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- wwwwww. "Chemical and Computer-Assisted Study of the Agonist Pharmacophore of the Benzodiazepine Receptor," W. Zhang, P. Skolnick and J.M. Cook, presented at the 207th ACS National Meeting, San Diego, CA, March 13-17, 1994, MEDI-188.
- xxxxxx. "Stereoselective Pictet-Spengler Reactions: Application to the Synthesis of Optically Active Tetrahydro  $\beta$ -Carbolines," M.S. Reddy and J.M. Cook, presented at the 207th ACS National Meeting, San Diego, CA, March 13-17, 1994, ORGN-312.
- yyyyyy. "General Approach for the Synthesis of Macroline-Sarpagine Alkaloids: Enantiospecific Synthesis of (+)Macroline and a Partial Synthesis of (+)Villalstonine," Y. Bi, L. Hamaker and J.M. Cook, presented at the 207th ACS National Meeting, San Diego, CA, March 13-17, 1994, ORGN-444.
- zzzzzz. "Effect of 3-Substituted  $\beta$ -Carbolines on Pentobarbital (PB) Induced Sleep," G.J. Yutrzenka, C. LeBeaux, K. Campbell-Prue and J.M. Cook, XII International Congress of Pharmacology, Montreal, Quebec, July 24-29, 1994.
- aaaaaaa. "Mode of Action of  $\beta$ -Carboline Convulsants on the Insect Nervous System and Their Potential as Insecticides," J.R. Bloomquist, A.J. LaLoggia, M.S. Reddy and J.M. Cook, presented in the summer of 1994.
- bbbbbbb. "Chemical and Computer-Assisted Development of the Inclusive Pharmacophore for the Benzodiazepine Receptor," James Cook, presented at the 28th Middle Atlantic Regional Meeting of the ACS, University of Maryland, Baltimore County, Baltimore, MD, May 25-27, 1994, ABS 112.
- ccccccc. "Synthesis and SAR Study of Selective High Affinity Ligands Which Bind to Benzodiazepine Receptor Subtypes," R. Liu, P. Zhang, P. Skolnick and J.M. Cook, presented at the Joint Great Lakes, Central Regional ACS Meeting, University of Michigan, Ann Arbor, MI, June 1-3, 1994, ABS 314.
- ddddddd. "Synthesis and SAR Study of Novel Imidazobenzodiazepines Which Bind to Diazepam- Insensitive Benzodiazepine Receptors," P. Zhang, R. Liu, P. Skolnick and J.M. Cook, presented at the Joint Great Lakes, Central Regional ACS Meeting, University of Michigan, Ann Arbor, MI, June 1-3, 1994, ABS 315.
- eeeeeee. "Synthesis of 3,4,6-Trisubstituted  $\beta$ -Carbolines. Probing the Dimensions of the Lipophilic Pockets in the BzR Site(s)," E. Cox and J.M. Cook, presented at the Joint Great Lakes, Central Regional ACS Meeting, University of Michigan, Ann Arbor, MI, June 1-3, 1994, ABS 316.
- fffffff. "Evaluation of Competitive and Non-competitive Inhibitors of Indoleamine

- 2,3-Dioxygenase to Combat Aberrant Tryptophan Metabolism in Immunological Disease States," A.C. Peterson, E. Cox, J.M. Cook, R.A. Arend and R.R. Brown, presented at the Joint Great Lakes, Central Regional ACS Meeting, University of Michigan, Ann Arbor, MI, June 1-3, 1994, ABS 319.
- gggggggg. "A Chemical and Computer Assisted Study of the Inclusive Pharmacophore of the Benzodiazepine Receptor," W. Zhang and J.M. Cook, presented at the Joint Great Lakes, Central Regional ACS Meeting, University of Michigan, Ann Arbor, MI, June 1-3, 1994, ABS 320.
- hhhhhhhh. "Enantiospecific Synthesis of Macrolin/Sarpagine/Ajmaline-Related Alkaloids *via* the Pictet-Spengler Reaction," Y. Bi, L. Hamaker and J.M. Cook, presented at the Joint Great Lakes, Central Regional ACS Meeting, University of Michigan, Ann Arbor, MI, June 1-3, 1994, ABS 358.
- iiiiiiii. "Enantiospecific Approach Towards the Synthesis of the Macrolin-Related Alkaloids Alstophylline and Macralstonine," L. Hamaker, M.S. Allen and J.M. Cook, presented at the Joint Great Lakes, Central Regional ACS Meeting, University of Michigan, Ann Arbor, MI, June 1-3, 1994, ABS 381.
- jjjjjjjj. "The Aza-Wittig Approach to the Enantiospecific Synthesis of Norsuaveoline, Macrophylline, and the Related Desmethylmacrophylline," F. Yu and J.M. Cook, presented at the Joint Great Lakes, Central Regional ACS Meeting, University of Michigan, Ann Arbor, MI, June 1-3, 1994, ABS 396.
- kkkkkkkk. "Studies Directed Toward the Enantiospecific Synthesis of *Alstonia*, *Gardneria*, and *Voacanga* Oxindole Alkaloids," A.C. Peterson and J.M. Cook, presented at the Joint Great Lakes, Central Regional ACS Meeting, University of Michigan, Ann Arbor, MI, June 1-3, 1994, ABS 399.
- llllllll. "Synthetic Approach to Angular Tetraquinanes Related to  $14\pi$  Cyclo pentapentalenes," M.S. Reddy and J.M. Cook, presented at the Joint Great Lakes, Central Regional ACS Meeting, University of Michigan, Ann Arbor, MI, June 1-3, 1994, ABS 402.
- mmmmmmmm. "Stereochemical Control of the Pictet-Spengler Reaction," K. Czwierinski, K. Koehler and J.M. Cook, presented at the Joint Great Lakes, Central Regional ACS Meeting, University of Michigan, Ann Arbor, MI, June 1-3, 1994, ABS 403.
- nnnnnnnn. "The Total Synthesis of Roeharmine, (+)Norrocarboline, and (-)-1,2,3,4- Tetrahydroroeharmine," M. Sreenivasa Reddy and J.M. Cook, presented at the Joint Great Lakes, Central Regional ACS Meeting, University of Michigan, Ann Arbor, MI, June 1-3, 1994, ABS 428.
- oooooooo. "Search for  $\alpha 5$  Benzodiazeping Receptor Subtype Specific Ligands Based on the Structure of Sarmazenil (Ro 15-4513)," R.Y. Liu, N.P. Gillard, Z-Q. Gu, K. Rice, R. McKernan and J.M. Cook. Presented at the 56th Annual Scientific Meeting of the College on Problems of Drug Dependence, The Breakers, West Palm Beach, June 18-23, 1994, Oral Communications VI.
- pppppppp. "Chemical and Computer-Assisted Study of the Inclusive Pharmacophore/Receptor Model of the Benzodiazepine Receptor Binding Site," W. Zhang, R. Liu, Q. Huang, P. Zhang, K.F. Koehler and J.M. Cook, presented at the 208th National ACS Meeting, Washington, D.C., August 21-25, 1994, MED-191.
- qqqqqqqq. "Use of  $\beta$ -Carbolines to Further Differentiate the Agonist/Inverse Agonist Pharmacophore at the BzR," E.D. Cox and J.M. Cook, presented at the 208th National ACS Meeting, Washington, D.C., August 21-25, 1994, MED-192.
- rrrrrrrr. "Synthesis and SAR Study of Novel Imidazobenzodiazepines at Diazepam- Insensitive and Diazepam-Sensitive Benzodiazepine Receptors," P. Zhang, W. Zhang, R. Liu and J.M. Cook, presented at the 208th National ACS Meeting, Washington, D.C., August 21-25, 1994, MED-195.
- ssssssss. "Total Synthesis of Roemeria Alkaloids. A Study of the Racemization in (-)-1,2,3,4- Tetrahydroroeharmine," M.S. Reddy and J.M. Cook, presented at the 208th National ACS Meeting, Washington, D.C., August 21-25, 1994, ORG 259.
- tttttttt. "Enantiospecific Approach Toward the Synthesis of the *Alstonia* Alkaloid Alstophylline and the Bisindole Macralstonine," L.K. Hamaker and J.M. Cook, presented at the 208th National ACS Meeting, Washington, D.C., August 21-25, 1994, ORG 269.

- uuuuuuuu. "Studies Toward the Enantiospecific Synthesis of Suaveoline Alkaloids. Aza-Wittig Approach to the Construction of the Pyridine E-Ring Systems," F. Yu and J.M. Cook, presented at the 208th National ACS Meeting, Washington, D.C., August 21-25, 1994, ORG 270.
- vvvvvvvv. "Studies Directed Toward the Diastereoselective Synthesis of *Alstonia* Oxindole Alkaloids," A.C. Peterson and J.M. Cook, presented at the 208th National ACS Meeting, Washington, D.C., August 21-25, 1994, ORG 271.
- wwwwwww. "Recent Advances in GABA<sub>A</sub>/Benzodiazepine Receptor Subtype Selectivity," J.M. Cook, 27th Annual Mardi Gras Symposium on Chemistry in Drugs of Abuse: Recent Advances in Chemistry and Pharmacology, University of New Orleans, February 24, 1995.
- xxxxxxx. "Synthesis of Ligands Selective for the  $\alpha 5$  Benzodiazepine Receptor (BzR) Subtype," R.Y. Liu, P.W. Zhang, N.P. Gillard, R. McKernan and J.M. Cook, presented at the 209th National ACS Meeting, Anaheim, CA, April 2-6, 1995, MED 1.
- yyyyyyyy. "Evidence for Cleavage Across the C(1)N(2) Bond in the Epimerization of 1,2,3,4-Tetrahydro- $\beta$ -Carbolines," E.D. Cox, L.K. Hamaker, M.S. Reddy, P. Zhang, K. Czerwinski and J.M. Cook, presented at the 209th National ACS Meeting, Anaheim, CA, April 2-6, 1995. ORG 356.
- zzzzzzzz. "Stereospecific Approach to 19,20-Dehydro-10-methoxytalcarpine. The Enantio-specific Synthesis of 5-Methoxy-D-(+)-or L(-)-tryptophan," P.W. Zhang and J.M. Cook, presented at the 28th Great Lakes Regional Meeting of the ACS, La Crosse, WI, June 5-8, 1995, #142.
- aaaaaaaa. "A Chemical and Computer Assisted Study of the Inclusive Pharmacophore of the Benzodiazepine Receptor," Q. Huang, W. Zhang and J.M. Cook, presented at the 28th Great Lakes Regional Meeting of the ACS, La Crosse, WI, June 5-8, 1995, #169.
- bbbbbbbbb. "Scission of the C(1)-N(2) Bond in the Epimerization of 1,2,3,4-Tetrahydro  $\beta$ -Carbolines," E.D. Cox, M. S. Reddy and J.M. Cook, presented at the 28th Great Lakes Regional Meeting of the ACS, La Crosse, WI, June 5-8, 1995, #183.
- cccccccc. "Synthesis and SAR Study of Novel Imidazobenzodiazepines Which Bind to 'Diazepam-Insensitive' GABA<sub>A</sub> Receptors," P. Zhang, R. Liu, B. Harris, P. Skolnick and J.M. Cook, presented at the 28th Great Lakes Regional Meeting of the ACS, La Crosse, WI, June 5-8, 1995, #199.
- dddddddd. "Synthesis and Study of Ligands Selective for the  $\alpha 5\beta 2\gamma 2$  BzR Subtype," R.Y. Liu, P.W. Zhang, N.P. Gillard, R. McKernan and J.M. Cook, presented at the 28th Great Lakes Regional Meeting of the ACS, La Crosse, WI, June 5-8, 1995, #200.
- eeeeeeee. "Studies Directed Toward the Rapid Construction of Angular Tetraquinanes Related to 14 $\pi$  Cyclopentapentalenes," S. Van Ornum, M.S. Reddy and J.M. Cook, presented at the 28th Great Lakes Regional Meeting of the ACS, La Crosse, WI, June 5-8, 1995, #210.
- fffffffff. "Pharmacophore Mapping: Synthesis of Ligands Selective for the  $\alpha 5\beta 2\gamma 2$  BzR Site," R.Y. Liu, P.W. Zhang, Q. Huang, N.P. Gillard, R. McKernan and J.M. Cook, presented at the 57th Annual Scientific Meeting of the College on Problems of Drug Dependence, Scottsdale, Arizona, June 10-15, 1995, P.S. II #35.
- gggggggg. "Synthesis of Novel Imidazobenzodiazepines: The Selective Ligands for the GABA<sub>A</sub> Receptor Subtype," P. Zhang, R. Liu, P. Skolnick and J.M. Cook, presented at the 210th ACS National Meeting, Chicago, Illinois, August 20-24, 1995, MEDI-0148.
- hhhhhhhhh. "Chemical and Computer-Assisted Study of the Inclusive Pharmacophore of the Benzodiazepine Receptor," Q. Huang, W. Zhang and J.M. Cook, presented at the 210th ACS National Meeting, Chicago, Illinois, August 20-24, 1995, MEDI -159.
- iiiiiii. "Synthesis of Ligands Selective for the  $\alpha$ -5 Benzodiazepine Receptor (BzR) Subtype," R.Y. Liu, P.W. Zhang, N.P. Gillard, R. McKernan and J.M. Cook, presented at the 210th ACS National Meeting, Chicago, Illinois, August 20-24, 1995, MEDI-160.
- jjjjjjjj. "Enantiospecific Synthesis of Macroline/Sarpagine/Ajmaline-related Indole Alkaloids via the Pictet-Spengler Reaction," J. Li, L. Hamaker, K. Czerwinski, P. Zhang and J.M. Cook, presented

