

CURRICULUM VITAE - CHARLES F. BEAM, JR.

EDUCATION: *COLLEGE:* The City College of the City University of New York, 1958-63, B.S. Major: Chemistry. *GRADUATE SCHOOL:* University of Maryland, College Park, 1963-68, Ph.D. Major: Organic Chemistry; Minors: Physical and Inorganic Chemistry. Research Mentor: Dr. William J. Bailey. *POSTDOCTORAL:* Duke University, 1968-71. Research Mentor: Dr. Charles R. Hauser. Lehigh University, 1971-72. Research Mentor: Dr. Ned D. Heindel.

EMPLOYMENT: *College of Charleston* [1982-present], Department of Chemistry and Biochemistry, Charleston, SC 29424: Associate Professor, 1982-88; Professor, since 1988; Interim Chairman, 12/89-8/90; Chairman. 8/16/92-8/15/95; Tel., (843) 953-8099. *Medical University of South Carolina*, Charleston, SC 29425: Department of Pharmaceutical Sciences, Adjunct Professor, 1989-2005. *Newberry College* [1972-82], Department of Chemistry, Newberry, SC 29106: Assistant Professor, 1972-75; Associate Professor, 1975-82; Professor, 1982; Director of Scientific Research, 1974-82; Title III Coordinator, 1976-82.

RESEARCH EXPERIENCE: *Established Research Program:* Strong-base syntheses with multiple anions; new monomer and polymer syntheses; heterocyclic syntheses with isatoic anhydrides, substituted hydrazines, and acetylene esters; other syntheses. *College Faculty Appointments:* directed research activities of 125 [86 from Coll. Chas., includes 3 recent high school students] + 6 collaborative students (mostly undergraduate) + 2 with publishable projects from regular course follow ups since 1972, supported primarily from extramural grant funding [Newberry College, *ca.*, \$110,000; \$ 19,910 transferred to the College of Charleston][College of Charleston, *ca.* \$759,475, which includes \$19,910 transferred from Newberry College] and some internal funding [Newberry College, \$3,200 and College of Charleston, \$ 63,700]. Postdoctoral-4 years (Duke University, 3 yrs.; Lehigh University, 1 yr.). Recent Collaborators: Jason S. Overby – NSF grant and Clyde R. Metz - X-ray crystal anal. [this department]; William T. Pennington, Clemson Univ. - X-ray crystal structure; N. D. Camper, Clemson Univ., USDA grant; Dennis W. Smith, Clemson Univ., NASA-EPISCoR grant; Ibraheem T. Badejo, industry.

TEACHING EXPERIENCE: Courses instructed, *College of Charleston*, 1982-present: General Chemistry, Organic Chemistry, Advanced Organic Chemistry, Synthesis and Characterization, Organic Polymer Chemistry, Heterocyclic Chemistry, Research, Bachelor's Essay, and Chemistry Seminar. *Newberry College*, 1972-82: Every course in undergraduate chemistry curriculum except Advanced Inorganic Chemistry.

PROFESSIONAL ACKNOWLEDGMENTS: Distinguished Research Award, College of Charleston, **1990**. Elected to membership in the Honor Society of Phi Kappa Phi, College of Charleston Chapter, **1991**. South Carolina Section of the American Chemical Society, Outstanding South Carolina Academic Chemist of the Year, **2000**. School of Sciences and Mathematics, College of Charleston, Outstanding Achievement Award [citing undergraduate research], **2000**. The Governor's Award for Excellence in Science for Outstanding Achievements in Science Awareness [citing undergraduate research], **2003**. American Chemical Society Award for Research at an Undergraduate Institution, sponsored by the Research Corporation, **2006**.

ADMINISTRATIVE EXPERIENCE: *College of Charleston:* Department Chairman, 1989-1990, 1992-1995. Coordinator, Undergraduate Program for Southeast Regional Meeting of the American Chemical Society, Charleston, SC, November 13-16, 2002. Overall Program Chairman for Annual Meeting, South Carolina Academy of Science (SCAS), held at the College of Charleston in 1984; Council Member, South Carolina Academy of Science, 1982-87; President Elect, SCAS, 1983; President, SCAS, 1984; Immediate Past President, SCAS, 1985; Past President, SCAS, 1986; Chairman, statewide committee, SCAS, selection of secondary school outstanding science or math teacher, 1984, 1986-90; Consultant, Limestone College, 1983 and 1985, Evaluation of Title III Programs funded by the Department of Education; Chemistry Research Grants, total, \$759,475 (NSF, USDA, NASA, PRF, Project SEED, Heart Assoc., Res. Corp., Dow-Elanco, Food Machinery Chemical Corporation, Coll. of Chas. Res. and Develop. Committee, Summer Undergraduate Research Forum (SURF), Howard Hughes Medical Intitute.and Academic Affairs Office); collegewide external committee for tenure and promotion, 1988; faculty senate, 1999-2003. *Newberry College:* Director of Scientific Research, 1974-82; Administrative Council, 1973-82; Title III Coordinator, 1976-82 (Programs for low income, minority, and underprepared students), grants total, \$1,717,800; Chemistry Research Grants, total, \$109,510; Consultant, Minority Biomedical Research Program, Voorhees College, 1981-84; Chairman, statewide committee, South Carolina Academy of Science, selection of outstanding secondary school science or math teacher-yearly activity, 1980-82.

OTHER PROFESSIONAL ACTIVITIES: *Professional Organizations:* American Chemical Society (ACS), Member; American Institute of Chemists (AIC), Fellow, also elected to Board of Directors, 3 year term, 2002-2005; South Carolina Academy of Science (SCAS), Life Member; Council on Undergraduate Research - Member and Institutional Liaison; Sigma Xi; Chi Beta Phi, 1973, Honorary Member; Blue Key National Honorary, 1975. Additional Items: Juror: American Chemical Society Award for Research at an Undergraduate Institution, **1993-95** and American Institute of Chemists, Chemical Pioneers, Selection Committee, **1997**, chairman, Education Committee, **2002**; Certification Commission member. Referee for: J. Org. Chem. (2-3/yr.); Synth. Commun. (occasionally); Indust. & Eng. Chem. Res. (occasionally); others (occasionally); research proposal reviewer, NSF (1-2/yr.), PRF (1-2/yr); others (s.g., USDA)(occasionally). Collegewide, Judicial Board, 1990-91; Faculty Senate, 1999-2003.

OTHER INFORMATION: Born, 9/24/40 in New York City; Married (Sallie, Nurse Anesthetist, R. N., and C. R. N. A.), two children (Paul, John); Home Address: 898 Farm Quarter Road, Mount Pleasant, SC 29424; Tel., (843) 884-2794. Listings: *Who's Who in Science and Engineering, 1st and 2nd.*; *Who's Who in Technology Today*, 1981-82; *Outstanding Young Men in America*, 1976; *Outstanding Educators of America*, 1974, 1976. [Recent] *Who's Who in the World*, 16th and earlier editions. Civic: South Carolina Heart Association, Administrative President for Newberry County Fund Drive, 1980.

JOURNAL ARTICLES: {*UNDERGRADUATE RESEARCH STUDENT COAUTHORS;
† high school students}

94. Smith*, Ellyn A.; Hess*, Sloan M.; McFadden*, Thomas M. C.; Redpath*, L. Elizabeth, Metz, Clyde R.; Pennington, William T.; VanDerveer, Donald G.; Beam, Charles F. Preparation of 3-Aryl-2-(phenylamino)isoquinolin-1(2*H*)-ones from polythiated 2-Methylbenzoic Acid Phenylhydrazide and Aromatic Esters, manuscript in preparation for *Synthetic Communications* in **2009**.

93. Smith*, Ellyn A.; Potter*, Chandra; Kennedy*, Zachary C.; Puciaty*, Andrew J.; Acevedo-Jake*, Amanda M.; Hersey*, Stephen D.; Metz, Clyde R.; Pennington, William T.; VanDerveer, Donald G.; Beam, Charles F. Preparation of 5-Phenyl-1*H*-pyrazole-3-acetanilides from Trilithiated Acetoacetanilide, Select Benzoate Esters, and Hydrazine, *Journal of Heterocyclic Chemistry*, online in November **2009**.

Kennedy*, Zachary C.; 92. Dawsey*, Anna C.; Potter*, Chandra; Knight*, John D.; Kennedy*, Zachary C.; Smith*, Ellyn A.; Acevedo-Jake*, Amanda M.; Puciaty*, Andrew J.; Metz, Clyde R.; Pennington, William T.; VanDerveer, Donald G.; Beam, Charles F. Preparation of 2*H*-spiro[Benzo[*d*]isothiazole-3,3'-pyrazole]-1,1-dioxide-2'(4'*H*)-carboxylates from Dilithiated C(α),*N*-Carboalkoxyhydrazones and Methyl 2-(Aminosulfonyl)benzoate, *Journal of Heterocyclic Chemistry*, **2009**, 46, 231.

91. Potter*, Chandra; Acevedo-Jake*, Amanda M.; Rhoden*, Amy M.; Metz, Clyde R.; Pennington, William T.; VanDerveer, Donald G.; Beam, Charles F. The synthesis and crystal structure determination of phenyl 2-(3,4-dihydro-1(2*H*)naphthalenylidene)hydrazinecarboxylate and phenyl (2,4-dichloro-phenylmethylene)hydrazinecarboxylate, *Journal of Chemical Crystallography*, online in November **2009**.

90. Metz, Clyde R.; Knight*, John D.; Pastine*, Stefan J.; Pennington, William T.; Beam, Charles F. Synthesis and crystal structure determination of 3-phenyl-2-(2-phenylhydrazino)-4*H*-1-benzothiopyran-4-one, *Journal of Chemical Crystallography*, online in November **2009**.

89. Metz, Clyde R.; Knight*, John D.; Dawsey*, Anna C.; Pennington, William T.; VanDerveer, Donald G.; Brown*, Jordan B.; Bigham*, Kevin J.; Beam, Charles F. Synthesis and crystal structure determination of methyl 2-acetyl-5'-(2-thienyl-2*H*-spiro[benzo[*d*]isothiazole-3,3'-pyrazole]-1,1-dioxide-2'(4'*H*)-carboxylate and methyl 2-acetyl-5'-phenyl-2*H*-spiro[benzo[*d*]isothiazole-3,3'-pyrazole]-1,1-dioxide-2'(4'*H*)-carboxylate, *Journal of Chemical Crystallography*, published online 27 October **2009**.

88. Dawsey*, Anna C.; Knight*, John D.; Beam Charles F.; Camper, N. Dwight Preparation of 2-[1-Phenyl-1*H*-pyrazol-5-yl]benzoic Acids from Dilithiated C(α),*N*-Phenylhydrazones and Methyl Hydrogen Phthalate, *Synthetic Communications*, **2008**, 38, 4150-4159.

87. Knight*, John D.; Weddle*, Derrik L., II; McLaughlin*, Julianne; Straumanis, Andrei; Beam, Charles F. Characterization of new and some known organic compounds: phenyl carbazate and its transformation into hydrazones, *Chemical Educator*, **2009**, 14, 4.

86. Knight*, John D.; Metz, Clyde R.; Beam, Charles F.; Pennington, William T.; VanDerveer, Donald G. New Strong Base Synthesis of Symmetrical 1,5-Diaryl-1,3,5-pentanetriones from

Acetone and Benzoate Esters. *Synthetic Communications* **2008**, *38*, 2465-2482.

85. Choi*, Emily; Knight*, John D.; Malatanos*, Maria D.; Rhett*, J. Matthew; Walters*, Matthew J.; Dunn*, S. Patrick; Beam, Charles F. Preparation of 4,5-dihydronaphth[2,1-c]isoxazoles from dilithiated 2-tetralone oxime and select esters. *Synthetic Communications* **2008**, *38*, 713-722.

84. Knight*, John D.; Brown*, Jordan B.; Overby, Jason S.; Beam, Charles F.; Camper, N. Dwight. Preparation of 2-(1H-pyrazol-5-yl)benzenesulfonamides from polyolithiated C(α), N-carbo-tert-butoxyhydrazones and methyl 2-(aminosulfonyl)benzoate. *Journal of Heterocyclic Chemistry* **2008**, *45*, 189-194.

83. Knight*, John D.; Kramp*, Catherine R.; Hilton*, Ebony J.; Vella*, Jarrett H.; Grant*, Bonnie J.; Hajiaghamseni*, Laela M.; Meierhoefer*, Michelle A.; Dunn*, S. Patrick; Walters*, Matthew J.; Overby, Jason S.; Metz, Clyde R.; Pennington, William T.; VanDerveer, Donald G.; Beam, Charles F. Synthesis of NH₂H-4,5-Dihydrobenz[g]indazoles and Related Compounds from 1-Tetralone Carbomethoxyhydrazones and Aromatic Esters. *Industrial & Engineering Chemistry Research* **2007**, *46*, 8959-8967.

82. Grant*, Bonnie J.; Kramp*, Catherine R.; Knight*, John D.; Meierhoefer*, Michelle A.; Vella*, Jarrett H.; Sober*, Carolyn L.; Jones, Stephen S.; Metz, Clyde R.; Beam, Charles F.; Pennington, William T.; VanDerveer, Donald G.; Camper, N. Dwight. Preparation of spiro[Benzo-isothiazole-isoxazole]dioxides from dilithiated C(α),O-oximes and methyl 2-(aminosulfonyl)-benzoate. *Journal of Heterocyclic Chemistry* **2007**, *44*, 627-632.

