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PROFESSIONAL APPOINTMENTS

- 5/15–present **Chairman and Member**, Chemical Biology Program, Sloan Kettering Institute for Cancer Research, Memorial Sloan Kettering Cancer Center (MSKCC)
- 10/12–5/15 **Member (tenured)**, Molecular Pharmacology & Chemistry Program, Sloan Kettering Institute for Cancer Research, MSKCC.
- 3/08–10/12 **Associate Member**, Molecular Pharmacology & Chemistry Program, Sloan Kettering Institute for Cancer Research, MSKCC.
- 5/02–3/08 **Assistant Member**, Molecular Pharmacology & Chemistry Program, Sloan Kettering Institute for Cancer Research, MSKCC.
- 4/13–present **Tri-Institutional Professor**, The Rockefeller University, and Weill Cornell Medical College (secondary appointments).
- 3/08–4/13 **Tri-Institutional Associate Professor**, The Rockefeller University, and Weill Cornell Medical College (secondary appointments).
- 3/03–3/08 **Tri-Institutional Assistant Professor**, The Rockefeller University, and Weill Cornell Medical College (secondary appointments).
- 5/02–present **Director** (2012–present), **Associate Director** (2012), **Advisory Committee** (2003–present), and **Faculty Member** (2002–present), Tri-Institutional PhD Program in Chemical Biology of MSKCC, The Rockefeller University, and Weill Cornell Medical College.
- 10/02–present **Faculty Member (Professor**, 2013–present; **Associate Professor**, 2008–2013; **Assistant Professor**, 2002–2008), Pharmacology Program, Weill Graduate School of Medical Sciences of Cornell University.
- 1/04–present **Faculty Member**, Gerstner Sloan Kettering Graduate School of Biomedical Sciences, MSKCC.
- 9/02–present **Faculty Member** (2002–present) and **Executive Committee** (2014–present), Experimental Therapeutics Center, MSKCC.
- 1/10–present **Faculty Member** (2010–present) and **Executive Committee** (2011–2014), Center for Molecular Imaging and Nanotechnology (2014–present), Nanotechnology Center (2010–2014), MSKCC
- 2/10–present **Faculty Member**, Lucille Castori Center for Microbes, Inflammation and Cancer, MSKCC

EDUCATION AND TRAINING

- 9/00–4/02 **Postdoctoral Research Fellow** (with Prof. Samuel J. Danishefsky), Laboratory of Bioorganic Chemistry, Sloan Kettering Institute for Cancer Research, MSKCC. *Total synthesis of guanacastepene A and synthetic studies toward spiroxin A.*
- 9/95–8/00 **Ph. D. in Chemistry** (with Prof. Stuart L. Schreiber), Department of Chemistry and Chemical Biology, Harvard University. *Diversity-oriented synthesis targeted to chemical genetics.*
- 6/95–8/95 **Summer Research Intern** (with Dr. David A. Oare), Bioorganic Chemistry Department, Genentech, Inc. *Solid phase synthesis of peptide β -turn mimics.*
- 9/91–6/95 **B. S. in Chemistry with Distinction and Honors** (with Prof. Dale G. Drueckhammer), Department of Chemistry, Stanford University. *Enzymatic dynamic kinetic resolution of α -substituted propionate thioesters.*

TEACHING ACTIVITIES

- 9/12–present **Chemical Biology Seminar Course** (Faculty Moderator), Tri-Institutional PhD Program in Chemical Biology. *Topics:* Papers by chemical biology seminar speakers at MSKCC, The Rockefeller University, and Weill Cornell.
- 3/12–present **Transitioning to Research Independence Seminar Series** (Speaker), Tri-Institutional Research Program. *Topic:* Staffing and Managing a Lab
- 9/11–present **Principles of Chemical Biology** (Lecturer), Tri-Institutional PhD Program in Chemical Biology and The Rockefeller University. *Topics:* chemistry and biosynthesis of peptides and oligonucleotides.
- 12/08–present **Responsible Conduct of Research** (Facilitator), MSKCC. *Topics:* authorship, publication, & peer review; conflicts of interest, collaboration & mentoring
- 9/02–present **Pharmacology I: Chemical Biology** (Co-Course Director 2003–2012; Lecturer 2002–present), Pharmacology Program, Weill Cornell Graduate School of Medical Sciences. *Topics:* organic reaction mechanisms, biological and laboratory synthesis of primary and secondary metabolites, combinatorial chemistry.
- 4/03–present **Pharmacology IV: Molecular Pharmacology of Cancer** (Lecturer), Pharmacology Program, Weill Cornell Graduate School of Medical Sciences. *Topic:* natural product anti-cancer agents.
- 12/06 **Cancer Biology Core Course** (Lecturer), Cancer Biology Graduate Program, Gerstner Sloan Kettering Graduate School of Biomedical Sciences, MSKCC. *Topic:* cell cycle inhibitors
- 9/03–9/04 **Frontiers in Biomedical Science** (Lecturer), Tri-Institutional MD–PhD Program. *Topic:* small molecule inhibition of protein–protein interactions.

