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Tan Lab Publications

75. Activation of N-Formyldipeptide-Masked prodrugs by human peptide deformylase.
Geißen, R.; Yildirim, O.; Köhn, M.; Scheinberg, D. A.; Tan, D. S.* *ACS Chem. Biol.* 2025, 2171-2179.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
74. Chalkophore-mediated respiratory oxidase flexibility controls M. tuberculosis virulence.
Buglino, J. A.; Ozakman, Y.; Hatch, C. E.; Benjamin, A.; Tan, D. S.; Glickman, M. S.* *eLife* 2025, 14,
.
[[Abstract](#) | [PubMed](#) | [PMC](#)]

73. Structural basis for transthiolation intermediates in the ubiquitin pathway.
Kochańczyk, T.; Hann, Z. S.; Lux, M. C.; Delos Reyes, A. M. V.; Ji, C.; Tan, D. S.* ; Lima, C. D.*
Nature 2024, *633*, 216–223.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
72. Design and synthesis of a library of C8-substituted sulfamidoadenosines to probe bacterial permeability.
Yildirim, O.; Barman, D.; Chung, M.; Stone, S.; Geißen, R.; Bobby, M. L.; Sherborne, B. S.; Tan, D. S.* *Bioorg. Med. Chem. Lett.* 2024, *110*, 129844.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
71. Design and semisynthesis of biselectrophile-functionalized ubiquitin probes to investigate transthioesterification reactions.
Delos Reyes, A. M. V. †; Lux, M. C. †; Hann, Z. S. †; Ji, C.; Kochańczyk, T.; DiBello, M.; Lima, C. D.*; Tan, D. S.* *Org. Lett.* 2024, *26*, 4594–4599.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
70. Reaction hijacking inhibition of Plasmodium falciparum asparagine tRNA synthetase.
Xie, S. C. †; Wang, Y. †; Morton, C. J. †; Metcalfe, R. D. †; Dogovski, C.; Pasaje, C. F. A.; Dunn, E.; Luth, M. R.; Kumpornsin, K.; Istvan, E. S.; Park, J. S.; Fairhurst, K. J.; Ketprasit, N.; Yeo, T.; Yildirim, O.; Bhebhe, M. N.; Klug, D. M.; Rutledge, P. J.; Godoy, L. C.; Dey, S.; De Souza, M. L.; Siqueira-Neto, J. L.; Du, Y.; Puhlovich, T.; Amini, M.; Shami, G.; Loesbanluechai, D.; Nie, S.; Williamson, N.; Jana, G. P.; Maity, B. C.; Thomson, P.; Foley, T.; Tan, D. S.; Niles, J. C.; Han, B. W.; Goldberg, D. E.; Burrows, J.; Fidock, D. A.; Lee, M. C. S.; Winzeler, E. A.; Griffin, M. D. W.*; Todd, M. H.*; Tilley, L.* *Nat Commun* 2024, *15*, 937.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
69. Design and synthesis of a library of C2-substituted sulfamidoadenosines to probe bacterial permeability.
Zhao, S.; Maceren, J.; Chung, M.; Stone, S.; Geißen, R.; Bobby, M. L.; Sherborne, B. S.; Tan, D. S.* *Bioorg. Med. Chem. Lett.* 2024, *97*, 129486.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
68. Direct conversion of amino acids to oxetanol bioisosteres via photoredox catalysis.
Delos Reyes, A. M. V.; Nieves Escobar, C. S.; Muñoz, A.; Huffman, M. I.; Tan, D. S.* *Chem Sci.* 2023, *14*, 10524–10531.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
(Highlighted in [Chem Sci.](#))
67. Development of a *p*-hydroxybenzyl-alcohol-linked glutamate prodrug for activation by *Pseudomonas* carboxypeptidase G2.
Lee, J. P.; Corless, B. C.; Gardner, T. J.; Scheinberg, D. A.; Tan, D. S.* *Org. Lett.* 2023, 6295–6299.
[Abstract](#) | [PubMed](#) | [PMC](#)]