81. Vella*, Jarrett H.; Patel*, Nidhi S.; Meierhoefer*, Michelle A.; Hilton*, Ebony J.; Sober*, Carolyn L.; Grant*, Bonnie J.; Kramp*, Catherine R.; Knight*, John D.; Metz, Clyde R.; Beam, Charles F.; Pennington, William T.; VanDerveer, Donald G. The preparation of 3,3a,4,5-tetrahydronaphth[1,2-c]isoxazoles from dilithiated 1-tetralone oxime and select aromatic aldehydes. *Journal of Heterocyclic Chemistry* **2006**, *43*, 315-319.

80. Meierhoefer*, Michelle A.; Walters*, Matthew J.; Dunn*, S. Patrick; Vella*, Jarrett H.; Grant*, Bonnie J.; Sober*, Carolyn L.; Patel*, Nidhi S.; Hajiaghamseni*, Laela M.; Lioi*, Sara B.; Metz, Clyde R.; Beam, Charles F.; Pennington, William T.; VanDerveer, Donald G.; Camper, N. Dwight. The preparation of 3-substituted 1,2-benzisothiazole 1,2-dioxides from the condensation-cyclization of dilithiated β -ketoesters with methyl 2-(aminosulfonyl)benzoate or 1,2-benzisothiazol-3(2H)-one 1,1-dioxide. *Journal of Heterocyclic Chemistry* **2006**, *43*, 307-313.

79. Meierhoefer*, Michelle A.; Dunn*, S. Patrick; Hajiaghamseni*, Laela M.; Walters*, Matthew J.; Embree*, Mildred C.; Grant*, Sally P.; Downs*, Jennifer R.; Townsend*, Jessica D.; Metz, Clyde R.; Beam, Charles F.; Pennington, William T.; VanDerveer, Donald G.; Camper, N. Dwight. Preparation of 2-(1-phenyl-1H-pyrazol-5-yl)benzenesulfonamides from polyolithiated C(α),N-phenylhydrazones and methyl 2-(aminosulfonyl)benzoate. *Journal of Heterocyclic Chemistry* **2005**, *42*, 1095-1099.

78. Dunn*, S. Patrick; Walters*, Matthew J.; Metz, Clyde R.; Beam, Charles F.; Pennington, William T.; Krawiec, Mariusz. The preparation of benzoisothiazolo[1,2-b][1,2]isoquinolin-11-one-1,1-dioxides from dilithiated *ortho*-toluic acids and lithiated methyl 2-(aminosulfonyl)-benzoate. *Journal of Heterocyclic Chemistry* **2004**, *41*, 1005-1009.
77. Downs*, Jennifer R.; Grant*, Sally P.; Townsend*, Jessica D.; Schady*, Deborah A.; Pastine*, Stefan J.; Embree*, Mildred C.; Metz, Clyde R.; Pennington, William T.; Walsch, Rosa D. Bailey; Beam, Charles F. Preparation of 4-anilino-6-aryl-2H-pyran-2-ones from trilithiated acetoacet-anilides and aromatic esters. *Canadian Journal of Chemistry* **2004**, *82*, 659-664.
76. Dunn*, S. Patrick; Hajiaghamseni*, Laela M.; Lioi*, Sara B.; Meierhoefer*, Michelle A.; Walters*, Matthew J.; Beam, Charles F. The preparation of 3-substituted 1,2-benz-isothiazole 1,1-dioxides from lithiated intermediates or Grignard reagents and methyl 2-(aminosulfonyl)-benzoate. *Journal of Heterocyclic Chemistry* **2004**, *41*, 295-298.
75. Walters*, Matthew J.; Dunn*, S. Patrick; Choi*, Emily; D'Elia†, Amanda N.; Warner†, Morgan E.; Beam, Charles F. The preparation of 5-aryl-5-methyl-4,5-dihydroisoxazoles from dilithiated C(α),O-oximes and select acetyl ketones. *Synthetic Communications* **2003**, *33*, 4163-4171.
74. Grant*, Sally P.; Embree*, Mildred C.; Downs*, Jennifer R.; Townsend*, Jessica D.; Beam, Charles F. Preparation of Alkyl 4,5-Dihydro-2H-benz[g]indazole-2-carboxylates and Methyl 4,5-Dihydro-2H-benz[e]indazole-2-carboxylates from Dilithiated 1-Tetralone or 2-Tetralone Carboalkoxyhydrazones and Aromatic Esters. *Industrial & Engineering Chemistry Research* **2003**, *42*, 5721-5726.
73. Downs*, Jennifer R.; Pastine*, Stefan J.; Townsend*, Jessica D.; Greer*, Heather A.; Kelley*, Wayne, Jr.; Schady*, Deborah A.; McConaughy*, Teresa Lentz; Metz, Clyde R.; Beam, Charles F.; Almquist*, Catharine D.; Pennington, William T.; Walsch, Rosa D. Bailey. Preparation of substituted 1,2-dihydro-3H-pyrazol-3-ones from polyolithiated 2'-phenylphenylacetohydrazides and aromatic esters. *Journal of Heterocyclic Chemistry* **2001**, *38*, 695-701.
72. Downs*, Jennifer R.; Pastine*, Stefan J.; Schady*, Deborah A.; Greer*, Heather A.; Kelley*, Wayne, Jr.; Embree*, Mildred C.; Townsend*, Jessica D.; Beam, Charles F. Preparation of 1H-pyrazole-5-carboxamides from dilithiated C(α),N-phenylhydrazones and lithiated ethyl oxanilates or lithiated ethyl oxamate. *Journal of Heterocyclic Chemistry* **2001**, *38*, 691-694.
71. Pastine*, Stefan J.; Kelley*, Wayne, Jr.; Bear*, Jennifer J.; Templeton*, J. Nathan, III; Beam, Charles F. The preparation of 3-(2-phenylethenyl)-1H-pyrazoles from dilithiated (3E)-4-phenyl-3-buten-2-one hydrazones. *Synthetic Communications* **2001**, *31*, 539-548.
70. Grant*, S. P.; Hurst*, D. R.; Cordray*, T. L.; Beam, C. F. Preparation of 2-phenyl-4-(1H-pyrazol-5-yl)quinolines. *Organic Preparations and Procedures International* **2001**, *33*, 91-95.

69. Beam, Charles F.; Schady*, Deborah A.; Rose*, Kelly L.; Kelley*, Wayne, Jr.; Rakkhit*, Ronjay; Hornsby*, Christopher D.; Studer-Martinez, Shannon L. Preparation of 4,5-dihydro-3-aryl-naphth[1,2-c]isoxazoles from dilithiated 1-tetralone oxime and aromatic esters. *Synthetic Communications* **2000**, *30*, 3391-3404.
68. Townsend*, Jessica D.; Kelley*, Wayne, Jr.; Rose*, Kelly L.; Schady*, Deborah A.; Downs*, Jennifer R.; Greer*, Heather A.; Pastine*, Stefan J.; Beam, Charles F. The preparation of 4,5-dihydro-5-phenyl-5-(2-phenylethenyl)isoxazoles, 4,5-dihydro-5-methyl-5-(2-phenylethenyl)isoxazoles, or 4,5-dihydro-5,5-Di-(2-phenylethenyl)isoxazoles from dilithiated C(α), O-oximes and select α,β -unsaturated ketones. *Synthetic Communications* **2000**, *30*, 2175-2189.
67. Townsend*, Jessica D.; Williams*, Angela R.; Angel*, April J.; Finefrock*, Anne E.; Beam, Charles F. Preparation of benz[b]indeno[1,2-e]pyran-11(6H)-ones and benz[b]indeno[1,2-e]-thiopyran-11(6H)-one from dilithiated 2-indanone and lithiated methyl salicylates or lithiated methyl thiosalicylate. *Synthetic Communications* **2000**, *30*, 689-699.
66. Angel*, April J.; Finefrock*, Anne E.; Williams*, Angela R.; Townsend*, Jessica D.; Nguyen*, Thuy-Ha V.; Hurst*, Douglas R.; Heldrich, Frederick J.; Beam, Charles F.; Badejo, Ibraheem T. The preparation of 4,5-dihydro-2H-benz[e]indazoles from dilithiated 2-tetralone phenylhydrazone and aromatic esters. *Journal of Heterocyclic Chemistry* **1999**, *36*, 1231-1233.
65. Alexander, Christopher W.; Asleson, Gary L.; Beam, Charles F.; Doig, Marion T.; Heldrich, Frederick J.; Studer-Martinez, Shannon. Gradualism: a method for primary instruction on spectroscopic analysis in introductory organic chemistry. *Journal of Chemical Education* **1999**, *76*, 1297-1298.
64. Rampey*, Mary E.; Halkyard*, Carrie E.; Williams*, Angela R.; Angel*, April J.; Hurst*, Douglas R.; Townsend*, Jessica D.; Finefrock*, Anne E.; Beam, Charles F.; Studer-Martinez, Shannon L. A new series of proton/charge transfer molecules: synthesis and spectral studies of 2-(5-aryl-1-carbomethoxy-1H-pyrazol-3-yl)phenols. *Photochemistry and Photobiology* **1999**, *70*, 176-183.
63. Williams*, Angela R.; Angel*, April J.; French*, Kristen L.; Hurst*, Douglas R.; Beckman*, Darrell D.; Beam, Charles F. Preparation of 2-(4,5-dihydro-3-aryl-5-isoxazolyl)phenols from C(α),O-dilithiooximes and lithiated hydroxyaryl aldehydes. *Synthetic Communications* **1999**, *29*, 1977-1988.
62. Angel*, April J.; Finefrock*, Anne E.; French*, Kristen L.; Hurst*, Douglas R.; Williams*, Angela R.; Rampey*, Mary E.; Studer-Martinez, Shannon L.; Beam, Charles F. Preparation of N-aryl-4-oxo-4H-1-benzothiopyran-2-acetamides from trilithiated acetoacetanilides and lithiated methyl thiosalicylate. *Canadian Journal of Chemistry* **1999**, *77*, 94-97.
61. Rampey*, Mary E.; Hurst*, Douglas R.; Sood†, Aseem; Studer-Martinez, Shannon L.; Beam, Charles F. The preparation of 2-(1-phenyl-5-phenyl or 5-substituted phenyl-1H-pyrazol-3-yl)phenols from trilithiated 2'-hydroxyacetophenone phenylhydrazone and aromatic esters.

Synthetic Communications **1999**, 29, 495-506.

60. Hurst*, Douglas R.; French*, Kristen L.; Angel*, April J.; Williams*, Angela R.; Rampey*, Mary E.; Guion*, Tina S.; Chan*, Kam W.; Kassis*, Camille M.; Martinez, Shannon L. Studer; Beam, Charles F. The preparation of 4-oxo-N-aryl-4H-1-benzopyran-2-acetamides by the condensation/cyclization of trithiated acetoacetanilides with lithiated methyl salicylates. *Journal of Heterocyclic Chemistry* **1998**, 35, 1357-1359.

59. Angel*, April J.; Hurst*, Douglas R.; Williams*, Angela R.; French*, Kristen L.; Beam, Charles F. The preparation of 2-(4-oxo-4H-1-benzopyran-2-yl)-1-phenyl ethanones by the condensation/cyclization of dilithiated 1-benzoylacetone with lithiated methyl salicylates. *Synthetic Communications* **1998**, 28, 1547-1554.

58. French*, Kristen L.; Angel*, April J.; Williams*, Angela R.; Hurst*, Douglas R.; Beam, Charles F. A new preparation of substituted 4H-1-benzothiopyran-4-ones from C(α)-N-benzoylhydrazones or C(α),N-carboalkoxyhydrazones and methyl thiosalicylate. *Journal of Heterocyclic Chemistry* **1998**, 35, 45-48.

57. Beam, Charles F.; Davis*, Sharon E.; Cordray*, Tracy L.; Chan*, Kam W.; Kassis*, Camille M.; Davis*, Joanna G. Freeman; Latham*, G. Mark; Guion*, Tina S.; Hildebran*, Karen C.; Church*, A. Cameron; Koller*, Madlene U.; Metz, Clyde R.; Pennington, William T.; Schey, Kevin L. Preparation of N-(1H-pyrazol-3-yl)arylamides and 1H-pyrazol-3-amines from polyolithiated C(α),N-thiosemicarbazones and C(α),N-semicarbazones. *Journal of Heterocyclic Chemistry* **1997**, 34, 1549-1554.

56. Davis*, Sharon E.; Church*, A. Cameron; Tummons*, Rebecca C.; Beam, Charles F.. Preparation of 3-substituted 4-hydroxy-2H-1-benzopyran-2-ones and 4-hydroxy-2H-1-benzothiopyran-2-ones from carboxylic esters and methyl salicylates or methyl thiosalicylate. *Journal of Heterocyclic Chemistry* **1997**, 34, 1159-1162.

55. Davis*, Sharon E.; Church*, A. Cameron; Griffith*, Cynthia L.; Beam, Charles F.. Preparation of substituted 1(2H)-isoquinolinones from dilithiated 2-methyl-N-arylbenzamides, 2-methyl-N(arylmethyl)benzamides, or 2-methylbenzoic acid 2,2-dimethylhydrazide. *Synthetic Communications* **1997**, 27(17), 2961-2969.

53. Davis*, Sharon E.; Church*, A. Cameron; Scott*, Ashley S.; Throckmorton*, Helen L.; Studer-Martinez, Shannon L.; Beam, Charles F. The preparation of (5-aryl-3-isoxazolyl)-ferrocenes from dilithiated acetylferrocene oxime and aromatic esters. *Journal of Organometallic Chemistry* **1997**, 533, 125-129.

