Curriculum Vitae
Patrick Sung

Citizenship: USA

Birth Date: May 24th, 1959

Birth Place: Hong Kong

Marital Status: Married to Ines Cuadrado since 1984
Three children: Patrick jr. (25), Kenneth (12), and Maria-Isabel (7)

Home Address
427 Powder Hill Road
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Yale University School of Medicine
Molecular Biophysics and Biochemistry
333 Cedar Street, SHM C130A
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Education:

1978-1981 **B. Sc.** (Biochemistry), University of Liverpool, Great Britain
1981-1985 **D. Phil.** (Biochemistry), University of Oxford, Great Britain
1971-1978 **Saint Louis Boys School**, Hong Kong

Appointments:

1985-1993 **Research Associate,** University of Rochester (Mentors: Louise Prakash & Satya Prakash)
1993-1997 **Assistant Professor**, University of Texas Medical Branch, Galveston.
1997-2001 **Associate Professor,** University of Texas Health Science Center at San Antonio (UTHSCSA)
2001-2003 **Professor,** UTHSCSA
2002-2003 **Zachry Distinguished Professor of Molecular Medicine,** UTHSCSA
1998-2001 **Chair**, Graduate Program in Molecular Medicine, UTHSCSA
1998-2000 **Course Director**, Molecular Medicine Course, UTHSCSA
2001-2003 **Co-director,** NCI training grant "Training Program in DNA Repair", UTHSCSA

2001-2003 **Deputy Director**, Institute of Biotechnology, UTHSCSA
2001-2003 **Deputy Chair**, Department of Molecular Medicine, UTHSCSA
2003- **Professor,** Department of Molecular Biophysics & Biochemistry, Yale University
2003- **Professor,** Department of Therapeutic Radiology, Yale University
2006- **Co-Leader,** Yale Cancer Center Radiation Biology and Radiotherapy Program
2007- **Vice Chairman,** Department of Molecular Biophysics & Biochemistry, Yale University
2009- **Chairman,** Department of Molecular Biophysics & Biochemistry, Yale University

Professional Activities & Honors:

2008- **Guest Editor**, *Proceedings of the National Academy of Sciences, USA*
2000-2008 **Editor,** *Molecular & Cellular Biology*
2003- **Associate Editor**, *Genes to Cell*
1998-2000 **Member**, Editorial Board of *Molecular & Cellular Biology*.
2001- **Member,** Editorial Board of *DNA Repair*
2003- **Member,** Editorial Board of *Genes & Development*
1999 ***Ad Hoc* Member,** NIH Microbial Physiology & Genetics 2 Study Section.
1999/2000 ***Ad Hoc* Member,** NIH Radiation Biology Study Section.
1999 **Mail Reviewer,** NIH Molecular Biology Study Section.
2000-2003 **Charter Member,** NIH Radiation Biology Study Section
2003-2004 **Charter Member,** NIH Radiation Therapy and Biology Study Section
2006-2010 **Charter Member,** NIH Cancer Etiology Study Section
2003 **Mail Reviewer**, NIH Aging Systems in Geriatrics Study Section
2003-2004 **Member**, NIH Cell CDF2 Study Section Special Emphasis Panel
2008 **Discussion Leader**, NCI Molecular and Cellular Oncology P01 Special Emphasis Panel
2008-2010 **Chair,** NIH Cancer Etiology Study Section
1999 **Chair and Organizer**, Workshop on Eukaryotic Recombination, Keystone Symposium on "Molecular Mechanisms in DNA Replication and Recombination".
1993- ***Ad hoc* Grant Reviewer,** DOE, NSF, and American Heart Foundation Grant Applications.
1993- **Regular Reviewer** for *Genes & Dev., Genes to Cell, Biochemistry, Mol. Biol. Cell, J. Biol. Chem., PNAS, Science, Cell, Molecular Cell, Mol. Cell. Biol., TIBS, Curr. Biol., Nature, Mut. Res., Nature Structural Biology, Nature Genetics, DNA Repair, EMBO Reports, & EMBO J.*
1999 **Ray Wu Award in Basic Research**, Society for Chinese Bioscientists in America.
2002 **Session Chair:** "Recombination Proteins". EMBO Workshop on Recombination Mechanisms
2003 **Session Chair and Discussion Leader:** "Recombination & Double-strand Break Repair". Gordon Research Conference on Mammalian DNA Repair.
2003 **Session Chair:** "Recombination Mechanisms". FASEB summer conference on Genetic Recombination and Chromosome Rearrangements.
2009 **Session Chair: "**DNA Mismatch Repair", Gordon Research Conference on Mammalian DNA Repair.
2011 **Session Chair:** "DNA Alterations & Chromatin", Keystone Symposia on DNA Replication and Recombination
2010 **William H. Bell lectureship**, Oklahoma Medical Research Foundation
2010- **Member**, External Advisory Board, Cancer Therapy & Research Center, University of Texas Health Science Center San Antonio, Texas.
2012 **American Society for Biochemistry and Molecular Biology**, Theme Symposium (DNA Transactions) Organizer.

Administrative Responsibilities:

1998-2001 **Voting Member**, Graduate Faculty Council of the Graduate School, UTHSCSA
1997- **Member**, Core Committee, Department of Molecular Medicine, UTHSCSA
1997- **Member or Chair**, Promotion and Tenure Committee, Department of Molecular Medicine, UTHSCSA
2001-2003 **Chair**, Promotion and Tenure Committee, Department of Molecular Medicine, UTHSCSA
1997-2003 **Member or Chair**, Faculty Search Committee, UTHSCSA
1997-2003 **Member**, Student Recruitment Committee, UTHSCSA
1997-2003 **Member or Chair**, Faculty Evaluation Committee
2000-2003 **Mentor** of four assistant professors (all are currently supported by at least one NIH RO1 grant)
2003 **Graduate Curriculum Committee,** Molecular Biophysics & Biochemistry, Yale University
2003 **Member, Faculty Search Committee,** Molecular Biophysics & Biochemistry, Yale University
2003- **Graduate Admissions Committee,** Molecular Biophysics & Biochemistry, Yale University
2002 **Student Visiting Day,** Molecular Biophysics & Biochemistry, Yale University
2004- **Chair, Faculty Stockroom Advisory Committee,** Yale University
2004- **Web (Member),** Molecular Biophysics & Biochemistry, Yale University
2004- **MB&B Junior Faculty Mentoring**, Yale University
2004- **Writing Workshops** (NSF fellowship & qualifying examination), Yale University
2007-2009 **Member, Advisory Committee of the Division of Biological Sciences**, Yale University
2007-2010 **Member, Scholar Awards Committee**, Yale University
2007 **Member, MB&B Departmental Executive Committee**, Yale University
2003- **Member, Faculty Recruitment Committee,** Therapeutic Radiology, Yale University
2007 **Chair, Faculty Recruitment Committee**, Molecular Biophysics & Biochemistry, Yale University
2008 **Chair, Faculty Recruitment Committee**, Molecular Biophysics & Biochemistry, Yale University
2008 **Member, MB&B Teaching Oversight Committee,** Yale University
2008 **Member, MB&B Graduate Student Admissions Committee**, Yale University

Teaching & Other Academic Responsibilities:

1997-2003 **Lecturer or Director**, Molecular Medicine; Advanced Cell & Molecular Biology at UTHSCSA.
1997-2003 **Member**, Comprehensive Examination Committee at UTHSCSA (every year).
1997-2003 **Member or Chair**, Ph.D. Qualifying examination Committees at UTHSCSA (>12).
1997-2003 **Member or Chair**, Ph.D. Dissertation Committees at UTHSCSA (>10).
2003- **Lecturer** in Medical Impact of Basic Science at Yale (Director: Joan Steitz)
2004- **Lecturer** in Eukaryotic Genetics (Director: Anthony Koleske)
2004- **Lecturer** in Prokaryotic Genetics and Molecular Biology (Director: Nigel Grindley)
2005- **Lecturer** in History of Science (Director: William Summers)
2004- **Director,** MB&B 490b Senior Seminar
2009- **Lecturer,** Biochemistry, MB&B 301b (Director Scott Strobel/Joan Steitz)
2008-2009 **Instructor,** Undergraduate Methods & Logic MB&B 445 (Director: Tony Koleske)
2003- **Ph.D. Qualifying Examination Committees,** MB&B, Genetics, Cell Biology, Pathology, Immunobiology, Yale University
2003- **Ph.D. Thesis Committees (>20),** MB&B, Genetics, MCDB, Immunobiology, Yale University

Research Grant Support:

(1) NIH grant 5R01ES07061-19
"Yeast DNA Repair Genes and Proteins of the *RAD52* Group"
Budget period: 07/01/2010 – 03/31/2015
Role in Project: Principal Investigator
The goal is to define the hierarchy of physical and functional interactions among members of the recombination machinery in the budding yeast *Saccharomyces cerevisiae*.

(2) NIH grant 5RO1GM57814-11
Formation and Resolution of Recombination Intermediates"
Budget Period: 07/01/08 – 06/30/2012
Role in Project: Principal Investigator
To decipher the functions of *Saccharomyces cerevisiae* Rad54 and Rdh54/Tid1 proteins in the formation and resolution of recombination intermediates.

(3) NIH/NCI Program Project PO1CA92584-10
"Structural & Cell Biology of DNA Repair Machines"
PIs: John Tainer & Priscilla Cooper (Lawrence Berkeley National Laboratory)
Budget Period: 09/01/2006-08/31/2011
Role in Project: Leader of Project 4
This project will employ structural approaches to address the functional significance of protein complexes in homologous recombination reactions, with a special focus on the Rad51 and Rad52 proteins of *Saccharomyces cerevisiae*.

(4) NIH Grant 1RO1ES015252-05
"Molecular Analyses of BRCA2-mediated DNA Repair and Cancer Avoidance"
Budget Period: 12/01/2006-11/30/2011
Role in Project: Principal Investigator
This project will employ a variety of genetic, cell biological, and biochemical approaches to assess the role of BRCA2 and associated proteins – PALB2, and FANCG – in the DNA homology-directed repair of damaged chromosomes.

(5) NIH Grant 1RO1ES015632-05
"BLM-mediated Homologous Recombination Regulation"
Budget Period: 04/01/07-03/31/2012
Role in Project: Principal Investigator
We will reconstitute the BLM-Topo 3 alpha-BLAP75 (BTB) complex and carry out a variety of molecular analyses to decipher the role of this complex in homologous recombination regulation.

(6) NIH/NCI Program Project PO1 CA129186-04 (PI: Glazer, Peter)
"DNA Repair in Cancer Biology and Therapy"
Budget Period: 09/01/07-08/31/2012
Role in Project: Leader of Project 4 & Director of Core B
(a) Project 4 will use a combination of genetics and biochemistry to delineate the functional significance of the BRCA2-FANCD2 complex in the homology-directed repair of DNA breaks and

crosslinks, and to explore the possibility of targeting this protein complex as the basis for effective cancer therapy.
(b) Core B of this program project will provide state-of-the-art protein biochemistry services to the four research projects.

(7) MPI grant 1R01CA146940-02 "Mechanism of DNA Motor Proteins in Genome Maintenance
Budget Period: 7/01/2009-6/30/2014
Role in Project: One of three PIs, with Hannah Klein (NYU) and Eric Greene (columbia)
Our objective is to employ a combination of biochemistry, single-molecule analyses, and genetics decipher the mechanistic role that various DNA motor proteins play in homologous recombination and DNA repair.

Pending:

Competitive renewal of NIH Grant RO1ES015252
"Molecular Analyses of BRCA2-mediated DNA Repair and Cancer Avoidance"
Budget Period: 12/01/2011-11/30/2016
Role in Project: Principal Investigator
To be reviewed in the June cycle.

Competitive renewal of NIH/NCI Program Project PO1CA92584
"Structural & Cell Biology of DNA Repair Machines"
PIs: John Tainer & Priscilla Cooper (Lawrence Berkeley National Laboratory)
Budget Period: 09/01/2011-08/31/2016
Role in Project: Leader of Project 4
This renewal application has been accorded an overall score of 19.
Project 4 has been accorded a score of 12.
No funding decision

Trainee Fellowships:

Eloise Dray
Susan G. Komen for the Cure (2008-2011)

Hengyao Niu
Susan G. Komen for the Cure (2008-2011)

Current Postdoctoral Trainees:
Eloise Dray
Nicolas Paquet
Simonne Longerich
Dennis Xu
Hengyao Niu
Wilson Zhao
Xiaoyu Xue
Will Gaines

Associate Research Scientists:
Youngho Kwon
James Daley
Dorina Saro
Aristidis Sachpatzidis (joint with Professor Yong Xiong)

Current Predoctoral Trainees:
Xiao Feng Zheng (Genetics)
Danielle Krasner (MB&B)

Past Predoctoral Trainess:
Stephen Van Komen (Research Scientist: Bristol Meyer Squibb)
Kelly Trujillo (Postodoctoral Fellow: Stowers Research Institute)
Binwei Song (Lead Research Specialist: Emory University)
Stefan Sigurdsson (Postdoctoral Fellow: Cancer Research UK)
Wendy Bussen, (Postdoctroal Fellow, Washington University); was supported by a DOD fellowship.
Julia Etchin (Postdoctoral Fellow, Dana Farber Cancer Institute)
Sierra Colavito (Postdoctoral Fellow, Yale Department of Pathology)
Idina Shi (Postdoctoral Fellow, Singapore National University)
Rohit Prakash (Postdoctoral fellow, Sloane-Kettering Cancer Institute)
Changhyun Seong (Postdoctoral Fellow, Harvard, Cell Biology)
MyunHwa Kang (Postdoctoral Fellow, Yale, Cell Biology)
Peter Hung Yuan Chi (Assistant Professor, Institute of Biomedical Sciences, National Taiwan University)

Past Postdoctoral Trainees:
Donghyun Roh (Assistant Professor: Chungbuk National University South Korea)
Galina Petukhova (Assistant Professor, Uniformed Services University of the Health Sciences)
Vladimir Rotrekl (Postdoctoral Fellow, UT Health Science Center at San Antonio)
Lumir Krejci (Associate Professor and Burrough Wellcome Senior Research Fellow at Brno University, Czech Republic); supported by a DOD fellowship.
Jana Villemain (Assistant Professor, Indiana University of Pennsylvania)
Michael Sehorn (Assistant Professor, Clemson University); supported by an NIH NRSA fellowship.
Margaret Macris (Senior Scientist, RainDance Technologies, CT); was supported by an ACS fellowship.
Joesph San Filippo (Principal Scientist, Roche); supported by a Susan G. Komen for the Cure fellowship.
Puja Singh (Postdoctoral Fellow, Cold Spring Harbor Laboratory)
Ahkilesh Singh (Postdoctoral Fellow, University of Washington, Saint Louis)
Tina Liu (Postdoctoral Fellow, MD Anderson Cancer Center)

Publications (*160 published or in press, of which 133 are original research articles*):
***h-index:* 59 (from the Web of Science & Scopus)**
37 of the publications have been cited 100 times or more

1. Sung, P., L. Prakash, S. Weber, and S. Prakash (1987) The *RAD3* gene of Saccharomyces cerevisiae encodes a DNA-dependent ATPase. ***Proc. Natl. Acad Sci. USA***. 84:6045-6049.