- at the 210th ACS National Meeting, Chicago, Illinois, August 20-24, 1995, ORGN-212.
- kkkkkkkkk. "Studies Toward the Synthesis of the Antiamoebic Bisindole Alkaloid (-)-Macrocarpamine: The Partial Synthesis of (-)-Anhydromacrosalpine-methine," T. Gan and J.M. Cook, presented at the 210th ACS National Meeting, Chicago, Illinois, August 20-24, 1995, ORGN-213.
- lllllllll. "Stereospecific Approach to 19,20-Dehydro-10-methoxytalcarpamine: The Enantio-specific Synthesis of 5-Methoxy-D(+)- or L(-)-Tryptophan," P. Zhang, T. Gan and J.M. Cook, presented at the 210th ACS National Meeting, Chicago, Illinois, August 20-24, 1995, ORGN-214.
- mmmmmmmmm. "Studies Directed Toward the Diastereoselective Synthesis of *Alstonia* Oxindole Alkaloids," A.C. Peterson, P. Yu and J.M. Cook, presented at the 210th ACS National Meeting, Chicago, Illinois, August 20-24, 1995, ORGN-215.
- nnnnnnnnn. "Scission of the C(1)-N(2) Bond in the Epimerization of 1,2,3,4-Tetrahydro- $\beta$ -Carbolines," E.D. Cox, L.K. Hamaker, M.S. Reddy, P. Zhang, K.M. Czerwinski and J.M. Cook, presented at the 210th ACS National Meeting, Chicago, Illinois, August 20-24, 1995, ORGN-216.
- ooooooooo. "Studies Directed Toward the Construction of Angular Tetraquinanes Related to  $14\pi$  Cyclopentapentalenes," S.G. van Ornum, M.S. Reddy and J.M. Cook, presented at the 210th ACS National Meeting, Chicago, Illinois, August 20-24, 1995, ORGN-217.
- ppppppppp. "Studies Directed Toward Enantiospecific Synthesis of the Antiamoebic Alkaloid Macrocarpanine and 10-Methoxymacrocarpamine," J.M. Cook and T. Gan, presented at the Sixteenth Mona Symposium on Natural Products and Medicinal Chemistry, Mona, Jamaica, January 8-12, 1996.
- qqqqqqqqq. "Partial Synthesis of the Antiamoebic Alkaloid Macrocarpamine *via* the Asymmetric Pictet-Spengler Reaction," J.M. Cook and T. Gan, presented at the 211th ACS National Meeting, New Orleans, March 23-28, 1996, ORGN-116.
- rrrrrrrrr. "The Partial Synthesis of the Antiamoebic Alkaloid Macrocarpamine *via* The Asymmetric Pictet-Spengler Reaction," T. Gan and J.M. Cook presented at the 29th Great Lakes Regional ACS Meeting, Illinois State University, Normal, IL, May 19-22, 1996, Abstract No. 130.
- sssssssss. "Studies Directed Toward the Construction of Angular Tetraquinanes Related to  $14\pi$  Cyclopentapentalenes," S. van Ornum, M.S. Reddy and J.M. Cook, presented at the 29th Great Lakes Regional ACS Meeting, Illinois State University, IL, May 19-22, 1996, Abstract No. 251.
- ttttttttt. "Synthesis of Ligands Selective for the  $\alpha 5$  Benzodiazepine Receptor (BzR) Subtype," R. Liu, P.W. Zhang, N.P. Gillard, R. McKernan and J.M. Cook, presented at the 29th Great Lakes Regional ACS Meeting, Illinois State University, Normal, IL., May 19-22, 1996, Abstract No. 255.
- uuuuuuuuu. "Enantiospecific Synthesis of Macroline/Sarpagine/Ajmaline-Related Indole Alkaloids *via* The Pictet-Spengler Reaction," J. Li, L. Hamaker, K. Czerwinski, P. Zhang and J.M. Cook, presented at the 29th Great Lakes Regional ACS Meeting, Illinois State University, Normal, IL, May 19-22, 1996, Abstract No. 256.
- vvvvvvvvv. "Scission of The C(1)-N(2) Bond in the Epimerization of 1,2,3,4-Tetrahydro  $\beta$ -Carbolines," E. Cox, L.K. Hamaker, M.S. Reddy, P. Zhang, K. Czerwinski and J.M. Cook, presented at the 29th Great Lakes Regional ACS Meeting, Illinois State University, Normal, IL, May 19-22, 1996, Abstract No. 257.
- wwwwwwwww. "General Approach to The Diastereoselective Synthesis of *Alstonia* Oxindole Alkaloids," P. Yu, A. Peterson and J.M. Cook, presented at the 29th Great Lakes Regional ACS Meeting, Illinois State University, Normal, IL, May 19-22, 1996, Abstract No. 258.
- xxxxxxxxx. "Studies of the Pharmacophore-Receptor Models for Benzodiazepine Receptor Subtypes: Binding Affinities of Substituted  $\beta$ -Carbolines for  $\alpha\beta\gamma 2$ (X=1,2,3,5 or 6) Subtypes and a Comparative Molecular Field Analysis," Q. Huang, E.D. Cox, T. Gan, D.W. Bennett and J.M. Cook, presented at the 212th ACS National Meeting, Orlando, Florida, August, 25-29, 1996, MEDI-0157.



- yyyyyyyyy. "Partial Synthesis of The Antiamoebic Alkaloid Macrocarpamine via the Asymmetric Pictet-Spengler Reaction," T. Gan and J.M. Cook, presented at the 212th ACS National Meeting, Orlando, Florida, August 25-29, 1996, ORGN-0042.
- zzzzzzzzz. "The *cis* the *trans* Epimerization 1,2,3,4-Tetrahydro  $\beta$ -carbolines Employed in the Total Synthesis of Indole Alkaloids: Further Evidence for Cleavage Across the C(1) - N(2) Bond," E. Cox, J. Li, P. Yu, and J.M. Cook, presented at the 212th ACS National Meeting, Orlando, Florida, August, 25-29, 1996, ORGN-0044.
- aaaaaaaaa. "Studies Directed Toward the Construction of Angular Tetraquinanes Related to 14 $\pi$ -Cyclopentapentalenes," S. Van Ornum, M. Reddy and J.M. Cook, presented at the 212th ACS National Meeting, Orlando, Florida, August 25-29, 1996, ORGN-0068.
- bbbbbbbbbb. "Generation of Four Five-membered Rings in a One-pot process: Studies Toward the Synthesis of Dicyclopenta[a,e]pentalene via the Tandem Pauson-Khand Reaction," S.G. Van Ornum, M. S. Reddy, and J.M. Cook, presented at the 213th ACS National Meeting, San Francisco, CA, April 13-17, 1997, ORGN-0498.
- cccccccc. "Enantiospecific Total Synthesis of Tryprostatin A," T. Gan and J.M. Cook, presented at the 213th ACS National Meeting, San Francisco, CA, April 13-17, 1997, ORGN-0595.
- dddddddddd. "Enantiospecific Total Synthesis of (+)-Ajmaline and Alkaloid G via the Asymmetric Pictet-Spengler Reaction," J. Li, and J.M. Cook, presented at the 213th ACS National Meeting, San Francisco, CA, April 13-17, 1997, ORGN-0455.
- eeeeeeee. "Evidence for the Conservation of Conformational Topography at Five Major GABA<sub>A</sub>/Benzodiazepine Receptor Subsites: Potent Affinities of the S-Enantiomers of Framework-constrained 4,5-Substituted Pyrroloimidazobenzodiazepines," Q. Huang, R. Liu, J.M. Cook and R.M. McKernan, presented at the 213th ACS National Meeting, San Francisco, CA, April 13-17, 1997, MEDI-0175.
- fffffffff. "A Study of Pharmacophore/Receptor Models for Benzodiazepine Receptor Subtypes and SAR Study via a Ligand-mapping Approach," Q. Huang, E.D. Cox, T. Gan, X. He, C. Ma, and J.M. Cook, presented at the 213th ACS National Meeting, San Francisco, CA, April 13-17, 1997, MEDI-0040.
- ggggggggg. "Synthesis of Polyquinanes via the Tandem Pauson-Khand Reaction. Studies Directed Toward the Preparation of Dicyclopenta[a,d]pentalene and Dicyclopenta-[a,e]pentalene," S.G. Van Ornum, and J.M. Cook, presented at the 30th Great Lakes Regional ACS Meeting, Loyola University, Chicago, IL., May 28-30, 1997, Org 97.
- hhhhhhhhh. "Enantiospecific Total Synthesis of Tryprostatin A," Tong Gan and James M. Cook, presented at the 30th Great Lakes Regional ACS Meeting, Loyola University, Chicago, IL., May 28-30, 1997, Org 132.
- iiiiiiiiii. "Conservation of Conformational Topography at Five GABA<sub>A</sub>/Benzodiazepine Receptor Subtypes," Xiaohui He, Qi Huang, Tong Gan, and James M. Cook, presented at the 30th Great Lakes Regional ACS Meeting, Loyola University, Chicago, IL., May 28-30, 1997, Org 203.
- jjjjjjjjj. "Search for New Antianxiety Agents: Subtype Selectivity at  $\alpha 1\beta 3\gamma 2$  and  $\alpha 5\beta 3\gamma 2$  Receptor Subtypes," Chunrong Ma, E.D. Cox, R. McKernan and J.M. Cook, presented at the 30th Great Lakes Regional ACS Meeting, Loyola University, Chicago, IL., May 28-30, 1997, Org 204.
- kkkkkkkkk. "General Approach to the Enantiospecific Synthesis of *Alstonia* Oxindole Alkaloids," Peng Yu, F. Yu, T. Wang, A.C. Peterson and J.M. Cook, presented at the 30th Great Lakes Regional ACS Meeting, Loyola University, Chicago, IL., May 28-30, 1997, Org 216.
- lllllllll. "Enantiospecific Total Synthesis of (+)-Ajmaline *via* the Asymmetric Pictet-Spengler Reaction," Jin Li and J.M. Cook, presented at the 30th Great Lakes Regional ACS Meeting, Loyola University, Chicago, IL., May 28-30, 1997, Org 217.
- mmmmmmmmm. "Approach to the Enantiospecific Total Synthesis of Quebrachidine and Vincamajine," Tao Wang, P. Yu, J. Li and J.M. Cook, presented at the 30th Great Lakes Regional