FELLOWSHIPS AND SCHOLARSHIPS

- 2007–2009 Alfred P. Sloan Research Fellow
- 2005–2007 James D. Watson Investigator, NYSTAR
- 2001–2002 Damon Runyon Cancer Research Foundation Postdoctoral Fellowship
- 2000 American Cancer Society Postdoctoral Fellowship (declined)

2000	NIH National Research Service Award Postdoctoral Fellowship (declined)
1998–1999	Roche Graduate Fellowship in Organic Chemistry
1995–1998	National Defense Science and Engineering Graduate Fellowship
1995	NSF Graduate Fellowship (declined)
1994	Pfizer Summer Undergraduate Fellowship in Synthetic Organic Chemistry
1991–1995	National Merit Scholarship
1991–1992	Robert Byrd Honors Scholarship

HONORS AND AWARDS

2013	Dean's Award for Excellence in Teaching and Mentoring, Weill Cornell Medical College
2010	Boyer Award in Basic Research, MSKCC
2009, 2011	Kavli Fellow, National Academy of Sciences
1995–1996	Certificate of Distinction in Teaching, Harvard University
1995	Phi Beta Kappa
1995	Marsden Prize in Chemistry, Stanford University
1991–1992	President's Award for Academic Excellence, Stanford University
1991–1992	Jordan Scholar, Stanford University
1991–1992	Scholar Athlete Award, Stanford University

OTHER PROFESSIONAL ACTIVITIES

2016–present	Co-Chair, Organic Topical Group, NY Section, American Chemical Society
2015–present	External Advisory Board, EU Protein Conjugates Educational Training Network
2014–present	External Advisory Board, Institute for Research in Biomedicine, Barcelona
2014–present	Scientific Advisory Board, Tri-Institutional Therapeutics Discovery Institute
2011–present	Editorial Advisory Board, <i>Current Chemical Biology</i>
2011–present	Editorial Advisory Board, <i>Combinatorial Chemistry and High-Throughput Screening</i>
2010–2011	Organizing Committee, 4th Indo-U.S. Kavli Frontiers of Science Symposium
2009–2011	Scientific Advisory Board, Dart Neuroscience LLC
2009	Member, NSF Science and Technology Center Site Visit Committee
2007–present	Scientific Consultant, Gerson Lehrman Group
2007–present	Editorial Advisory Board, <i>Current Molecular Pharmacology</i>
2007	<i>Ad hoc</i> Reviewer, NSF Division of Chemistry
2006–present	Member, NYAS Chemical Biology Discussion Group Steering Committee
2006–present	<i>Ad hoc</i> Member, NIH Study Sections: SBCB (Synthetic and Biological Chemistry, <i>multiple</i>); ZRG1 IFCN-K52 (Molecular Libraries Probe Production Center Network); ZRG1 GGG-Z90 (Special Topics in Biological Sciences); ZRG1 BCMB-B03M (BCMB Member Conflicts); ZRG1 IDM-C58R (ARRA NIH Challenge Grants); ZRG1 BCMB-R02M (BCMB Member Conflicts); ZRC1 IDM-N02M (Topics in Drug Devt. Against Infectious Diseases, <i>multiple</i>); ZA11 LR-M(J1)1 (NIAID Centers of Excellence in Translational Research); ZRG1 ETTN-E55R (Novel Approaches to Diagnosing Alzheimer's Disease); ZRG1 BCMB-P02M (BCMB Member Conflicts); ZRG1 BCMB-H02M (BCMB Member Conflicts: Medicinal Chemistry)
2006–2007	Scientific Consultant, ThinkEquity Partners LLC
2005–present	Advisory Board, Tri-Institutional Training Program in Chemical Biology
2005	Scientific Consultant, Lilly Ventures
2004–present	Member, New York Academy of Sciences
2004	Member, Acfas – Association francophone pour le savoir, Canada

2003 Scientific Advisory Board, Québec Combinatorial Chemistry Consortium
2003 Scientific Advisory Board, CHI Diversity Oriented Synthesis Conference
2002–present Member, Harvey Society
1996–2011 Member, American Association for the Advancement of Science
1996–present Member, American Chemical Society

PEER REVIEWER

Accounts of Chemical Research, ACS Chemical Biology, ACS Combinatorial Sciences, ACS Medicinal Chemistry Letters, ACS Infectious Diseases, Angewandte Chemie, Beilstein Journal of Organic Chemistry, Biochemistry, Bioorganic & Medicinal Chemistry, Bioorganic & Medicinal Chemistry Letters, ChemBioChem, Chemistry & Biology, Chemical Communications, Chemical Reviews, Chemical Society Reviews, Diversity-Oriented Synthesis, Journal of the American Chemical Society, Journal of Chemical Education, Journal of Combinatorial Chemistry, Journal of Medicinal Chemistry, Journal of Organic Chemistry, Molecular BioSystems, Nature, Nature Biotechnology, Nature Chemical Biology, Nature Chemistry, Nature Communications, Neuron, Organic & Biomolecular Chemistry, Organic Letters, Proceedings of the National Academy of Sciences USA, Synlett, Tetrahedron, Tetrahedron Letters

PERSONAL INFORMATION AND ACTIVITIES

Born in Rochester, New York Second language: French (conversational)

SCUBA Diving – FFESSM Brevet Élémentaire (1989); PADI Advanced Open Water Diver (2004); PADI Enriched Air/Nitrox Diver (2005); PADI Wreck Diver (2006); PADI Deep Diver (2006); Emergency First Responder (CPR/AED/First Aid) (2008); PADI Rescue Diver (2008); PADI Search & Recovery Diver (2009).