52. Church*, A. Cameron; Koller*, Madlene U.; Hines*, Margaret A.; Beam, Charles F.. The preparation of 1H-pyrazole-1-carboxylic acid, 1,1-dimethylethyl esters from dilithiated C(α),N-hydrazones of hydrazinecarboxylic acid, 1,1-dimethylethyl ester. *Synthetic Communications* **1996**, 26, 3659-3669.

51. Church*, A. Cameron; Koller*, Madlene U.; O'Grady*, Sheila A.; Beam, Charles F. The

preparation of 1H-pyrazole-5-propanoic and 1H-pyrazole-5-butanoic acids from C(α), N-dilithiated N-carboalkoxyhydrazones and succinic or glutaric acid anhydrides. *Synthetic Communications* **1996**, *26*, 2603-2611.

50. Koller*, Madlene U.; Church*, A. Cameron; Griffith*, Cynthia L.; Hines*, Margaret A.; Lachicotte*, Rene J.; Taylor*, Richard A.; Beam, Charles F. The preparation of substituted 1(2H)-isoquinolinones from polyolithiated 2-(2-methylphenyl)hydrazinecarboxylic acid esters. *Synthetic Communications* **1996**, *26*, 1763-74.

49. Guion*, Tina S.; Koller*, Madlene U.; Lachicotte*, Rene J.; Rutledge*, Robin N.; Hildebran*, Karen C.; Le*, Phuong H.; Beam, Charles F. The preparation of 2-(2-oxo-2-phenylethyl)benzoic acids from dilithiated *ortho*-toluic acid. *Synthetic Communications* **1996**, *26*, 1753-62.

48. Koller*, Madlene U.; Peariso*, Katrina L.; Guion*, Tina S.; Martinez, Shannon Studer; Beam, Charles F. The preparation of substituted hydroxyphenylpyridylethanols and α -hydroxyphenyl- α -methylpyridineethanols by the condensation of 2-, 3-, or 4-picolylolithium with select hydroxy-benzaldehydes and 4-hydroxyacetophenone. *Synthetic Communications* **1995**, *25*, 2963-74.

47. Hildebran*, Karen C.; Cordray*, Tracy L.; Chan*, Kam W.; Beam, Charles F. The preparation of substituted 3,4-dihydro-1H-2-benzopyran-1-ones from the dianions of *ortho*-toluic acids. *Synthetic Communications* **1994**, *24*, 779-88.

46. Davis*, Joanna G.; Hines*, Margaret A.; Griffith*, Cynthia L.; Beam, Charles F.. The preparation of 3-substituted-2(1H)-quinoxalinones by the condensation of 3-methyl-2-quinoxalinol dianion with certain electrophilic reagents. *Synthetic Communications* **1993**, *23*, 201-08.

45. Beam, Charles F.; Kadhodayan*, Babak; Taylor*, Richard A.; Heindel, Ned D. Preparation of esters of certain substituted 1,2,3,4-tetrahydro-4-oxo-2-quinazolineacetic acids from isatoic anhydrides, substituted hydrazines, and acetylene diesters. *Synthetic Communications* **1993**, *23*, 237-44.

44. Mazat*, Cynthia L.; Beam, Charles F.; Hines*, Margaret A. The preparation of substituted 5H-pyrazolo[1,5-c][1,3]benzoxazin-5-ones from the trianions of certain (hydroxyphenyl)-carbethoxyhydrazones. *Synthetic Communications* **1990**, *20*, 253-9.

43. Lachicotte*, Rene J.; Hines*, Margaret A.; Mazat*, Cynthia L.; Taylor*, Richard A.; Beam, Charles F. C-acylation of hippurate and related esters utilizing multiple anion intermediates and ethyl 4-aminobenzoate. *Synthetic Communications* **1990**, *20*, 63-9.

42. Beam, Charles F.; Hines*, Margaret A.; Mazat*, Cynthia L.; Duncan*, Dean C.; Beckman*, Darrell D.; Lachicotte*, Rene J.; Tummons*, Rebecca C.; Heindel, Ned D. Preparation of the trianions of acetylacetone and acetoacetanilide and their reactions with selected electrophilic reagents for the synthesis of new heterocyclic compounds and related materials. *Chemistry &*

Industry **1989**, 727-9.

41. Mack*, H. Michael; Davis*, Everette A.; Kadkhodayan*, Babak; Taylor*, Richard A.; Duncan*, Dean C.; Beam, Charles F. The preparation of quinolines and related fused-ring heterocycles from the dianions of benzoylacetone, certain cyclic ketone oximes, or certain substituted hydrazones. *Journal of Heterocyclic Chemistry* **1987**, *24*, 1733-9.
40. Duncan*, Dean C.; Trumbo*, Todd A.; Almquist*, Catharine D.; Lentz*, Teresa A.; Beam, Charles F. The preparation of N-carboalkoxy-pyrazoles and N-phenylpyrazoles from C(α)-dianions of carboalkoxyhydrazones and phenylhydrazones. *Journal of Heterocyclic Chemistry* **1987**, *24*, 555-9.
39. Huff*, Ann M.; Beam, Charles F. The preparation of selected benzopyrano[3,4-b]pyrazoles by the condensation of C(α),N-dilithiocarboalkoxyhydrazones and salicylate esters. *Journal of Heterocyclic Chemistry* **1986**, *23*, 1343-6.
38. Huff*, Ann M.; Hall*, Howard L.; Smith*, Melanie J.; O'Grady*, Sheila A.; Waters*, Frank C.; Fengl*, Richard W.; Welsh*, Jeffery A.; Beam, Charles F. The preparation of phenacyl-pyrazoles, acylpyrazoles, imidazolylisoxazoles, and imidazolylpyrazoles from C(α)-dianions of oximes, phenylhydrazones, and acylhydrazones. *Journal of Heterocyclic Chemistry* **1985**, *22*, 501-4.
37. Beam, Charles F.; Hall, Howard L.; Huff*, Ann M.; Tummons*, Rebecca C.; O'Grady*, Sheila A. The preparation and reactions of C(α),N-dilithiocarboalkoxyhydrazones. *Journal of Heterocyclic Chemistry* **1984**, *21*, 1897-9.
36. Bailey, William J.; Beam, Charles F., Jr.; Cappuccilli, Edmund D.; Haddad, Ibrahim; Volpe, Angelo A. Synthesis of polyspiroketals containing five-, six-, seven-, and eight-membered rings. *ACS Symposium Series* **1982**, *195*, 391-402.
35. Rawalay, Surjan S.; Beam, Charles F. Preparation of new N-[α -(benzylidenamino)-benzyl]-benzamides and N,N'-benzylidenebis(benzamides). *Journal of Chemical and Engineering Data* **1982**, *27*, 475-8.
37. Bailey, William J.; Beam, Jr. Charles F.; Cappuccilli, Edward D.; Haddad, Ibrahim; Volpe, Angelo A. Synthesis of Polyspiroketals Containing Five-, Six-, Seven-, and Eight-Membered Rings, *Amer. Chem. Soc., Symp. Ser.*, **1982**, *195*, 391 [W. J. Bailey, C. F. Beam, and I. Haddad, "New Spiro Polymers Containing Five-, Six-, Seven- and Eight-Membered Cyclic Ketals," *Amer. Chem. Soc., Div. of Polymer Chem., Preprints*, **1971**, *12*, 169].
34. Livingston*, Melanie J.; Chick†, MarLisa F.; Shealy†, Ernest O.; Beam, Charles F. The preparation of 5-phenacylisoxazoles and 5-hydroxyphenylisoxazoles and -pyrazoles by the condensation of C(α)-dianions with ethyl benzoylacetate and methyl salicylate. *Journal of Heterocyclic Chemistry* **1982**, *19*, 215-17.
33. Park*, Dorothy J.; Fulmer*, Tammy D.; Beam, Charles F. Preparation of 2,4-

diarylquinolines and substituted dihydrobenz[c]acridines by the condensation of certain C(α),O-dilithiooximes with 2-aminobenzophenones. *Journal of Heterocyclic Chemistry* **1981**, *18*, 649-51.

32. Fulmer*, Tammy D.; Dasher*, Lisette P.; Bobb†, Bonni L.; Wilson*, Jana D.; Sides†, Kimberly L.; Beam, Charles F. An improved synthesis of 3,5-disubstituted isoxazoles and pyrazoles from C(α),O-dilithiooximes and C(α),N-dilithiophenylhydrazones. *Journal of Heterocyclic Chemistry* **1980**, *17*, 799-800.

31. Wilson*, Jana D.; Fulmer*, Tammy D.; Dasher*, Lisette P.; Beam, Charles F. A new synthesis of 2-pyrazolin-5-ones from the condensation of C(α),N-dilithiophenyl-hydrazones with diethyl carbonate. *Journal of Heterocyclic Chemistry* **1980**, *17*, 389-91.

30. Brown*, Jane; Sides†, Kimberly L.; Fulmer*, Tammy D.; Beam, Charles F. A facile preparation of 4-quinolinols by the condensation of dilithiobenzoylacetone or C(α),O-dilithiooximes with methyl anthranilate or 5-chloroisatoic anhydride. *Journal of Heterocyclic Chemistry* **1979**, *16*, 1669-70.

29. Beam, Charles F.; Brown*, Jane; Dawkins*, Donna R.; Fives, William P.; Heindel, Ned D. A new method for the preparation of 2-carboalkoxy-pyrazolo[5,1-b]quinazolin-9(1H)-ones. *Journal of Heterocyclic Chemistry* **1979**, *16*, 957-60.

28. Beam, Charles F.; Shealy*, Keith D.; Risinger*, Sharon A.; Brown*, Jane; Sides, Kimberly L.; Hanberry*, Candace R.; Pavlakovich*, Kathy P.; Davis*, Steven E. The reactions of lithioacetonitrile and lithiomethoxyacetonitrile with certain ketones. *Canadian Journal of Chemistry* **1978**, *56*, 2572-5.

27. Beam, Charles F.; Brown*, Jane; Hall*, Randall W.; Bernhardt*, F. Christian; Sides†, Kimberly L.; Mack*, Michael H.; Lakatos*, Donald A. Synthesis of monomers and copolymers from isatoic anhydrides. *Journal of Polymer Science, Polymer Chemistry Edition* **1978**, *16*, 2679-81.

26. Davis*, Steven E.; Shealy*, Neal L.; Shealy*, Keith D.; Shaffer*, Lynn M.; Beam, Charles F. Aldol-type condensations of C(α)-dianions of azines. *Canadian Journal of Chemistry* **1978**, *56*, 1236-7.

25. Hall*, Randall W.; Bernhardt*, F. Christian; Beam, Charles F. bis-Isatoic anhydrides. I. The preparation of bis-isatoic anhydrides. *Journal of Heterocyclic Chemistry* **1978**, *15*, 495-6.

24. Beam, Charles F.; Park*, Charles A.; Reames*, David C.; Miller, Scott A.; Hauser, Charles R. Aldol-condensation products from the multiple anions of oximes, benzanilides, a benzamide, and *o*-tolylanilides. *Journal of Chemical and Engineering Data* **1978**, *23*, 183-4.

23. Davis*, Steven E.; Schaffer*, Lynn M.; Shealy*, Neal L.; Shealy*, Keith D.; Beam, Charles F. The preparation and reactions of anions of certain Schiff bases. *Synthetic Communications* **1978**, *7*, 261-8.

22. Beam, Charles F.; Park*, Charles A.; Heindel, Ned D.; Fives, William P. The synthesis of 2-carbomethoxy-2-carbomethoxymethyl-2,3-dihydro-4(1H)-quinazolines. *Journal of Heterocyclic Chemistry* **1977**, *14*, 703-4.
21. Sandifer*, Ronda M.; Beam, Charles F.; Perkins, Matilda; Hauser, Charles R. Silylation at the ortho position of N-methyl and N-phenylbenzamide. *Chemistry & Industry (London, United Kingdom)* **1977**, 231.
20. Beam, Charles F.; Bissell, Robert L.; Hauser, Charles R. Aldol-condensation products from the multiple anions of benzyl acetylacetone. *Chemistry & Industry (London, United Kingdom)* **1976**, 789.
19. Beam, Charles F.; Thomas*, C. Wayne; Sandifer*, Ronda M.; Foote, Robert S.; Hauser, Charles R. Monoalkylation and aldol condensation of ketones via the corresponding hydrazone trianion. *Chemistry & Industry (London, United Kingdom)* **1976**, 487-8.
18. Sandifer*, Ronda M.; Davis*, Steven E.; Beam, Charles F. The preparation of new C(α)-dianions. *Synthetic Communications* **1976**, *6*, 339-47.
17. Park*, Charles A.; Beam, Charles F.; Kaiser, Edwin M.; Kaufman, Robert J.; Henoch, Fred E.; Hauser, Charles R. Preparation of 2-isoxazolines from C(α),O-dilithiooximes and aldehydes and ketones. *Journal of Heterocyclic Chemistry* **1976**, *13*, 449-53.
16. Sandifer*, Ronda M.; Shaffer*, Lynn M.; Hollinger*, Wayne M.; Reames*, David C.; Beam, Charles F. An easy method for the preparation of 4-acylisoxazoles from C(α),O-dianions of oximes. *Journal of Heterocyclic Chemistry* **1976**, *13*, 607-8.
15. Beam, Charles F.; Heindel, Ned D.; Chun, Maria; Stefanski, Anthony. The preparation of heterocyclic materials from 2-isocyanatobenzoyl chloride and difunctional nucleophiles. *Journal of Heterocyclic Chemistry* **1976**, *13*, 421-2.
14. Perkins, Matilda; Beam, Charles F., Jr.; Dyer, Morgan C. D.; Hauser, Charles R. 3-(4-Chlorophenyl)-5-(4-methoxyphenyl)isoxazole. *Organic Syntheses* **1976**, *55*, 39-43.
13. Beam, Charles F.; Sandifer*, Ronda M.; Foote, Robert S.; Hauser, Charles R. Synthesis of pyrazoles by the condensation of C(α)-di- and trianions with esters. *Synthetic Communications* **1976**, *6*, 5-10.
12. Beam, Charles F.; Shealy*, Keith D.; Harris*, Charles E.; Shealy*, Neal L.; Dasher*, Luther W.; Hollinger*, Wayne M.; Sandifer*, Ronda M.; Reames*, David C. Preparation of tri- and tetramethyleneisoxazoles. *Journal of Pharmaceutical Sciences* **1976**, *65*, 1408-9.
11. Sandifer*, Ronda M.; Dasher*, Luther W.; Hollinger*, Wayne M.; Thomas*, C. Wayne; Reames*, David C.; Beam, Charles F.; Foote, Robert S.; Hauser, Charles R. The reactions of C(α),O-dilithiooximes, C(α), N-dilithiophenylhydrazones, and C(α), N,N-trilithiohydrazones

with diethyl oxalate to give bisoxazoles, bipyrazoles, and pyridazones. *Journal of Heterocyclic Chemistry* **1975**, *12*, 1159-63.

