

Marc Alan Cohn
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PROFESSIONAL EXPERIENCE:

7/90 - to date Professor, Seed Biology/Crop Physiology, Louisiana State University Agricultural Center, Baton Rouge. Responsible for studies of seed dormancy mechanisms using red rice and *Spartina alterniflora* as model systems, and seed recalcitrance/technology studies of *S. alterniflora*.

Devised a comparative physiology system to study seed desiccation tolerance by comparing response of *Spartina alterniflora* (recalcitrant) versus *Spartina pectinata* and *S. spartinae* (orthodox) seeds

The critical moisture content for recalcitrant *Spartina* seed death is independent of drying temperature and drying rate

Identified a suite of three dozen heat stable proteins putatively required for seed desiccation tolerance using the *Spartina* comparative proteomics system

Devised a viability test for dormant/recalcitrant *Spartina alterniflora* spikelets

Showed that lipid oxidation (TBARS, FOX assay, membrane leakage) and DNA fragmentation are not the causes of recalcitrant *Spartina* seed death

Showed that putative lipid oxidation detected by other workers using TBARS in recalcitrant seeds is caused by a common procedural error

Showed an inverse relationship between antioxidant titer (decreasing) and protein carbonylation during drying of *Spartina* seeds that occurs during desiccation of both recalcitrant and orthodox seeds

Showed that crosses between red rice and transgenic rice exhibit lower or the same levels of dormancy as red rice itself (first successful risk assessment study of herbicide-resistant, transgenic rice)

Dormancy-breaking chemicals lower tissue pH during their application and prior to visible germination

Dormancy-breaking chemicals may rapidly (within 2 h) elevate fructose 2,6-bisphosphate levels that are correlated to subsequent speed of germination

Kinetics of alcohol metabolism to a carboxylic acid are consistent with tissue acidification kinetics during the dormancy-breaking process

Alcohols must be metabolized by alcohol dehydrogenase before dormancy-breaking occurs: evidence from structure-activity studies, inhibitor studies, and ¹³C-NMR studies of metabolism. Results refute the Aanesthetic@hypothesis proposed

by

Taylorson.

Successful QSAR modeling of dormancy-breaking chemicals relating activity to steric and electronic parameters in addition to lipophilicity, size or shape

Hypochlorite actually stimulates seedling growth independent of seed surface disinfection. Developed a method for seed disinfection in the absence of liquid solvent.

Dry-afterripening is associated with dramatic decreases in cysteine and cystine in the unimbibed seed. GSH levels increase, while GSSG levels are unchanged.

Liquid smoke preparations break dormancy of intact red rice aged in soil via a pH-dependent but a nitrite-independent process.

Slight extent of dry-afterripening sensitizes rice grains to cold stratification (provides the first real controls for the study of stratification)

7/82 - 6/90

Associate Professor, Crop Physiology, Louisiana State University Agricultural Center, Baton Rouge.

First successful demonstration of application of a dormancy-breaking chemical (nitrogen oxides) to unimbibed seeds. First demonstration that gaseous nitrogen oxides break dormancy.

Discovered a new class of dormancy-breaking chemicals: monocarboxylic acids.

Chemical lipophilicity, nature of functional groups and their position, or molecular size control the efficacy of dormancy-breaking chemicals.

6/78 - 6/82

Assistant Professor, Crop Physiology, Louisiana State University Agricultural Center, Baton Rouge.

Demonstrated pH dependence of dormancy-breaking chemicals that are weak acids or bases.

Showed pH dependence of inorganic weak acids diminishes as a function of dry-afterripening.

While unimbibed seeds lose dormancy, hydrated seeds remain dormant and viable at ambient temperatures. Dormancy is a function of seed moisture content.

Cytokinins can act alone as dormancy-breaking agents.

Both glumes and caryopsis contribute to dormancy, which is not due to water uptake restrictions.

Determined seed development parameters in the field: Seeds shattered after physiological maturity and were fully dormant throughout development.

Showed no surface changes in covering structures or pericarp correlated with dormancy loss via dry-afterripening.

- 12/77 - 6/78 Visiting Assistant Professor, Dept of Biology, University of Virginia. Responsible for plant physiology course. In association with Jim Riopel, engaged in studies culminating in the partial purification of a haustorium-inducing chemical in the parasitic plant, Agalinis.
- 7/77 - 11/77 Personal travel leave. The "grand tour" of Europe.
- 1/77 - 6/77 Instructor, Cornell University, Ithaca NY. Lecturer for introductory plant physiology course.
- 7/73 - 12/76 Graduate Research Assistant, Cornell University
9/71 - 8/72 Major Field: Plant Physiology
Minor Fields: Biochemistry, Analytical Chemistry
M.S., Ph.D. topic: Imbibitional chilling injury during germination of Zea mays L.
- Determined chilling injury to be independent of energy metabolism as measured by kernel respiration, embryo ATP levels, energy charge, and mitochondrial respiration.
- Demonstrated that the root growth reduction observed may be ascribed to the formation of a stelar lesion during imbibition. Observed the lesion to be a heritable, recessive character.
- 9/72 - 6/73 Graduate Teaching Assistant, Cornell University.
- Responsible for lab sections in introductory crop science, Dept. of Agronomy (also organization and maintenance of field and greenhouse plantings, lab manual revisions, preparation of audio-visual materials).
- 6/70 - 5/71 Undergraduate Research and Teaching Assistant, Dept of Biology, Northeastern University, Boston.
- Under an NSF training grant, assisted in work on the effect of red and far-red light upon ripening in tomato fruit.
- Discussion section leader, genetics. Guest lecturer in general biology and plant physiology lab courses.
- 1/68 - 5/70 Project Technician, Dept. Nutr & Food Sci, M.I.T., Cambridge.
- Responsible for maintenance and organization of studies evaluating storage stability of freeze-dried foods for NASA space missions. Responsible for execution of experiments studying lipid oxidation of intermediate moisture food model systems.