Road Racing & Track – MSKCC Corporate Challenge Team (2002–2015; Co-Captain 2003–2015); Warren Street Social & Athletic Club (2003–2005); New York Road Runners Club (2001–2012); Stanford University Varsity Track Team (1991–1992); New York City Marathon finisher (2003).

National Center for Missing & Exploited Children – Advisory Board, Manhattan Affiliate Office (2003–2007); Volunteer, New York Branch/Adam Walsh Child Resource Center (1987–1991).

Music and Theater – *Stanford Band* – Treasurer (1993–94), Public Relations Director (1992–93), Trombone Section Leader (1992–94). *Music Director/ Conductor* – “Once on this Island” (1995), “Anything Goes” (1995), “Big Game Gaieties” (1994), “Anything Goes” (1994), “Sweet Charity” (1993), “Boanthropy” (1992).

PUBLICATIONS

Independent

- 50) Guney, T.[†]; Wenderski, T. A.[†]; Boudreau, M. W.; Tan, D. S.* “Versatile synthesis of benzannulated medium-ring lactams via tandem oxidative dearomatization–ring expansion reactions.” submitted.
- 49) Verano, A. L.; Tan, D. S.* “Family-level stereoselective synthesis of pyrrolomorpholine spiroketal natural product antioxidants.” *Chem. Sci.* **2017**, *8*, 3687–3693.
DOI: 10.1039/c6sc05505b PMID: 28848229 PMCID: PMC5571482
- 48) Verano, A. L.; Tan, D. S.* “Stereocontrolled synthesis of spiroketals: An engine for chemical and biological discovery.” *Isr. J. Chem.* **2017**, *57*, 279–291. (*Invited review; Special Issue in honor of Prof. Stuart L. Schreiber and Prof. K. C. Nicolaou, 2016 Wolf Prize in Chemistry*).
DOI: 10.1002/ijch.201600134 PMID: 29104308 PMCID: PMC5665374
- 47) Brooks, J. L.; Xu, L.; Wiest, O.; Tan, D. S.* “Diastereoselective synthesis of highly-substituted tetrahydrofurans by Pd-catalyzed tandem oxidative cyclization–redox relay reactions controlled by intramolecular hydrogen bonding.” *J. Org. Chem.* **2017**, *82*, 57–75.
DOI: 10.1021/acs.joc.6b02053 PMID: 28004933 PMCID: PMC5224347
• Highlighted in *Org. Chem. Highlights* Jan 8, 2018.
- 46) Evans, C. E.; Matarlo, J. S.; Tonge, P. J.*; Tan, D. S.* “Stereoselective synthesis, docking, and biological evaluation of difluoroindanediol-based MenE inhibitors as antibiotics.” *Org. Lett.* **2016**, *18*, 6384–6387.
DOI: 10.1021/acs.orglett.6b03272 PMID: 27978658 PMCID: PMC5171203
- 45) Davis, T. D.[†]; Mohandas, P.[†]; Chiriac, M.; Bythrow, G. V.; Quadri, L. E. N. Q.*; Tan, D. S.* “Design, synthesis, and biological evaluation of α -hydroxyacyl-AMS inhibitors of amino acid adenylation enzymes.” *Bioorg. Med. Chem. Lett.* **2016**, *26*, 5340–5345.
DOI: 10.1016/j.bmcl.2016.09.027 PMID: 27692545 PMCID: PMC5079767
- 44) Ji, C.; Sharma, I.; Pratihari, D.; Hudson, L. L.; Maura, D.; Guney, T.; Rahme, L. G.; Pesci, E. C.; Coleman, J. P.; Tan, D. S. “Designed small-molecule inhibitors of the anthranilyl-CoA synthetase PqsA block quinolone biosynthesis in *Pseudomonas aeruginosa*.” *ACS Chem. Biol.* **2016**, *11*, 3061–3067.
DOI: 10.1021/acschembio.6b00575 PMID: 27658001 PMCID: PMC5117135
- 43) Matarlo, J. S.[†]; Evans, C. E.[†]; Sharma, I.; Lavaud, L. J.; Ngo, S. C.; Shek, R.; Rajashankar, K. R.; French, J. B.; Tan, D. S.*; Tonge, P. J.* “Mechanism of MenE inhibition by acyl-adenylate analogues and discovery of novel antibacterial agents.” *Biochemistry* **2015**, *54*, 6514–6524.
DOI: 10.1021/acs.biochem.5b00966 PMID: 26394156 PMCID: PMC4624480
- 42) Stratton, C. F.; Newman, D. J.; Tan, D. S.* “Cheminformatic comparison of approved drugs from natural product versus synthetic origins.” *Bioorg. Med. Chem. Lett.*, **2015**, *25*, 4802–4807 (*Recent Advances in Medicinal Chemistry and Chemical Biology Symposium-in-Print*).
DOI: 10.1016/j.bmcl.2015.07.014 PMID: 26254944 PMCID: PMC4607632