10. Reames*, David C.; Harris*, Charles E.; Dasher*, Luther W.; Sandifer*, Ronda M.; Hollinger*, Wayne M.; Beam, Charles F. Reactions of C(α),N-dilithiophenylhydrazones with aldehydes. Acid cyclization to 2-pyrazolines. *Journal of Heterocyclic Chemistry* **1975**, *12*, 779-81.

9. Beam, Charles F.; Reames*, David C.; Harris*, Charles E.; Dasher*, Luther W.; Hollinger*, Wayne M.; Shealy*, Neal L.; Sandifer*, Ronda M.; Perkins, Matilda; Hauser, Charles R. New method for the preparation of 4-acylpyrazoles. Reaction of C(α),N-dianions of phenylhydrazones with acid chlorides. *Journal of Organic Chemistry* **1975**, *40*, 514-16.

8. Beam, Charles F.; Foote, Robert S.; Hauser, Charles R. Reactions of dilithiooximes, dilithiophenylhydrazones, and trilitiohydrazones with nitriles. Acid cyclization to isoxazoles or pyrazoles. *Journal of Heterocyclic Chemistry* **1972**, *9*, 183-5.

7. Bailey, William J.; Beam, Charles F. Preparation of 1,4-cyclohexanedi-carboxaldehyde and 1,1,4,4-cyclohexanetetramethanol. *Journal of the Chemical Society [Section] C: Organic* **1971**, 2730-31.

6. Beam, Charles F.; Foote, Robert S.; Hauser, Charles R. Preparation of pyrazoles from the C(α), N,N-trianion of hydrazones having an α -hydrogen atom. *Journal of the Chemical Society [Section] C: Organic* **1971**, 1658-60.

5. Griffiths, Jonathan S.; Beam, Charles F.; Hauser, Charles R. New method for the preparation of Δ 2-isoxazolin-5-ones from the oximes of ketones having an α -hydrogen atom. *Journal of the Chemical Society [Section] C: Organic* **1971**, 974-5.

4. Beam, Charles F.; Bissell, Robert L.; Hauser, Charles R., Synthesis of halo compounds for studies of potential benzyne cyclizations *Journal of Chemical and Engineering Data* **1971**, *16*, 103-4.

3. Beam, Charles F.; Dyer, Morgan C. D.; Schwarz, Richard A.; Hauser, Charles R. New synthesis of isoxazoles from 1,4-dianions of oximes having an α hydrogen. Mass spectrometry. *Journal of Organic Chemistry* **1970**, *35*, 1806-10.

2. Foote, Robert S.; Beam, Charles F.; Hauser, Charles R. New synthesis of substituted pyrazoles from 1,4-dianions of phenylhydrazones having an α -hydrogen. *Journal of Heterocyclic Chemistry* **1970**, *7*, 589-92.

1. Beam, Charles F.; Bissell, Robert L.; Hauser, Charles R. Cyclization at the less nucleophilic center of a β -diketone dicarbanion through a dicarbanion-benzyne intermediate. *Journal of Organic Chemistry* **1970**, *35*, 2083-5.

PRESENTATIONS: {*UNDERGRADUATE RESEARCH STUDENT-NAME OF PRESENTER UNDERLINED; † high school student }

Prior to joining the College of Charleston faculty in 1982, I made or my students (Newberry College) made sixteen (16) presentations to professional meetings of the American Chemical Society (ACS), the South Carolina Academy of Science (SCAS), or other professional organizations. Each presentation included a published abstract: American Chemical Society Meetings, published with the program; South Carolina Academy of Science, published in the *Bulletin of the South Carolina Academy of Science*.

1.-2. *F. C. Waters, and C. F. Beam, "5-Phenacylpyrazoles: Precedent and Synthesis." *R. W. Fengl, and C. F. Beam, "5-Phenacylpyrazoles: Structure Proof and Significance," March, **1983**, SCAS.

3.-6. *L. K. Hoong, *J. A. Welsh, *M. J. Smith, and C. F. Beam, "The Condensation of Certain Lithiated Imines with Alkyl Halides, Ketones, Esters, and Other Electrophilic Reagents." *H. L. Hall, *J. L. Twiss, *R. C. Tummons, M. G. Toatley†, T. D. Washington†, and C. F. Beam, "The Condensation of $C(\alpha)$ -Dianions of Oximes, Acylhydrazones, and Related Materials with Carboxylic Acid Anhydrides." *A. M. Huff, *H. L. Hall, *F. C. Waters, *R. W. Fengl, and C. F. Beam, "The Preparation of 5-Phenacylpyrazoles, 1-Acylpyrazoles, and Related Materials by the Condensation of $C(\alpha)$ -Dianions with Ethyl Benzoylacetate or Other Esters." *H. L. Hall, *J. L. Twiss, *R. C. Tummons, M. G. Toatley†, T. D. Washington†, and C. F. Beam, "The Condensation of the $C(\alpha)$ -Dianions of Oximes, Acylhydrazones, and Related Materials with Carboxylic Acid Anhydrides." *J. L. Twiss, *R. C. Tummons, and C. F. Beam, "The Condensation of Certain $C(\alpha)$ -Anions with Salicylaldehydes and Methyl Salicylates," November, **1983**, Southeast Regional Meeting of the ACS, Charlotte, NC.

7.-15. *J. L. Twiss, *R. C. Tummons, and C. F. Beam, "Condensation of Certain $C(\alpha)$ -Anions with Salicylaldehydes and Methyl Salicylates;" *H. L. Hall, *A. M. Huff, and C. F. Beam, "Preparation of 5-Phenacyl-pyrazoles and 1-Acylpyrazoles;" *J. L. Twiss, *R. C. Tummons, and C. F. Beam, "The Condensation of Dilithiated Oximes and Related Materials with Carboxylic Acid Anhydrides;" *J. A. Welsh and C. F. Beam, "The Preparation of New Imidazole-Isoxazoles;" *L. K. Hoong, *M. J. Smith, and C. F. Beam, "Preparation and Reactions of Certain Imine Anions and Their Reactions with Electrophilic Reagents;" *A. M. Huff, *H. L. Hall, and C. F. Beam, "The Preparation of Dilithio- $C(\alpha)$, N -Carboalkoxyhydrazones;" *S. A. O'Grady and C. F. Beam "Quinazolinones I: Precedent and Preparation;" *C. J. Naccarato and C. F. Beam, "Quinazolinones II: Proof of Structure and Significance;" S. Rawalay and C. F. Beam, "Preparation of New Complex Iminobenzamides and *Bis*-(Benzamides)," March, **1984**, SCAS.

16.-17. *H. L. Hall, *A. M. Huff, *S. A. O'Grady, and C. F. Beam, "The Preparation of Substituted Quinolines, Coumarin-Pyrazoles, and Related Materials from $C(\alpha)$, N -Dilithio-carbomethoxyhydrazones;" *A. M. Huff, *S. A. O'Grady, *M. J. Smith, *H. L. Hall, and C. F. Beam, "The Preparation of Imidazole-Isoxazoles, Imidazole-Pyrazoles, and Related Materials by the Condensation of Certain $C(\alpha)$ -Dianions with Imidazolecarboxylate Esters;" October, **1984**, ACS Regional Meeting, Raleigh, NC.

18.-20. *A. M. Huff and C. F. Beam, "The Preparation of Benzopyranopyrazoles and Related Materials from $C(\alpha),N$ -Carbomethoxyhydrazones;" *S. A. O'Grady and C. F. Beam, "The Reactions of $C(\alpha),N$ -Dilithiocarbomethoxyhydrazones with Ethyl Chloroformate and Aliphatic Acid Anhydrides;" *H. L. Hall, *M. J. Smith, and C. F. Beam, "The Preparation and Reactions of Benzoyl-Carbomethoxy-Hydrazine Anions with Certain Electrophilic Reagents," March, **1985**, SCAS.

21.-26. *T. A. Trumbo, *D. C. Duncan, and C. F. Beam, "The Preparation of New Pyrazoles by the Claisen-Type Condensation of the 1,4-Dianions of Phenylacetaldehyde Hydrazones;" *T. A. Lentz, *D. C. Duncan, and C. F. Beam, "The Preparation of Pyrazolinones from the $C(\alpha)$ -Dianions of Phenylacetic Acid Hydrazides;" *D. C. Duncan, *T. A. Trumbo, *T. A. Lentz, and C. F. Beam, "The Preparation of N -Phenyl-, N -Carboalkoxy-, and N -Carbamyl-Pyrazoles from 1,4-Dianions of Hydrazones and Semicarbazones." Each student presented the same paper to two separate professional meetings held at Clemson University, April, **1986**; SCAS and the Southeastern Regional Conference of Undergraduate Student Chemists (ACS).

27.-29. *B. Kadkhodayan, *R. A. Taylor, and C. F. Beam, "Preparation of Certain 2-Carboalkoxy-2-carboalkoxy-alkyl-2,3-dihydro-4(*1H*)-quinazolinones from Isatoic Anhydrides, Substituted Hydrazines, and Acetylene Esters;" *R. A. Taylor, *D. C. Duncan, and C. F. Beam, "Challenging Syntheses Utilizing the Trianions of Acetylacetone," April, **1987**, SCAS.

30.-32. *Invited Paper:* C. F. Beam, *R. J. Lachicotte, and *R. A. Taylor, "Strong-Base Synthesis of Isocoumarins;" *R. J. Lachicotte, *R. A. Taylor, and C. F. Beam, " C -Acylation of the Dianions of Hippurate and Related Esters;" *R. J. Lachicotte, *R. A. Taylor, and C. F. Beam, "Strong-Base Synthesis of 1-Isoquinolones," April, **1988**, SCAS. **33.** *R. J. Lachicotte (C. F. Beam), "New Multiple Anion Syntheses of Isocarbostyrils, Isocoumarins, and Acylated Hippurate Esters," April, **1988**, Second National Conference on Undergraduate Research (NCUR), Asheville, NC.

34. *R. J. Lachicotte and C. F. Beam, "Strong-Base Preparations of New Pyrazoles, Pyrazolinones, Isocarbostyrils, Isocoumarins, and Related Materials," November, **1988**, 40th ACS Southeast Regional Meeting, Atlanta, GA.

35. *R. J. Lachicotte, *P. H. Le, *R. N. Rutledge, and C. F. Beam, "The Preparation of New Heterocyclic Compounds and Related Acyclic Materials from the Trianions of Acetylacetone, Acetoacetanilide, and *ortho*-Hydroxyacetophenone Hydrazones," April, **1989**, SCAS.

36-41. *C. L. Mazat, *M. A. Hines, and C. F. Beam, "Strong-Base Preparation of Novel Heterocyclic Compounds from the Trianions of Acetylacetone and Acetoacetanilide;" *C. L. Mazat, *M. A. Hines, and C. F. Beam, "Strong-Base Preparation of New Substituted Pyrazolobenzoxazinones from the Trianions of Certain Hydroxyphenylcarboethoxyhydrazones;" *M. A. Hines, *C. L. Mazat, and C. F. Beam, "Strong-Base Preparation of Oxazine-Diones from the Multiple Anions of Phenylacetylurea;" *M. A. Hines, *C. L. Mazat, and C. F. Beam, "Strong-Base Preparation of Heterocyclic Compounds from *ortho*-Toluic Acids or *ortho*-Toluic Acid Amides;" *M. A. Hines, *C. L. Mazat, and C. F. Beam, "Strong-Base Preparation of New N -(*para*-Toluenesulfonyl)pyrazoles and N -(*para*-Toluenesulfonylamino)isocarbostyrils;" *C. L.

Mazat, *M. A. Hines, and C. F. Beam, "The Reactions of the Trianions of *ortho*-Toluenesulfonamide and the Dianions of 1-Benzoyl-2-carbo-*tert*-butoxyhydrazine with Select Electrophilic Reagents. Preliminary Results," March, **1990**, SCAS.