2. Sung, P., L. Prakash, S. W. Matson, and S. Prakash (1987) RAD3 protein of Saccharomyces cerevisiae is a DNA helicase. ***Proc. Natl. Acad. Sci. USA.*** 84:8951-8955.
3. Sung, P., D. Higgins, L. Prakash, and S. Prakash (1988) Mutation of lysine-48 to arginine in the yeast RAD3 protein abolishes its ATPase and DNA helicase activities but not the ability to bind ATP. ***EMBO J***. 7:3263-3269.
4. Sung, P., S. Prakash, and L. Prakash (1988) The RAD6 protein of Saccharomyces cerevisiae polyubiquitinates histones, and its acidic domain mediates this activity.***Genes & Develop***. 2:1476-1485.
5. Sung, P., S. Prakash, and L. Prakash (1990) Mutation of cysteine-88 in the Saccharomyces cerevisiae RAD6 protein abolishes its ubiquitin-conjugating activity and its various biological functions. ***Proc. Natl. Acad. Sci. USA***. 87: 2695-2699.
6. Sung, P., E. Berleth, C. Pickart, S. Prakash, and L. Prakash (1991) Yeast *RAD6* encoded ubiquitin conjugating enzyme mediates protein degradation dependent on the N-end-recognizing E3 enzyme. ***EMBO J***. 10: 2187-2193.
7. Sung, P., S. Prakash, and L. Prakash (1991) Stable ester conjugate between the *Saccharomyces cerevisiae* RAD6 protein and ubiquitin has no biological activity. ***J. Mol. Biol***. 221:745-749.
8. Bailly, V., P. Sung, L. Prakash, and S. Prakash (1991) DNA-RNA helicase activity of RAD3 protein of *Saccharomyces cerevisiae*. ***Proc. Natl. Acad. Sci. USA***. 88:9712-9716.
9. Sung, P., L. Prakash, and S. Prakash (1992) Renaturation of DNA catalysed by yeast DNA repair and recombination protein RAD10. ***Nature*** 335:743-745.
10. Bailly, V., C. H. Sommers, P. Sung, L. Prakash, and S. Prakash (1992) Specific complex formation between proteins encoded by the yeast DNA repair and recombination genes *RAD1* and *RAD10*. ***Proc. Natl. Acad. Sci. USA***. 89:8273-8277.
11. Watkins, J. F., P. Sung, S. Prakash, and L. Prakash (1993) The extremely conserved amino terminus of RAD6 ubiquitin-conjugating enzyme is essential for amino-end rule-dependent protein degradation. ***Genes & Develop.*** 7:250-261.
12. Guzder, S. N., P. Sung, L. Prakash, and S. Prakash (1993) Yeast DNA repair gene *RAD14* encodes a zinc metalloprotein with affinity for ultraviolet-damaged DNA. ***Proc. Natl. Acad. Sci. USA.*** 90:5433-5437.
13. Sung, P., V. Bailly, C. Weber, L. H. Thompson, L. Prakash, and S. Prakash. (1993) Human xeroderma pigmentosum group D gene encodes a DNA helicase. ***Nature*** 365:852-855.
14. Sung, P., P. Reynolds, L. Prakash, and S. Prakash. (1993) Purification and characterization of the *Saccharomyces cerevisiae* RAD1/RAD10 endonuclease. ***J. Biol. Chem.*** 268:26391-26399.
15. Watkins, J. F., P. Sung, L. Prakash, and S. Prakash. (1993) The *Saccharomyces cerevisiae* DNA repair gene *RAD23* encodes a protein with a ubiquitin-like domain. ***Mol. Cell. Biol.*** 13:7757-7765.
16. Habraken, Y., P. Sung, L. Prakash, and S. Prakash. (1993) Yeast excision repair gene *RAD2* encodes a single-stranded DNA endonuclease. ***Nature*** 366:365-368.
17. Guzder, S. N., H. Qiu, C. H. Sommers, P. Sung, L. Prakash, and S. Prakash, (1994) DNA repair gene *RAD3* of *S. cerevisiae* is essential for transcription by RNA polymerase II. ***Nature*** 367:91-94.
18. Sung, P., J. F. Watkins, L. Prakash, and S. Prakash. (1994) Negative superhelicity promotes ATP dependent binding of yeast RAD3 protein to ultraviolet-damaged DNA. ***J. Biol. Chem.*** 269:8303-8308.
19. Bailly, V., J. Lamb, P. Sung, S. Prakash, and L. Prakash. (1994) Specific complex formation between yeast RAD6 and RAD18 proteins: a potential mechanism for targeting RAD6 ubiquitin-conjugating activity to DNA damage sites. ***Genes & Develop.*** 8:811-820.
20. Guzder, S.N., P. Sung, V. Bailly, L. Prakash, and S. Prakash. (1994) RAD25 is a DNA helicase required for DNA repair and RNA polymerase II transcription. ***Nature*** 369:578-581.