66. Host interactions with engineered T-cell micropharmacies.
Bourne, C. M.; Wallisch, P.; Dacek, M. M.; Gardner, T. J.; Pierre, S.; Vogt, K.; Corless, B. C.; Bah, M. A.; Romero-Pichardo, J. E.; Charles, A.; Kurtz, K. G.; Tan, D. S.; Scheinberg, D. A.* *Cancer Immunol. Res.* 2023, 1253–1265.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
65. Chemoenzymatic synthesis of novel cytotoxic epoxyketones using the eponemycin biosynthetic enzyme EpnF.
Corless, B. C.; Geißen, R.; Prescott, N. A.; David, Y.; Scheinberg, D. A.; Tan, D. S.* *ACS. Chem. Biol.* 2023, 1360–1367.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
64. Functional diversity of Gram-negative permeability barriers reflected in antibacterial activities and intracellular accumulation of antibiotics.
Leus, I. V.; Adamiak, J.; Chandar, B.; Bonifay, V.; Zhao, S.; Walker, S. S.; Squadroni, B.; Balibar, C. J.; Kinarivala, N.; Standke, L. C.; Voss, H. U.; Tan, D. S.; Rybenkov, V. V.; Zgurskaya, H. I.* *Antimicrob. Agents Chemother.* 2023, 67, e01377–22.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
63. Diisonitrile lipopeptides mediate resistance to copper starvation in pathogenic mycobacteria.
Buglino, J. A.; Ozakman, Y.; Xu, Y.; Chowdhury, F.; Tan, D. S.; Glickman, M. S.* *mBio* 2022, 13, e02513–22.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
62. Engineering CAR-T cells to activate small-molecule drugs in situ.
Gardner, T. J.; Lee, J. P.; Bourne, C. M.; Wijewarnasuriya, D.; Kinarivala, N.; Kurtz, K. G.; Corless, B. C.; Dacek, M. M.; Chang, A. Y.; Mo, G.; Nguyen, K. M.; Brentjens, R. J.; Tan, D. S.*; Scheinberg, D. A.* *Nat. Chem. Biol.* 2022, 18, 216–225.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
(Highlighted in [Nat. Chem. Biol.](#))
61. Cheminformatic analysis of natural product-based drugs and chemical probes.
Stone, S.; Newman, D. J.; Colletti, S. L.; Tan, D. S.* *Nat. Prod. Rep.* 2022, 39, 20–32.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
60. Defining new chemical space for drug penetration into Gram-negative bacteria.
Zhao, S.; Adamiak, J. W.; Bonifay, V.; Mehla, J.; Zgurskaya, H. I.; Tan, D. S.* *Nat. Chem. Biol.* 2020, 16, 1293–1302.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
59. Gram-scale preparation of the antibiotic lead compound salicyl-AMS, a potent inhibitor of bacterial salicylate adenylation enzymes.
Kinarivala, N.; Standke, L. C.; Guney, T.; Cheng, J.; Naoyoshi, N.; Yasutomi, A.; Tan, D. S.* *Method*

Enzymol. 2020, 638, 69–87.

[[Abstract](#) | [PubMed](#) | [PMC](#)]

58. Total synthesis of the bacterial diisonitrile chalkophore SF2768.

Xu, Y.; Tan, D. S.* *Org. Lett.* 2019, 21, 8731–8735.

[[Abstract](#) | [PubMed](#) | [PMC](#)]

57. Structural basis for adenylation and thioester bond formation in the ubiquitin E1.

Hann, Z. S.; Ji, C.; Olsen, S. K.; Lu, X.; Lux, M. C.; Tan, D. S.*; Lima, C. D.* *Proc. Natl. Acad. Sci. U.S.A.* 2019, 116, 15475–15484.

[[Abstract](#) | [PubMed](#) | [PMC](#)]

56. Small-molecule targeting of MUSASHI RNA-binding activity in acute myeloid leukemia.

Minuesa, G.; Albanese, S. K.; Xie, W.; Kazansky, Y.; Worroll, D.; Chow, A.; Schurer, A.; Park, S. M.; Rotsides, C. Z.; Taggart, J.; Rizzi, A.; Naden, L. N.; Chou, T.; Gourkanti, S.; Cappel, D.; Passarelli, M. C.; Fairchild, L.; Adura, C.; Glickman, J. F.; Schulman, J.; Famulare, C.; Patel, M.; Eibl, J. K.; Ross, G. M.; Bhattacharya, S.; Tan, D. S.; Leslie, C. S.; Beuming, T.; Patel, D. J.; Goldgur, Y.; Chodera, J. D.; Kharas, M. G.* *Nat Commun* 2019, 10, 2691.

[[Abstract](#) | [PubMed](#) | [PMC](#)]

55. Synthesis of bicyclic ethers by a palladium-catalyzed oxidative cyclization-redox relay- π -allyl-Pd cyclization cascade reaction.

