohio University Student Research and Creative Activities Fair, 5/12/2005, 5/4/2006, 5/3/2007, 5/14/2008, 5/14/2009

Judge at Ohio State Science Day, Ohio State University: 5/11/2002, 5/3/2003, 5/8/2004, 5/7/2005, 5/4/2006, 5/6/2006, 5/6/2007, 5/10/2008, 5/9/2009

Judge at Ohio District 12 Regional Science Day, 3/2/2002, 3/8/2003, 3/6/2004, 3/5/2005, 3/4/2006, 3/3/2007, 3/7/2009.

Oral exam committees and Speak test panels:

Oral exam panel member for Anh Ngo (September 27, 2004)

Speak test panel member for Anh Ngo (April 2, 2004)

Speak test panel member for Ghana Pokharel (January 16, 2004)

Speak test panel member for Clapa Vasile-Iulian and Allen Dahili (September 5, 2003)

Department Outreach:

Did demonstrations on Optical Tweezers for **Physics & Astronomy Open House**, November 3, 2007

Gave presentation on Nanobiophysics for **Morrison Elementary School Science Day**, March 31, 2006

Helped to organize and served as demonstrator (interacting with the public and advising graduate students on dealing with the public) on both days at **Open House for World Year of Physics**, November 4-5, 2005.

Led question and answer session for World Year of Physics event on **The Physics of Star Trek**, April 8, 2005.

Did formal demonstrations of Brownian motion for World Year of Physics **visit by Wellston Middle School**, March 21, 2005.

Performed demonstrations in fluid mechanics, sound and magnetism for four of John King's classes of kindergarten and 1st grade students at **West Elementary School**, Athens on July 24, 2003.

Professional Activities

Member of Biomedical Engineering Society

Member of Biophysical Society

Member of American Physical Society

Member of American Chemical Society

Member of American Association for the Advancement of Science

Reviewer of over 30 papers for *Annals of Biomedical Engineering*, *Biophysical Journal*, *Biorheology*, *Physical Review E*, *Physical Review Letters*, *Langmuir*, and *Mathematical Biosciences*, and grants for the National Science Foundation (panelist), American Heart Association (Biotechnology panelist), South Carolina DEPSCoR/IDeA Program and Singapore Biomedical Research Council.

Peer-Reviewed Publications

L. Tan, **D.F.J. Tees**, J. Qian, S. Kareem, M.J. Kieliszewski Adhesion properties of synthetic glycomodules of plant cell wall hydroxyproline-rich glycoproteins. Manuscript in preparation.

Sundd, P., D.J. Goetz, and **D.F.J. Tees**. Transient Adhesion of Neutrophils on P-selectin in Pulmonary Capillary-Sized Microvessels *in Vitro*. *In revision following submission to American Journal of Physiology—Cellular Physiology*.

Anand Pai, Prithu Sundd, and **D.F.J. Tees**. In situ microrheological determination of neutrophil stiffening following adhesion in a model capillary. *Annals of Biomedical Engineering*, 36(4):596-603, 2008. DOI: 10.1007/s10439-008-9437-8

Sundd, P., X. Zou, D.J. Goetz, and **D.F.J. Tees**. Leukocyte adhesion in capillary-sized, P-selectin-coated micropipettes. *Microcirculation*, 15(2):109-122, 2008 (Published online Nov. 2007). DOI: 10.1080/10739680701412971

Tees, D.F.J., Prithu Sundd, and Douglas J. Goetz. A Flow Chamber for Capillary Networks: Leukocyte adhesion in capillary-sized, ligand-coated micropipettes *in* "Principles of Cellular Engineering: Understanding the Biomolecular Interface", Michael R. King, ed., Elsevier, New York, 213-231, 2006.

X. Zou, V.R. Shinde Patil, N.M. Dagia, L.A. Smith, M.J. Wargo, K. A. Interliggi, Christopher M. Lloyd, **D.F.J. Tees**, B. Walcheck, M.B. Lawrence, and D.J. Goetz. PSGL-1 derived from human

neutrophils is high-efficiency ligand for endothelial-expressed E-selectin under flow. *American Journal of Physiology—Cell Physiology*. 209:C415-C424, 2005.