ACS Meeting, Loyola University, Chicago, IL., May 28-30, 1997, Org 218.

nnnnnnnnnn. "Approach to Sarpagine Indole Alkaloids. Stereospecific Synthesis of (6S, 10S)-2-Methoxy-9-OXO-12-benzyl-6,7,8,9,10,11-hexahydro-6,10-imino-5H-cyclooct [b]indole via the Asymmetric Pictet-Spengler Reaction," S. Zhao, Q. Huang, R. Liu, P. Zhang and J.M. Cook, presented at the 30th Great Lakes Regional ACS Meeting, Loyola University, Chicago, IL., May 28-30, 1997, Org 219.

oooooooooo. "Generation of Four Five-Membered Rings in a One Pot Process. Studies Directed Toward the Synthesis of Dicyclopenta[a,e]pentalene via the Tandem Pauson-Khand Reaction," S.G. Van Ornum and J.M. Cook, presented at the 30th Great Lakes Regional ACS Meeting, Loyola University, Chicago, IL., May 28-30, 1997, Org 231.

pppppppppp. "Conservation of Conformational Topography at Five GABA<sub>A</sub>/Benzodiazepine Receptor Subtypes," Q. Huang, X. He, T. Gan and J.M. Cook, presented at the 59th Annual Scientific Meeting of the College on Problems of Drug Dependence, Nashville, TN, June 14-19, 1997, Oral Communications III.

qqqqqqqqqq. "Pharmacophore - receptor Models for Five Major Benzodiazepine Receptor Subtypes," J.M. Cook, Q. Huang, E.D. Cox R. Liu, T. Gan, X. He and C. Ma, presented at the 214th ACS National Meeting, Las Vegas, Nevada, September 6-11, 1997, MEDI-124.

rrrrrrrrrr. "Enantiospecific Total Synthesis of (+)-Ajmaline," J. Li and J.M. Cook, presented at the 214th ACS National Meeting, Las Vegas, Nevada, September 6-11, 1997, ORGN-190.

ssssssssss. "Diastereospecific Synthesis of Ketooxindoles: Potential Intermediates for the Synthesis of Alstonisine as well as Voacanga-related Oxindole Alkaloids," P. Yu and J.M. Cook, presented at the 214th ACS National Meeting, Las Vegas, Nevada, September 6-11, 1997, ORGN-340.

tttttttttt. "Studies Directed Toward the Synthesis of Dicyclopenta[a,e]pentalene and Dicyclopenta [a,d]pentalene via the Tandem Pauson-Khand Reaction," S. Van Ornum and J.M. Cook, presented at the 214th ACS National Meeting, Las Vegas, Nevada, September 6-11, 1997, ORGN-356.

uuuuuuuuuu. "Enantiospecific Synthesis of Ajmaline, Alkaloid G, Talpinine and Talcarpine via the Asymmetric Pictet-Spengler Reaction," J. Li, P. Yu, and J.M. Cook, presented at the Seventeenth Mona Symposium, 1998 in Mona, Jamaica, January 5-9, 1998.

vvvvvvvvvv. "GABA<sub>ERGIC</sub> Regulation of the Reinforcing Properties of Alcohol in Wistar rats," C. R. Cason, H. L. June, M. Fredericks, G. Cheatham, A. Chen, J. Cook, T. Gan and J. M. Murphy, 27th Annual Meeting of Society for Neuroscience, New Orleans, October 25-30, 1997, abstract 381.5.

wwwwwwwww. "Exploration of the L2 Region of Pharmacophore/Receptor Models for Benzodiazepine Receptor Subtypes *via* Preparation of Rigidly Substituted Pyrazoloquinolinones (CGS-Series)," Qi Huang, X. He, C. Ma and J.M. Cook, 215th ACS National Meeting, Dallas Texas, March 29-April 2, 1998, abstract MEDI-136.

xxxxxxxxxx. "Search for Selective Ligands for Benzodiazepine Receptor Subtypes by Probing the Pharmacophore/Receptor Models of GABA<sub>A</sub>/BzR Subtypes *via* Optically Active BzR Ligands," S. Yu, X. He, C. Ma, X. Liu and J.M. Cook, 215th ACS National Meeting, Dallas, Texas, March 29-April 2, 1998, abstract MEDI-137.

yyyyyyyyyy. "First Enantiospecific Total Synthesis of Talcarpine and Talpinine from D-(+)-Tryptophan via the Asymmetric Pictet-Spengler Reaction," P. Yu and J.M. Cook 215th ACS National Meeting, Dallas, Texas, March 29-April 2, 1998, abstract ORGN-175.

zzzzzzzzzz. "Enantiospecific Total Synthesis of (+)-Ajmaline via the Asymmetric Pictet Spengler Reaction," J. Li and J.M. Cook, 215th ACS National Meeting, Dallas, Texas, March 29-April 2, 1998, abstract ORGN-176.

aaaaaaaaaa. "Synthetic Approach Toward The Synthesis of Dicyclopenta[a,d]pentalene and Dicyclopenta[a,e]pentalene *via* The Tandem Pauson-Khand Reaction," S.G. Van Ornum and J.M. Cook, 215th ACS National Meeting, Dallas, Texas, March 29-April 2, 1998, abstract ORGN-275.

- bbbbbbbbbb. “Enantiospecific Total Synthesis of (+)-Ajmaline *via* the Asymmetric Pictet-Spengler Reaction,” Jin Li and J.M. Cook, 31st Great Lakes Regional Meeting of the ACS, University of Wisconsin-Milwaukee, Milwaukee, WI, June 1-3, 1998, abst. 185.
- cccccccccc. “Exploration of Region L2 of Pharmacophore/Receptor Models for GABA<sub>A</sub>/BzR Subtypes,” J.M. Cook, Q. Huang, C. Ma, X. He and S. Yu, presented at The College on Problems of Drug Dependence, Sixtieth Annual Scientific Meeting, Scottsdale, AZ, June 13-18, 1998, poster session III, #124.
- dddddddddd. “Enantiospecific Total Synthesis of Talcarpine 1 and Talpinine 2 *via* the Asymmetric Pictet-Spengler Reaction,” Peng Yu and J.M. Cook, 31st Great Lakes Regional Meeting of the ACS, University of Wisconsin-Milwaukee, Milwaukee, WI, June 1-3, 1998, abst. 186.
- eeeeeeeeee. “The Enantiospecific Total Synthesis of Norsuaveoline *via* The Pictet-Spengler Reaction,” Tao Wang and J.M. Cook, 31st Great Lakes Regional Meeting of the ACS, University of Wisconsin-Milwaukee, Milwaukee, WI, June 1-3, 1998, abst. 187.
- ffffffffff. “Utility of The Tandem Pauson-Khand Reaction Directed Toward The Synthesis of Dicyclopenta[a,d]pentalene and Dicyclopenta[a,e]pentalene,” M.M. Bruendl, S.G. Van Ornum and J.M. Cook, 31st Great Lakes Regional Meeting of the ACS, University of Wisconsin-Milwaukee, Milwaukee, WI, June 1-3, 1998, abst. 200.
- gggggggggg. “Synthesis and Evaluation of Functionalized Tryptophan Derivatives and Substituted  $\beta$ -Carbolines As Inhibitors of Indoleamine 2,3-Dioxygenase,” Xiaoxiang Liu, Chunrong Ma, Andrew C. Peterson and J.M. Cook, 31st Great Lakes Regional Meeting of the ACS, University of Wisconsin-Milwaukee, Milwaukee, WI, June 1-3, 1998, abst. 206.
- hhhhhhhhhh. “Enantiospecific Total Synthesis of Tryprostatin A,” Shuo Zhao, Tong Gan, Peng Yu and J.M. Cook, 31st Great Lakes Regional Meeting of the ACS, University of Wisconsin-Milwaukee, Milwaukee, WI, June 1-3, 1998, abst. 227.
- iiiiiiiiiii. “Synthetic Approach Directed Toward The Synthesis of Dicyclopenta[a,d]pentalene and Dicyclopenta[a,e]pentalene *via* the Tandem Pauson-Khand Reaction,” S.G. Van Ornum and J.M. Cook, 31st Great Lakes Regional Meeting of the ACS, University of Wisconsin-Milwaukee, Milwaukee, WI, June 1-3, 1998, abst 235.
- jjjjjjjjjj. “Search for Selective Ligands for  $\alpha$ 5-Benzodiazepine Receptor Subtypes By Probing The Pharmacophore/Receptor Models of GABA<sub>A</sub>/BzR Subtypes *via* Chiral BzR Ligands,” Xiaoxiang Liu and J.M. Cook, 31st Great Lakes Regional Meeting of the ACS, University of Wisconsin-Milwaukee, Milwaukee, WI, June 1-3, 1998, abst 245.
- kkkkkkkkkk. “The Agonist Pharmacophore of The Benzodiazepine Receptor. Synthesis of A Selective Anticonvulsant/anxiolytic,” Chunrong Ma, E.D. Cox, R. McKernan and J.M. Cook, 31st Great Lakes Regional Meeting of the ACS, University of Wisconsin-Milwaukee, Milwaukee, WI, June 1-3, 1998, abst 246.
- llllllllll. “Evidence of Conservation of Conformational Topography at Five GABA<sub>A</sub>/BzR Subtypes,” Xiaohui He, Qi Huang, Tong Gan and J.M. Cook, 31st Great Lakes Regional Meeting of the ACS, University of Wisconsin-Milwaukee, Milwaukee, WI, June 1-3, 1998, abst 248.
- mmmmmmmmmm. “Exploration of the L2 Region of Pharmacophore/Receptor Models For Benzodiazepine Receptor Subtypes *via* Preparation of Rigidly Substituted Pyrazoloquinolinones (CGS Series),” Qi Huang, Xiaohui He, Chunrong Ma and J.M. Cook, 31st Great Lakes Regional Meeting of the ACS, University of Wisconsin-Milwaukee, Milwaukee, WI, June 1-3, 1998, abst 249.
- nnnnnnnnnn. “Study of Pharmacophore/Receptor Models for Benzodiazepine Receptor Subtypes *via* Preparation of Rigidly Substituted Pyrazoloquinolinones,” Q. Huang, X. He, S. Yu, C. Ma and J. M. Cook, 216th National ACS Meeting, Boston, MA, August 23-27, 1998, abst MEDI-96.