21. Habraken, Y., P. Sung, L. Prakash, and S. Prakash. (1994) Human xeroderma pigmentosum group G gene encodes a DNA endonuclease. ***Nucleic Acid Res.*** 22:3312-3316.
22. Habraken, Y., P. Sung, L. Prakash and S. Prakash.(1994) Holliday junction cleavage by yeast Rad1 protein. ***Nature*** 371:531-534
23. Sung, P. (1994) Catalysis of ATP-dependent homologous DNA pairing and strand exchange by yeast RAD51 protein. ***Science*** 265:1241-1243.
24. Habraken, Y., P. Sung, L. Prakash, and S. Prakash. (1994) A conserved 5' to 3' exonuclease activity in the yeast and human nucleotide excision repair proteins RAD2 and XPG. ***J. Biol. Chem. Communication*** 269:31342-31345.
25. Guzder, S.N., V. Bailly, P. Sung, L. Prakash, and S. Prakash. (1995) Yeast DNA repair protein RAD23 promotes complex formation between transcription factor TFIIH and DNA damage recognition factor RAD14. ***J. Biol. Chem. Communication*** 270:8385-8388.
26. Guzder, S.N., Y. Habraken, P. Sung, L. Prakash, and S. Prakash. (1995) Reconstitution of yeast nucleotide excision repair with purified Rad proteins, replication protein A, and transcription factor TFIIH. ***J. Biol. Chem. Communication*** 270:12973-12976.
27. Guzder, S.N., P. Sung, S. Prakash, and L. Prakash. (1995) Lethality in yeast of trichothiodystrophy (TTD) mutations in the human xeroderma pigmentosum group D gene. Implications for transcriptional defect in TTD. ***J. Biol. Chem. Communication*** 270:17660-17663.
28. Sung, P. and D. L. Robberson. (1995) DNA strand exchange mediated by a RAD51-ssDNA nucleoprotein filament with polarity opposite to that of RecA. ***Cell*** 82:453-461.
29. Habraken, Y., P. Sung, L. Prakash, and S. Prakash (1995) Structure-specific nuclease activity in yeast nucleotide excision repair protein Rad2. ***J. Biol. Chem.*** 270:30194-30198.
30. Guzder, S.N., P. Sung, L. Prakash, and S. Prakash (1996) Nucleotide excision repair in yeast is mediated by sequential assembly of repair factors and not by a pre-assembled repairosome. ***J. Biol. Chem.*** 271:8903-8910.
31. Sung, P., S.N. Guzder, L. Prakash, and S. Prakash (1996) Reconstitution of TFIIH and requirement of its DNA helicase subunits, Rad3 and Rad25, in the incision step of nucleotide excision repair. ***J. Biol. Chem.*** 271:10821-10826.
32. Burns, J.L., S.N. Guzder, P. Sung, S. Prakash, and L. Prakash (1996) An affinity of human replication protein A for ultraviolet-damaged DNA. ***J. Biol. Chem. Communication*** 271:11607-11610.
33. Guzder, S.N, Y. Habraken, P. Sung, L. Prakash, and S. Prakash (1996) RAD26, the yeast homolog of human Cockayne's syndrome group B gene, encodes a DNA-dependent ATPase. ***J. Biol. Chem. Communication*** 271:18314-18317.
34. Habraken, Y., P. Sung, L. Prakash, and S. Prakash (1996) Binding of insertion/deletion DNA mismatches by the heterodimer of yeast mismatch repair proteins MSH2 and MSH3. ***Curr. Biol.*** 6:1185-1187.
35. Habraken, Y., P. Sung, S. Prakash, and L. Prakash (1996) Transcription factor TFIIH and DNA endonuclease Rad2 constitute yeast nucleotide excision repair factor 3: implications for nucleotide excision repair and Cockayne syndrome. ***Proc. Natl. Acad. Sci. USA*** 93:10718-10722.
36. Johnson, R.E., G.K. Kovvali, S.N. Guzder, N.S. Amin, C. Holm, Y. Habraken, P.Sung, L. Prakash, and S. Prakash (1996) Evidence for involvement of yeast proliferating cell nuclear antigen in DNA mismatch repair. ***J. Biol. Chem. Communication*** 271:27987-27990.
37. Lauder, S., M. Bankman, S.N. Guzder, P. Sung, L. Prakash, and S. Prakash (1996) Dual requirement for the yeast MMS19 gene in DNA repair and RNA polymerase II transcription. ***Mol. Cell. Biol.*** 16:6783-6793.
38. Sung, P. and S. Stratton (1996) Yeast Rad51 recombinase mediates polar DNA strand exchange in the absence of ATP hydrolysis. ***J. Biol. Chem. Communication*** 271:27983-27986.

39. Sung, P. (1997) Yeast Rad55 and Rad57 proteins form a heterodimer that functions with replication protein A to promote DNA strand exchange by Rad51 recombinase. ***Genes & Develop.***11:1111-1121.
40. Guzder, S.N., P. Sung, L. Prakash, and S. Prakash. (1997) Yeast Rad7-Rad16 complex, specific for the nucleotide excision repair of the nontranscribed DNA strand, is an ATP-dependent DNA damage sensor. ***J. Biol. Chem. Communication*** 272:21665-21668.
41. Habraken, Y., P. Sung, L. Prakash, and S. Prakash. (1997) Enhancement of MSH2-MSH3-mediated mismatch recognition by the yeast MLH1-PMS1 complex. ***Curr. Biol.,*** 7:790-793.
42. Sung, P. (1997) Function of yeast Rad52 protein as a mediator between replication protein A and the Rad51 recombinase. ***J. Biol. Chem. Communication*** 272:28194-28197.
43. Guzder, S. N., P. Sung, L. Prakash, and S.Prakash (1998) The DNA-dependent ATPase activity of yeast nucleotide excision repair factor 4 and its role in DNA damage recognition. ***J. Biol. Chem.*** 273:6292-6296.
44. Yuan, Z.M., Y. Huang, T. Ishiko, S. Nakada, T. Utsugisawa, S. Kharbanda, R. Wang, P. Sung, A. Shinohara, R. Weichselbaum, and D. Kufe. (1998) Regulation of Rad51 function by c-Abl in response to DNA damage. ***J. Biol. Chem. Communication*** 273:3799-3802.
45. Habraken, Y., P. Sung, L. Prakash, and S. Prakash. (1998) ATP-dependent assembly of a ternary complex consisting of a DNA mismatch and the yeast MSH2-MSH6 and MLH1-PMS1 protein complexes. ***J. Biol. Chem.*** 273:9837-9841.
46. Petukhova, G. S. Stratton, and P. Sung. (1998) Catalysis of homologous DNA pairing by yeast Rad51 and Rad54 proteins. ***Nature*** 393: 91-94.
47. Trujillo, K.M., S. S. Yuan, , E. Y. Lee, and P. Sung. (1998) Nuclease activities in a complex of human recombination and DNA repair factors Rad50, Mre11, and p95. ***J. Biol. Chem. Communication*** 273:21447-21450.
48. Guzder S. N, P. Sung, L. Prakash, and S. Prakash. (1998) Affinity of yeast nucleotide excision repair factor 2, consisting of the Rad4 and Rad23 proteins, for ultraviolet damaged DNA. ***J. Biol. Chem.*** 273:31541-31546.
49. Chen, G., S.S. Yuan, W. Liu, Y. Xu, K. Trujillo, B. Song, F. Cong, S. P. Goff, R. Arlinghaus, D. Baltimore, P. J. Gasser, M. S. Park, P. Sung, and E. Y. Lee. (1999) Radiation-induced assembly of Rad51 and Rad52 recombination complex requires ATM and c-Abl. ***J. Biol. Chem.*** 274:12748-12752.
50. Guzder. S., P. Sung, L. Prakash, and S. Prakash. (1999) Synergistic interaction between yeast nucleotide excision repair factors NEF2 and NEF4 in the binding of ultraviolet-damaged DNA. ***J. Biol. Chem.*** 274:24257-24262.
51. Petukhova, G., S. Van Komen, S. Vergano, H. Klein, and P. Sung. (1999) Yeast Rad54 promotes Rad51-dependent homologous DNA pairing via ATP hydrolysis-driven change in DNA double helix conformation. ***J. Biol. Chem***. 274:29453-29462.
52. Petukhova, G., Stratton, S.A., and P. Sung. (1999) Single strand DNA binding and annealing activities in the yeast recombination factor Rad59. ***J. Biol. Chem. Communication*** 274:33839-33842.
53. Mazin, A.V.,E. Zaitseva, P. Sung, and S.C. Kowalczykowski. (2000) Tailed duplex DNA is the preferred substrate for Rad51 protein-mediated homologous pairing. ***EMBO J.*** 19:1148-1156.
54. Song, B. and P. Sung. (2000) Functional interactions among yeast Rad51 recombinase, Rad52 mediator, and replication protein A in DNA strand exchange. ***J. Biol. Chem***. 275:15895-15904.
55. Chen L, K. Trujillo, P. Sung and A. E. Tomkinson. (2000) Interactions of the DNA ligase IV/XRCC4 complex with DNA ends and the DNA-dependent protein kinase. ***J. Biol. Chem***. 275:26196-26205.
56. Petukhova, G., P. Sung, and H. Klein. (2000) Promotion of Rad51-dependent D-loop formation by yeast recombination factor Rdh54/Tid1. ***Genes & Develop***. 14:2206-2215. **Sung** is corresponding author.