42-44. *C. L. Mazat, *J. G. Freeman, *M. A. Hines, and C. F. Beam, "Multiple Anion Preparation of 1*H*-Pyrazole-1-carbothioamides and Related Compounds (4,5-Dihydro), and 5*H*-Pyrazolo- [1,5-*c*][1,3]-benzothiazin-5-ones. Preliminary Results;" *J. G. Freeman, *M. A. Hines, *C. L. Mazat, and C. F. Beam, "The Preparation of Substituted 2(1*H*)-Quinoxalinones by the Condensation of 3-Methyl-2-quinoxalinol Dianions with Certain Electrophilic Reagents;" *M. A. Hines, *J. G. Freeman, *C. L. Mazat, and C. F. Beam, "The Preparation of Certain Substituted 4(1*H*)-Benzopyranoneacetamides and 2-Phenacylbenzophenones by the Condensation of Acetoacetanilide Trianions and Benzoylacetone Dianions with Salicylate Esters." April, **1991**, SCAS.

45-48. *C. M. Kassis, *K. W. Chan, *T. L. Cordray, *G. M. Latham, *M. L. Smith, and C. F. Beam, "The Condensation of the Dianions of $C(\alpha)$,*N*-Carboethoxyhydrazones with Methyl Thiosalicylate for the Preparation of Pyrazolobenzothiazinones, Substituted Pyrazoles, or Benzothiopyranones," April, **1992**, SCAS. *T. L. Cordray, *C. M. Kassis, *K. W. Chan, *G. M. Latham, *M. L. Smith, and C. F. Beam, "The Preparation of Substituted Pyrazoles by the Condensation of the Multiple Anions of $C(\alpha)$,*N*-Hydrazones with Challenging Esters Such as Methyl 2-Phenyl-4-quinolinecarboxylate and Methyl 2-(Aminosulfonyl)benzoate." *K. W. Chan, *C. M. Kassis, *T. L. Cordray, *G. M. Latham, *M.L. Smith, and C. F. Beam, "The Preparation and Reactions of the Multiple Anions of $C(\alpha)$,*N*-Thiosemicarbazones and $C(\alpha)$,*N*-Semicarb-azones." *G. M. Latham, *T. L. Cordray, *C. M. Kassis, *K. W. Chan, *M. L. Smith, and C. F. Beam, "The Condensation of the Multiple Anions of Substituted Acetoacetanilides or Benzoyl-acetone with Salicylate and Thiosalicylate Esters for the Preparation of New Benzopyranones and Benzothiopyranones."

49-51. *Invited Paper:* C.F. Beam, "Strong-Base Synthesis of Unsymmetrical Pyrazoles and Related Heterocyclic Compounds," April, **1993**, SCAS. *K.C Hildebran, *K. W. Chan, *T. L. Cordray, and C. F. Beam, "Preparation of Substituted Benzopyranones from Benzoylacetone Dianions and Acetoacetanilide Trianions." *K.C. Hildebran, *K.W. Chan, *T.L. Cordray, and C.F. Beam, "Preparation of Substituted Dihydroisocoumarins from *ortho*-Toluic Acid and Related Dianions."

52. *T.S. Guion, *K.C. Hildebran, and C.F. Beam, "Strong-Base Preparation of 1*H*-Pyrazole-1-carboxamides from the Multiple Anions of $C(\alpha)$,*N*-Semicarbazones and $C(\alpha)$, *N*-Thiosemicarbazones," April, **1994**, SCAS.

53.-55. *M.U. Koller, *K.L. Peariso, *T.S. Guion, S. Studer-Martinez, and C.F. Beam, "The Preparation of Substituted Pyridineethanols by the Condensation of 2-, 3-, or 4-Picolyl-lithium with Select Hydroxy-Benzaldehydes and 4-Hydroxyacetophenone," April, **1995**. *T.S. Guion, *M.U. Koller, S. Studer-Martinez, and C.F. Beam, "The Preparation of *ortho*-Phenacyl-benzoic Acids and Related Materials from Dilithiated *ortho*-Toluic Acid or α -Phenyl-*ortho*-Toluic Acid," April, **1995**. K.L. Peariso, S. Studer-Martinez, and C.F. Beam, "Molecular Design and Photophysics of 10-Hydroxybenzo[*h*]quinoline Derivatives," April, **1995**.

56.-63. *S.E.Davis, *A.C. Church, and C.F. Beam, "The Preparation of Substituted 1(2*H*)-Isoquinolinones from 2-(2-Methylphenyl)hydrazine Carboxylic Esters", SCAS, April **1996**. *A.C. Church, S.E. Davis, and C.F. Beam, "The Preparation of Pyrazole Carboxylic Acids and Carboxylic Acid *tert*-Butyl Esters", SCAS, April, **1996**. *A. C. Church, *S.E. Davis, and C.F. Beam, "The Preparation of Pyrazole-Carboxylic Acids and Pyrazole-Carboxylic Acid *tert*-Butyl Esters. Related Results", Natnl. Conf. on Undergrad. Res. (NCUR), April, **1996**. *H. Throckmorton, S. Studer-Martinez, and C.F. Beam, "The Preparation of β -Ferrocenoylpropionic Acid Derivatives", SCAS, April, **1996**. *S.E. Davis, *A.C. Church, and C.F. Beam, "The Preparation of Substituted 1(2*H*)-Isoquinolinones from Polythiated 2-(2-Methylphenyl)-hydrazinecarboxylate Esters. Related Results", Natnl. Conf. on Undergrad. Res.(NCUR), April, **1996**. *H. Throckmorton, S. Martinez and C. Beam, "The Preparation of β -Ferrocenoylpropionic Acid Derivatives", Natnl. Conf. on Undergrad. Res.(NCUR), April, **1996**. *S.E. Davis, *A. Cameron Church, C.R. Metz, W.T. Pennington, and C.F. Beam, "Preparation of Substituted Pyrazoles from Polythiated C(α),*N*-Semicarbazones and C(α),*N*-Thiosemicarbazones", Southeast Reg. Mtg. of the Amer. Chem. Soc.(SERMACS-96), November, **1996**. *S.E. Davis, *A.C. Church, *A.S. Scott, *H.L. Throckmorton, S.L. Studer-Martinez, and C.F. Beam, "Strong-Base Preparation of Ferrocenyl-Isoxazoles and Ferrocenyl-Pyrazoles", SERMACS-96, November, **1996**.

64.-67 *A.J. Angel, *K.L. French, *S.E. Davis, *A.C. Church and C.F. Beam, "The Preparation of 4-Hydroxy-3-Substituted, 2*H*-1-Benzopyran-2-ones and 2*H*-1-Benzothiopyran-2-ones from Carboxylic Acid Esters and Methyl Salicylates or Methyl Thiosalicylate", SCAS, April, **1997**. *K.L. French, *A.J. Angel, and C.F. Beam, "The Preparation of 2-Substituted, 4*H*-1-Benzopyran-4-ones and 4*H*-1-Benzothiopyran-4-ones from 1,3-Diketones or 1,3-Ketoesters and Methyl Salicylates or Methyl Thiosalicylate", SCAS, April, **1997**.

68.-72. *A.J. Angel, *K.L. French, *A.R. Williams, *D.R. Hurst, *A.E. Finefrock, S.L. Studer-Martinez, and C.F. Beam, "Strong-Base Preparation of 2*H*-1-Benzopyran-2-ones and 2*H*-1-Benzothiopyran-2-ones from Carboxylic Acids or Esters and Methyl Salicylates, Thiosalicylate, or Salicylaldehydes". *K.L. French, *A.J. Angel, *A.R. Williams, *D.R. Hurst, S.L. Studer-Martinez, and C.F. Beam, "Strong-Base Preparation of 4*H*-1-Benzopyran-4-ones and 4*H*-1-Benzothiopyran-4-ones from 1,3-Diketones, 1,3-Ketoamides, or Related Materials and Methyl Salicylates or Thiosalicylate". *D.R. Hurst, *A.R. Williams, *K.L. French, *A.J. Angel, and C.F. Beam, "Preparation of 1*H*-Pyrazoles from Polythiated C(α),*N*-Hydrazone-Related Intermediates". *A.R. Williams, *K.L. French, *A.J. Angel, *D.R. Hurst, and C.F. Beam, "Condensation/Cyclization of Dilithiated C(α),*O*-Oximes with Hydroxy-Benzaldehydes, Carboxylic Acid Anhydrides, of Cinnamate Esters for the Preparation of 4,5-Dihydroisoxazoles or Isoxazoles". C.W. Alexander, G.L. Asleson, C.F. Beam, M.T. Doig, S.S. Martinez, and F.J. Heldrich, Gradualistic Instruction of Spectroscopy", *Poster Session Presentation*. Southeast Reg. Mtg. of the Amer. Chem. Soc.(SERMACS-97), October, **1997**.

73.-80. *A. J. Angel, *T-H V. Nguyen, F. J. Heldrich, I. T. Badejo and C. F. Beam, The Preparation of 4,5-Dihydro-2*H*-Benz[*g*]indazoles, 4,5-Dihydro-2*H*-Benz[*e*]indazoles and Related Materials from Dilithiated 1-Tetralone or 2-Tetralone Phenylhydrazones and Aromatic Esters". *J. D. Butler*, *D. L. Smith, *T-H V. Nguyen, C. W. Alexander, C. F. Beam, F. J.

Heldrich, and I. Badejo, Naphtho[1,8-*bc*]pyran-2(3*H*)-one Preparations". D. R. Hurst, *J. D. Avery, *K. L. French, *A. J. Angel, *A. R. Williams, S. L. Studer-Martinez, and C. F. Beam "The Preparation of 5-Substituted, 1-Carbomethoxy-3-(2-hydroxyphenyl)-1*H*-pyrazoles and Other 1*H*-Pyrazoles from the Polyanion Type Intermediates of Carboalkoxyhydrazones and Phenylhydrazones". *A. R. Williams, *D. R. Hurst, *A. J. Angel, *K. L. French, S. L. Studer-Martinez, *C. D. Hornsby, and C. F. Beam, "The Preparation of 5-Substituted, 3-(2-Hydroxyphenyl)-isoxazoles, Other Isoxazoles and 4,5-Dihydroisoxazoles from the Dianion-type or Trianion-type Intermediates of Oximes and a Variety of Electrophilic Reagents". *K. L. French, *A. J. Angel, *D. R. Hurst, *A. R. Williams, *M. E. Rampey, S. L. Studer-Martinez, and C. F. Beam, "Preparation of 4-Oxo-*N*-phenyl-4*H*-1-benzothiopyran-2-acetamides from Trilithiated Acetoacetanilides and Lithiated Methyl Thiosalicylate". *A. E. Finefrock, *A. J. Angel, *K. L. French, *A. R. Williams, *D. R. Hurst, C. W. Alexander, and C. F. Beam, "The Condensation of Lithiated Phenylacetic Acids and Esters with Lithiated Salicylaldehydes for the Preparation of Coumarins and Related Materials." SCAS, Clemson, SC, March, **1998**. Aseem Sood (Hanahan High School), [S. L. Studer-Martinez and C. F. Beam], "Preparation of Hydroxy-pyrazoles as Potential Excited State Proton Transfer Molecules". South Carolina Junior Academy of Science, Clemson, SC, March, **1998**.

81.-87. SERMACS-99, Southeast Regional Meeting of the American Chemical Society, Meeting-in-Miniature, Knoxville, TN, Oct. **1999**. *J. D. Townsend, S. L. Studer-Martinez, and C. F. Beam, "The Strong-Base Preparation of Select Hydroxyaryl-, Pyrazoles and Isoxazoles with Potential for Photophysical Studies." *S. J. Pastine, *W. Kelley, Jr., *H. A. Greer, *J. D. Townsend, *K. L. Rose, *D. A. Schady, *J. R. Downs, and C. F. Beam, "The Condensation of Polyolithiated Phenylacetic Acid Hydrazides with Esters for the Preparation of 1,2-Dihydro-3*H*-pyrazolin-3-ones". *W. Kelley, Jr., *K. L. Rose, *D. A. Schady, *H. A. Greer, *J. D. Townsend, *J. R. Downs, *S. J. Pastine, and C. F. Beam, "The Preparation of New Dihydroisoxazoles from Dilithiated Oximes and Select α,β -Unsaturated Ketones." *J. R. Downs, *D. A. Schady, *S. J. Pastine, *J. D. Townsend, *W. Kelley, Jr., *H. A. Greer, S. L. Studer-Martinez, and C. F. Beam, "The Preparation of 1*H*-Pyrazole-5-carboxamides and Related Azoles from Dilithiated Phenylhydrazones or Other Polyolithiated Intermediates and Lithiated Ethyl Oxanilates or Lithiated Ethyl Oxamate." *H. A. Greer, *D. A. Schady, *W. Kelley, Jr., *J. D. Townsend, *J. R. Downs, *S. J. Pastine, S. L. Studer-Martinez, and C. F. Beam, "The Preparation of Additional Pyrazole-Related and Isoxazole-Related Compounds from Dilithiated Oximes and Dilithiated Substituted Hydrazones. *D. A. Schady, *J. R. Downs, *J. D. Townsend, *W. Kelley, Jr., *H. A. Greer, *S. J. Pastine, S. L. Studer-Martinez, and C. F. Beam, "The Preparation of New Compounds from Trilithiated Acetoacetanilides and a Variety of Electrophilic Reagents." *J. D. Townsend and C. F. Beam, "Preparation of Benz[*b*]indeno[1,2-*e*]pyran-11(6*H*)-ones and Benz[*b*]indeno[1,2-*e*]thiopyran-11(6*H*)-one from Dilithiated 2-indanone and Lithiated Methyl Salicylates or Lithiated Methyl Thiosalicylate."