Lux, M. C.; Boby, M. L.; Brooks, J. L.; Tan, D. S.* *Chem. Commun.* 2019, 55, 7013–7016.

[[Abstract](#) | [PubMed](#) | [PMC](#)]

54. Targeting adenylate-forming enzymes with designed sulfonyladenosine inhibitors.

Lux, M. C.; Standke, L. C.; Tan, D. S.* *J. Antibiot.* 2019, 72, 325–349.

[[Abstract](#) | [PubMed](#) | [PMC](#)]

53. Structure-based design, synthesis, and biological evaluation of non-acyl sulfamate inhibitors of the adenylate-forming enzyme MenE.

Evans, C. E.[†]; Si, Y.[†]; Matarlo, J. S.; Yin, Y.; French, J. B.; Tonge, P. J.*; Tan, D. S.* *Biochemistry* 2019, 58, 1918–1930.

[[Abstract](#) | [PubMed](#) | [PMC](#)]

52. Kinetic analyses of the siderophore biosynthesis inhibitor salicyl-AMS and analogues as MbtA inhibitors and antimycobacterial agents.

Bythrow, G. V.; Mohandas, P.; Guney, T.; Standke, L. C.; Germain, G. A.; Lu, X.; Ji, C.; Levendosky, K.; Chavadi, S. S.; Tan, D. S.*; Quadri, L. E. N.* *Biochemistry* 2019, 883–847.

[[Abstract](#) | [PubMed](#) | [PMC](#)]

51. Canvass: A crowd-sourced, natural-product screening library for exploring biological space.

Kearney, S. E. *et al.* Verano, A. L.; Tan, D. S.; Rohde, J. M.* *ACS. Cent. Sci.* 2018, 4, 1727–1741.

[[Abstract](#) | [PubMed](#) | [PMC](#)]

50. Synthesis of benzannulated medium-ring lactams via a tandem oxidative dearomatization-ring

expansion reaction.

Guney, T.[†]; Wenderski, T. A.[†]; Boudreau, M. W.; Tan, D. S.* *Chem. Eur. J.* 2018, 24, 13150–13157.

[[Abstract](#) | [PubMed](#) | [PMC](#)]

(Cover article in [Chem. Eur. J.](#))

49. Family-level stereoselective synthesis and biological evaluation of pyrrolomorpholine spiroketal natural product antioxidants.
Verano, A. L.; Tan, D. S.* *Chem. Sci.* 2017, 8, 3687–3693.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
48. Stereocontrolled synthesis of spiroketals: An engine for chemical and biological discovery
Verano, A. L.; Tan, D. S.* *Isr. J. Chem.* 2017, 57, 279–291.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
47. Diastereoselective synthesis of highly substituted tetrahydrofurans by Pd-catalyzed tandem oxidative cyclization-redox relay reactions controlled by intramolecular hydrogen bonding.
Brooks, J. L.; Xu, L.; Wiest, O.; Tan, D. S.* *J. Org. Chem.* 2017, 82, 57–75.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
46. Stereoselective synthesis, docking, and biological evaluation of difluoroindanediol-based MenE inhibitors as antibiotics.
Evans, C. E.; Matarlo, J. S.; Tonge, P. J.*; Tan, D. S.* *Org. Lett.* 2016, 18, 6384–6387.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
45. Design, synthesis, and biological evaluation of α -hydroxyacyl-AMS inhibitors of amino acid adenylation enzymes.
Davis, T. D.[†]; Mohandas, P. [†]; Chiriac, M. I.; Bythrow, G. V.; Quadri, L. E. N.*; Tan, D. S.* *Bioorg. Med. Chem. Lett.* 2016, 21, 5340–5345.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
44. Designed small-molecule inhibitors of the anthranilyl-CoA synthetase PqsA block quinolone biosynthesis in *Pseudomonas aeruginosa*..
Ji, C.; Sharma, I.; Pratihari, I.; Hudson, L.; Maura, D.; Guney, T.; Rahme, L. G.; Pesci, E. C.; Coleman, J. P.; Tan, D. S.* *ACS Chem. Biol.* 2016, 11, 3061–3067.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
43. Mechanism of MenE inhibition by acyl-adenylate analogues and discovery of novel antibacterial agents.
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.* *Biochemistry* 2015, 54, 6514–6524.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
42. Cheminformatic comparison of approved drugs from natural product versus synthetic origins.
Stratton, C. F.; Newman, D. J.; Tan, D. S.* *Bioorg. Med. Chem. Lett.* 2015, 25, 4802–4807.
[[Abstract](#) | [PubMed](#) | [PMC](#)]