- oooooooooooo. "Development of Selective Ligands for Benzodiazepine Receptor Subtypes By Manipulating the Stereochemistry of Optically Active BzR Ligands," S. Yu, X. He, C. Ma, X. Liu and J. M. Cook, 216th National ACS Meeting, Boston, MA, August 23-27, 1998, abst MEDI-97.
- pppppppppppp. "Synthesis and Study of Bz1 Receptor Subtype Specific Ligands," C. Ma, X. He, S. Yu, R. McKernan and J. M. Cook, 216th National ACS Meeting, Boston, MA, August 23-27, 1998, abst MEDI-98.
- qqqqqqqqqqq. "In Search of Inhibitors for the Indoleamine 2,3-dioxygenase (IDO) Enzyme System, X. Liu, C. Ma, A. C. Peterson and J. M. Cook, 216th National ACS Meeting, Boston, MA, August 23-27, 1998, abst ORG-105.
- rrrrrrrrrrr. "Photochemical Tandem Pauson-Khand Reaction: Studies Directed Toward The Synthesis of Dicyclopenta[a,f]pentalene and Dicyclopenta[a,e]pentalene," M. M. Bruendl, S. G. Van Ornum, J. M. Cook, 216th National ACS Meeting, Boston, MA, August 23-27, 1998, abst ORG-117.
- sssssssssss. "General Approach to The Diastereospecific Synthesis of Indole Alkaloids: Total Synthesis of Talcarpine, Talpinine, Alstonerine, and Anhydromacrosalpine-Methine *via* the Asymmetric Pictet-Spengler Reaction," P. Yu, J. Li, T. Wang and J. M. Cook, 216th National ACS Meeting, Boston, MA, August 23-27, 1998, abst. ORG-554.
- ttttttttttt. "General Approach to the Synthesis of Sarpagine/Ajmaline Alkaloids: Enantiospecific Total Synthesis of (+)-Ajmaline *via* the Asymmetric Pictet-Spengler Reaction," J. Li and J. M. Cook, 216th National ACS Meeting, Boston, MA, August 23-27, 1998, abst. ORG-555.
- uuuuuuuuuuu. "Total Synthesis of Norsuaveoline From D-(+)-Tryptophan *via* an Asymmetric Pictet-Spengler Reaction and Regioselective Oxyanion Cope Rearrangement," T. Wang, P. Yu, J. Li and J. M. Cook, 216th National ACS Meeting, Boston, MA, August 23-27, 1998, abst. ORG-556.
- vvvvvvvvvvv. "Enantiospecific Total Synthesis of the Enantiomers of Tryprostatin A and B," S. Zhao, T. Gan, P. Yu and J. M. Cook, 216th National ACS Meeting, Boston, MA, August 23-27, 1998, abst. ORG-557.
- wwwwwwwwwww. "Study of Pharmacophore/Receptor Models for GABA<sub>A</sub>/BzR Subtypes *via* QSAR Analysis of Symmetrically Substituted Pyrazoloquinolinones," X. He, S. Yu, C. Ma, Q. Huang, R. McKernan, and J.M. Cook, 217th National ACS Meeting, Anaheim, CA, March 21-25, 1999, abst. MEDI-095.
- xxxxxxxxxxxx. "Studies in Search of Memory-enhancing Agents that Act *via* GABA<sub>A</sub>/Bz Receptors: Part 1. Evidence for the Conservation of Pharmacophoric Descriptors at all DS Subtypes," S. Yu, X. He, C. Ma, J.M. Cook, 217th National ACS Meeting, Anaheim, CA, March 21-25, 1999, abst. MEDI-096.
- yyyyyyyyyyy. "Manipulation of Stereochemistry of Optically Active BzR Ligands: Development of Selective Ligands for Benzodiazepine Receptor Subtypes," M.M. Bruendl, X. He, C. Ma, J.M. Cook, 217th National ACS Meeting, Anaheim, CA, March 21-25, 1999, abst. MEDI-097.
- zzzzzzzzzzz. "Synthesis of [5.5.5]- and [5.6.6.5]Tetracycles *via* the Tandem Pauson-Khand Reaction," M.M. Bruendl, H. Cao, J.M. Cook, 217th National ACS Meeting, Anaheim, CA, March 21-25, 1999, abst. ORG-271.
- aaaaaaaaaaaa. "Studies Toward the Enantiospecific Total Synthesis of Pleiocarpamine *via* a Novel Pictet-Spengler Reaction," S. Yu, E.D. Cox, J.M. Cook, 217th National ACS Meeting, Anaheim, CA, March 21-25, 1999, abst. ORG-405.
- bbbbbbbbbbbbb. "Novel Synthesis of Optically Active Tryptophan Derivatives," C. Ma, X. Liu, S. Yu, S. Zhao, J.M. Cook, 217th National ACS Meeting, Anaheim, CA, March 21-25, 1999, abst. ORG-416.
- cccccccccccc. "Synthesis of Chiral Imidazobenzodiazepines Employed in the Development of Selective Ligands for Benzodiazepine Receptor Subtypes," M.M. Bruendl, X. He, C. Ma, and J.M.

- Cook, 36th National Organic Chemistry Symposium, University of Wisconsin-Madison, Madison, WI, June 13-17, 1999, abst. 29.
- dddddddddd. "Study of Pharmacophore/Receptor Models for GABA<sub>A</sub>/BzR Subtypes By Synthesis of Rigidly Substituted Imidazobenzodiazepines and Pyrazoloquinolinones," X. He, S. Yu, C. Ma, M. Bruendl, and J.M. Cook, 36th National Organic Symposium, University of Wisconsin-Madison, Madison, WI, June 13-17, 1999, abst. 102.
- eeeeeeeeeee. "Approach to the Total Synthesis of Indole Alkaloid Alstophylline," X. Liu, C. Ma, L. Hamaker, and J.M. Cook, 36th National Organic Symposium, University of Wisconsin-Madison, Madison, WI, June 13-17, 1999, abst. 160.
- ffffffffffff. "Efficient Synthesis of Optically Active Tryptophan and Isotryptophan Derivatives," C. Ma, X. Liu, S. Yu, X. He, and J.M. Cook, 36th National Organic Symposium, University of Wisconsin-Madison, Madison, WI, June 13-17, 1999, abst. 169.
- ggggggggggg. "Enantiospecific Total Synthesis of Norsuaveoline via Asymmetric Pictet-Spengler Reaction and Regioselective Oxanion Cope Rearrangement," T. Wang and J.M. Cook, 36<sup>th</sup> National Organic Symposium, University of Wisconsin-Madison, Madison, WI, June 13-17, 1999, abst. 279.
- hhhhhhhhhhh. "Studies Directed Toward the Enantiospecific Total Synthesis of Indole Alkaloid Pleiocarpamine via a Novel Pictet-Spengler Reaction," S. Yu, E.D. Cox, and J.M. Cook, 36th National Organic Symposium, University of Wisconsin-Madison, Madison, WI, June 13-17, 1999, abst. 302.
- iiiiiiiiiii. "Sarpagine Indole Alkaloids. Stereospecific Synthesis of (6s, 10s)-2-Methoxy-9-oxo-12-benzyl-6,7,8,9,10,11-hexahydro-6,10-imino-5H-cyclooct[b]indole via Asymmetric Pictet-Spengler Reaction," S. Zhao and J.M. Cook, 36th National Organic Symposium, University of Wisconsin-Madison, Madison, WI, June 13-17, 1999, abst.310.
- jjjjjjjjjjj. "Development of Selective Ligands for Benzodiazepine Receptor Subtypes by Manipulating the Stereochemistry of Optically Active BzR Ligands," M.M. Bruendl, X. He, C. Ma, and J.M. Cook, 218<sup>th</sup> National ACS Meeting, New Orleans, LA, August 22-26, 1999, abst. MEDI-127.
- kkkkkkkkkkk. "Search for Selective Ligands for GABA<sub>A</sub>/BZR Subtypes and Their Role as Inverse Agonists/Antagonists in Alteration of Alcohol Dependence," X. He, C. Ma, M. Bruendl, S. Yu, H. June, R. McKernan, and J.M. Cook, 218<sup>th</sup> National ACS Meeting, New Orleans, LA, August 22-26, 1999, abst. MEDI-128.
- lllllllllll. "Search for Bz1 Selective Ligands For GABA<sub>A</sub>/Benzodiazepine Receptor Subtypes," C. Ma, X. He, M. Bruendl, R. McMCKernan, and J.M. Cook, 218<sup>th</sup> National ACS Meeting, New Orleans, LA, August 22-26, 1999, abst. MEDI-129.
- mmmmmmmmmmm. "Total Synthesis of Tryprostatin A and B, and Enantiomers," S. Zhao, T. Gan, P. Yu and J.M. Cook, 218<sup>th</sup> National ACS Meeting, New Orleans, LA, August 22-26, 1999, abst. ORGN-155.
- nnnnnnnnnnn. "General Approach for the Synthesis of Ajmaline and Sarpagine Indole Alkaloids: Enantiospecific Total Synthesis of Norsuaveoline via Asymmetric Pictet-Spengler Reaction," T. Wang and J.M. Cook, 218<sup>th</sup> National ACS Meeting, New Orleans, LA, August 22-26, 1999, abst. ORGN-156.
- oooooooooooo. "Enantiospecific Synthesis of Tryptophans and Tryprostatins via the Schöllkopf Chiral Auxillary," S. Zhao, C. Ma, and J.M. Cook, MONA Symposium-2000, Mona, Jamaica, January 2-7, 2000.
- ppppppppppp. "Enantiospecific Synthesis of Tryprostatins *via* the Schöllkopf Chiral Auxiliary," S. Zhao, C. Ma, X. Liu, and J.M. Cook, 219<sup>th</sup> National ACS Meeting, San Francisco, CA, March 26-30,2000, abst. ORGN- 749.
- qqqqqqqqqqq. "General Approach for the Synthesis of Suaveoline and Sarpagine Indole