- 41) Wenderski, T. A.; Stratton, C. F.; Bauer, R. A.; Kopp, F.; Tan, D. S.* “Principal component analysis as a tool for library design: a case study investigating natural products, brand-name drugs, natural product-like libraries, and drug-like libraries.” *Methods Mol. Biol.* **2015**, *1263*, 225–242.
DOI: 10.1007/978-1-4939-2269-7_18 PMID: 25618349 PMCID: PMC4373534
- 40) Davis, T. D.; Gerry, C. J.; Tan, D. S.* “A general platform for systematic quantitative evaluation of small-molecule permeability in bacteria.” *ACS Chem. Biol.* **2014**, *9*, 2535–2544.
DOI: 10.1021/cb5003015 PMID: 25198656 PMCID: PMC4245172
• Highlighted in *ACS Chem. Biol.* **2014**, *9*, 2433.
- 39) Sharma, I.; Wurst, J. M.; Tan, D. S.* “Solvent-dependent divergent functions of Sc(OTf)₃ in stereoselective epoxide-opening spiroketalizations.” *Org. Lett.* **2014**, *16*, 2474–2477.
DOI: 10.1021/ol500853q PMID: 24742081 PMCID: PMC4018158
- 38) Lun, S.; Guo, H.; Adamson, J.; Cisar, J. S.; Davis, T. D.; Sundaram Chavadi, S.; Warren, J. D.; Quadri, L. E. N.*; Tan, D. S.*; Bishai, W. R.* “Pharmacokinetic and *in vivo* efficacy studies of the mycobactin biosynthesis inhibitor salicyl-AMS in mice.” *Antimicrob. Agents Chemother.* **2013**, *57*, 5138–5140.
DOI: 10.1128/AAC.00918-13 PMID: 23856770 PMCID: PMC3811451
- 37) Sharma, I.; Tan, D. S.* “Diversifying complexity.” *Nat. Chem.* **2013**, *5*, 157–158. (*Invited News & Views*)
DOI: 10.1038/nchem.1581
- 36) Bauer, R. A.; Wenderski, T. A.; Tan, D. S.* “Biomimetic diversity-oriented synthesis of benzannulated medium rings via ring expansion.” *Nat. Chem. Biol.* **2013**, *9*, 21–29.
DOI: 10.1038/nchembio.1130 PMID: 23160003 PMCID: PMC3556477
- 35) Wurst, J. M.; Verano, A. L.; Tan, D. S.* “Stereoselective synthesis of acortatarins A and B.” *Org. Lett.* **2012**, *14*, 4442–4445.
DOI: 10.1021/ol3019456 PMID: 22924668 PMCID: PMC3466107
- 34) Kopp, F.[†]; Stratton, C. F.[†]; Akella, L. B.; Tan, D. S.* “A diversity-oriented synthesis approach to macrocycles via oxidative ring expansion.” *Nat. Chem. Biol.* **2012**, *8*, 358–365.
DOI: 10.1038/nchembio.911 PMID: 22406518 PMCID: PMC3359144
• Highlighted in *SciBX* **2012**, *5*, doi: 10.1038/scibx.2012.348
- 33) Lu, X.; Zhou, R.; Sharma, I.; Li, X.; Kumar, G.; Swaminathan, S.; Tonge, P. J.*; Tan, D. S.* “Stable analogues of OSB-AMP: Potent inhibitors of MenE, the *o*-succinylbenzoate-CoA synthetase from bacterial menaquinone biosynthesis.” *ChemBioChem* **2012**, *13*, 129–136.
DOI: 10.1002/cbic.201100585 PMID: 22109989 PMCID: PMC3436903
- 32) Wurst, J. M.; Liu, G.; Tan, D. S.* “Hydrogen-bonding catalysis and inhibition by simple solvents in the stereoselective epoxide-opening spirocyclization of glycol epoxides to form spiroketals.” *J. Am. Chem. Soc.* **2011**, *133*, 7916–7925.
DOI: 10.1021/ja201249c PMID: 21539313 PMCID: PMC3113711