41. 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.
Wenderski, T. A.; Stratton, C. F.; Bauer, R. A.; Kopp, F.; Tan, D. S.* *Methods Mol. Biol.* 2015, *1263*, 225–242.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
40. General platform for systematic quantitative evaluation of small-molecule permeability in bacteria.
Davis, T. D.; Gerry, C. J.; Tan, D. S.* *ACS Chem. Biol.* 2014, *9*, 2535–2544.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
(Highlighted in [ACS Chem. Biol.](#))
39. Solvent-dependent divergent functions of Sc(OTf)₃ in stereoselective epoxide-opening spiroketalizations.
Sharma, I.; Wurst, J. M.; Tan, D. S.* *Org. Lett.* 2014, *16*, 2474–2477.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
38. Pharmacokinetic and *in vivo* efficacy studies of the mycobactin biosynthesis inhibitor salicyl-AMS in mice.
Lun, S.; Guo, H.; Adamson, J.; Cisar, J. S.; Davis, T. D.; Sundaramn Chavadi, S.; Warren, J. D.; Quadri, L. E. N.*; Tan, D. S.*; Bishai, W. R.* *Antimicrob. Agents Chemother.* 2013, *57*, 5138–5140.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
37. Diversifying complexity.
Sharma, I.; Tan, D. S.* *Nat. Chem.* 2013, *5*, 157–158.
[[Abstract](#) | [PubMed](#)]
36. Biomimetic diversity-oriented synthesis of benzannulated medium rings via ring expansion.
Bauer, R. A.; Wenderski, T. A.; Tan, D. S.* *Nat. Chem. Biol.* 2013, *9*, 21–29.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
35. Stereoselective synthesis of acortatarins A and B.
Wurst, J. M.; Verano, A. L.; Tan, D. S.* *Org. Lett.* 2012, *14*, 4442–4445.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
34. A diversity-oriented synthesis approach to macrocycles via oxidative ring expansion.
Kopp, F.; Stratton, C. F.; Akella, L. B.; Tan, D. S.* *Nat. Chem. Biol.* 2012, *8*, 358–365.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
(Highlighted in [SciBX](#))
33. Stable analogues of OSB-AMP: Potent inhibitors of MenE, the *o*-succinylbenzoate-CoA synthetase from bacterial menaquinone biosynthesis.
Lu, X.; Zhou, R.; Sharma, I.; Li, X.; Kumar, G.; Swaminathan, S.; Tonge, P. J.*; Tan, D. S.* *ChemBioChem* 2012, *13*, 129–136.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
32. Hydrogen-bonding catalysis and inhibition by simple solvents in the stereoselective kinetic epoxide-

- opening spirocyclization of glycal epoxides to form spiroketals.
Wurst, J. M.; Liu, G.; Tan, D. S.* *J. Am. Chem. Soc.* 2011, *133*, 7916–7925.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
31. Solid-phase synthesis and chemical space analysis of a 190-membered alkaloid/terpenoid-like library.
Moura-Letts, G.; DiBlasi, C. M.; Bauer, R. A.; Tan, D. S.* *Proc. Natl. Acad. Sci. USA* 2011, *108*, 6745–6750.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
30. The *tert*-butylsulfonamide lynchpin in transition-metal-mediated multiscaffold library synthesis.
Bauer, R. A.; DiBlasi, C. M.; Tan, D. S.* *Org. Lett.* 2010, *12*, 2084–2087.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
29. Expanding the range of 'druggable' targets with natural product-based libraries: An academic perspective.
Bauer, R. A.; Wurst, J. M.; Tan, D. S.* *Curr. Opin. Chem. Biol.* 2010, *14*, 308–314.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
28. Active site remodelling accompanies thioester bond formation in the SUMO E1.
Olsen, S. K.; Capili, A. D.; Lu, X.; Tan, D. S.*; Lima, C. D.* *Nature* 2010, *463*, 906–912.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
(Highlighted in [Nature](#) , [Chem. Eng. News](#) , [Nat. Rev. Mol. Cell Biol.](#) , [Nat. Chem. Biol.](#) , [Structure](#) , [ACS Chem. Biol.](#) , and [Faculty of 1000 Biology](#))
27. Designed semisynthetic protein inhibitors of Ub/Ubl E1 activating enzymes.
Lu, X.; Olsen, S. K.; Capili, A. D.; Cisar, J. S.; Lima, C. D.*; Tan, D. S.* *J. Am. Chem. Soc.* 2010, *132*, 1748–1749.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
(Highlighted in [Chem. Eng. News](#) , [Nat. Rev. Mol. Cell Biol.](#) , [ACS Chem. Biol.](#) , and [Faculty of 1000 Biology](#))
26. Stereoselective synthesis of benzannulated spiroketals: Influence of the aromatic ring on reactivity and conformation.
Liu, G.; Wurst, J. M.; Tan, D. S.* *Org. Lett.* 2009, *11*, 3670–3673.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
25. Mechanism-based inhibitors of MenE, an acyl-CoA synthetase involved in bacterial menaquinone biosynthesis.
Lu, X.; Zhang, H.; Tonge, P. J.*; Tan, D. S.* *Bioorg. Med. Chem. Lett.* 2008, *18*, 5963–5966.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
24. Small molecule inhibition of microbial natural product biosynthesis – An emerging antibiotic strategy.
Cisar, J. S.; Tan, D. S.* *Chem. Soc. Rev.* 2008, *37*, 1320–1329.
[[Abstract](#) | [PubMed](#) | [PMC](#)]