Tees, D.F.J. and D.J. Goetz. Leukocyte adhesion: An exquisite balance of hydrodynamic and molecular forces. *News in Physiological Sciences*, 18:186-190, 2003. Invited by Dr. Neil Granger (LSU).

Tees, D.F.J., K.-C. Chang, S. D. Rodgers, and D. A. Hammer. Simulation of cell adhesion to bioreactive surfaces in shear: the effect of cell size. *Industrial and Engineering Chemistry Research* 41:486-493, 2002

Tees, D.F.J., J.T. Woodward, and D.A. Hammer. Reliability theory for receptor-ligand bond dissociation. *Journal of Chemical Physics*, 114:7483-7496, 2001.

Tees, D.F.J., R.E. Waugh, and D.A. Hammer. A microcantilever device to assess the effect of force on the lifetime of selectin-carbohydrate bonds. *Biophysical Journal*, 80:668-682, 2001.

Chang, K.-C., **Tees, D.F.J.**, and D.A. Hammer. The state diagram for cell adhesion under flow: leukocyte rolling and firm adhesion. *Proceedings of the National Academy of Sciences U.S.A.*, 97:11262-11267, 2000. Paper received an “Editor’s Choice” notice in *Science* (290:235, 2000).

Long, M., H.L. Goldsmith, **D.F.J. Tees**, and C. Zhu. Probabilistic modeling of shear-induced formation and breakage of doublets cross-linked by receptor-ligand bonds. *Biophysical Journal*, 76:1112-1128, 1999.

Tees, D.F.J., and H.L. Goldsmith. Kinetics and locus of failure of receptor-ligand mediated adhesion between latex spheres. I. Protein-carbohydrate bond. *Biophysical Journal*, 71:1102-1114, 1996.

Kwong, D., **D.F.J. Tees**, and H.L. Goldsmith. Kinetics and locus of failure of receptor-ligand mediated adhesion between latex spheres. II. Protein-protein bond. *Biophysical Journal*, 71:1115-1122, 1996.

Tees, D.F.J., O. Coenen and H.L. Goldsmith. Interaction forces between red cells agglutinated by antibody. IV. Time and force dependence of break-up. *Biophysical Journal*, 65:1318-1334, 1993.

Fabry, F., G.L. Austin and **D. Tees**. The accuracy of rainfall estimates by radar as a function of range. *Quarterly Journal of the Royal Meteorological Society*, 118:435-453, 1992.

Non-Peer-Reviewed Publications

Goldsmith, H.L., S.P. Tha, and **D.F.J. Tees**. Red blood cell aggregation by monoclonal antibodies. In: *Hémorhéologie et agrégation érythrocytaire. Applications cliniques*. (J.F. Stoltz, ed.) Editions Médicales Internationales, Cachan, France, 1994. pp. 5-12.

Goldsmith, H.L., K. Takamura, S. Tha and **D. Tees**. Study of cell-cell interactions with the travelling microtubule. In: “*Studying Cell Adhesion*”, (P. Bongrand, P. Claesson and A. Curtis, eds.) Springer Verlag, Heidelberg, New York, 1994, pp. 141-156.

Invited Conference Presentations

Tees, D.F.J. The Nanoscale Biophysics of Micrometer-scale Cell Adhesion. March Meeting of the American Physical Society, Montreal, QC, Canada. March, 2004.

Tees, D.F.J., J.T. Woodward, and D.A. Hammer. The effect of multivalency on estimation of Bell model parameters for bond dissociation rates from forced unbinding assays. 3rd Virginia Colloquium on Biomechanics of Cell Adhesion, Charlottesville, VA. July, 2002.