57. Van Komen, S., G. Petukhova, S. Sigurdsson, S. Stratton, and P. Sung. (2000) Superhelicity-driven homologous DNA pairing by yeast recombination factors Rad51 and Rad54. ***Molecular Cell*** 6:563–572.
58. Sigurdsson, S., K. Trujillo, B. Song, S. Stratton, and P. Sung. (2001) Basis for avid homologous DNA strand exchange by human Rad51 and RPA. ***J. Biol. Chem***. 276:8798-8806.
59. Trujillo, K. M. and P. Sung. (2001) DNA structure-specific nuclease activities in the Saccharomyces cerevisiae Rad50/Mre11 complex. ***J. Biol. Chem.*** 276:35458-35464.
60. Anderson, D.E. K.M. Trujillo, P. Sung, and H.P. Erickson. (2001) Structure of the Rad50/Mre11 DNA repair complex from Saccharomyces cerevisiae by electron microscopy. ***J. Biol. Chem.*** 276:37027-37033.
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Research Seminars & Invited Lectures

1984 Invited Speaker, Symposium on Mechanism of Blood Coagulation, University of Edinburgh, Edinburgh, Scotland. Title of Presentation: "The Vitamin K Dependent Carboxylase from Rat Liver."

1987 Invited Speaker, Conference on Yeast Genetics and Molecular Biology, San Francisco, California. Title of Presentation: "*RAD3* gene of *Saccharomyces cerevisiae* Encodes a DNA Dependent ATPase."

1987 Invited Speaker, New York Yeast Meeting, State University of New York at Buffalo, Buffalo, New York. Title of Presentation: "*RAD3* gene and protein of *Saccharomyces cerevisiae*."

1989 Invited Speaker, Conference on Yeast Genetics and Molecular Biology, Atlanta, Georgia. Title of Presentation: "DNA Helicase Activity of the *S. cerevisiae* RAD3 Protein."

1992 Invited Speaker, National Institute on Aging, National Institutes of Health, Gerontology Research Center, Baltimore, Maryland. Title of Presentation: "Nucleotide Excision Repair in Eukaryotes."

1992 Invited Speaker, University of Texas Medical Branch, Galveston, Texas. Title of Presentation: "Excision Repair Genes and Proteins of Eukaryotes."

1993 Invited Speaker, University of Texas Medical Branch, Galveston, Texas. Title of Presentation: "Structure and Function of Excision Repair Proteins from *S. cerevisiae*."

1994 Invited Speaker, FASEB Meeting on Genetic Recombination, Snowmass, Colorado. Could not attend because of personal reasons.

1995 Invited Speaker, EMBO Workshop on Genetic Recombination, Seillac, France. Could not attend because of personal reasons.

1995 Invited Speaker, University of Texas Medical Branch, Galveston, Texas. Title of Presentation: "Mechanism of the RAD51 Recombinase."

1996 Invited Speaker, Keystone Conference on DNA Replication and Genetic Recombination. Could not attend because of personal reasons.

1996 Invited Speaker, University of Texas MD Anderson Cancer Center, Houston, Texas. Blaffner Seminar Series. Title of Presentation "Rad51 Recombinase: Mechanism of Action.

1996 Invited Speaker, Columbia University. Title of presentation: "DNA Heteroduplex Formation by the Yeast Rad51 Recombinase."

1996 Invited speaker, Center for Molecular Medicine/Institute of Biotechnology, University of Texas Health Science Center at San Antonio.Title of Presentation: "Role of *RAD51* Encoded Recombinase in DNA Repair and Recombination."

1996 Invited Speaker, Sealy Center for Oncology and Hematology, University of Texas Medical Branch, Galveston, Texas. Title of Presentation: "DNA Heteroduplex Formation by Rad51 Protein and Replication Protein A."

1997 Invited speaker, Gordon Research Conference on Mammalian DNA Repair, Ventura, California. Title of Presentation: "Action Mechanism of Rad Proteins Required for Recombination and Repair."

1997 Invited Speaker, FASEB Meeting on Genetic Recombination, Snowmass, Colorado. Title of Presentation: "Functional Interactions Among Yeast Rad Proteins and Replication Protein A in DNA Strand Exchange.

1997 Invited Speaker, University of California at Davis. Title of Presentation: "Roles of Recombination Proteins Rad51, Rad55, Rad57, and RPA in the Formation of Heteroduplex DNA."

1997 Invited Speaker, MD Anderson Cancer Center. Title of Presentation: "Mechanism of Rad Proteins Required for Recombinational Repair."

1997 Invited Speaker, University of Chicago. Title of Presentation: "Action Mechanism of Rad Proteins Required for Genetic Recombination."

1998 Invited Speaker, Gordon Research Conference on Mutagenesis, Plymouth State College, New Hampshire. Title of Presentation: "Enzymology of Heteroduplex DNA Formation."

1998 Invited Speaker, 1998 Medical Oncology Research Conference, Department of Medicine, University of Texas Health Science Center, San Antonio, Texas.

1998 Invited Speaker, EMBO Workshop on the Mechanisms and Consequences of Genetic Recombination, Seillac, France. Could not attend because of personal reasons.

1998 Invited Speaker, Robert Wood Johnson Medical School, University of New Jersey. Title of Presentation: "Functions of Recombination Rad Proteins Required for Heteroduplex DNA Formation."

1998 Invited Speaker, International Congress on Genetics, Beijing, China. Could not attend because of personal reasons.

1998 Invited Speaker, Department of Cellular and Structural Biology, University of Texas Health Science Center, San Antonio, Texas. Title of Presentation: "Action Mechanism of Recombinational DNA Repair in Eukaryotes."

1999 Invited Speaker, ASM Meeting on DNA Repair and Mutagenesis: Mechanism, Control, and Biological Consequences, Charleston, South Carolina. Title of Presentation: "Mechanism of DNA Strand Break Repair Mediated by the RAD52 Group Proteins".

1999 Invited Speaker, Keystone Symposium on Molecular Mechanisms in DNA Replication and Recombination, Taos, New Mexico. Title of Presentation: "Mechanism of Heteroduplex DNA Formation".

1999 Chair and Organizer, Workshop on Eukaryotic Recombination Systems. Keystone Symposium on Molecular Mechanisms in DNA Replication and Recombination, Taos, New Mexico.

1999 Workshop on Mechanisms of Homologous Recombination and Genetic Rearrangements, Institute Juan March de Estudios e Investigaciones, Madrid, Spain. Could not attend because of personal reasons.

1999 Invited Speaker, FASEB Conference on the Mechanism of Genetic Recombination, Snowmass, Colorado. Title of Presentation: "Synergistic Interactions of Rad Proteins in Recombination & Repair."