- 31) Moura-Letts, G.; DiBlasi, C. M.; Bauer, R. A.; Tan, D. S.* “Solid-phase synthesis and chemical space analysis of a 190-membered alkaloid/terpenoid-like library.” *Proc. Natl. Acad. Sci. USA* **2011**, *108*, 6745–6750.
DOI: 10.1073/pnas.1015268108 PMID: 21451137 PMCID: PMC3084128
- 30) Bauer, R. A.; DiBlasi, C. M.; Tan, D. S.* “The *tert*-butylsulfonamide lynchpin in transition metal-mediated multiscaffold library synthesis.” *Org. Lett.* **2010**, *12*, 2084–2087.
DOI: 10.1021/ol100574y PMID: 20356070 PMCID: PMC2869296
- 29) Bauer, R. A.; Wurst, J. M.; Tan, D. S.* “Expanding the range of ‘druggable’ targets with natural product-based libraries: An academic perspective.” *Curr. Opin. Chem. Biol.* **2010**, *14*, 308–314. (Invited review)
DOI: 10.1016/j.cbpa.2010.02.001 PMID: 20202892 PMCID: PMC2878877
- 28) Olsen, S. K.; Capili, A. D.; Lu, X.; Tan, D. S.*; Lima, C. D.* “Active site remodelling accompanies thioester bond formation in the SUMO E1.” *Nature* **2010**, *463*, 906–912.
DOI: 10.1038/nature08765 PMID: 20164921 PMCID: PMC2866016
• Highlighted in *Nature* **2010**, 463, 889–890; *Chem. Eng. News* **2010**, 88(Feb 22), 7; *Nat. Rev. Mol. Cell. Biol.* **2010**, 11, 161; *Nat. Chem. Biol.* **2010**, 6, 247; *Structure* **2010**, 18, 419–421; *ACS Chem. Biol.* **2010**, 5, 352; Faculty of 1000 Biology (article ID 2390957).
- 27) Lu, X.; Olsen, S. K.; Capili, A. D.; Cisar, J. S.; Lima, C. D.*; Tan, D. S.* “Designed semisynthetic protein inhibitors of Ub/Ubl E1 activating enzymes.” *J. Am. Chem. Soc.* **2010**, *132*, 1748–1749.
DOI: 10.1021/ja9088549 PMID: 20099854 PMCID: PMC2830896
• Highlighted in *Chem. Eng. News* **2010**, 88(Feb 22), 7; *Nat. Rev. Mol. Cell. Biol.* **2010**, 11, 161; *Nat. Chem. Biol.* **2010**, 6, 247; *ACS Chem. Biol.* **2010**, 5, 352; Faculty of 1000 Biology (article ID 2638963).
- 26) Liu, G.; Wurst, J. M.; Tan, D. S.* “Stereoselective synthesis of benzannulated spiroketals: Influence of the aromatic ring on reactivity and conformation.” *Org. Lett.* **2009**, *11*, 3670–3673.
DOI: 10.1021/ol901437f PMID: 19634891 PMCID: PMC2760470
- 25) Lu, X.; Zhang, H.; Tonge, P. J.*; Tan, D. S.* “Mechanism-based inhibitors of MenE, an acyl-CoA synthetase involved in bacterial menaquinone biosynthesis.” *Bioorg. Med. Chem. Lett.* **2008**, *18*, 5963–5966 (Special Issue in honor of Prof. Benjamin F. Cravatt, 2008 Tetrahedron Young Investigator Award).
DOI: 10.1016/j.bmcl.2008.07.130 PMID: 18762421 PMCID: PMC2628629
- 24) Cisar, J. S.; Tan, D. S.* “Small molecule inhibition of microbial natural product biosynthesis – An emerging antibiotic strategy.” *Chem. Soc. Rev.* **2008**, *37*, 1320–1329 (Invited review).
DOI: 10.1039/b702780j PMID: 18568158 PMCID: PMC2587208
- 23) Ferreras, J. A.; Stirrett, K. L.; Lu, X.; Ryu, J.-S.; Soll, C. E.; Tan, D. S.; Quadri, L. E. N.* “Mycobacterial PGL virulence factor biosynthesis: Mechanism and small-molecule inhibition of polyketide chain initiation.” *Chem. Biol.* **2008**, *15*, 51–61.
DOI: 10.1016/j.chembiol.2007.11.010 PMID: 18158259 PMCID: PMC2276623
• Highlighted in *Chem. Biol.* **2008**, *15*, xi; *Start-Up: Emerging Medical Ventures* **2008**, Jan 1.