Tees, D.F. J. Molecular Mechanics of E-selectin/Sialyl LewisX Recognition Evaluated by a Microcantilever Device, 2nd Virginia Colloquium on Biomechanics of Cell Adhesion, Charlottesville, VA. June, 2001

Tees, D.F.J. Adh sion leucocytaire. Journ es scientifiques, U. de Nancy, Nancy, France. November, 1999

Tees D.F.J., R.E. Waugh, D.A. Hammer. Force dependence of E-selectin/sialyl-Lewis^x single bond dissociation. Annual meeting of the Biomedical Engineering Society, Atlanta, GA. October, 1999

Tees, D.F.J., R.E. Waugh, K.-C. Chang, and D.A. Hammer. Dependence of E-selectin/sialyl Lewis^x reverse reaction rates on applied force. Annual meeting of the Biomedical Engineering Society, Cleveland, OH. October, 1998. Published in *Annals of Biomedical Engineering* 26:S-29, 1997.

Tees, D.F.J., K.-C. Chang, R.E. Waugh, and D. A. Hammer. Measurement of the force dependence of E-selectin/sialyl Lewis^x reverse reaction rates using a microcantilever technique. American Chemical Society Symposium on Microscopy Techniques in Bio-Interfacial Science, Boston, MA. August, 1998.

Tees, D.F.J. and D. A. Hammer. Predicting cell adhesive behavior from the force dependence of receptor-ligand reaction rates. Third annual Delaware Valley Soft Materials Symposium, Philadelphia, PA. May, 1998.

Invited Seminars

Department of Chemical & Biomolecular Engineering, Ohio University, October, 2007

Department of Physics & Astronomy, Miami University, September, 2007

Department of Plant Biology, Ohio State University, October, 2005

Department of Chemical Engineering, Ohio University, Athens, OH, May, 2002

Department of Physics, University of Cincinnati, Cincinnati, OH, November, 2001

National Institute of Standards & Technology, Gaithersburg, MD, August, 2001

Department of Physics & Astronomy, Ohio University, Athens, OH, June, 2001

Department of Physics, Dalhousie University, Halifax, NS, May, 2001

Department of Bioengineering, University of California, San Diego, CA, April, 2001

Department of Physics, University of Alberta, Edmonton, AB, March, 2001

Department of Chemical Engineering, University of Maryland, College Park, MD, March, 2001

Department of Physics, University of Illinois at Chicago, Chicago, IL, February, 2001

Department of Chemical Engineering, University of Florida, Gainesville, FL, February, 2001

Department of Chemical Engineering, McMaster University, Hamilton, ON, February, 2001

Department of Biophysics, State University of New York, Buffalo, NY, January, 2001

Inst. of Biomaterials and Biomedical Engineering, University of Toronto, Toronto, ON, June, 2000.

Department of Mechanical Engineering, University of Michigan, Ann Arbor, MI, May, 2000.

Department of Physics, University of Waterloo, Waterloo, ON, March, 2000.

Department of Chemical Engineering, University of Oklahoma, Norman, OK, February, 2000.

Department of Physics, Drexel University, Philadelphia, PA, April, 1999.

Department of Physics, Villanova University, Villanova, PA, November, 1998.

Conference Abstracts

Rogers, S. and **D.F.J. Tees**, Determining the time for activation of mechanically deformed neutrophils using the Calcium sensitive dye Fura 2. Annual meeting of the Biomedical Engineering Society, St. Louis, MO. October, 2008.

Choi, Y., P. Sundd, D. Goetz and **D. Tees**, Neutrophil Motion on P-Selectin/ICAM-1 in an In Vitro Model of a Lung Capillary. Annual meeting of the Biomedical Engineering Society, St. Louis, MO. October, 2008.

Sundd, P., Y.E. Choi, D.J. Goetz, and **D.F.J. Tees**, Neutrophil motion on P-selectin/ICAM-1 in an in vitro model of a lung capillary. 13th International Congress of Biorheology. Pennsylvania State University, State College, PA. July 2008. Abstract published in *Biorheology*, 45:126-126, 2008.

Tees, D.F.J, P. Sundd and D.J. Goetz, Neutrophil motion on P-selectin/ICAM-1 in an in vitro model of a lung capillary. Experimental Biology 2008, San Diego, CA. April, 2008.

Sundd, P., D.J. Goetz, and **D.F.J. Tees**, Neutrophil adhesion to P-selectin/ICAM-1 in an in vitro model of a lung capillary, Experimental Biology 2007, Washington, DC. April-May, 2007.