- Alkaloids. Enantiospecific Total Synthesis of Norsuaveoline and Vellosimine,” T. Wang and J.M. Cook, 219<sup>th</sup> National ACS Meeting, San Francisco, CA, March 26-30, 2000, abst. ORGN- 752.
- rrrrrrrrrrr. “Search for Selective Ligands for GABA<sub>A</sub>/BzR Subtypes and Their Role in Alteration of Alcohol Dependence,” J.M. Cook, X. He, C. Ma, S. Yu, H. June, and R. McKernan, 219<sup>th</sup> National ACS Meeting, San Francisco, CA, March 26-30, 2000, abst. MEDI-101.
- sssssssssss. “Development of Selective Ligands for Benzodiazepine Receptor Subtypes,” J.M. Cook, C. Ma, X. He, and M.M. Bruendl, 219<sup>th</sup> National ACS Meeting, San Francisco, CA, March 26-30, 2000, abst. MEDI-105.
- ttttttttttt. “Comparison of the Behavioral Effects of Beta-CCt and Flumazenil in Rhesus Monkeys,” C.P. France, L.R. Gerak, C. Ma, and J.M. Cook, 62<sup>nd</sup> Meeting of the College on Problems of Drug Dependence, Oral Communications XVIII, Puerto Rico, June 17-22, 2000.
- uuuuuuuuuuu. “Search for Benzodiazepine/GABA<sub>A</sub> Subtype Selective Ligands and Implications in Alcohol Self-Administration,” X. He, C. Ma, H. June, and J.M. Cook, 62<sup>nd</sup> Meeting of the College on Problems of Drug Dependence, Poster Session IV (85), Puerto Rico, June 17-22, 2000.
- vvvvvvvvvvvv. “General Approach for the Synthesis of Sarpagine/Ajmaline/Corynanthe Alkaloids *via* the Asymmetric Pictet-Spengler Reaction. Enantiospecific Synthesis of Ajmaline, Vellosimine, Geissoschizine and Corynantheidine,” T. Wang, S. Yu, and J.M. Cook, (Planery Lecture), 32<sup>nd</sup> Great Lakes 2000 Regional Meeting of the ACS, Fargo, North Dakota, June 4-6, 2000, abst.74.
- wwwwwwwwwww. “Approach to the Total Synthesis of the Indole Alkaloid N<sub>a</sub>-Methylsarpagine and the Bisindole Alkaloid Macralstonine,” S. Zhao and J.M. Cook, 32<sup>nd</sup> Great Lakes 2000 Regional Meeting of the ACS, Fargo, North Dakota, June 4-6, 2000, abst.93.
- xxxxxxxxxxxxx. “Progress Towards the Total Synthesis of 10-Methoxyanhydromacrosalhinemethine *via* the Asymmetric Pictet-Spengler Reaction, X. Liao, S. Zhao, and J.M. Cook, 32<sup>nd</sup> Great Lakes 2000 Regional Meeting of the ACS, Fargo, North Dakota, June 4-6, 2000, abst. 145.
- yyyyyyyyyyyyy. “Studies Towards the Total Synthesis of the Bisindole Alkaloid Macralstonine,” X. Liu, C. Ma, and J.M. Cook, 32<sup>nd</sup> Great Lakes 2000 Regional Meeting of the ACS, Fargo, North Dakota, June 4-6, 2000, abst. 146.
- zzzzzzzzzzzzz. “Enantiospecific Synthesis of Vellosimine and Norsuaveoline as well as an Approach Toward Quebrachidine,” T. Wang and J.M. Cook, 32<sup>nd</sup> Great Lakes 2000 Regional Meeting of the ACS, Fargo, North Dakota, June 4-6, 2000, abst.150.
- aaaaaaaaaaaaa. “Enantiospecific Approach Towards the Total Synthesis of the Enantiomer of (+) Ajmaline,” Q. Xu, T. Wang, and J.M. Cook, 32<sup>nd</sup> Great Lakes 2000 Regional Meeting of the ACS, Fargo, North Dakota, June 4-6, 2000, abst. 152.
- bbbbbbbbbbbbb. “Construction of [5.5.5.5] Tetracycles *via* the Tandem Pauson-Khand Reaction and New Entry into [5.8.5] Ring Systems,” H. Cao, S. Van Ornum, M. Bruendl, and J.M. Cook, 32<sup>nd</sup> Great Lakes 2000 Regional Meeting of the ACS, Fargo, North Dakota, June 4-6, 2000, abst. 158.
- cccccccccccc. “General Approach to the Corynanthe Alkaloids: Enantiospecific Total Synthesis of (-) Corynantheidol and (+)-Geissoschizine,” M. Berner, S. Yu, and J.M. Cook, 32<sup>nd</sup> Great Lakes 2000 Regional Meeting of the ACS, Fargo, North Dakota, June 4-6, 2000, abst.173.
- dddddddddddd. “Total Synthesis of the Enantiomer of the Indole Alkaloid Affinisine and Approach to the Total Synthesis of Alstophylline and Macralstonine,” X. Liu, T. Wang, C. Ma, Q. Xu, and J.M. Cook, 220<sup>th</sup> National ACS Meeting, Washington, D.C., August 20-24, 2000, abst. ORG -122.
- eeeeeeeeeeee. “General Approach for the Synthesis of (-)Corynantheidine, (-)Corynantheidol, (+)-Geissoschizine, and (-)-Geissoschizol from a Common Intermediate,” M. Berner, S. Yu, and J.M. Cook, 220<sup>th</sup> National ACS Meeting, Washington, D.C., August 20-24, 2000, abst. ORG - 131.

- ffffffffffff. "Approach to the Total Synthesis of the Bisindole Alkaloid Macralstonidine," S. Zhao and J.M. Cook, 220<sup>th</sup> National ACS Meeting, Washington, D.C., August 20-24, 2000, abst. ORG - 137.
- gggggggggggg. "Enantiospecific Total Synthesis of the Sarpagine Indole Alkaloid (+)-Velloimine as well as a Study Toward the Total Synthesis of the Bisindole Alstonisidine," T. Wang and J.M. Cook, 220<sup>th</sup> National ACS Meeting, Washington, D.C., August 20-24, 2000, abst. ORG - 140.
- hhhhhhhhhhhh. "Enantiospecific Synthesis of Sarpagine, Ajmaline, and Corynanthe Indole Alkaloids via the Asymmetric Pictet-Spengler Reaction," (planery lecture), The Twenty-third Gulf Coast Chemistry Conference, Pensacola, Florida, September 14-16, 2000 (Thursday Lecture 2:40).
- iiiiiiiiiiiiii. "Discriminative Stimulus Effects of the Novel 1,4-Benzodiazepine QHII-66 in Ethanol-and Triazolam-Trained Squirrel Monkeys," S. Lelas, D.M. Platt, J.K. Rowlett, R.D. Spealman, J. Cook, and C. Ma, 30<sup>th</sup> Annual Meeting of the Society for Neuroscience, New Orleans, LA, November 4-9, 2000, Soci. Neurosci. Abst., 26, Part 1, 280 (abst. 103.2).
- jjjjjjjjjjjj. "Selective GABA<sub>A</sub>  $\alpha$ 1 Subunit Ligands (BCCT, 3PBC) Attenuate Responding Maintained by Ethanol Following Microinjection into the Ventral Pallidum," M.R. Carroll, K.L. Foster, S. Harvey, P.F. McKay, J.M. Cook and H. June, Alcoholism: Clin. Exp. 24: 47A (abst. 24).
- kkkkkkkkkkkk. "Development of Selective Ligands for GABA<sub>A</sub>/BzR Subtypes and Their Role in Alteration of Alcohol Dependence," X. Li, X. He, C. Ma, S. Harvey, and J.M. Cook, 221<sup>st</sup> National ACS Meeting, San Diego, CA, April 1-5, 2001, abst. MEDI-83.
- llllllllllll. "High-yield Generation of the [5.5.5]Tetracyclic Systems *via* Molybdenum Carbonyl Mediated Tandem Pauson-Khand Reaction," H. Cao and J.M. Cook, 221<sup>st</sup> National ACS Meeting, San Diego, CA, April 1-5, 2001, abst. ORGN-420.
- mmmmmmmmmmmm. "Approach to the Total Synthesis of 10-Methoxyanhydromacrosalhinemethine *via* the Asymmetric Pictet-Spengler Reaction," X. Liao, S. Zhao, and J.M. Cook, 221<sup>st</sup> National ACS Meeting, San Diego, CA, April 1-5, 2001, abst. ORGN-586.
- nnnnnnnnnnnn. "General Approach to the Total Synthesis of Macroline/Sarpagine Indole Alkaloids as well as Their Enantiomers," X. Liu and J.M. Cook, 221<sup>st</sup> National ACS Meeting, San Diego, CA, April 1-5, 2001, abst. ORGN-591
- oooooooooooo. "General Approach for the Synthesis of Sarpagine Ajmaline and Corynanthe Alkaloids *via* the Asymmetric Pictet-Spengler Reaction," (planery lecture) Royal Society of Chemistry, Perkin Division, 15<sup>th</sup> Lakeland Symposium: Grasmere, Grasmere Village, UK, May 10-14, 2001, (Friday morning lecture).
- pppppppppppp. "Alcohols Euphoric Properties are Regulated by the GABA<sub>A</sub> Receptor  $\alpha$ 1 Subtype," W. Yin, M. Carroll, H. June, and J.M. Cook, College on Problems of Drug Dependence, 63<sup>rd</sup> Annual Scientific Meeting, Scottsdale, AZ, June 16-21, 2001, Oral Communications IX (1:45 p.m.).
- qqqqqqqqqqqq. "Approach to Cyclopentapentalenes. Regiospecific Synthesis of the Highly Functionalized [5.5.5]Tetracycles *via* the Molybdenum Carbonyl-Mediated Tandem Pauson-Khand Reaction," H. Cao, J.M. Cook, and J. Flippen-Anderson, 37<sup>th</sup> National Organic Chemistry Symposium, Montana State University, Bozeman, MT, June 10-14, 2001, abst. 58.
- rrrrrrrrrrrr. "Research in Search of Selective Ligands for GABA<sub>A</sub>/BZR Subtypes and Their Role in Alteration of Alcohol Dependence," X. Li, X. He, C. Ma, S. Harvey, and J.M. Cook, 37<sup>th</sup> National Organic Chemistry Symposium, Montana State University, Bozeman, MT, June 10-14, 2001, abst.-122.
- ssssssssssss. "Studies Directed Toward the Antimalarial Bisindole Alkaloid Macralstonine O-Methyl Ether as well as Macralstonine," X. Liu and J.M. Cook, 37<sup>th</sup> National Organic Chemistry Symposium, Montana State University, Bozeman, MT, June 10-14, 2001, abst.-126.
- tttttttttttt. "Studies Directed Toward the Total Synthesis of the Bisindole Villalstonine," J. Ma, S. Yu, O.M. Berner, and J.M. Cook, 37<sup>th</sup> National Organic Chemistry Symposium, Montana State

- University, Bozeman, MT, June 10-14, 2001, abst.-132.
- uuuuuuuuuuuu. “Studies Directed Toward the Enantiospecific Total Synthesis of Oxindole Alkaloids: Approach to the Total Synthesis of Alstonisine,” X. Wearing, P. Yu, and J.M. Cook, 37<sup>th</sup> National Organic Chemistry Symposium, Montana State University, Bozeman, MT, June 10-14, 2001, abst.-219.
- vvvvvvvvvvvvv. “Search for Benzodiazepine/GABA<sub>A</sub> Subtype Selective Ligands that Reverse Alcohol Self-Administration,” W. Yin, C. Zhang, M. Carroll, H. June, and J.M. Cook, 37<sup>th</sup> National Organic Chemistry Symposium, Montana State University, Bozeman, MT, June 10-14, 2001, abst.-234.
- wwwwwwwwwwww. “Study of Pharmacophore/Receptor Models for GABA<sub>A</sub>/BzR Subtypes,” Chunchun Zhang and J.M. Cook, 37<sup>th</sup> National Organic Chemistry Symposium, Montana State University, Bozeman, MT, June 10-14, 2001, abst.-238.
- xxxxxxxxxxxxx. “The Enantiospecific Total Synthesis of the Alstonia Bisindole Alkaloid, Macralstonidine,” X. Liao, S. Zhao, and J.M. Cook, 37<sup>th</sup> National Organic Chemistry Symposium, Montana State University, Bozeman, MT, June 10-14, 2001, abst.-239.
- yyyyyyyyyyyyy. “Enantiospecific Synthesis of a Very Potent Tryprostatin Diastereomer, Active Against Human Cancer Cell Lines,” S. Zhao, X. Liu, C. Zhang, A. Morin, K. Smith, T. McDonald, and J.M. Cook, 37<sup>th</sup> National Organic Chemistry Symposium, Montana State University, Bozeman, MT, June 10-14, 2001, abst. 240.
- zzzzzzzzzzzzz. “Search for Benzodiazepine/GABA(A) Subtype Selective Ligands that Reverse Alcohol Self-Administration,” J. Cook, W. Yin, C. Zhang, X. Li, and H. June, (plenary lecture), 53<sup>rd</sup> Southeastern Regional Meeting of the ACS, Savannah, GA, September 23-26, 2001, plenary lecture, abst. 379.
- aaaaaaaaaaaaa. “The Enantiospecific Synthesis of Sarpagine, Ajmaline, and Corynanthe Indole Alkaloids *Via* the Asymmetric Pictet-Spengler Reaction,” T. Wang, S. Zhao, X. Liu, and J.M. Cook, 19<sup>th</sup> Meeting of the Northeast Chapter of the International Isotope Society, Pearl River, N.Y., October 26, 2001 (plenary lecture).
- bbbbbbbbbbbbbb. “The Role of the GABA(A)  $\alpha$ 1 Subtype in Mediating the Sedative and Anxiolytic Properties of Benzodiazepines,” M.R. Carroll, J. Woods, R.Y. Seyoum, and H. June, presented at the RCM Meeting, 2001.
- cccccccccccc. “Involvement of GABA(A) Receptors Containing the  $\alpha$ 5 Subunit in Nitrous Oxide Withdrawal,” L. Vaughn, R. Lindau, W. Yin, and J.M. Cook, presented at the Neuroscience Meeting, San Diego, CA, 2001.
- dddddddddddddd. “The Role of BZ/ $\alpha$ 1 and BZ/ $\alpha$ 5 Receptors in Discriminative Stimulus Effects of Triazolam in Squirrel Monkeys,” S. Lelas, J.K. Rowlett, R.D. Spealman, J.M. Cook, X. Li, and W. Yin, presented at the Neuroscience Meeting, San Diego, CA, 2001.
- eeeeeeeeeeeeee. “Role of GABA(A)/ $\alpha$ 1 Receptor Mechanisms in the Discriminative Stimulus Effects of Ethanol in Squirrel Monkeys,” D.M. Platt, J.K. Rowlett, R.D. Spealman, J.M. Cook, and W. Yin, FASEB Summer Research Conference, Arizona, August 2001.
- fffffffffffff. “Search for Benzodiazepine/GABA(A) Subtype Selective Ligands that Reverse Alcohol Self-Administration,” W. Yin, C. Zhang, M. Carroll, H. June, and J.M. Cook, 21<sup>st</sup> Symposium on Medicinal Chemistry, 10<sup>th</sup> Annual Meeting of the Division of Medicinal Chemistry, Kyoto, Japan, November 28-30th, 2001, (plenary lecture).
- ggggggggggggg. “Enantiospecific Synthesis of Sarpagine, Ajmaline and Corynanthe Alkaloids *via* the Asymmetric Pictet-Spengler Reaction,” T. Wang, S. Zhao, X. Liu, and J.M. Cook, Mini-Symposium of the Society of Synthetic Organic Chemistry(Japan), Chiba, Japan, November 30, 2001 (plenary lecture).
- hhhhhhhhhhhhh. “The Enantiospecific, Stereospecific Total Synthesis of the Alstonia Bisindole, Macralstonidine,” S. Zhao, X. Liao, and J.M. Cook, The Mona Symposium 2002, Natural Products