1999 Invited Speaker, Session on DNA Repair, Society of Chinese Bioscientists, Hong Kong. Title of Presentation: "Mechanism of Recombinational DNA Repair."

1999 Invited Speaker, Second International Conference on DNA Repair, Replication, and Recombination, Osaka, Japan. Title of Presentation: "Mechanism of Heteroduplex DNA Formation in Recombination Processes".

1999 Invited Speaker, Louisiana State University Medical Center. Title of Presentation: "Roles of Rad Proteins in Recombination and Repair."

1999 Invited Speaker, MD Anderson Cancer Center. Title of Presentation: "Enzymology of Recombination and DNA Double-strand Break Repair".

1999 Invited Speaker, Department of Biochemistry, University of North Carolina at Chapel Hill. Title of Presentation: "DNA Strand Exchange Reactions in Homologous Recombination".

1999 Invited Speaker, Saint Edward University Career Fair, Austin, TX. Title of Presentation: "How to Prepare for Graduate School".

2000 Invited Speaker, University of Cincinnati College of Medicine. Title of Presentation: "Mechanism of DNA Double-strand Break Repair by Recombination".

2000 Invited Speaker, Colloquium on Links Between Recombination and Replication: Vital Roles of Recombination, Irvine, California. Title of Presentation: "Roles of *RAD52* Group Genes and Proteins in Recombination and Repair". Organized by the U.S. National Academy of Sciences.

2000 Invited Speaker, Department of Biochemistry, University of Wisconsin. Title of Presentation: "Action Mechanism of Recombination Factors of *Saccharomyces cerevisiae*."

2000 Invited Speaker, University of Texas Health Science Center, San Antonio. Title of Presentation: "The *RAD52* Group Genes and Proteins Required for Recombination and DNA Double-strand Break Repair".

2000 Invited Speaker, University of Delaware. Title of Presentation: "Mechanisms of Heteroduplex DNA Formation in Recombination Process".

2000 Invited Speaker, EMBO Workshop on Mechanisms of Genetic Recombination, Seillac, France. Title of Presentation "Rad51 and Rdh54 Constitute a DNA Supercoiling Motor Indispensable for D-loop Formation".

2000 Invited Speaker, National Cancer Institute - Frederick Cancer Research and Development Center. Title of Presentation: "Role of Rad52 Group Recombination Proteins in Heteroduplex DNA Formation".

2000 Invited Speaker, Fox Chase Cancer Center. Title of Presentation: "Functions of Recombination Factors of the RAD52 Group".

2000 Invited Speaker by the Graduate Student Body, City of Hope National Medical Center. Title of Presentation: "Synergistic actions of Rad proteins in DNA recombination and repair"

2000 Invited Speaker, Department of Biochemistry, University of Texas Health Science Center, San Antonio. Title of Presentation: "Mechanisms of Homologous Recombination in Eukaryotic Cells".

2000 Invited Speaker, International Symposium on Cancer Research, San Antonio, Texas. Co-organizer and Speaker. Title of Presentation: "Role of RAD52 Group Proteins in DNA Recombination & Repair".

2000 Invited Speaker, MD Anderson Cancer Center. Title of Presentation: "Functional Interactions Among RAD52 Group Proteins in Recombination and Repair".

2000 Invited Speaker, Saint Edward University Career Fair, Austin, Texas. Title of Presentation: "How to Prepare for Graduate School".

2001 Invited Speaker, Gordon Research Conference on Mammalian DNA Repair, Ventura, California. Title of Presentation "Mechanisms of Rad52 Group Recombination Factors".

2001 Invited Speaker, Gordon Research Conference on Radiation Oncology, Ventura, California. Title of Presentation "A Hierarchy of Functional & Physical Interactions Among the RAD52 group Recombination Factors".

2001 Invited Speaker, FASEB Summer Research Conference on Helicases: Structure, Function and Roles in Human Disease, Saxtons River, Vermont. Title of Presentation "Functional Interactions Among RAD52 Group Proteins in Homologous Recombination".

2001 Invited Speaker, FASEB Research Conference on Recombination Mechanisms. Snowmass Colorado. Title of Presentation "Basis for Avid Homologous DNA Strand Exchange by Human Rad51 Recombinase and RPA".

2001 Invited Speaker, Workshop on DNA Repair and Recombination, organized by the National Institutes of Health. Title of Presentation "An Overview of Homologous Recombination Mechanism in Eukaryotic Cells".

2001 Invited Speaker, Columbia University. Title of Presentation "DNA Strand Exchange by Human Rad51 and RPA".

2001 Invited Speaker , University of Texas at Austin. Title of Presentation "Recombination Factors of *Saccharomyces cerevisiae*".

2001 Invited Speaker, Nucleic Acids Gordon Research Conference, Salve Regina University, RI "An Overview of Homologous Recombination in *Saccharomyces cerevisiae*".

2001 Invited Speaker, Tufts University, "Mechanism of Rad Proteins in DNA Recombination and Repair".

2001 Invited Speaker, BRCA1 and Breast Cancers, "Functional Interactions that Govern the Integrity of the Homologous Recombination Machinery". Organized by the National Cancer Institute.

2001 Invited Speaker, Third International Conference on DNA Repair, Replication, and Recombination, Osaka, Japan. Title of Presentation: "An Overview of the Enzymology of Recombination and DSB Repair in Eukaryotes."

2001 Invited Speaker in the Blaffner Seminar Series, MD Anderson Cancer Center, Houston, Texas. Title of Presentation "Mechanism of Heteroduplex DNA Formation".

2001 Invited Speaker, Texas A & M University at Corpus Christi. Title of presentation "DNA Double-strand Break Repair in Eukaryotes".

2001 Invited Speaker, Kyoto University, Kyoto, Japan. Title of Presentation "Biochemical Mechanism of DNA Double-strand Break Repair by Recombination".

2001 Invited Speaker, Emory University, Atlanta, Georgia. Title of Presentation "DNA Strand Invasion During Recombination and DNA Double-Strand Break Repair".

2001 Invited Speaker, "Mechanism of the RAD52 Group Proteins Required for Recombination". Workshop on Recombination Proteins, organized by the National Cancer Institute. Could not attend because of conflict with another meeting.

2002 Invited Speaker, Keystone Conference on Mechanism of DNA Replication and Recombination. Title of Presentation "Recombination Factors that Influence the Rad51 Recombinase Activity".

2002 Invited Speaker & Session Chair, EMBO Workshop on Mechanisms of Genetic Recombination. Chaired session on "Recombination Proteins". Title of Presentation: "Action Mechanism of Yeast and Human Rad54".

2002 Invited Speaker, International Symposium on Cancer Research, MD Anderson Cancer Center. Title of Presentation "Mechanism of the Eukaryotic Recombination Machinery".

2002 Invited Speaker, Annual Meeting of the Environmental Mutagen Society, Anchorage, Alaska. . Title of Presentation "Functional Interactions among Human Rad51, RPA, and Mediator Proteins".

2002 Invited Speaker, Meiosis Gordon Conference. June 16 - 21 at Colby-Sawyer College in New Hampshire. Could not attend because of conflict with NIH study section.

2002 Invited Speaker, Radiation Research Symposium in Reno, Nevada. Title of Presentation "Mechanisms and Assembly of Homologous Recombination Protein Complexes".