88.-96. SCAS South Carolina Academy of Science, Annual Meeting, Clinton, SC, March 31, **2000**. *D. A. Schady, *J. R. Downs, *J. D. Townsend, *W. Kelley, Jr., *S. J. Pastine, S. L. Studer-Martinez, C. R. Metz, C. F. Beam, W. T. Pennington, and R. D. Bailey, "The Preparation of New Benzopyranones/Benzothiopyranones and Pyranones from Trilithiated Acetoacetanilides and Selectively Substituted Benzoate Esters". *J. N. Templeton III, *S. J. Pastine, *W. Kelley, Jr., *J. J. Bear, and C. F. Beam, "The Preparation of 3-Styrylpyrazoles from

Dilithiated Benzalacetone Hyrazones and Select Esters.” *S. J. Pastine, *W. Kelley, Jr., *J. D. Townsend, *D. A. Schady, *J. R. Downs, C. R. Metz, C. F. Beam, W. T. Pennington and R. D. Bailey, “The Condensation of Polyolithiated Phenylacetic Acid Phenylhydrazides with Aromatic Esters Including Methyl Thiosalicylate for the Preparation of Dihydropyrazolinones or Isothioflavones.” *J. D. Townsend, *J. R. Downs, and C. F. Beam, “The Preparation of 3-Styryl-isoxazoles and Related Materials by the Condensation-Cyclization of Dilithiated Benzalacetone Oxime with a Variety of Esters.” *J. R. Downs, *D. A. Schady, *S. J. Pastine, *J. D. Townsend, *W. Kelley, Jr., S. L. Studer-Martinez, and C. F. Beam, “The Preparation of 1*H*-Pyrazole-5-Carboxamides and Related Azoles from Dilithiated Phenylhydrazones or Other Polyolithiated Intermediates and Lithiated Ethyl Oxanilates or Lithiated Ethyl Oxamate.” *W. Kelley, Jr., *D. A. Schady, *J. D. Townsend, *J. R. Downs, *S. J. Pastine, and C. F. Beam, “The Preparation of New Dihydroisoxazoles from Dilithiated Oximes and Select α,β -Unsaturated Ketones.” *J. D. Townsend and C. F. Beam, “Preparation of Indeno-Chromones and an Indeno-Thiochromone from Dilithiated 2-Indanone and Lithiated Methyl Salicylates or Lithiated Methyl Thiosalicylate.” *J. J. Bear, *D. A. Schady, *W. Kelley, Jr., *J. D. Townsend, *J. R. Downs, *S. J. Pastine, S. L. Studer-Martinez, and C. F. Beam, “The Preparation of Additional Pyrazole or Pyrazole-Related and Isoxazole or Isoxazole-Related Compounds from Dilithiated Oximes and Dilithiated Substituted Hydrazones.”

97.-101. South Carolina Academy of Science, Annual Meeting, Conway, SC, April 6, **2001**. *J. R. Downs, *M. C. Embree, *J. D. Townsend, and C. F. Beam, “The Preparation of 5-Isoxazolecarboxamides and Pyrazole-5-carboxamides from the Condensation and Cyclization of Dilithiated Oximes, Phenylhydrazones, or Carboalkoxyhydrazones with Polyolithiated Oxamates or Oxanilates.” *M.C. Embree, *S. P. Grant, *J. R. Downs, *J. J. Bear, *E. Choi, *J. J. Sahn, J. S. Overby, and C. F. Beam, “The Preparation of *N*-H Pyrazoles from Dilithiated Carbo-*tert*-butoxyhydrazones and Aromatic Esters.” *J. R. Downs, *S. P. Grant, *J. D. Townsend, *S. J. Pastine, *M. C. Embree, C. R. Metz, R. D. Bailey Walsch, W. T. Pennington, and C. F. Beam “The *C*-Acylation of Trilithiated Acetoacetanilides Followed by Cyclization and Rearrangements to 3-Aryl-5-Aminoaryl-2*H*-pyran-2-ones.” *S. P. Grant, *M. C. Embree, *J. R. Downs, *J. D. Townsend, J. S. Overby, and C. F. Beam, “The Preparation of *N*-Carboalkoxydihydrobenzindazoles and Related Materials from Dilithiated Carboalkoxyhydrazones of 1- and 2-Tetralone and Aromatic Esters or Lithiated Salicylate Esters.” *E. Choi, *J. J. Sahn, *S. P. Grant, *M. C. Embree, *J. R. Downs, *J. D. Townsend, J. S. Overby, C. R. Metz, W. T. Pennington, R. D. Bailey Walsch, and C. F. Beam, “The Preparation of Other Isoxazoles, Pyrazoles, and Related Compounds Involving Polyolithiated Intermediates and Esters or Carbonyl Compounds.”

102-107. SERMACS-01, Savannah, GA, September 23, **2001**. *J. J. Sahn, *J. M. Rhett, *S. P. Grant, *E. Choi, *M. D. Melatanos, and C. F. Beam, “Preparation of Styryl Isoxazoles from Dilithiated Benzalacetone oxime, Other Oximes and Methyl Cinnamate or Other Esters;” *S. P. Grant and C. F. Beam, “Preparation of Fused-Ring Compounds from Dilithiated Carboalkoxyhydrazones of 1- and 2-Tetralone and Aromatic Esters or Lithiated Salicylate Esters;” *J. M. Rhett, *J. R. Downs, *J. J. Sahn, *E. Choi, *M. D. Melatanos, *S. P. Grant, and C. F. Beam, “Preparation of 5-Isoxazolecarboxamides from the Condensation and Cyclization of Dilithiated Oximes with Lithiated Oxamate or Oxanilate;” *E. Choi, *J. J. Sahn, *S. P. Grant, *M. D. Melatanos, *J. M. Rhett, and C. F. Beam, “The Preparation of Dihydronaphthoisoxazoles from the Condensation and Cyclization of Dilithiated 2-Tetralone Oxime and Aromatic Esters.” *M. D.

Melatanos, *S. P. Grant, *E. Choi, *J. J. Sahn, *J. M. Rhett, and C. F. Beam, "Preparation of *N*-Carbobenzyloxypyrazoles from the Condensation-Cyclization of Dilithiated C(α), *N*-Carbo-benzyloxyhydrazones and Select Esters."

108.-119. South Carolina Academy of Science, Annual Meeting, Aiken, SC, April 12, **2002**.

*E. Choi, *J. J. Sahn, *S. P. Grant, *M. D. Malatanos, *J. M. Rhett, and C. F. Beam, "The Preparation of Fused-Ring Isoxazoles and Dihydroisoxazoles from the Condensation and Cyclization of Dilithiated 2-Tetralone Oxime with Aromatic Esters and Select Ketones." *S. P. Grant and C. F. Beam, "Preparation of Dihydrobenzylindazolobenzoxazinones from Dilithiated Carboalkoxyhydrazones of 1- and 2-Tetralone and Lithiated Salicylate Esters and Related Compounds." *M. J. Walters, *E. Choi, and C. F. Beam, "Preparation of Dihydroisoxazoles and Dihydropyrazoles from Dilithiated Oximes or Dilithiated Hydrazones and Acetophenones." *J. M. Rhett, *J. R. Downs, *J. J. Sahn, *E. Choi, *M. D. Malatanos, *S. P. Grant, and C. F. Beam, "Preparation of Azolecarboxamides from the Condensation and Cyclization of Dilithiated Oximes or Hydrazones with Lithiated Oxanilate." * M. D. Malatanos, *S. P. Grant, *E. Choi, *J. J. Sahn, *J. M. Rhett, and C. F. Beam, "Preparation and Use of *N*-Carbobenzyloxypyrazoles and Other *N*-Carboalkoxy-pyrazoles." *J. J. Sahn, *J. M. Rhett, *S. P. Grant, *E. Choi, *M. D. Malatanos, and C. F. Beam, "Preparation of Styryl Isoxazoles and Related Compounds from Dilithiated Oximes, Methyl Cinnamate or Other Esters;"

120. American Institute of Chemists, National Conference, Boston, MA, November 9, **2002**, C. F. Beam , "The Undergraduate Research Program Involving the Strong-Base Multiple Ion Type Preparation of Isoxazoles, Pyrazoles and Related Compounds."

121.-127. SERMACS-2002, Charleston, SC, November 15-16, **2002**. *M. J. Walters, *S. P. Dunn, N. D. Camper, and C. F. Beam, "The Preparation of 2,3-Dihydro-3-oxo-1*H*-pyrazole-1-carboxylates from Polyolithiated 2-(Phenylacetyl)hydrazinecarboxylates and Select Esters;" *S. P. Dunn, *M. J. Walters, N. D. Camper, W. T. Pennington, C. R. Metz, and C. F. Beam, "Preparation of 1,2-Benzisothiazole 1,1-Dioxides from Polyolithiated β -Dicarbonyl Compounds and Polyolithiated Methyl 2-(Aminosulfonyl)benzoate;" *M. J. Walters, *S. P. Dunn, *E. Choi, A. N. D'Elia[†], M. E. Warner[†], and C. F. Beam, "Preparation of 5-Aryl-5-Methyl-4,5-Dihydroisoxazoles from Dilithiated C(α), *O*-Oximes and Select Ketones;" *S. P. Dunn, *M. J. Walters, *J. R. Downs, *M. C. Embree, *S. P. Grant, C. R. Metz, W. T. Pennington, N. D. Camper, and C. F. Beam, "Condensation-Cyclization of Polyolithiated Methyl (2-Aminosulfonyl)benzoate with Dianion-Type Intermediates;" *M. J. Walters, *S. P. Dunn, *J. M. Rhett, *J. J. Sahn, N. D. Camper, and C. F. Beam, "Preparation of 5-Isoxazolecarboxamides and 1*H*-Pyrazole-5-carboxamides from Dilithiated Oximes or Hydrazones and Ethyl Oxamate or Ethyl Oxanilates;" [poster]; *S. P. Dunn, *M. J. Walters, J. S. Overby, and C. F. Beam, "Multiple Anion Preparation of *N-H* Pyrazoles and Related Compounds for the Preparation of tris(Pyrazolyl)-borates and Related Ligands." [poster].

128.-134. South Carolina Academy of Science, Annual Meeting, Clemson, SC, March 21, **2003**. *S. B. Lioi, *L. M. Hajiaghamseni, *E. J. Hilton, *S. P. Dunn, *M. J. Walters, and C. F. Beam "The Preparation of Isoxazole-Carboxylic Acids by the Condensation-Cyclization of the 1,4-Dianions of Oximes with Select Carboxylic Acid Anhydrides." *L. M. Hajiaghamseni, *S. B. Lioi, *E. J. Hilton, *S. P. Dunn, *M. J. Walters, and C. F. Beam, "The Preparation of Pyrazole-

Carboxylic Acids by the Condensation-Cyclization of the 1,4-Dianions of Substituted Hydrazones with Carboxylic Acid Anhydrides.” [poster] *M. J. Walters, *S. P. Dunn, and C. F. Beam, “Preparation of 2,3-Dihydro-3-oxo-1*H*-pyrazole-1-carboxylates from Polyolithiated 2-(Phenylacetyl)hydrazinecarboxylates.” *S. P. Dunn, *M. J. Walters, C. R. Metz, and C. F. Beam “Preparation of 1,2-Benzisothiazole 1,1-dioxides from Polyolithiated beta-Dicarbonyl Compounds and Polyolithiated Methyl 2-(Aminosulfonyl)benzoate.” *S. P. Dunn, *M. J. Walters, *J. R. Downs, *M. C. Embree, *S. P. Grant, C. R. Metz, and C. F. Beam “Condensation-Cyclization of Polyolithiated Methyl (2-Aminosulfonyl)benzoate with Several Dianion Type Intermediates.” *M. J. Walters, *S. P. Dunn, *E. Choi, A. N. D’Elia, M. E. Warner, and C. F. Beam “Preparation of 5-Aryl-5-methyl-4,5-dihydroisoxazoles from Dilithiated C(alpha),*O*-Oximes and Select Ketones.” *E. J. Hilton, *S. B. Lioi, *L. M. Hajiaghamseni, *S. P. Dunn, *M. J. Walters, J. S. Overby, and C. F. Beam, “Synthesis of *C*-Acylyated Carboalkoxyhydrazones, *N*-Carboalkoxy-pyrazoles and *N*-H Pyrazoles for the Preparation of Tris(Pyrazolyl)borates and Related Ligands.”