23. Mycobacterial phenolic glycolipid virulence factor biosynthesis: Mechanism and small-molecule inhibition of polyketide chain initiation.
Ferreras, J. A.; Stirrett, K. L.; Lu, X.; Ryu, J.-S.; Soll, C. E.; Tan, D. S.; Quadri, L. E. N.* *Chem. Biol.* 2008, *15*, 51–61.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
(Highlighted in [Chem. Biol.](#))
22. Exploiting ligand conformation in selective inhibition of non-ribosomal peptide synthetase amino acid adenylation with designed macrocyclic small molecules.
Cisar, J. S.; Ferreras, J. A.; Soni, R. K.; Quadri, L. E. N.*; Tan, D. S.* *J. Am. Chem. Soc.* 2007, *129*, 7752–7753.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
(Highlighted in [Faculty of 1000 Biology](#))
21. A unified synthetic approach to polyketides having both skeletal and stereochemical diversity.
Shang, S.; Iwadare, H.; Macks, D. E.; Ambrosini, L. M.; Tan, D. S.* *Org. Lett.* 2007, *9*, 1895–1898.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
20. Stereocontrolled synthesis of spiroketals via Ti(O*i*-Pr)₄-mediated kinetic spirocyclization of glycol epoxides with retention of configuration.
Moilanen, S. B.; Potuzak, J. S.; Tan, D. S.* *J. Am. Chem. Soc.* 2006, *128*, 1792–1793.
[[Abstract](#) | [PubMed](#) | [PMC](#)]
(Highlighted in [Nature](#))
19. Stereocontrolled synthesis of spiroketals via a remarkable methanol-induced kinetic spirocyclization reaction.
Potuzak, J. S.; Moilanen, S. B.; Tan, D. S.* *J. Am. Chem. Soc.* 2005, *127*, 13796–13797.
[[Abstract](#) | [PubMed](#)]
18. Diversity-oriented synthesis: Exploring the intersections between chemistry and biology.
Tan, D. S.* *Nat. Chem. Biol.* 2005, *1*, 74–84.
[[Abstract](#) | [PubMed](#)]
17. Small-molecule inhibition of siderophore biosynthesis in *Mycobacterium tuberculosis* and *Yersinia pestis*.
Ferreras, J. A.; Ryu, J.-S.; Di Lello, F.; Tan, D. S.*; Quadri, L. E. N.* *Nat. Chem. Biol.* 2005, *1*, 29–32.
[[Abstract](#) | [PubMed](#)]
(Highlighted in [Nature](#) , [Nat. Chem. Biol.](#) , [Chem. Eng. News.](#) , and [Mercosur Económico](#))
16. Advancing chemistry and biology through diversity-oriented synthesis of natural product-like libraries.
Shang, S.; Tan, D. S.* *Curr. Opin. Chem. Biol.* 2005, *9*, 248–258.
[[Abstract](#) | [PubMed](#)]
15. An acid-stable *tert*-butyldiarylsilyl (TBDAS) linker for solid-phase organic synthesis.