2002 Invited Speaker, Joint Meeting on DNA Repair, Sendai, Japan. Could not attend because of conflict with NIH study section.

2002 Invited Speaker, Gordon Conference on Mutagenesis. Bates College, Maine. Title of Presentation: "Crosstalk Among Rad51, Rad54, and RPA in DNA Joint Formation".

2002 Invited Speaker, Yale University. Title of Presentation: "DNA Double-strand Break Repair in Eukaryotes".

2002 Invited Speaker, University of Pittsburg. Title of Presentation "Mechanism of Repair of DNA Double-strand Breaks".

2002 Invited Speaker, University of Southern California. Title of Presentation "DNA Double-Strand Break Repair in Eukaryotes".

2002 Invited Speaker, RIKEN Conference on "DNA repair and recombination: from molecular structures at the angstrom resolution to human diseases". Title of Presentation "Mechanism of DNA Joint Formation in DNA Recombination and Repair".

2002 Invited Speaker, Cornell University, Title of Presentation: "RAD52 Group of Recombination Factors".

2002 Invited Speaker, International Symposium on Cancer Research, San Antonio, Texas.
Title of Presentation: "Role of RAD52 Group Proteins in DNA Recombination & Repair".

2002 Invited Speaker, Meeting on DNA Recombination and Repair, Cold Spring Harbor Laboratory. Title of Presentation "Mechanism of Heteroduplex Formation".

2002 Invited Speaker, University of Medicine and Dentistry of New Jersey. Title of presentation "DNA Double-strand Break repair in Eukaryotes".

2003 Invited Speaker & Session Chair: FASEB summer conference on Genetic Recombination and Chromosome Rearrangements, Snowmass, Colorado. To chair session on "Recombination Mechanisms": Title of Presentation "Mediators of Recombination".

2003 Invited Speaker and Discussion Leader: Gordon Research Conference on Mammalian DNA Repair. Ventura, California. Title of presentation "Homologous Recombination: Mediators and Regulators".

2003 Invited Speaker: University of Texas at San Antonio. Title of presentation "Mechanism of Rad51-mediated Recombination".

2003 Invited Speaker: University of New Mexico School of Medicine "Molecular Basis of Disease Seminar Series". Title of Presentation "Mechanism of Heteroduplex DNA Formation in DNA Recombination and Repair".

2003 Invited Speaker: Stanford University Tumor Biology Program. Title of Presentation "Mechanism of Homology-directed Repair of DNA Strand Breaks".

2003 Invited Speaker: Memorial Sloan-Kettering Cancer Center. Title of Presentation "Mechanisms of the RAD52 Group Recombination Proteins".

2003 Invited Speaker, ASBMB meeting: Title of Presentation "DNA Double-Strand Break Repair by Homologous Recombination".

2003 Selected Speaker by the Graduate Student Body: University of Maryland. Title of Presentation "Mediators and Modulators of Homologous Recombination".

2003 Invited Speaker: University of Texas Medical Branch at Galveston. Title of Presentation "Mechanism of the Eukaryotic Recombination Machinery".

2003 Invited Speaker: University of Colorado Health Sciences Center. CU Cancer Center mini-symposium.
Title of Presentation "Homology-directed DNA Repair in Eukaryotes".

2003 Invited Speaker: Stowers Institute for Medical Research. "Biochemical Mechanism of Homologous Recombination in Eukaryotes".

2003 Invited Speaker: University of North Carolina at Chapel Hill. "Hierarchy of Functional Interactions that Govern the Efficacy of Homologous Recombination".

2003 Invited Speaker: Vienna Biocenter, Vienna, Austria. "Recombinases, Recombination Mediators, and Anti-Recombinases".

2003 Invited Speaker: International Meeting on Replication, Recombination & Repair. Awaji Island, Japan.
"Overview of Recombination Mechanisms in Eukaryotes".

2003 Invited Speaker: Osaka University (Hideo Shinagawa). "Multi-faceted role of Rad54 in DNA recombination and repair".

2003 Invited Speaker: Sangamo BioSciences, Inc. Richmond, California. "Rad51 Recombinase and its Mediators".

2004 Invited Speaker: University of California at Berkeley (Host: Nick Cozzarelli). "DNA motor activity of Rad54 protein and its role in recombination".

2004 Invited Speaker: Dana Farber Cancer Center, Radiation Oncology Symposium. "Mechanism of Rad51-mediated Recombination Reactions".

2004 Invited Speaker: Nucleic Acids Gordon Conference, Newport, Rhode Island. "Role of Rad54 in Chromatin Remodeling and Homologous Recombination".

2004 Invited Speaker: Meiosis Gordon Conference, Colby-Sawyer College, New London, New Hampshire. "DNA Starnd Exchange by the Human Meiotic Recombinase Dmc1".

2004 Invited Speaker: Juan March Foundation Workshop on "Recombinational Repair and Links with Replication and Chromosome Maintenance". "Mediators of Homologous Recombination".

2004 Invited Speaker: EMBO Workshop on Mechanisms of Genetic Recombination. "Catalysis of Homologous DNA Pairing and Strand Exchange by a hDmc1-nucleoprotein Filament".

2004 Invited Speaker: University of Kentucky Markey Cancer Center's Distinguished Visitor Seminar. "Mechanism of Homologous Recombination in Eukaryotes".

2004 Invited Speaker: Division of Cancer Biology, National Cancer Institute: "DNA Double-strand Break Repair by Homologous Recombination".

2004 Invited Speaker: National Institutes of Health, NIDDK, Genetics and Biochemistry Branch. "Rad51 and Dmc1 Recombinases".

2004 Invited Seminar Speaker: Mayo Clinic, Rochester, Minnesota. "Mechanism of Homologous Recombination in Eukaryotes".

2004 Invited Speaker: Yale University, The past, present, and future of recombination. A symposium celebrating the career of Charles Radding. "Recombinases and Recombination Mediators".

2004 Invited Speaker: Harvard School of Public Health, Symposium on Genetic Stability through Quality Control in Cellular Processes. "The Mechanism of Eukaryotic Recombinases".

2004 Guest Lecturer: Harvard Medical School, Department of Biological Chemistry and Molecular Pharmacology. "Homologous recombination in Eukaryotes and it Relevance in Tumor Suppression".

2005 Invited Speaker: Eppley Cancer Institute, University of Nebraska "The Rad51 and Dmc1 Recombinases".

2005 Invited Speaker: BioScience 2005, The Biochemical Society of Great Britain "Mechanism of Action of Eukaryotic Recombinases".

2005 Invited Speaker: University of Iowa. "Recombinases and Recombination Mediators".

2005 FASEB summer conference on Genetic Recombination and Chromosome Rearrangements, Snowmass, Colorado. "A Tale of Two Recombinases"

2005 Invited Speaker: New York Academy of Sciences. "Eukaryotic Recombination Mechanisms". To be rescheduled, as it conflicted with my child adoption trip to China.

2005 Invited Speaker: Rutgers University. "Recombinases & Recombination Mediators".

2005 Invited Speaker: Laboratory of Molecular Pharmacology, National Cancer Institute. "Mechanism for Heteroduplex DNA Formation in Recombination Reactions".

2005 Invited Speaker: Division of Radiation Oncology, Thomas Jefferson University. "Recombinases and Recombination Mediators".