- 22) Cisar, J. S.; Ferreras, J. A.; Soni, R. K.; Quadri, L. E. N.*; Tan, D. S.* “Exploiting ligand conformation in selective inhibition of non-ribosomal peptide synthetase amino acid adenylation with designed macrocyclic small molecules.” *J. Am. Chem. Soc.* **2007**, *129*, 7752–7753.
DOI: 10.1021/ja0721521 PMID: 17542590 PMCID: PMC2565600
• Highlighted in *Faculty of 1000 Biology* (article ID 1087363).
- 21) Shang, S.; Iwadare, H.; Macks, D. E.; Ambrosini, L. M.; Tan, D. S.* “A unified approach to polyketides having both skeletal and stereochemical diversity.” *Org. Lett.* **2007**, *9*, 1895–1898.
DOI: 10.1021/ol070405p PMID: 17439132 PMCID: PMC2597797
- 20) Moilanen, S. B.; Potuzak, J. S.; Tan, D. S.* “Stereocontrolled synthesis of spiroketals via Ti(Oi-Pr)₄-mediated kinetic spirocyclization of glycol epoxides with retention of configuration.” *J. Am. Chem. Soc.* **2006**, *128*, 1792–1793.
DOI: 10.1021/ja057908f PMID: 16464069 PMCID: PMC2553756
• Highlighted in *Nature* **2006**, *439*, 512.
- 19) Potuzak, J. S.; Moilanen, S. B.; Tan, D. S.* “Stereocontrolled synthesis of spiroketals via a remarkable methanol-induced kinetic spirocyclization reaction.” *J. Am. Chem. Soc.* **2005**, *127*, 13796–13797.
DOI: 10.1021/ja055033z
- 18) Tan, D. S.* “Diversity-oriented synthesis: Exploring the intersections between chemistry and biology.” *Nature Chem. Biol.* **2005**, *1*, 74–84. (Invited review)
DOI: 10.1038/nchembio0705-74 PMID: 16408003
• Highlighted in *Nature Chem. Biol.* **2005**, *1*, 61.
- 17) Ferreras, J. A.; Ryu, J.-S.; Di Lello, F.; Tan, D. S.*; Quadri, L. E. N.* “Small molecule inhibition of siderophore biosynthesis in *Mycobacterium tuberculosis* and *Yersinia pestis*.” *Nature Chem. Biol.* **2005**, *1*, 29–32.
DOI: 10.1038/nchembio706 PMID: 16407990
• Highlighted in *Nature* **2005**, *435*, 389; *Nature Chem. Biol.* **2005**, *1*, 1; *Chem. Eng. News*, **2005**, *83*(May 30), 13; *Mercosur Económico*, June 13, 2005.
- 16) DiBlasi, C. M.; Macks, D. E.; Tan, D. S.* “An acid-stable *tert*-butyldiarylsilyl (TBDAS) linker for solid-phase organic synthesis.” *Org. Lett.* **2005**, *7*, 1777–1780.
DOI: 10.1021/ol050370y PMID: 15844904
• Highlighted in *Lett. Org. Chem.* **2005**, *2*, 668–669.
- 15) Shang, S.; Tan, D. S.* “Advancing chemistry and biology through diversity-oriented synthesis of natural product-like libraries.” *Curr. Opin. Chem. Biol.* **2005**, *9*, 248–258. (Invited review)
DOI: 10.1016/j.cbpa.2005.03.006 PMID: 15939326
- 14) Moilanen, S. B.; Tan, D. S.* “Enantioselective synthesis of *erythro*-4-deoxyglycals as scaffolds for target- and diversity-oriented synthesis: New insights into glycol reactivity.” *Org. Biomol. Chem.* **2005**, *3*, 798–803.
DOI: 10.1039/b417429a PMID: 15731865

- 13) Tan, D. S. "Current progress in natural product-like libraries for discovery screening." *Comb. Chem. High-Throughput Screen.* **2004**, *7*, 631–643. (Invited review)
DOI: 10.2174/1386207043328418 PMID: 15578925
- 12) Potuzak, J. S.; Tan, D. S.* "Synthesis of C1-alkyl and C1-acylglycals from glycals using a B-alkyl Suzuki–Miyaura cross coupling approach." *Tetrahedron Lett.* **2004**, *45*, 1797–1801.
DOI: 10.1016/j.tetlet.2003.12.006
- 11) Potuzak, J. S.; Moilanen, S. B.; Tan, D. S.* "Discovery and applications of small molecule probes for studying biological processes." *Biotechnol. Genet. Eng. Rev.* **2004**, *21*, 11–78. (Invited review)
URL: <https://www.nottingham.ac.uk/ncmh/documents/bger/volume-21/bger21-2.pdf>
PMID: 17017027
- 10) Tan, D. S. "Sweet surrender to chemical genetics." *Nat. Biotechnol.* **2002**, *20*, 561–563. (Invited News & Views)
DOI: 10.1038/nbt0602-561 PMID: 12042857

Postdoctoral, Graduate, and Undergraduate

- 9) Mandal, M.; Yun, H.; Dudley, G. B.; Lin, S.; Tan, D. S.; Danishefsky, S. J.* "Total synthesis of guanacastepene A: A route to enantiomeric control." *J. Org. Chem.* **2005**, *70*, 10619–10637 (Cover article).
DOI: 10.1021/jo051470k PMID: 16355979
- 8) Tan, D. S.; Dudley, G. B.; Danishefsky, S. J.* "Synthesis of the functionalized tricyclic skeleton of guanacastepene A: A tandem epoxide-opening β -elimination/Knoevenagel cyclization." *Angew. Chem. Int. Ed.* **2002**, *41*, 2185–2188.
DOI: 10.1002/1521-3773(20020617)41:12<2185::AID-ANIE2185>3.0.CO;2-0 PMID: 19746639
- 7) Lin, S.; Dudley, G. B.; Tan, D. S.; Danishefsky, S. J.* "A stereoselective route to guanacastepene A through a surprising epoxidation." *Angew. Chem. Int. Ed.* **2002**, *41*, 2188–2191.
DOI: 10.1002/1521-3773(20020617)41:12<2188::AID-ANIE2188>3.0.CO;2-J PMID: 19746640
- 6) Dudley, G. B.; Tan, D. S.; Kim, G.; Tanski, J. M.; Danishefsky, S. J.* "Remarkable stereoselectivity in the alkylation of a hydroazulenone: Progress toward the total synthesis of guanacastepene." *Tetrahedron Lett.* **2001**, *42*, 6789–6791.
DOI: 10.1016/S0040-4039(01)01342-9
- 5) Tan, D. S.; Schreiber, S. L.* "A mercury-catalyzed transesterification cyclization leading to fused cyclic polyethers." *Tetrahedron Lett.* **2000**, *41*, 9509–9513 (Special Issue in honor of Prof. Harry A. Wasserman).
DOI: 10.1016/S0040-4039(00)01658-0
- 4) Tan, D. S.*; Burbaum, J. J.* "Ligand discovery using encoded combinatorial libraries." *Curr. Opin. Drug Discovery Dev.* **2000**, *3*, 439–453. (Invited review)
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BOOK CHAPTER