Pai, A. and **D.F.J. Tees**, Micro-rheological assessment of neutrophil mechanical properties in adhesion in a model capillary, Experimental Biology Conference, Washington, DC. April-May, 2007.

Sundd, P., D.J. Goetz, and **D.F.J. Tees**, Neutrophil adhesion in P-selectin/ICAM-1 coated, capillary-sized glass microvessels, Annual meeting of the Biomedical Engineering Society, Chicago, IL. October, 2006.

Pai, A. and **D.F.J. Tees**, Micro-rheological assessment of neutrophil mechanical properties following adhesion in a model capillary, Annual meeting of the Biomedical Engineering Society, Chicago, IL. October, 2006.

Kareem, S., L. Tan, J. Qian, M. Kieliszewski and **D.F.J. Tees**. Forced unbinding of Hydroxyproline-rich Glycoproteins. Annual meeting of the Biomedical Engineering Society, Chicago, IL. October, 2006.

Kareem S., L. Tan, J. Qian, M. Kieliszewski and **David F. J. Tees**. Defining interactions for Hydroxyproline-rich Glycoproteins using single molecule forced unbinding. Ohio Nanosummit, Columbus Ohio, April 4-5, 2006

Sundd, P., X. Zou, D.J. Goetz, and **D.F.J. Tees**. Leukocyte firm adhesion in capillary-sized, selectin coated micropipettes, Annual meeting of the American Institute of Chemical Engineers, Cincinnati, OH. November, 2005. *[This poster has also been shown at the Ohio University Student Research Day on May 4, 2006, where it won **first prize** in its category, and at the Department of Chemical and Biomolecular Engineering Board of Advisors Poster Session on April 22, 2006, where it also won **first prize**.]*

Sundd, P., D.J. Goetz, and **D.F.J. Tees**. Cyclic migratory behavior of neutrophils in selectin coated capillary-sized micropipettes, Annual meeting of the American Institute of Chemical Engineers, Cincinnati, OH. November, 2005.

Sundd, P., X. Zou, D.J. Goetz, and **D.F.J. Tees**, Leukocyte firm adhesion in capillary-sized, selectin coated micropipettes, Annual meeting of the Biomedical Engineering Society, Baltimore, MD. September, 2005.

Sundd, P., D.J. Goetz, and **D.F.J. Tees**, Cyclic migratory behavior of neutrophils in selectin coated capillary-sized micropipettes, Annual meeting of the Biomedical Engineering Society, Baltimore, MD. September, 2005.

Tees, D.F.J., L. Tan, S. Kareem, J. Qian and M. Kieliszewski. Defining interactions for Hydroxyproline-rich Glycoproteins using single molecule forced unbinding, Annual meeting of the Biomedical Engineering Society, Baltimore, MD. September, 2005.

Sundd, P., X. Zou, D.J. Goetz, and **D.F.J. Tees**, Leukocyte adhesion in capillary-sized, ligand-coated micropipettes. Research and Creative Activity Fair, Ohio University, Athens, OH. May, 2005.

Tees, D.F.J., D.F.J., S. Kareem, and V.-I. Clapa. Forced unbinding of single bioadhesion molecules using a microcantilever device, Ohio Nanotechnology Summit, Dayton, OH. February 2005.

Sundd, P., X. Zou, D.J. Goetz, and **D.F.J. Tees**. Leukocyte adhesion in capillary-sized, ligand-coated micropipettes. Annual meeting of the Biomedical Engineering Society, Philadelphia, PA. October, 2004.

Tees, D.F.J., P. Sundd, X. Zou and D.J. Goetz. Leukocyte adhesion in capillary-sized, ligand-coated micropipettes. Experimental Biology 2004, Washington, DC. April, 2004.

Sundd, P., X. Zou, D.J. Goetz, and **D.F.J. Tees**. Cancer cell adhesion and mechanical plugging in adhesion molecule-coated micropipettes. Annual meeting of the Biomedical Engineering Society, Nashville, TN. October, 2003.

Tees, D.F.J. and D.A. Hammer, Molecular mechanics and multivalency of E-selectin /sialyl Lewis^x recognition evaluated using a microcantilever device, Keystone symposium on Molecular Mechanisms of Leukocyte Trafficking, Steamboat Springs, CO. April, 2002.