135.-139. Southeast Regional Meeting of the American Chemical Society, November 16, **2003** [SERMACS-2003] *S. B. Lioi, *L. M. Hajiaghamseni, *M. A. Meierhoefer, *S. P. Dunn, *M. J. Walters and C. F. Beam, “Preparation of 1,2-Benzisothiazole 1,1-Dioxides from Polyolithiated Intermediates or Grignard Reagents and Methyl 2-(Aminosulfonyl)benzoate.” *L. M. Hajiaghamseni, *S. P. Dunn, *S. B. Lioi, *M. A. Meierhoefer, *M. J. Walters, N. D. Camper, W. T. Pennington, C. R. Metz, and C. F. Beam, “Preparation of 2-(1-Phenyl-1*H*-pyrazol-5-yl)benzenesulfonamides from Polyolithiated C(alpha),*N*-Phenylhydrazones and Methyl 2-(Aminosulfonyl)benzoate.” *E. J. Hilton, *S. B. Lioi, *L. M. Hajiaghamseni, *S. P. Dunn, *M. J. Walters, and C. F. Beam, “The Preparation of 3,3a,4,5-Tetrahydro-3-arylnaphth[1,2-*c*]isoxazoles from Dilithiated 1-Tetralone Oxime and Select Substituted Benzaldehydes.” *M. A. Meierhoefer, *E. J. Hilton, *S. B. Lioi, *L. M. Hajiaghamseni, *S. P. Dunn, *M. J. Walters, J. S. Overby, and C. F. Beam, “Synthesis of *N*-H Pyrazoles and Related Compounds from Carbomethoxyhydrazones and Aromatic Esters.” *N.S. Patel, *L. M. Hajiaghamseni, *S. B. Lioi, *M. A. Meierhoefer, *S. P. Dunn, *M. J. Walters and C. F. Beam, “Preparation of Alkyl (1,1-Dioxido-1,2-benzisothiazol-3(2*H*)-ylidene)-3-oxo-Butanoates from Dilithiated beta-Ketoesters or Lactones and Lithiated Methyl 2-(Aminosulfonyl)benzoate.” [poster]

140.-153. South Carolina Academy of Science, annual meeting, Charleston, SC, April 16, **2004.**

*S. B. Lioi, *L. M. Hajiaghamseni, *M. A. Meierhoefer, and C. F. Beam, “Preparation of 3-Substituted 1,2-Benzisothiazole 1,1-Dioxides from Lithiated Methyl 2-(Aminosulfonyl)benzoate and Polyolithiated beta-Diketones, beta-Ketoesters, and beta-Ketoamides.” [poster] *L. M. Hajiaghamseni, *S. B. Lioi, *M. A. Meierhoefer, C. R. Metz, C. F. Beam, W. T. Pennington, D. G. VanDerveer, and N. D. Camper, “Preparation of 2-(1-Carboalkoxy-1*H*-pyrazol-5-yl)-benzenesulfonamides or 2-(Isoxazol-5-yl)benzenesulfonamides from Polyolithiated C(alpha),*N*-Carboalkoxyhydrazones or C(alpha),*O*-Oximes and Methyl 2-(Aminosulfonyl)benzoate.” [poster] *M. A. Meierhoefer, *E. J. Hilton, *S. B. Lioi, *L. M. Hajiaghamseni, J. S. Overby, and C. F. Beam, “Preparation of *N*-H Pyrazoles and Related Compounds from *N*-Carboalkoxy-hydrazones.” [poster] *E. J. Hilton, *S. B. Lioi, *L. M. Hajiaghamseni, and C. F. Beam, “The Preparation of Tetrahydroarylnaphth(isoxazoles) from Dilithiated 1-Tetralone or 2-Tetralone Oxime and Select Substituted Benzaldehydes. or Dihydroarylnaphthylisoxazoles from Dilithiated 2-Tetralone Oxime and Select Aromatic Esters.” [poster] *J. H. Vella, *B. J. Grant, *C. L.

Sober, *L. Cai, *N. S. Patel, *L. M. Hajiaghamohseni, *S. B. Lioi, *M. A. Meierhoefer, C. R. Metz, C. F. Beam, W. T. Pennington, D. G. VanDerveer, and N. D. Camper, "Preparation of 5-Isoxazolecarboxamides and 1*H*-Pyrazole-5-carboxamides from Dilithiated Oximes or Dilithiated Carboalkoxyhydrazones and Polyolithiated Oximates or Oxanilates." [poster] *B. J. Grant, *J. H. Vella, *C. L. Sober, *L. Cai, *N. S. Patel, *L. M. Hajiaghamohseni, *S. B. Lioi, *M. A. Meierhoefer, J. S. Overby, and C. F. Beam, "The Preparation of Fused-Ring Heterocyclic Compounds [Dihydro-benzindazolo-benzoxazines] from Dilithiated Carboalkoxyhydrazones of 1- and 2-Tetralone and Lithiated Salicylate Esters." [poster] *L. Cai, *B. J. Grant, *J. H. Vella, *C. L. Sober, *N. S. Patel, *L. M. Hajiaghamohseni, *S. B. Lioi, *M. A. Meierhoefer and C. F. Beam, "The Preparation of 3-Styryl- and 5-Styryl-, Isoxazoles from the Condensation-Cyclization of Dilithiated Oximes with Aromatic Esters or with Methyl Cinnamate." [poster] *C. L. Sober, *L. Cai, *B. J. Grant, *J. H. Vella, *N. S. Patel, *L. M. Hajiaghamohseni, *S. B. Lioi, *M. A. Meierhoefer and C. F. Beam, "The Preparation of *N*-Carbobenzyloxy pyrazoles from the Condensation-Cyclization of Dilithiated C(α),*N*-Carbobenzyloxyhydrazones and Select Esters." [poster] *N. S. Patel, *L. M. Hajiaghamohseni, *S. B. Lioi, *M. A. Meierhoefer, *J. H. Vella and C. F. Beam, "Preparation of Benzisothiazole Dioxide/ β -Ketoesters from Dilithiated β -Ketoesters and Lithiated Methyl 2-(Aminosulfonyl)benzoate." [poster] *S. B. Lioi, *L. M. Hajiaghamohseni, *M. A. Meierhoefer, *S. P. Dunn, *M. J. Walters and C. F. Beam, "Preparation of 3-Substituted 1,2-Benzisothiazole 1,1-Dioxides from Metalated Methyl 2-(Aminosulfonyl)benzoate and Polyolithiated Intermediates or Grignard Reagents." *L. M. Hajiaghamohseni, *S. P. Dunn, *S. B. Lioi, M. A. Meierhoefer, M. J. Walters, C. R. Metz, C. F. Beam, W. T. Pennington, D. G. VanDerveer, and N. D. Camper, "Preparation of 2-(1-Phenyl-1*H*-pyrazol-5-yl)benzenesulfonamides from Polyolithiated C(α),*N*-Phenylhydrazones and Methyl 2-(Aminosulfonyl)benzoate." *E. J. Hilton, *S. B. Lioi, *L. M. Hajiaghamohseni, *S. P. Dunn, *M. J. Walters, and C. F. Beam, "The Preparation of Tetrahydroarylnaphth-isoxazoles and Related Fused-Ring Compounds from Dilithiated 1-Tetralone Oxime or Other Dilithiated Oximes and Select Substituted Benzaldehydes." *N. S. Patel, *L. M. Hajiaghamohseni, *S. B. Lioi, *M. A. Meierhoefer, *S. P. Dunn, *M. J. Walters, *J. H. Vella and C. F. Beam, "Preparation of Alkyl (1,1-Dioxido-1,2-benzisothiazol-3(2*H*)-ylidene)-3-oxo-butanoates from Dilithiated β -Ketoesters or Lactones and Lithiated Methyl 2-(Aminosulfonyl)benzoate." *M. A. Meierhoefer, *E. J. Hilton, *S. B. Lioi, *L. M. Hajiaghamohseni, *S. P. Dunn, *M. J. Walters, J. S. Overby, and C. F. Beam, "Multiple Anion Synthesis of *N*-Carbomethoxy pyrazoles and their Saponification to *N*-H Pyrazoles and Related Compounds."

154-157. SERMACS-2004, Research Triangle Park, NC, November 13-15, 2004

*C. L. Sober, *M. A. Meierhoefer, *J. H. Vella, *B. J. Grant, *S. P. Grant, and C. F. Beam, "1*H*-Pyrazole-5-carboxamides and 5-Isoxazolecarboxamides: Synthesis and Characterization." *B. J. Grant, *C. L. Sober, *M. A. Meierhoefer, *J. H. Vella, C. R. Metz, C. F. Beam, W. T. Pennington, D. G. VanDerveer, M. Krawiec, and N. D. Camper, "Isoxazole-*ortho*-Benzenesulfonamides and Pyrazole-*ortho*-Benzenesulfonamides: Synthesis and Characterization." *J. H. Vella, *B. J. Grant, *C. L. Sober, *M. A. Meierhoefer, C. R. Metz, C. F. Beam, W. T. Pennington, D. G. VanDerveer, and M. Krawiec, "Dihydronaphthisoxazoles and Tetrahydronaphthisoxazoles: Synthesis and Characterization." *M. A. Meierhoefer, *B. J. Grant, *C. L. Sober, *J. H. Vella, C. R. Metz, C. F. Beam, W. T. Pennington, D. G. VanDerveer, M. Krawiec,

and N. D. Camper, "3-Substituted 1,2-Benzisothiazole-1,1-dioxides: Synthesis of 3-BIDS/beta-ketoesters and Characterization."

158-161. SCAS-2005 Winthrop University, Rock Hill, SC, March 16, **2005**

J. H. Vella, B. J. Grant, C. L. Sober, M. A. Meierhoefer, C. R. Metz, C. F. Beam, W. T. Pennington, D. G. VanDerveer, and N. D. Camper, "Dihydronaphthisoxazoles and Tetrahydronaphthisoxazoles: Multiple Anion Synthesis and Characterization.." *C. L. Sober, *M. A. Meierhoefer, *J. H. Vella, *B. J. Grant, *S. P. Grant, and C. F. Beam, "1H-Pyrazole-5-carboxamides and 5-Isoxazolecarboxamides: Multiple Anion Synthesis and Characterization," *M. A. Meierhoefer, *B. J. Grant, *C. L. Sober, *J. H. Vella, C. R. Metz, C. F. Beam, D. G. VanDerveer, W. T. Pennington, and N. D. Camper, "3-Substituted 1,2-Benzisothiazole-1,1-Dioxides/beta-ketoesters: Multiple Anion Synthesis and Characterization." *B. J. Grant, *C. L. Sober, *M. A. Meierhoefer, *J. H. Vella, C. R. Metz, C. F. Beam, W. T. Pennington, D. G. VanDerveer, and N. D. Camper, "spiro(Benz-isothiazole Dioxides - Isoxazolines) and Pyrazole-ortho-Benzenesulfonamides: Multiple Anion Synthesis and Characterization."

162-163. SCAS-2006, USC-Columbia, Columbia, SC, March 10, **2006**

*D. Weddle, *J. D. Knight, *J. McLaughlin, A.R. Straumanis, and C. F. Beam, "Modified Preparations of Phenyl Hydrazinecarboxylate and Carbophenoxyhydrazones, and the Multiple Anion Synthesis of Dihydropyrazolinones."

*J. D. Knight, A. R. Straumanis, and C. F. Beam, "Synthesis of Heterocyclic Compounds using New Methodology with Dianions of beta-Diketones."

164-167. 231st National Meeting of the American Chemical Society, Atlanta, GA, March 26-28, 2006

C. R. Kramp*, J. H. Vella*, N. S. Patel*, M. A. Meierhoefer*, E. J. Hilton*, C. L. Sober*, B. J. Grant*, J. D. Knight*, C. R. Metz, C. F. Beam, W.T. Pennington and D. G. VanDerveer, "The Preparation of 3,3a,4,5-Tetrahydroarylnaphth[1,2-c]isoxazoles from Dilithiated 1-Tetralone and Select Benzaldehydes. " B. J. Grant*, J. D. Knight*, C. R. Kramp*, C. R. Metz, C. F. Beam, W.T. Pennington, D. G. VanDerveer, and N. D. Camper, "Preparation of Azole-Related Products from Methyl 2-(Aminosulfonyl)-Benzoate and Polyolithiated Intermediates." J. D. Knight*, B. J. Grant*, C. R. Kramp*, C. R. Metz, J. S. Overby, C.F. Beam, W. T. Pennington, D. G. VanDerveer, and N. D. Camper, "Synthesis of N-H 4,5-Dihydrobenz[g]indazoles and Related Compounds from Carbomethoxyhydrazones of 1-Tetralones and Aromatic Esters " Award Symposium for C.F. Beam, "Synthesis of Azoles, Pyranone Related, and Pyridine Related Heterocyclic Compounds from Polyolithiated Intermediates."

168-169 SCAS 2007, Columbia, SC, April 20, 2007

John D. Knight*, Clyde R. Metz, Charles F. Beam, William T. Pennington and Donald G. VanDerveer, "Strong Base Synthesis of Symmetrical Triketones." Luan Q. Do*, Anna C. Dawsey*, John D. Knight*, and Charles F. Beam. "Strong Base Synthesis of Aroylacetones,

Phenacylthiochromone, Phenacylquinolinones and Related Compounds.” Anna C. Dawsey*, Luan Q. Do*, John D. Knight*, Clyde R. Metz, Charles F. Beam, William T. Pennington and Donald G. VanDerveer, and N. Dwight Camper, “Strong Base Synthesis of Pyrazolyl-ortho-benzenesulfonamides with C(alpha),N-Hydrazones and Methyl 2-(Aminosulfonyl)benzoate.”

SERMACS – 2007 59th Southeast Regional Meeting of the American Chemical Society, Greenville, SC, October 24-27 (2007).

170-171 Dawsey*, Anna C.; Knight*, John D.; Brown*, Jordan B.; Beam, Charles F.. Preparation of NH-Pyrazoles from Dilithiated C-Alpha, N-Carbo-Tert-Butoxyhydrazones and a Variety of Aromatic Esters. GEN-721. AN 2007:1197098. Dawsey*, Anna C.; Knight*, John D.; Brown*, Jordan B.; Metz, Clyde R.; Beam, Charles F.; Pennington, William T.; VanDerveer, Donald G.; Camper, N. Dwight. New Spiro-Benzoisothiazole-Pyrazoles or Pyrazole-Benzoic Acids: Dilithiated Hydrazones with Methyl 2-Aminosulfonyl-Benzoate or Methyl Hydrogen Phthalate. GEN-722. AN 2007:1197099.