2005 Invited Speaker: Division of Radiation Oncology, Johns Hopkins University Medical School. "Recombinases & Recombination Mediators"

2005 Invited Speaker: Cancer Research UK Clare Hall Laboratories. "Recombinases & Recombination Mediators".

2005 Invited Speaker: Division of Radiation Oncology, Washington University School of Medicine. "Recombinases & Recombination Mediators"

2005 Invited Speaker: Department of Cellular Stress Biology, Roswell Park Cancer Institute. "Recombinases, Meiosis, & Tumor Suppression".

2005 Invited Speaker: Academia Sinica. Taiwan. "Recombinases, Meiosis, & Tumor Suppression".

2005 Invited Speaker: Brown University "Recombinases, Meiosis, and Tumor Suppression".

2006 Invited Speaker: EMBO Workshop on Mechanisms of Genetic Recombination. "Mediator Function of the Human BRCA2 Protein".

2006 Invited Speaker: Keystone Symposium on Nucleic Acid Enzymes. "An Overview of Recombination Pathways in Eukaryotes".

2006 Invited Speaker: Department of Biochemistry and Molecular Biophysics, Columbia University. "Recombinases & Recombination Mediators".

2006 Invited Speaker: Department of Molecular Biology and Biochemistry, Wesleyan University. "Recombinases, Meiosis, and Tumor Suppression".

2006 Invited Speaker: Department of Molecular, Microbial, and Structural Biology, University of Connecticut Health Center. "Recombinases, Meiosis, and Tumor Suppression".

2006 Invited Speaker: Department of Biochemistry and Molecular Biology, Drexel University College of Medicine. "Recombinases, Meiosis, and Tumor Suppression".

2006 Invited Speaker: Meiosis Gordon Conference. "Rad51 Targeting and Recombination Mediator Activity of a Human BRCA2-derived Polypeptide".

2006 Invited Speaker: Department of Biochemistry, Duke University. "Recombinases and Recombination Mediator".

2006 Invited Speaker: Department of Molecular and Medical Genetics, Oregon Health & Science University. "Recombinases and Recombination Mediators".

2006 Invited Speaker: Department of Pharmacology, University of Wisconsin, Madison. "Recombinases, Meiosis, and Tumor Suppression".

2006 Invited Speaker: Department of Molecular Medicine, University of Texas Health Science Center at San Antonio. "An Overview on Recombination Mechanism in Eukaryotes".

2006 Invited Speaker: Institute of Molecular Oncology Foundation, University of Milan, Italy. "Recombination Mediator and ssDNA Targeting Activity of the BRCA2 Tumor Suppressor".

2006 Invited Speaker: Department of Genetics, University of Seville, Spain. "Recombinases, Meiosis, and Tumor Suppression".

2007 Invited Speaker: FASEB Summer Conference on Genetic Recombination and Chromosome Rearrangements, Snowmass, Colorado.

2007 Invited Speaker: Dana Farber Cancer Institute, Seminars in Oncology. "Recombination Mechanisms and Regulation".

2007 Invited Speaker: Lecture to Radiation Oncology Residents at the Dana Farber Cancer Institute. "Recombinases, Meiosis, and Tumor Suppression".

2007 Invited Speaker: Abcam Symposium on "Cellular Responses to DNA Damage" at the Harvard Medicial School: "Hop2-Mnd1 Complex Acts at Two Critical Steps During Homologous Recombination".

2007 Invited Speaker: Yale Cancer Center "Recombinases, Meiosis, and Tumor Suppression".

2007 Invited Speaker: Vanderbilt University. "Mechanism and Regulation of Homology-directed Repair of DNA Breaks in Human Cells". *Cancelled due to foot injury*.

2007 Invited Speaker: Tulane University. "Mechanism and Regulation of Homology-directed Repair of DNA Breaks in Human Cells".

2007 Invited Speaker: Purdue University. "Eukaryotic Recombination: Mechanism and Regulation".

2008 Invited Speaker: Cornell Medical College. **"**The Meiotic Recombinase Dmc1 and its Mediators".

2008 Invited Speaker: Sloane-Kettering Cancer Institute. "Homologous Recombination: Mechanism and Regulation".

2008 Invited Speaker, Jacob & Monod Conference. Roscoff, France. "Role of the Mph1 Helicase .

2008 Invited Speaker, FASEB Summer Research Conference "DNA Palindromes". Title to be determined.

2008 Invited Speaker, Bloom's Syndrome Workshop: Control of Recombination in Genome Integrity. University of Chicago Gleacher Center. Title to be determined.

2008 Invited Speaker, NIH, NIDDK. "Eukaryotic Homologous Recombination: Mechanism and Regulation".

2008 Invited Speaker, NCI-sponsored Workshop: "Targeting DNA Replication and Repair Pathways in Cancer Therapeutics". Bethesda, Maryland.

2008 Invited Speaker, Genome Integrity Discussion Group. New York Academy of Sciences. "Mechanism of Eukaryotic Homologous Recombination"

2009 Invited Speaker, Mammalian DNA Repair Gordon Research Conference. Ventura, California. "Functional Interactions of RAD51AP1 with the Meiotic Recombinase DMC1".

2009 Invited Speaker, Ludwig Institute for Cancer Research, University of California San Diego. "Homologous Recombination: Mechanism and Regulation".

2009 Invited Speaker, Baylor College of Medicine. "Role of DNA Helicases in Homologous Recombination Regulation".

2009 Invited Speaker, FASEB Summer Research Conference entitled "Genetic Recombination and Genome Rearrangements". "Mechanism of the DNA End Resection machinery from S. cerevisiae".

2009 Invited Speaker, Juan March Foundation Workshop in Molecular Mechanisms of Genomic Stability. "Three Distinct Means of Homologous Recombination Regulation".

2010 Honorary Speaker, St. Louis School/University of Hong Kong. "DNA Repair & Cancer".

2010 Invited Speaker, Greenbaum Cancer Center, University of Maryland, "Homologous Recombination: from Beginning to End".

2010 Invited Speaker, University of Texas MD Anderson Cancer Center, "Homologous Recombination Mechanism & Regulation".

2010 Invited Speaker, University of Texas Health Science Center at San Antonio, "Homologous Recombination: from Beginning to End".

2010 Invited Speaker, William H. Bell lectureship, Oklahoma Medical Research Foundation, **"**Homologous Recombination: from Beginning to End".

2010 Invited Speaker, CRCHUQ, Quebec, Canada, "Homologous Recombination: from Beginning to End".

2010 Invited Speaker, University of Pittsburgh Cancer Institute, "Homologous Recombination: from Beginning to End".

2010 Invited Speaker, University of Maryland Greenebaum Cancer "Homologous Recombination: from Beginning to End".

2011 Invited Speaker, Keystone Symposium on DNA Replication and Recombination, "Helicases in DNA Recombination".

2011 Invited Speaker, FASEB Summer Research Conference on Genetic Recombination and Genome Rearrangements, "Mediators of Homologous Recombination".

2011 Invited Speaker, UTMB Galveston, "Homologous Recombination: from Beginning to End".

2011 Invited Speaker, Peking University, "Homologous Recombination: Mechanism & Regulation".

**Note: being heavily involved in administration, I have had to turn down numerous invitations to speak at institutions and scientific conferences in recent years.*