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CONFERENCE ABSTRACTS (ORAL PRESENTATIONS)

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- 3) Tan, D. S. "Diversity and design: New chemical probes for biology and medicine." Invited presentation at *Symposium in Memory of Dr. David Y. Gin* at the 243rd National Meeting of the American Chemical Society, San Diego, CA, March 2012; Paper CARB 63.
- 3) Tan, D. S. "Natural product-based libraries for chemical biology and drug discovery." Invited presentation in *Diversity Oriented Synthesis* at *Pacificchem 2010*, Honolulu, HI, December 2010, Paper 1739.
- 2) Tan, D. S. "Following Nature's lead: New strategies for diversity-oriented synthesis." Presented at the 226th National Meeting of the American Chemical Society, New York, NY, September 2003; Paper ORGN 331.
- 1) Tan, D. S.; Foley, M. A.; Shair, M. D.; Schreiber, S. L. "Stereoselective synthesis of over two million compounds having structural features both reminiscent of natural products and compatible with miniaturized cell-based assays." Presented at the 216th National Meeting of the American Chemical Society, Boston, MA, August 1998; Paper ORGN 230.

INVITED SEMINARS

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|----------|---|
| 11/8/18 | Wayne State University, Department of Chemistry, Organic Seminar |
| 4/20/18 | Virginia Tech, Department of Chemistry, Highlands Seminar Series |
| 3/22/18 | CDD Vault, Antibiotic Discovery Webinar: Penetrating Gram-Negative Bacteria |
| 10/5/17 | Merck Chemistry in Biomedical Sciences Symposium, Kenilworth, NJ |
| 4/19/17 | University of Connecticut, Department of Chemistry and School of Pharmacy |
| 4/3/17 | Eli Lilly, Indianapolis, IN |
| 3/17/17 | Baylor University, Department of Chemistry |
| 12/5/16 | Genentech, Immunology & Infectious Diseases Seminar Series, South San Francisco, CA |
| 8/31/16 | EMBO 2016 Chemical Biology Conference, EMBL Heidelberg, Germany |
| 6/16/16 | CHI Chemical Biology in Drug Discovery Conference, Boston, MA |
| 11/11/15 | Bristol-Myers Squibb, Process R&D Chemistry, New Brunswick, NJ |
| 11/10/15 | Bristol-Myers Squibb, Discovery Chemistry, Lawrenceville, NJ |
| 10/8/15 | University of Tennessee, Knoxville, Department of Chemistry |
| 8/14/15 | Ehwa Womans University, College of Pharmacy, Seoul, Korea |

- 8/13/15 1st International Symposium on Challenges in Chemical Biology, Seoul National University, Seoul, Korea
- 8/11/15 45th IUPAC World Chemistry Conference, Busan, Korea
- 7/28/15 American Society of Pharmacognosy Annual Meeting, Copper Mountain, CO
- 7/12/15 Innovative Medicines Initiative TRANSLOCATION Annual Meeting, Bremen, Germany
- 6/11/15 Merck Research Laboratories, Kenilworth, NJ
- 12/9/14 University of Texas Southwestern Medical Center, Department of Biochemistry
- 10/24/14 University of Central Florida, Burnett School of Biomedical Sciences
- 10/16/14 The Rockefeller University, Evnin Chemical Biology Seminar Series
- 8/12/14 248th ACS National Meeting, San Francisco, CA
- 5/22/14 CHI Chemical Biology for Target Validation Conference, Boston, MA
- 4/21/14 MSKCC, SKI Scientific Colloquium
- 12/4/13 Vanderbilt Institute of Chemical Biology, Vanderbilt University
- 10/31/13 University of Pennsylvania, Dept. of Chemistry, Biol. Chemistry Seminar Series
- 10/11/13 Frontier Sciences on New Drug Discovery Symposium, Tsinghua University, Beijing, China
- 8/1/13 Gordon Research Conference, Natural Products, Andover, NH
- 6/3/13 Gordon Research Conference, High-Throughput Chemistry & Chemical Biology, New London, NH
- 5/2/13 New York City Emerging Technologies Summit, Mt. Sinai School of Medicine
- 4/19/13 Cubist Pharmaceuticals, Lexington, MA
- 3/21/13 Cell Press Microbes and Cancer LabLinks Symposium, Columbia University
- 12/11/12 Mount Sinai School of Medicine, Department of Structural and Chemical Biology
- 11/26/12 City University of New York, City College, Department of Chemistry
- 11/8/12 National Cancer Institute, Frederick, MD
- 5/30/12 Merck Research Laboratories, Rahway, NJ
- 4/13/12 New York University, Department of Chemistry
- 3/27/12 David Y. Gin Memorial Symposium, 243rd ACS National Mtg, San Diego, CA
- 9/19/11 University of Colorado, Boulder, Department of Chemistry and Biochemistry
- 5/9/11 City Univ. of New York, Queens College, Dept. of Chemistry and Biochemistry
- 4/22/11 U. Michigan, 31st Symposium in Pharmacol. Sci. & Biorelated Chem. (keynote)
- 4/18/11 4th Indo-US Kavli Frontiers of Science Symposium, Irvine, CA
- 4/7/11 Northwestern University, Department of Chemistry
- 3/29/11 EMBO Methods in Chemical Biology Course, EMBL Heidelberg, Germany
- 3/23/11 Society of Chemical Industry Symposium, London, UK
- 3/17/11 Broad Institute of Harvard & MIT, Chemical Biol. & Novel Therapeutics Prog.
- 12/19/10 Pacificchem 2010, Diversity-Oriented Synthesis Symposium, Honolulu, HI
- 11/19/10 The George Washington University, Department of Chemistry
- 6/23/10 Gordon Research Conference, High-Throughput Chemistry & Chemical Biology, Les Diablerets, Switzerland
- 4/28/10 University of Toledo, Department of Chemistry
- 11/12/09 21st US Kavli Frontiers of Science Symposium, Irvine, CA
- 9/19/09 3rd Nature Chemical Biology Symposium, Boston, MA
- 8/16/09 Gordon Research Conference, Tuberculosis Drug Development, U. Oxford, UK
- 5/7/09 AstraZeneca Research & Development, Boston, MA
- 3/13/09 St. Jude Children's Research Hospital, Dept. of Chemical Biology & Therapeut.
- 3/1/09 3rd Indo-US Kavli Frontiers of Science Symposium, Agra, India