and Medicinal Chemistry, University of the West Indies, Mona Jamaica, Jan. 7-10, 2002, p.21.

iiiiiiiiiiii. "Search for Benzodiazepine/GABA<sub>A</sub> Subtype Selective Ligands to Treat Alcohol Abuse," W. Yin, C. Zhang, H. June, and J.M. Cook, 28<sup>th</sup> National Medicinal Chemistry Symposium, San Diego, CA, June 8-12, 2002 (plenary lecture).

jjjjjjjjjjjj. "Approach to Cyclopentapentalenes: Regiospecific Synthesis of the Highly Functionalized [5.5.5.5]Tetracycles *via* the Molybdenum Carbonyl-Mediated Tandem Pauson-Khand Reaction," H. Cao, J.M. Cook, and J. Flippen-Anderson, 223<sup>rd</sup> National Meeting of the ACS, Orlando, FL, April 7-11, 2002, abst. ORGN 301.

kkkkkkkkkkkk. "Progress Towards The Synthesis of Antimalarial Bisindole Alkaloids," X. Liao and J.M. Cook, 223<sup>rd</sup> National Meeting of the ACS, Orlando, FL, April 7-11, 2002, abst. ORGN 104.

llllllllllll. "General Approach for the Synthesis of Indole Alkaloids *via* the Asymmetric Pictet-Spengler Reaction," J. Cook, 2002 Gordon Research Conference on Heterocyclic Compounds, Salve Regina University, Newport, RI, 2002 (plenary lecture)

mmmmmmmmmmmm. "Search for Benzodiazepine/GABA<sub>A</sub> Subtype Selective Ligands that Reverse Alcohol Self-Administration," W. Yin, J. Cook, and H. June, 34<sup>th</sup> Great Lakes Regional Meeting of the ACS, Minneapolis, MN, June 2-4, 2002, abst. 85.

nnnnnnnnnnnn. "Enantiospecific Synthesis of a Very Potent Tryprostatin Diastereomer Active Against Human Cancer Cell Lines," C. Zhang, S. Zhao, and J.M. Cook, 34<sup>th</sup> Great Lakes Regional Meeting of the ACS, Minneapolis, MN, June 2002, abst. 92.

oooooooooooo. "Regiospecific Synthesis of the Highly Functionalized [5.5.5.5]Tetracycles," Hui Cao and J.M. Cook, 34<sup>th</sup> Great Lakes Regional Meeting of the ACS, Minneapolis, MN, June 2-4, 2002, abst. 110.

pppppppppppp. "The First Enantiospecific Total Synthesis of Alstonisine from D-(+)-Tryptophan *via* the Asymmetric Pictet-Spengler Reaction," X. Wearing, P. Yu, and J.M. Cook, 34<sup>th</sup> Great Lakes Regional Meeting of the ACS, Minneapolis, MN June 2-4, 2002, abst. 203.

qqqqqqqqqqqq. "Study of Selective Ligands for GABA/BzR Subtypes and their Role in Alteration of Alcohol Dependence," X. Li, W. Yin, S. Harvey, and J.M. Cook, 34<sup>th</sup> Great Lakes Regional Meeting of the ACS, Minneapolis, MN, June 2-4, 2002, abst. 78.

rrrrrrrrrrrr. "Approach Toward the Total Synthesis of the Antimalarial Alkaloid Villalstonine," J. Ma, S. Yu, O. Mathias, and J.M. Cook, 34<sup>th</sup> Great Lakes Regional Meeting of the ACS, Minneapolis, MN, June 2-4, 2002, abst. 90.

ssssssssssss. "The Total Synthesis of Bisindole Dispegatine," X. Liao and J.M. Cook, 34<sup>th</sup> Great Lakes Regional Meeting of the ACS, Minneapolis, MN, June 2-4, 2002, abst. 105.

tttttttttttt. "Search for Benzodiazepine/GABA(A) Subtype Selective Ligands that Reverse Alcohol Self-Administration," W. Yin, X. Liao, H. June, and J. Cook, 224<sup>th</sup> ACS National Meeting, Boston, MA, August 18-22, 2002, abst. MEDI-244.

uuuuuuuuuuuu. "Studies in Search of Memory Enhancing Agents Which Act *via* GABA(A)/BzR Receptors," X. Li, C. Cook, F.J. Helmstetter, and J.M. Cook, 224<sup>th</sup> ACS National Meeting, Boston, MA, August 18-22, 2002, abst. MEDI-245.

vvvvvvvvvvvv. "Enantiospecific Stereospecific Total Synthesis of Alstonisine," X. Wearing, J.M. Cook, and J.L Flippen-Anderson, 224<sup>th</sup> ACS National Meeting, Boston, MA, August 18-22, 2002, abst. O361.

wwwwwwwwwwww. "Approach to Cyclopentapentalenes, Regiospecific Synthesis of the Highly Functionalized [5.5.5.5]tetracycles *via* the Molybdenum Carbonyl-mediated Tandem Pauson-Khand Reaction," H. Cao, J.M. Cook, and J. Flippen-Anderson, 224<sup>th</sup> ACS National Meeting, Boston, MA, August 18-22, 2002, abst. O835.

xxxxxxxxxxxxxx. "The GABA(A) Receptor  $\alpha$ 1 Subtype in the Ventral Pallidum Regulates Alcohol-

Seeking Behaviors,” W. Yin, C. Zhang, H. June, and J.M. Cook, The 12<sup>th</sup> Neuropharmacology Conference, GABA(A) Receptors in Cellular and Network Excitability, Sheraton World Resort, Orlando, FL, October 31-November 2, 2002, poster P-D05.

yyyyyyyyyyyyyy. “GABA(A)/ $\alpha$ 1, 5HT<sub>1A</sub>, Alcohol and Agression in Rats,” S.L. Gourley, J.F. Debold, J.M. Cook and K.A. Miczek, Society for Neuroscience 32<sup>nd</sup> Annual Meeting, Orlando, FL, November 2-7, 2002, abstract 607.9.

zzzzzzzzzzzzzz. “Role of GABA<sub>A</sub>/ $\alpha$ 5 Receptor Mechanisms in the Discriminative Stimulus Effects of Ethanol in Squirrel Monkeys,” D.M. Platt, J.K. Rowlett, R.D. Spealman, J.M. Cook, and W. Yin, Alcohol Society Meeting, June, 2003.

aaaaaaaaaaaaaa. “Biological Activity of the Tryprostatins and their Diastereomers on Human Carcinoma Cell Lines,” C.C. Zhang, S. Zhao, and J.M. Cook, 225<sup>th</sup> ACS National Meeting, New Orleans, LA, March 23-27, 2003 (abst MEDI-87).

bbbbbbbbbbbbbbb. “Studies of Memory Enhancing Agents which act via GABA<sub>A</sub>/BzR Receptors,” X. Li, H. Cao, C. Cook, F. Helmstetter, and J.M. Cook, 225<sup>th</sup> ACS National Meeting, New Orleans, LA, March 23-27, 2003 (abst MEDI-221).

cccccccccccccc. “Enantiospecific, Sterospecific Total Synthesis of Alstonisine and Approach to the Total Synthesis of N<sub>b</sub>-Demethylalstophylline Oxindole,” Xiangyu Z. Wearing and J.M. Cook, 225<sup>th</sup> ACS National Meeting, New Orleans, LA, March 23-27, 2003 (abst ORG-412).

ddddddddddddddd. “Sterospecific, Enantiospecific Total Synthesis of the Sarpagine Indole Alkaloids (*E*)16-Epiaffinisine, (*E*)16-Epinormacusine B and Dehydro-16-epiaffinisine,” Jianming Yu and James M. Cook, 225<sup>th</sup> ACS National Meeting, New Orleans, LA, March 23-27, 2003, Organic Section (March 25<sup>th</sup>).

eeeeeeeeeeeeeee. “ $\alpha$ 1 Subunit Containing GABA<sub>A</sub> Receptor Antagonism and Alcohol Heightened Aggressive Behavior in Male Rats,” D.L. Zitzman, J.F. DeBold, S.L. Gourley, J.M. Cook, and K.A. Miczek, Neuroscience Meeting, New Orleans, LA, November 12-17, 2003, #852.5.

fffffffffffffff. “The Reinforcing Effects of Amphetamine in the Selectivity Bred High Alcohol Drinking (HAD-1) and Low Alcohol Drinking (LAD-1) Rat Lines,” J.E. Woods, J.Cook, And H.L. June, Neuroscience Meeting, New Orleans, LA, November 12-17, 2003, #852.12.

ggggggggggggggg. “Rational Design of Indoleamine 2,3-Dioxygenase Inhibitors,” A. Martin, C. Austin, J. Mizdrak, V. MacFarlane, C. Zhang, W. Yin, X. Li, J. Jamie, R. Truscott, J. Cook, and R. Griffith, 19<sup>th</sup> Royal Australian Chemical Institute Conference, Lorne, Victoria, Australia, July 6-11, 2003.

hhhhhhhhhhhhhhh. “Elucidating Benzodiazepine Receptor Subtype Mechanisms Using Zolpidem and the Putative GABA<sub>A</sub>/ $\alpha$ 5 Selective Agonist QH-ii-066,” A.N. Duke, D. Platt, R. Spealman, J.M. Cook, X. Li, and J. Rowlett, Sixty-fifth Annual Scientific Meeting of the College on Problems of Drug Dependence, Bal harbour, FL, June 14-19, 2003.

iiiiiiiiiiiiiii. “The SAR and Possible Treatment of Alcohol Abuse with  $\alpha$ 1 Selective Benzodiazepine/GABA<sub>A</sub> Receptor Antagonists,” James Cook, Sixty-fifth Annual Scientific Meeting on the College on Problems of Drug Dependence, Bal Harbour, FL, June 14-19, 2003. Invited Lecture-Workshop (30 min).