- DiBlasi, C. M.; Macks, D. E.; Tan, D. S.* *Org. Lett.* 2005, 7, 1777–1780.
[[Abstract](#) | [PubMed](#)]
(Highlighted in [Lett. Org. Chem.](#) [[PDF](#)])
14. Enantioselective synthesis of *erythro*-4-deoxyglycals as scaffolds for target- and diversity-oriented synthesis: New insights into glycal reactivity.
Moilanen, S. B.; Tan, D. S.* *Org. Biomol. Chem.* 2005, 3, 798–803.
[[Abstract](#) | [PubMed](#)]
13. Current progress in natural product-like libraries for discovery screening.
Tan, D. S.* *Comb. Chem. High-Throughput Screen.* 2004, 7, 631–643.
[[Abstract](#) | [PubMed](#)]
12. Synthesis of *C*₁-alkyl and *C*₁-acylglycals from glycals using a *B*-alkyl Suzuki–Miyaura cross coupling approach.
Potuzak, J. S.; Tan, D. S.* *Tetrahedron Lett.* 2004, 45, 1797–1801.
[[Abstract](#)]
11. Discovery and applications of small molecule probes for studying biological processes.
Potuzak, J. S.; Moilanen, S. B.; Tan, D. S.* *Biotechnol. Genet. Eng. Rev.* 2004, 21, 11–78.
[[PubMed](#)]
10. Sweet surrender to chemical genetics.
Tan, D. S.* *Nat. Biotechnol.* 2002, 20, 561–563.
[[Abstract](#) | [PubMed](#)]
-

Postdoctoral Publications

9. Total synthesis of guanacastepene A: A route to enantiomeric control.
Mandal, M.; Yun, H.; Dudley, G. B.; Lin, S.; Tan, D. S.; Danishefsky, S. J.* *J. Org. Chem.* 2005, 70, 10619–10637.
[[Abstract](#) | [PubMed](#)]
(Featured on the Cover)
8. Synthesis of the functionalized tricyclic skeleton of guanacastepene A: A tandem epoxide-opening β -elimination/Knoevenagel cyclization.
Tan, D. S.; Dudley, G. B.; Danishefsky, S. J.* *Angew. Chem., Int. Ed.* 2002, 41, 2185–2188.
[[Abstract](#) | [PubMed](#)]
7. A stereoselective route to guanacastepene A through a surprising epoxidation.
Lin, S.; Dudley, G. B.; Tan, D. S.; Danishefsky, S. J.* *Angew. Chem., Int. Ed.* 2002, 41, 2188–2191.
[[Abstract](#) | [PubMed](#)]
6. Remarkable stereoselectivity in the alkylation of a hydroazulenone: Progress toward the total synthesis of guanacastepene.

Dudley, G. B.; Tan, D. S.; Kim, G.; Tanski, J. M.; Danishefsky, S. J.* *Tetrahedron Lett.* 2001, 42, 6789–6791.

[[Abstract](#)]

Graduate Publications

5. A mercury-catalyzed transesterification cyclization leading to fused cyclic polyethers.
Tan, D. S.; Schreiber, S. L.* *Tetrahedron Lett.* 2000, 41, 9509–9513.
[[Abstract](#)]
 4. Ligand discovery using encoded combinatorial libraries.
Tan, D. S.*; Burbaum, J. J.* *Curr. Opin. Drug Discovery Dev.* 2000, 3, 439–453.
[[PubMed](#)]
 3. Synthesis and preliminary evaluation of a library of polycyclic small molecules for use in chemical genetic assays.
Tan, D. S.; Foley, M. A.; Stockwell, B. R.; Shair, M. D.; Schreiber, S. L.* *J. Am. Chem. Soc.* 1999, 121, 9073–9087.
[[Abstract](#)]
 2. Stereoselective synthesis of over two million compounds having structural features both reminiscent of natural products and compatible with miniaturized cell-based assays.
Tan, D. S.; Foley, M. A.; Shair, M. D.; Schreiber, S. L.* *J. Am. Chem. Soc.* 1998, 120, 8565–8566.
[[Abstract](#)]
(Highlighted in [Science](#) , *Chem. Eng. News.*)
-

Undergraduate Publication

1. Enzymatic resolution coupled with substrate racemization using a thioester substrate.
Tan, D. S.; Günter, M. M.; Drueckhammer, D. G.* *J. Am. Chem. Soc.* 1995, 117, 9093–9094.
[[Abstract](#)]

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