- 2/9/09 AACR-ACS Chemistry in Cancer Research Conference, New Orleans, LA
- 12/15/08 MSKCC, Department of Surgery, Research Conference Seminar Series
9/12/08 Eli Lilly UK, Erl Wood Manor, Windlesham, Surrey, UK
9/11/08 University of York, Department of Chemistry, UK
9/10/08 University College London, Department of Chemistry, UK
9/9/08 University of Cambridge, Department of Chemistry, UK
8/31/08 Gordon Research Conference, Combinatorial Chemistry, Univ. of Oxford, UK
8/29/08 University of Southampton, School of Chemistry, UK
2/26/08 University of Colorado, Boulder, Department of Chemistry and Biochemistry
- 12/11/07 Smith College, Department of Chemistry
11/13/07 Duke University, Department of Chemistry
10/10/07 ACS 41st Western Regional Meeting, San Diego, CA
7/28/07 2nd USA-UK Synthesis Workshop 'Young Guns II', San Francisco, CA
5/18/07 University of Pittsburgh, Department of Chemistry
4/27/07 University of Chicago, Department of Chemistry
3/30/07 Hamilton College, Department of Chemistry
3/8/07 SUNY Stony Brook, Department of Chemistry
2/14/07 Johns Hopkins School of Medicine, Dept. of Pharmacology & Mol. Sciences
2/8/07 UCLA, Department of Chemistry and Biochemistry
2/7/07 California Institute of Technology, Division of Chemistry & Chem. Engineering
2/1/07 University of Illinois at Urbana–Champaign, Department of Chemistry
1/12/07 The Scripps Research Institute, Department of Chemistry
- 12/4/06 Harvard University, Dept. of Chemistry & Chemical Biol., Eli Lilly Symposium
11/15/06 Yale University, Department of Chemistry
10/25/06 University of California, Irvine, Department of Chemistry
10/18/06 Wayne State University, Department of Chemistry
10/17/06 University of Michigan, Department of Chemistry
10/16/06 Pfizer Global Research & Development, Ann Arbor, MI
10/3/06 University of Wisconsin–Madison, Department of Chemistry
9/7/06 Columbia University, Department of Chemistry
8/2/06 Gordon Research Conference, Bioorganic Chemistry, University of Oxford, UK
7/25/06 Eli Lilly, Indianapolis, IN
6/2/06 NSF Workshop on Organic Synthesis, Holderness, NH
5/26/06 PS183 5th Grade Science Workshop, MSKCC
5/17/06 University of Minnesota, Chemical Biology Initiative Workshop
4/28/06 Abbott Laboratories, Abbott Park, IL
3/24/06 City University of New York, Hunter College, Department of Chemistry
2/23/06 MSKCC, SKI Scientific Colloquium
- 11/8/05 University of Delaware, Chemistry–Biology Interface Seminar Series
10/21/05 University of Kansas, 11th Annual Chemical Biology Symposium (keynote)
8/24/05 Gordon Research Conference, Combinatorial Chemistry, Andover, NH
4/18/05 The Rockefeller University, Monday Lecture Series
3/28/05 University of Toledo, Department of Chemistry
3/3/05 MSKCC, Translational Research Seminar Series
- 12/08/04 IBC Target-Based Compound Libraries Symposium, San Diego, CA
5/13/04 Université de Montréal, Département de Chimie
3/09/04 City Univ. of New York, Queens College, Dept. of Chemistry and Biochemistry
- 11/15/03 Cornell Institute for Biology Teachers (keynote)

4/15/03 Cornell University, Weill Medical College, Department of Pharmacology
3/20/03 Cornell University, Department of Chemistry and Chemical Biology
3/14/03 City University of New York, Brooklyn College, Department of Biology
12/10/02 New York University, Department of Chemistry