jjjjjjjjjjjjjjj. “Search of Benzodiazepine/GABA(A) Subtype Selective Ligands that Reverse Alcohol Self-Administration,” W. Yin, C. Zhang, X. Li, H. June, and J.M. Cook, Sixty-fifth Annual Scientific Meeting of the College on Problems of Drug Dependence, Bal Harbour, FL, June 14-19, 2003.

kkkkkkkkkkkkkkk. “Approach Towards the Total Synthesis of Villalstonine,” J. Ma and J.M. Cook, 38<sup>th</sup> National Organic Symposium, Indiana University, Bloomington, IN, June 8-12, 2003, Abstract Number: B64

lllllllllllllll. “Study of the Conformation of GABA<sub>A</sub>-Benzodiazepine Receptor Bivalent Ligands by Low Temperature NMR,” D. Han, F. Holger, X. Li, J.R. Deschamps, H. Cao, J. Ma, W. Yin, and

- J.M. Cook, 38<sup>th</sup> National Organic Symposium, Indiana University, Bloomington, IN, June 8-12, 2003, Abstract Number: A76.
- mmmmmmmmmmmmmmmm. “General Approach for the Synthesis of Natural and Non-natural Products via the Tandem Pauson-Khand Reaction: Synthesis of 14 $\pi$  Annulenes and [5.8.5] Systems,” H. Cao, J. Flippen-Anderson and J. M. Cook, 228<sup>th</sup> ACS National Meeting, Philadelphia, PA, August 22-26, 2004 (abst. ORG-390).
- nnnnnnnnnnnnnnnn. “Stereocontrolled Total Synthesis of (-)-11-Methoxy-17-Epivincamajine and (-)-Vincamajinine,” X. Z. Wearing, Y. Yu, F. Rivas and J. M. Cook, Philadelphia, PA, August 22-26, 2004 (abst. ORG-391).
- oooooooooooooooo. “GABA<sub>A</sub>/ $\alpha$ 1 Receptor Involvement in the Hyperphagic Effect of Benzodiazepines in Squirrel Monkeys,” A. Duke, D. Platt, J. M. Cook, W. Yin and J. K. Rowlett, 66<sup>th</sup> Annual Meeting of the College on Problems of Drug Dependence, San Juan, Puerto Rico, June 12-17, 2004, Poster Session III, Poster 32.
- pppppppppppppppp. “GABA-A Receptor Mechanisms Underlying Motor Effects of Benzodiazepines in Monkeys,” S. C. Licata, D. M. Platt, A. N. Duke, J. M. Cook, P. V. V. S. Sarma, and J. K. Rowlett, Neuroscience Meeting, San Diego, CA October 22-28 (2004).
- qqqqqqqqqqqqqqqq. “The GABA(A)/ $\alpha$ 1 Receptor-Preferring Antagonist BCCt Does Not Attenuate Benzodiazepine-Induced Suppression of Locomotor Activity,” A. N. Duke, D. M. Platt, W. Yin, J. M. Cook and J. Rowlett, Neuroscience Meeting, San Diego, October 22-28 (2004).
- rrrrrrrrrrrrrrrr. “Search for Benzodiazepine/GABA(A) Subtype Selective Bivalent Ligands That Reverse Alcohol Self-Administration,” W. Yin, C. Zhang, S. S. V. V. Pulella, H. June and J. M. Cook, 227<sup>th</sup> ACS National Meeting, Anaheim, CA March 28 – April 1, 2004 (abst. MEDI 0286).
- ssssssssssssssss. “Synthesis, in vitro Affinity and Efficacy of the First Bivalent  $\alpha$ 5 Subtype Selective BzR/GABA(A) Antagonist,” X. Li, W. Sieghart, G. R. Wenger and J. M. Cook. 227<sup>th</sup> ACS National Meeting, Anaheim, CA March 28 – April 1, 2004 (abst. MEDI 0348).
- tttttttttttttttt. “Preparation of Analogs of the Cytotoxic Tryprostatins A and B. Study of Structure Activity Relationships as well as Irreversible Inhibitors for Mechanistic Work,” C. Zhang, J. Ma and J. M. Cook, 227<sup>th</sup> ACS National Meeting, Anaheim, CA March 28 – April 1, 2004 (abst. MEDI 0115).
- uuuuuuuuuuuuuuuu. “Study of the Structure-Activity Relationships of GABA(A)-Benzodiazepine Receptor Bivalent Ligands by Low Temperature NMR Spectroscopy and X-ray Analysis,” D. Han, F. H. Forsterling, X. Li, J. R. Deschamps, H. Cao, and J. M. Cook, 227<sup>th</sup> ACS National Meeting, Anaheim, CA March 28 – April 1, 2004 (abst. MEDI 0285).
- vvvvvvvvvvvvvvvv. “Development of Selective Ligands for Benzodiazepine Receptor Subtypes by Manipulating the Stereochemistry of Optically Active BzR Ligands,” X. Li, J. R. Atack, and J. M. Cook, 227<sup>th</sup> ACS National Meeting, Anaheim, CA March 28 – April 1, 2004 (abst. MEDI 0287).
- wwwwwwwwwwwwww. “MEDI-0285 Also Chosen for Sci-Mix (represented).”
- xxxxxxxxxxxxxxxx. “MEDI-0287 Also Chosen for Sci-Mix (represented).”
- yyyyyyyyyyyyyyyy. Regiospecific, Enantiospecific Total Synthesis of the 12-Alkoxy-substituted Sarpagine Alkaloids, (+)-12-Methoxy-N<sub>a</sub>-Methylvellosimine, (+)-12-Methoxyaffinisine and (-)-Fuchsiaefoline,” H. Zhou, W. Yin and J. M. Cook, 227<sup>th</sup> ACS National Meeting, Anaheim, CA March 28 – April 1, 2004 (abst. ORGN 0444).
- zzzzzzzzzzzzzzzz. “Use of the Molybdenum Hexacarbonyl-Mediated Tandem Allenic Pauson-Khand Reaction for the Synthesis of a Dicyclo[a,e]pentalene,” H. Cao, J. L. Flippen-Anderson, J. L. Chen and J. M. Cook, 227<sup>th</sup> ACS National Meeting, Anaheim, CA March 28 – April 1, 2004 (abst. ORGN 0083).
- aaaaaaaaaaaaaaaa. “Mechanistic Study on the Asymmetric Pictet-Spengler Reaction. Evidence Supporting the Carbocationic Pathway,” D. Han, X. Liu, and J. M. Cook, 227<sup>th</sup> ACS National

- Meeting, Anaheim, CA March 28 – April 1, 2004 (abst. ORGN 0485).
- bbbbbbbbbbbbbb. “First Enantiospecific Total Synthesis of a Quaternary Voachalotine Alkaloid, (+)-Dehydrovoachalotine,” J. Yu, J. Ma, X. Wearing and J. M. Cook, 227<sup>th</sup> ACS National Meeting, Anaheim, CA March 28 – April 1, 2004 (abst. ORGN 0439).
- cccccccccccccc. “Progress Toward the Total Synthesis of the Antimalarial Bisindole Alkaloid Villastonine,” J. Ma, C. Zhang, J. Yu, and J. M. Cook, 227<sup>th</sup> ACS National Meeting, Anaheim, CA March 28 – April 1, 2004 (abst. ORGN 0443).
- dddddddddddddd. “Progress Toward the Enantiospecific Stereospecific Total Synthesis of N<sub>6</sub>-Demethylalstophylline Oxindole,” X. Z. Wearing and J. M. Cook, 227<sup>th</sup> ACS National Meeting, Anaheim, CA March 28 – April 1, 2004 (abst. ORGN 0483).
- eeeeeeeeeeeeeee. “General Approach to the Synthesis of Sarpagine/Macroline Bisindole Alkaloids,” X. Liao, H. Zhou and J. M. Cook, 227<sup>th</sup> ACS National Meeting, Anaheim, CA Mar. 28 – Apr. 1, 2004 (abst. ORGN 0442).
- fffffffffffffff. “Stereoselective Total Synthesis of (-)-Vincamajinine and (-)-11-Methoxy-17-epivincamijine,” X. Z. Wearing, J. Yu and J. M. Cook, 227<sup>th</sup> ACS National Meeting, Anaheim, CA March 28 – April 1, 2004 (abst. ORGN 0484).
- ggggggggggggggg. “ORGN-0483 Also chosen for Sci-mix (represented).”
- hhhhhhhhhhhhhhh. “General Approach for the Synthesis of Natural and Non-natural Products via the Tandem Pauson-Khand Reaction. Synthesis of 14 $\pi$  Annulenes and [5.8.5] Systems,” H. Cao, J. Flippen-Anderson and J. M. Cook, 36<sup>th</sup> Great Lakes Regional ACS Meeting, Peoria, IL, October 17-20 (2004), abstract 294.
- iiiiiiiiiiiiiii. “Synthesis, In Vitro Affinity and Efficacy of the First Bivalent Alpha 5 Subtype Selective BzR/GABA(A) Antagonist,” W. Yin, F. Rivas, R. Furtmueller, X. Li, W. Sieghart, G. Wenger and J. M. Cook, Neuroscience 2004, San Diego, CA, October 23-27 (2004), Tue, Posterboard MM31.
- jjjjjjjjjjjjjjj. “Alcohol Drinking in Baboons: Effects of 3-Propyloxy Beta-Carboline,” E. M. Weerts, B. J. Kaminski, W. Yin, P.V.V.S. Sarma and J. M. Cook, College on Problems of Drug Dependence, June 19-25, Orlando, FL (2005).
- kkkkkkkkkkkkkkk. “Neurochemical and Behavioral Effects of Novel 8-Acetylenyl Analogs of Triazolam,” S. Licata, D. M. Platt, J. M. Cook, H. Zhou, P.V.V.S. Sarma, R. Fürtmueller, W. Sieghart, S. Huck and J. K. Rowlett, 2005 Neuroscience Meeting, November 12-17, Washington, DC (2005).
- lllllllllllllll. “General Approach to the Synthesis of Ring-A Alkoxy Substituted Indole Alkaloids via the Asymmetric Pictet-Spengler Reaction,” H. Zhou, X. Liao, J. Ma, A. Wearing and J. M. Cook, The 21<sup>st</sup> Mona Symposium on Natural Products and Medicinal Chemistry, Mona Jamaica, January 3-6 (2006).
- mmmmmmmmmmmmmm. “General Approach to the Synthesis of Ring-A Alkoxy Substituted Indole Alkaloids via the Asymmetric Pictet-Spengler Reaction,” J. M. Cook, H. Zhou, X. Liao, J. Ma, and P.V.V.S. Sarma, Abstracts, 37<sup>th</sup> Great Lakes Regional Meeting of the American Chemical Society, Milwaukee, WI, May 31-June 2, 2006, GLRM-307.
- nnnnnnnnnnnnnnn. “Electronic Effects On the Cis to Trans Epimerization of Pictet-Spengler Produced 1,2,3,4-Tetrahydro- $\beta$ -Carbolines,” M. L. Van Linn, D. Han, H. J. Kumpaty, F. H. Forsterling, J.R. Deschamps, J. M. Cook, Abstracts of Papers, 232<sup>nd</sup> ACS National Meeting, San Francisco, CA, Sept. 10-14, 2006, ORGN-832.
- ooooooooooooooo. “Synthesis of Optically Active Subtype Selective BZR Ligands,” S. Huang, T. Clayton, M. Dai, R. Edwankar, C. Sawant, J. M. Cook, Abstracts of Papers, 232<sup>nd</sup> ACS National Meeting, San Francisco, CA, Sept. 10-14, 2006, MEDI-502.
- ppppppppppppppp. “Search For Benzodiazepine/GABA(A) Subtype Selective Ligands That Reverse Alcohol Self-Administration” M. L. Van Linn, E. Weerts, D. Platt, W. Yin, P.V.V.S. Sarma, J. M.