Tees, D.F.J., J.T. Woodward and D.A. Hammer. Systematic Errors in Estimation of Bell Model Parameters for Receptor-Ligand Bond Dissociation from Forced Unbinding Assays. Spring meeting of the American Chemical Society, San Diego, CA. April, 2001.

Tees, D.F.J. and D.A. Hammer. Calculation and simulation of parameter estimation for receptor-ligand bond dissociation. Annual meeting of the Biomedical Engineering Society, Seattle, WA. October, 2000. Published in *Annals of Biomedical Engineering*, 28 (supl. 1):S92, 2000.

Tees, D.F.J., R.E. Waugh, K.-C. Chang, and D.A. Hammer Measurement of the force dependence of E-selectin/sialyl Lewis^x reverse reaction rates. Annual meeting of the American Institute of Chemical Engineers, Miami, FL. November, 1998.

Goldsmith, H.L., **D.F.J. Tees**, M. Long and C. Zhu. Modeling of formation and breakage of receptor-ligand bonds in shear flow. 45th annual conference of the Microcirculatory Society, San Francisco, CA. Published in *FASEB J.* 12:A35, 1998. April, 1998.

Tees, D.F.J., R.E. Waugh and D.A. Hammer. Measurement of the dependence of E-selectin/sialyl Lewis^x reverse reaction rates on loading rate and magnitude of applied force. Keystone symposium on Molecular Mechanisms of Leukocyte Trafficking, Incline Village, NV. March, 1998. **Abstract selected for short presentation (10 chosen out of ~100 abstracts).**

Goldsmith, H.L., **D.F.J. Tees**, M. Long and C. Zhu. Modeling of formation and breakage of receptor-ligand bonds in shear flow. Annual meeting of the Biomedical Engineering Society, San Diego, CA. November, 1997. Published in *Annals of Biomedical Engineering*, 25:S-33, 1997.

Goldsmith, H.L., **D.F.J. Tees** and D. Kwong. Time and force dependence of the shear-induced rupture of antigen-antibody bonds. 12th International Congress on Rheology, Quebec City, QC. August, 1996.

Goldsmith, H.L., **D.F.J. Tees** and D. Kwong. Time and force dependence of the shear-induced rupture of receptor-ligand bonds. 70th Colloid and Surface Science Symposium, Clarkson University, Potsdam, NY. June, 1996.

Goldsmith, H.L., **D.F.J. Tees** and D. Kwong. Kinetics of receptor-ligand mediated adhesion of latex spheres. 43rd annual conference of the Microcirculatory Society, Washington, DC. April, 1996. Published in *Microcirculation*, 3:87, 1996.

Tees, D.F.J. and H. L. Goldsmith. The time and force dependence of separation of antibody agglutinated sphered red cells compared with that of blood group antigen-coupled microspheres. 9th International Congress of Biorheology/ 2nd International Congress on Clinical Hemorheology, Big Sky, MT. July, 1995. Published in *Biorheology*, 32:280, 1995.

Tees, D.F.J. and H. L. Goldsmith. Time and force dependence of separation of blood group B antigen-coupled microspheres cross-linked by monoclonal antibody. 42nd annual conference of the Microcirculatory Society, Atlanta, GA. April, 1995. Published in *Microcirculation*, 2:75, 1995.

Tees, D. and H.L. Goldsmith. Time and force dependence of separation of red cells agglutinated by monoclonal antibody. Gordon Conference on the Biorheology of Cell Adhesion, Henniker, NH. June, 1993. **Abstract selected for short presentation (7 chosen out of ~30 abstracts).**

Goldsmith, H.L. and **D. Tees**. Break-up of RBC aggregates: studies of the stochastic nature of receptor-ligand bonds. Conference on Recent Developments in Structured Continua III, Montreal, QC. May, 1993.

Tees, D. and H.L. Goldsmith. Stochastic nature of the interaction force between human red cells linked by monoclonal antibody. 34th annual meeting of Canadian Federation of Biological Societies, Queen's University, Kingston, ON. June, 1991.