SCAS- 2008 South Carolina Academy of Science, Clemson, SC, March 20, 2008

172-174. Dawsey*, Anna C.; Potter*, Chandra; Knight*, John D.; Brown*, Jordan B.; Metz, Clyde R.; Beam, Charles F.; Pennington, William T.; VanDerveer, Donald G.; Camper, N. Dwight. “Strong Base Multiple Anion Preparation of New spiro-Heterocycles Containing Benzisothiazole Dioxide with Pyrazoles or Isoxazoles.” Dawsey*, Anna C.; Potter*, Chandra; Knight*, John D.; Beam, Charles F., “Preparation of N-Phenylpyrazole-Benzoic Acids from Dilithiated Phenylhydrazones and Methyl Hydrogen Phthalate.” Gregory N. Goschy*, Anna C Dawsey*, John D. Knight*, Jordan B. Brown*, and Charles F. Beam, “Preparation of NH-Pyrazoles from Polyolithiated Hydrazones or Dilithiated beta-Ketoesters and a Variety of Aromatic Esters.”

236th ACS National Meeting, Philadelphia, PA, August 17-21, 2008

175. Dawsey*, Anna C.; Beam, Charles F.; Knight*, John D.; Metz, Clyde; Pennington, William T., “Preparation and characterization spiro-benzoisothiazole-pyrazoles, spiro-benzoisothiazole-isoxazoles, and pyrazole-benzenesulfonamides from dilithiated hydrazones or dilithiated oximes with methyl 2-(aminosulfonyl)benzoate.” WCC-014. AN 2008:956710

SERMACS – 2008 Southeast Regional Meeting of the American Chemical Society, Nashville, TN, November 13-15, 2008

176-179 Zachary C. Kennedy*, Ellyn A. Smith*, Amanda M. Acevedo-Jake*, Andrew J. Puciaty*, Clyde R. Metz, William T. Pennington, Donald G. VanDerveer, Chandra Potter*, Anna C. Dawsey*, and Charles F. Beam, “Preparation of 2*H*-spiro[Benzo[*d*]isothiazole-3,3'-pyrazole]-1,1-dioxide-2'(4'*H*)-carboxylates [spiro(BID-Pyrazoles)] from Dilithiated C(alpha),N-Carboalkoxy-hydrazones and Methyl 2-(Aminosulfonyl)benzoate.” Ellyn A. Smith*, Zachary C. Kennedy*, Amanda M. Acevedo-Jake*, Andrew J. Puciaty*, Stephen D. Hersey*, and Charles F. Beam, “Preparation of Unsymmetrical Triketones From a Different Base, Lithium Hexamethyldisilazide [LiHMDS].” Andrew J. Puciaty*, Ellyn A. Smith*, Zachary C. Kennedy*,

Amanda M. Acevedo-Jake*, and Charles F. Beam, "Preparation of Unsymmetrical Triketones From a Different Base, Lithium Hexamethyldisilazide [LiHMDS]." Amanda M. Acevedo-Jake*, and Charles F. Beam, "Aldol-type and Related Condensations Using Lithium Hexamethyldisilazide [LiHMDS] for the Preparation of Multiple Anions for the Preparation of New Organic Compounds."

180-183 SCAS-2009, USC-Columbia, SC, March 2009

Amanda M. Acevedo-Jake*, Zachary C. Kennedy*, Ellyn A. Smith*, Andrew J. Puciaty*, Clyde R. Metz, William T. Pennington, Donald G. VanDerveer, Chandra Potter*, Anna C. Dawsey*, and Charles F. Beam, "spiro(BID-Pyrazoles) from 1,4-Dianions of Select Hydrazones and an Ester-Sulfonamide."

Ellyn A. Smith*, Zachary C. Kennedy*, Amanda M. Acevedo-Jake*, Andrew J. Puciaty*, Chandra Potter* and Charles F. Beam, "Pyrazole-Acetic Amides from Polyolithiated beta-Ketoamides; Esters, and Hydrazine."

L. Elizabeth Redpath*, Andrew J. Puciaty*, Ellyn A. Smith*, Zachary C. Kennedy*, Amanda M. Acevedo-Jake*, Clyde R. Metz, William T. Pennington, Donald G. VanDerveer, and Charles F. Beam, "Aldol/Claisen Condensations of beta-Diketones with Aldehydes/Esters and LHMDS."

Sloan M. Hess*, Krista N. Koch*, Sarah M. Williams*, Allison M. Horger*, Amanda M. Acevedo-Jake*, and Charles F. Beam, "Isoquinolinones from Polyolithiated Aromatic Carboxylic Acid Hydrazides and Esters."

RESEARCH POSTER SESSIONS: 110 Research Posters, College of Charleston, Annual Research Poster Sessions, April, **1989-2009** (Same Authors and Titles as Presentations 35-48; 50-96; 97-101; 108-119; and 128-134, 140-153, 158-166, 168-174, 180-183 Above).

Listing of All Former and Current Research Students, College of Charleston, 1982-2009

1. Richard Fengl (Ph.D., Emory Univ.)
2. Frank Waters (M.S., Emory Univ.)
3. Rebecca Tummons (M.D., MUSC)
4. Jeffery Welsh (M.D., MUSC)
5. Ann Huff Rux (Ph.D., USC-Columbia.)
6. Howard Hall (Ph.D., UC-Berkeley)
7. Jeffery Twiss (M.D, MUSC/Ph.D., Case-Western Reserve Univ.)
8. Lee Hoong (Ph.D., M.I.T)
9. Carla Naccarato (M.D.)
10. Sheila O'Grady (M.D., USC-Columbia)
11. Michael Toatley* (military)
12. Teresa Washington* (R.N., USC-Columbia)
13. Melanie Smith (M. Ed.)
14. Dean Duncan (Ph.D, Emory Univ..)
15. Catherine Almquist (M.S., Univ. Iowa)
16. Teresa Lentz McConaughy (M.D., MUSC)
17. Richard Taylor (D.D.S., Med Coll. GA)
18. Babak Kadkhodayan (Ph.D., UC-Berkeley)
19. Sally Kadkhodayan (Ph.D., USC-Columbia)
20. Rene Lachicotte (Ph.D., Emory Univ.)
21. Todd A. Trumbo (Industry)
22. Robin Rutledge (industry)
23. Cynthia Mazat Griffith (secondary school science teacher)
24. Phong Le Tran (Industry)
25. Margaret Hines (Ph.D., Univ. Chicago)
26. Joanna F. Davis (Ph.D., USC-Columbia)
27. Michael Smith (sit. unknown)
28. Camille Kassis Stebbins (Ph.D., UNC-Chapel Hill)

29. G. Mark Latham (Indust.)
30. Kam W. Chan (M.D., MUSC)
31. Tracy L. Cordray (M.D., MUSC)
32. Karen Hildebran (M. Ed., Clemson Univ., secondary school science teacher)
33. Tina S. Guion Masterson (M.S., Univ. Oklahoma)
34. Madlene U. Koller Dole (Ph.D. Pharmacol., Duke U.)
35. A. Cameron Church (U. Florida, Ph.D.)
36. Sharon E. Davis Boggs (M.S., U.VA; MBA, UNC-Chapel Hill)
37. Kristen L. French (grad. school, Pharmacol., MUSC)
38. Angela R. Williams (M.D., MUSC)
39. April J. Angel.Merritt (M.D., MUSC)
40. Douglas R. Hurst (Ph.D., Florida State Univ.)
41. Mary E. Rampey (collab. student – with Shannon Martinez – M. S. Chem., USC, Columbia)
42. Anne E. Finefrock (M.S., U. VA; MD, UNC – Chapel Hill)
43. Stefan J. Pastine (PhD, Chem., Columbia Univ.)
44. Jennifer R. Downs (PhD., Chem., Emory Univ.)
45. Christopher R. Hornsby (academic year, M.D. USC - Columbia)
46. Ronjay Rakikit (academic year, MD., MUSC)
47. Jessica D. Townsend (M.D., MUSC)
48. Deborah A. Schady (MD, MUSC)
49. Wayne Kelly, Jr. (returning student, MD, MUSC)
50. Kelly L. Rose (MD, MUSC)
51. Jennifer J. Bear (returning student, indust.)
52. J. Nathan Templeton (returning student, DDM, MUSC)
53. Millie Embree (DDM – MUSC)
54. Sally P. Grant (DDM – MUSC)
55. James J. Sahn (PhD, Chem, North Carolina State Univ.)
56. Emily Choi (returning student – MD - Duke University)
57. Maria D. Malatanos (graduate school – Baylor College of Medicine)
58. J. Matthew Rhett (graduate school, MUSC)
59. Matthew J. Walters (PhD, chem./biochem., Duke Univ.)

60. S. Patrick Dunn (MD, Temple Univ.)
61. Bonnie J. Grant – (dental school, MUSC)
62. Sara B. Lioi – (graduate school , U. Maryland, College Park)
63. Ebony J. Hilton – (MD, MUSC)
64. Carolyn L. Sober – (PharmD MUSC)
65. Michelle A. Meierhoefer – (indust.)
66. Lini Cai – (dental school, Alabama)
67. Jarrett H. Vella – (PhD, Univ. FL)
68. Laela M. Hajiaghamohseni – (med. School, George Wash., Univ.)
69. Nidhi S. Patel – (DDM, MUSC)
70. Renzy Raju – (sit. Unknown)
71. Catherine R. Kramp, (med. School, USC – Columbia)
72. John D. Knight, (grad. Chem., Duke Univ., current student)
73. Leah D. Crowe, (indust.)
74. Zacchary C. Kenneday – (grad. school, Univ. Oregon, Chem.)
75. Chandra Potter – (grad. school, Emory, Univ., Chem.)
76. Sloan M. Hess – (grad. school, Univ. Colorado, Denver, Chem.)
77. Anna C. Dawsey – (grad. school, Univ. Southern California, Chem.)
78. Stephen C. Hersey – (returning student – indust.)
79. Jordan B. Brown – (med. school, Ohio State Univ.)
80. Kevin J. Bigham – (indust., grad. student, MUSC)
81. Ellyn A. Smith – (current student plans include MD/PhD program)
82. Amanda M. Acevedo-Jake – (current student plans include PhD program, Chem.)

83. Andrew J. Puciaty – (current student; plans include medical school)
84. Krista M. Koch – (current student; plans include dental school)
85. Sarah B. Williams – (current student; plans include graduate school, Chem.)
86. L. Elizabeth Redpath – (current student; plans include graduate school, Chem.)
87. Derrick L. Weddle, III - (academic year project published in the *Chemical Educator*. Pharmacy School, MUSC)
88. Amy M. Rhoden Smith – academic year project resulting from an upper level laboratory course, *J. Chem. Cryst.*, in press. grad. school Chem. Univ Texas, Austin
89. Helen Throckmorton – also with Shannon Martinez; indust.
90. Ashley Scott – also with Shannon Martinez; completed doctoral program, U. Texas-Dallas
91. Thuy-Ha Nguyen – also with Ibraheem Badejo and Rick Heldrich; industry; future plans include M.S. in chem.
92. Katrina Peariso – also with Shannon Martinez; U. Michigan (Ph.D. completed.)
93. Carrie E. Halkyard – also with Shannon Martinez; M.S., physics, U. Indiana
94. Vincent Palmieri - current student; plans include graduate school, chem.

Newberry College, 1972-1982

1. David Reames (Ph.D.)
2. Neal Shealy (M.D.)
3. Charles Harris (D.D.S.)
4. C. Monika Eargle (R.N.)
5. Ronda Sandifer (Ph.D.)
6. Wayne Hollinger (M.D.)
7. Steven Davis (M.S.)
8. Lynn Staffer (Prof. Eng./Elect.)
9. C. Wayne Thomas (M.B.A. - military)
10. Keith Shealy (M.D.)
11. Sharon Risinger Jones (M.D.)
12. Jane Brown Bunn (indust.)
13. Charles Park (M.B.A. – military, deceased)
14. Candace Hanberry Rauch (D.D.S.)
15. Randall Hall (M.S.)
16. Katharine Pavlakovich (M.A.- English)
17. Donald Lakatos (M.D.)
18. Lisette Dasher (Pharm.)
19. Jana Wilson (Indust.)
20. Tammela Fulmer Hamilton (Ph.D.)
21. Dorothy Park (O.D.)
22. F. Christian Bernhardt (Ph.D.)
23. Donna Dawkins (M.S. - Psych., M.D.)
24. Maria Childers (M.B.A.)
25. Kimberly Sides Havird (M. Ed.)
26. H. Michael Mack (M. Ed.)
27. Melanie Smith (M. Ed.)
28. Bonni Bobb (sit. unknown)
29. Melanie Livingston (Occupat. Therapy)
30. Marlisa Chick (sit. unknown)
31. Ernest Shealy (grad. Coll. Chas.)
32. Alice Livingston (Grad. Newberry Coll.)
33. Darrell Beckman (Indust.)
34. Barry Hothersall (D.D.S.)
35. Mary Nichols (Indust., Environ. Chem.)
36. Everette Davis (Indust.)
37. Luther Dasher (M.S.)
38. John Kennoy (Indust.)
39. Monika Eargle (RN)