- Cook, Abstracts, 37<sup>th</sup> Great Lakes Regional Meeting of the American Chemical Society, Milwaukee, WI, May 31-June 2 2006, GLRM-156.
- qqqqqqqqqqqqqq. “The SAR Study of Benzodiazepine Receptor Bivalent Ligands by Low Temperature NMR Spectroscopy and X-Ray Analysis,” S. Huang, T. Clayton, M. Dai, W. Yin, J. Ma, R. Edwankar, C. Sawant, M. Van Linn, Y. Teng, M. Johnson, H. F. Forsterling, and J. M. Cook, Abstracts, 37<sup>th</sup> Great Lakes Regional Meeting of the American Chemical Society, Milwaukee, WI May 31 – June 2, 2006, GLRM-155.
- rrrrrrrrrrrrrr. “Enantiospecific Synthesis of (+)-N<sub>a</sub>-Methyl-pericyclivine, (-)-N<sub>a</sub>-Methylakuammidine, (+)-10-Methoxy-N<sub>a</sub>-Methylpericyclivine and 10-Hydroxy-N<sub>a</sub>-Methylpericyclivine,” P.V.V.S. Sarma, R. V. Edwankar, C. R. Edwankar, S. Huang, J. M. Cook, Abstracts, 37<sup>th</sup> Great Lakes Regional Meeting of the American Chemical Society, Milwaukee, WI May 31-June 2, 2006, GLRM-143.
- ssssssssssssss. “General Approach to the Synthesis of Oxygenated Bisindole Alkaloids,” M. Dai, S. Huang, J. M. Cook, Abstracts, 37<sup>th</sup> Great Lakes Regional Meeting of the American Chemical Society, Milwaukee, WI, May 31-June 2, 2006, GLRM-142.
- tttttttttttttt. “General Approach Towards the Total Synthesis of 9-Methoxy Indole Alkaloids: 9-Methoxygeissoschizol, 9-Methoxy-N<sub>b</sub>-Methyl-geissoschizol and the Opioid Analgesic Active Mitragynine,” J. Ma, J. M. Cook, Abstracts, 37<sup>th</sup> Great Lakes Regional Meeting of the American Chemical Society, Milwaukee, WI, May 31-June 2, 2006, GLRM-141.
- uuuuuuuuuuuuuu. “Progress Towards the Total Synthesis of the Opioid Analgesic Indole Alkaloids Mitragynine and 7-Hydroxymitragynine as well as the Antimalarial Bisindole 10-Hydroxysambaresine,” J. Ma, W. Yin, J. M. Cook, Abstracts of Papers, 231<sup>st</sup> ACS National Meeting, Atlanta, GA, March 26-30, 2006, ORGN-174.
- vvvvvvvvvvvvvvv. “General Approach for the Synthesis of 12-Methoxy Substituted Sarpagine Indole Alkaloids Including 12-Methoxy-N<sub>b</sub>-Methyl-voachalotine and Fuschsiaefoline,” H. Zhou, J. M. Cook, Abstracts of Papers, 231<sup>st</sup> ACS National Meeting, Atlanta, GA, March 26-30, 2006, ORGN-173.
- wwwwwwwwwwwwww. “Total Synthesis of Antileishmanial and Antibacterial Alkaloids (+)-N<sub>a</sub>-Methylpericyclivine and (-)-N<sub>a</sub>-Methylakuammidine as well as the Ring A-Oxygenated Natural Products, (+)-10-Methoxy N<sub>a</sub>-Methylpericyclivine and 10-Hydroxy N<sub>a</sub>-Methylpericyclivine,” P.V.V.S. Sarma, J. M. Cook, Abstracts of Papers, 231<sup>st</sup> ACS National Meeting, Atlanta, GA, March 26-30, 2006, ORGN-172.
- xxxxxxxxxxxxxxxx. “Modulation of Alcohol-heightened Aggression in Mice by  $\alpha$ -5-Containing GABA(A) Receptors,” S. Faccidomo, J. G. Maggin, S. Melief, T. Clayton, J. M. Cook, K. A. Miczek, Society for Neuroscience, October, 2006, Atlanta, GA.
- yyyyyyyyyyyyyyyy. “Differential Sedative and Motor Effects of GABA(A) Subtype Selective Compounds in Rhesus Monkeys,” A. Duke, D. Platt, S. Licatta, R. Edwankar, S. Huang, J. M. Cook, R. Furtmueller, W. Sieghart, and J. K. Rowlett, Society for Neuroscience, October, 2006, Atlanta, GA.
- zzzzzzzzzzzzzzz. “Attenuation of Motor and Sedative-like Effects of Alparzolam by Flumazenil and BCCt in Rhesus Monkeys,” A. Duke, D. M. Platt, J. M. Cook, W. Yin and J. K. Rowlett, CPDD 68<sup>th</sup> Annual Meeting, June 17-22, 2006, Scottsdale, AZ.
- aaaaaaaaaaaaaaaa. “Synthesis, Pharmacological Studies, and Molecular Modeling of Novel 1,3-Diazipinium Chlorides,” J. A. Grant, Y. A. Jackson, M. Gossel-Williams, T. Clayton, J. M. Cook, Latest Trends in Organic Synthesis, Brock University, St.Catherines, Ontario, CA, 2006.
- bbbbbbbbbbbbbbbb. “General Approach to the Synthesis of Indole Alkaloids via the Asymmetric Pictet-Spengler Reaction,” J.M. Cook, (**Plenary Lecture**.) presented at the New Horizons in Catalysis (Synthetic Heterocyclic Chemistry), at the Palau de Congressos de Catalunya, Barcelona, April 12-13 (2007).

- cccccccccccccccc. “Synthesis of Subtype Selective Ligands for Alpha -5 Containing GABA (A) / Bz Receptors to Treat Memory Deficits,” T. Clayton, M.Ernst, L. Richter, S. Sankar, T. Delorey, W. Sieghart, R. Furtmüller, G. Ecker, and J.M. Cook, 233<sup>rd</sup> ACS National Meeting, March 25-29, Chicago, Ill., 2007, MED - 299.
- dddddddddddddddd. “Design and Synthesis of Stereoisomeric Benzodiazepine Receptor Ligands,” S.Huang, M. Savic, R. Furtmüller, A.Duke, T.Clayton, W. Sieghart, J.K. Rowlett and J.M. Cook, 233<sup>rd</sup> ACS National Meeting, March 25-29, Chicago, Ill., 2007, MED – 302.
- eeeeeeeeeeeeeeee. “Epimerization Kinetics of Electronically Altered 1-Phenyl-1,2,3,4 – Tetrahydro  $\beta$ -carbolines,” M. Van Linn, F.H. Forsterling, H.J. Kumpathy, J. Deschamps and J.M. Cook, 233<sup>rd</sup> ACS National Meeting, March 25-29, Chicago, Ill., 2007, Org-86.
- ffffffffffffffff. “Progress Toward the Total Synthesis of the Bisindole Alkaloid Angusticaline: Emphasis on the Northern Hemisphere as well as the Total Synthesis of Other Monomeric Indole Alkaloids,” C.R. Edwanker, R. Edwanker and J.M. Cook, 233<sup>rd</sup> ACS National Meeting, March 25-29, Chicago, Ill., 2007 ORG-418.
- gggggggggggggggg. “The First Enantiospecific Total Synthesis of the Important Biogenetic Intermediates, (+) - Polynuridine and (+)-Polynuridine Aldehyde, as well as 16-epi-Vellosimine and Macusine A,” W. Yin, J. Ma, J.M. Cook, Abstracts of Papers, 233<sup>rd</sup> ACS National Meeting, Chicago, IL, United States, March 25-29, 2007.
- hhhhhhhhhhhhhhhh. “GABA-A/alpha 5 Receptor Mechanisms in the Discriminative Stimulus Effects of GABA-A Modulators” D. Platt, M. Van Linn, T. Clayton, J.M. Cook, J. Rowlett, 69<sup>th</sup> Annual Meeting of the College on Problems of Drug Dependence, June 16-21, Hilton, Quebec, Canada, Poster Session III (2007).
- iiiiiiiiiiiiiiii. “Differential Antagonism of the Sedative and Motor Effects of Zolpidem and Alprazolam by BCCt,” A.N. Duke, D.M. Platt, J.M. Cook, M. Van Linn, J. Rowlett, 69<sup>th</sup> Annual Meeting of the College on Problems of Drug Dependence, June 16-21, Hilton, Quebec, Canada (2007).
- jjjjjjjjjjjjjjjj. “General Approach to the Synthesis of Alkoxy Substituted Indole Alkaloids,” J.M. Cook, Scientific Update Meeting, August 28-31, San Diego, CA (2007), (**Plenary Lecture**.)
- kkkkkkkkkkkkkkkk. “Linear Free Energy Relationship of the cis to trans Epimerization of Substituted 1-Phenyl-1,2,3,4-Tetrahydro- $\beta$ -Carbolines,” M.L. Van Linn, F.H. Forsterling, M.P. Ver Haag, J.R. Deschamps, J.M. Cook, Abstracts of Papers, 234<sup>th</sup> ACS National Meeting, Boston, MA, United States, August 19-23, 2007.
- llllllllllllllll. “Serendipity Rediscovered - An Oxymoron or Rational Drug Design: Studies on Subtype Selective BzR/GABAergic Ligands,” J.M. Cook, H. June, E. Weerts, M.L. Van Linn, D. Platt, T. DeLorey, M. Savic, T. Clayton, Abstracts of Papers, 234<sup>th</sup> ACS National Meeting, Boston, MA, United States, August 19-23, 2007 (**Plenary Lecture**.)
- mmmmmmmmmmmmmm. “Activity of Phenoxystyrene and Stilbene Analogs Against Clinically Important Gram-positive Bacteria,” K. Engelbrecht, M.S. Kabir, J.M. Cook, A. Monte, M. Rott, W.R. Schwan, Abstracts of Papers, 47<sup>th</sup> Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Chicago, IL, September 17-21, 2007.
- nnnnnnnnnnnnnnnn. “Antibacterial Activity of (E)-3-Methoxy-5-Hydroxy-Stilbene and Analogs Against Clinically Significant Gram/positive Bacteria,” E. Kathleen, M.S. Kabir, J.M. Cook, A. Monte, M. Rott, W.R. Schwan, Abstracts of Papers, North Central Branch Meeting of the American Society for Microbiology, Marshfield, WI, October 5, 2007.
- oooooooooooooooo. “Role of GABA(A) Receptors in Diazepam-induced Attenuation of the Anxiogenic Effects of Acute Citalopram Treatment in BALB/c Mice,” M. Birkett, A. Duke, J. Meyer, J.M. Cook, S. Huang, M. Van Linn, J.K. Rowlett, Society for Neuroscience, November, San Diego, CA (2007).

pppppppppppppppppp. “Differential Precipitated Withdrawal by Flumazenil and BCCT Following Chronic Alprazolam Administration,” A.N. Duke, D. Platt, M. Van Linn, P.V.V.S. Sarma, J.M. Cook, J.K. Rowlett, Society for Neuroscience, November, San Diego, CA (2007).

qqqqqqqqqqqqqqqqqq. “Antagonism of the Reinforcing Effects of Triazolam by Selective Antagonists in Rhesus Monkeys,” K.M. Bano, D.M. Platt, J.M. Cook, M.L. Van Linn, J.K. Rowlett, Society for Neuroscience, November, San Diego, CA (2007).

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