EDUCATION:

Ph.D., Plant Physiology, Cornell University, 1977
 M.S., Plant Physiology, Cornell University, 1974
 B.A., Biology, Northeastern University, Boston, 1971
 The McBurney School, New York City, 1966

SOCIETY MEMBERSHIPS AND ACTIVITIES:

International Seed Science Society, charter member, 2000-
 Publications Committee, 2000-2008
 American Society of Plant Biologists (life member)
 Annual Meeting Local Arrangements Committee, 1986
 Ad-Hoc Reviewer, Plant Physiology, 1988-92, 1995-2001
 Executive Committee, 1996-99
 Membership Committee, 1996-1999
 Southern Society of Plant Physiologists
 Graduate Student Awards Committee, 1981, 1985, 1987 (chairman)
 Nominations Committee, 1984, 1992 (chair), 1998
 Site Selection Committee, 1989 (chairman)
 Secretary/Treasurer, 1988-89
 Local Arrangements Committee, 1989 (chair), 1990, 1999 meetings
 Vice-Chairman/Symposium Organizer, 1989-90
 Chairman and Symposium Editor, 1990-91
 Executive Committee, 1992-1994
 Financial Oversight & Investments Committee (co-chair), 1992-to date
 Crop Science Society of America
 Associate Editor, Crop Science, 1990-92
 Ad-Hoc Reviewer, Crop Science, 1986-89; 2010-2011
 Ad-Hoc Reviewer, Agronomy Journal, 1987
 Seed Science Awards Committee, 1988, 1989
 C-4 (Seed Science) Division Chair-Elect & Chair, 2013-2015
 Weed Science Society of America
 Southern Weed Science Society
 Graduate Student Awards Committee, 1998
 Rice Technical Working Group
 Program Committee, 1984
 Local Arrangements Committee, 1984
 Panel Moderator, 1984
 Scandinavian Society for Plant Physiology
 Ad-Hoc Reviewer, Physiologia Plantarum, 1989-96, 2010
 Association of Official Seed Analysts (Associate Member)
 Ad-Hoc Reviewer, J Seed Technology, 1988
 Western Regional Project 'W-168', Seed Quality Investigations
 Secretary, 1991; Vice-Chair, 1992; Symposium Fundraiser, 1997;
 Local Arrangements (Chair), 1998-99;
 Project Re-write Committee (1997-98; 2002-03, 2007-08; 2012-13)

GRANT SUPPORT: (\$5,324,026 through January 2015)

Louisiana Quality Thrust (8g): 1988-92 (\$157,147)
 American Seed Research Foundation: 1988-92 (\$15,000)
 USDA Competitive Grants Program: 1986-88 (\$80,000)
 USDA Tropical/Subtropical Research: 1980-86 (\$118,000)
 USDA Western Regional Project, W-168, W-1168, W-2268: 1988-to date (c. \$300,000)
 LSU College of Agriculture Research Grant: 1984, 1985 (\$10,000)
 Louisiana Rice Research Board: 1984, 1985 (\$17,600)
 Louisiana Soybean Promotion Board: 1979 (\$12,000)
 CIBA-GEIGY: 1986 (\$1,000)
 AgrEvo Co: 1996-2000 (\$49,600)
 Monsanto Co 1998-99 (\$3,500)
 CABI International/Cambridge University Press: 1997-2008 (\$122,200)
 USDA-CREES: 1999-2007 (\$3,851,979)(multi-PI collaborative project on *Spartina alterniflora*)
 Aventis CropScience: 2001 (\$6,000)
 USDA-NRI: 2006-2010 (\$381,000)
 La Agric Exp Stn supplemental equipment grant: 2007 (\$75,000)
 LSU AgCenter BAIT program 2010 (\$24,000)
 LSU Graduate School (EDA Assistantship) 2014-2018 (\$100,000)

INVITED PRESENTATIONS:

Seminars: Grand Valley State University, Allendale, MI, December 2012
 Calvin College, Grand Rapids, MI, December 2012
 South Dakota State University, Brookings, SD, October 2008
 University of South Dakota, Vermillion, SD, October 2006
 USDA Nat Seed Storage Lab, Ft. Collins, CO, June 2000
 Oregon State University, Corvallis, May 2000
 Wageningen Agricultural University, Netherlands, October 1999
 Center for Phytotechnology RUL/TNO, Leiden, Netherlands, October 1999
 Royal Botanic Gardens, Wakehurst Place, UK, April 1998
 LSU-Shreveport, October 1996
 Purdue University, West Lafayette IN, March 1992
 USDA-ARS, New Orleans LA, June 1991
 Colorado State University, Ft. Collins CO, April 1991
 University of Tennessee, Knoxville TN, February 1991
 American Seed Research Foundation, Orlando FL, June 1990
 Montana State University, Bozeman MT, December 1989
 Penn State University, State College PA, November 1989
 Eli Lilly, Indianapolis IN, July 1989
 Furman University, Greenville SC, February 1989
 Mississippi State University, MS, October 1987
 USDA-ARS, Beckley WV, March 1986
 Virginia Tech, Blacksburg VA, March 1986
 Tulane University, New Orleans LA, November 1985
 Monsanto Company, St Louis MO, September 1985
 Duke University, Durham NC, March 1984
 USDA-ARS, New Orleans LA, August 1982
 Cornell University, Ithaca NY, February 1981
 NYS Agric. Exp. Stn., Geneva NY, February 1981

Symposia: Crop Science Society of America, Long Beach, CA, 2014
 American Society of Plant Biologists, Providence, RI, 2013
 Sleeping Beauties (Dormancy Across the Kingdoms), Max Planck Institute, Berlin, 2008
 5th International Desiccation Workshop, South Africa, 2007
 International Weed Science Society, South Africa, 2004
 3rd Intl Plant Dormancy Congress, Wageningen, The Netherlands, 2004
 Weed Science Society of America, Greensboro, NC, February 2001
 So. Assoc Agric Sci, Dallas, TX, January 2001
 2nd Intl Plant Dormancy Congress, Angers, France, July 1999
 6th Intl Seed Biology Workshop, Merida, Mexico, January 1999
 FESPP, Varna, Bulgaria, Sept 1998 (section keynote speaker)
 Seed Biology & Technology: Applications & Advances, Ft. Collins, Aug 1997 (keynote speaker)
 So Weed Sci Soc Amer, Charlotte, NC, January 1996
 5th Intl Seed Biology Workshop, Reading England, September 1995
 1st Intl Plant Dormancy Congress, Corvallis OR, July 1994
 4th Intl Seed Biology Workshop, Angers France, July 1992
 3rd Intl Seed Biology Workshop, Williamsburg VA, August 1989
 Seed & Seedbed Ecology of Rangeland Plants, Tucson AZ, April 1987
 2nd Intl Seed Biology Workshop, Wageningen, Netherlands, August 1985
 Weed Science Society of America, Seattle WA, February 1985
 23rd ASTA Garden Seed Conference, New Orleans LA, January 1984

LSU Seminars: Sigma Xi, March 1985
 Dept of Horticulture, April 1982, March 1984, April 1987
 Plant Path & Crop Physiol: November 1983, May 1986, Sept 1989, Sept 1995, Sept 1999, May 2003,
 Sept 2012
 Animal Science: Oct 1999
 Coastal Plants Field Day, Oct 2009
 Fascination of Plants Day Symposium, 2013

PERSONAL BACKGROUND:

40 years volunteer experience in jazz broadcasting: WNEU, WRBB, WVBR, WTJU, WPRG, WRKF, KLSU, WHYR.
 Featured Jazz Cloudcaster, Mixcloud.com/drjazz, 2013-
 Charter Member and Patron, Baton Rouge Jazz Society
 Former Associate Editor, Spectrum, a literary magazine, 1968. Very amateur jazz saxophonist

PUBLICATIONS:

Subudhi PK, T DeLeon, P Singh, A Parco, **MA Cohn**, T Sasaki. 2015. A chromosome segment substitution library of weedy rice for genetic dissection of complex agronomic and domestication traits. PLoS ONE 10(6): e0130650. doi:10.1371/journal.pone.0130650

Chappell JH, Y Wang, MA Cohn. 2015. Recalcitrant and orthodox *Spartina* seeds or isolated embryos exhibit similar leachate patterns immediately following desiccation. Seed Science Research 25: 247-254.

Ziska LH, DR Gealy, N Burgos, AL Caicedo, J Gressel, AL Lawton-Rauh, LA Avila, G Theisen, J Norsworthy, A Ferrero, F Vidotto, DE Johnson, FG Ferreira, E Marchesan, V Menezes, **MA Cohn**, S Linscombe, L Carmona, R Tang, and A Merotto Jr. 2015. Weedy (red) rice: an emerging constraint to global rice production. Advances in

Agronomy
129, 181-228.

Subudhi, P., Singh, P., DeLeon, T., Parco, A., Karan, R., Biradar, H., **Cohn, M.**, Sasaki, T. 2014. Mapping of seed shattering loci provides insights into origin of weedy rice and rice domestication. *Journal of Heredity* 105:276-287.

Wang Y, ZY Chen, MA Cohn. Comparative proteomics of dormancy release during moist chilling of two related grass species, *Spartina alterniflora* and *Spartina pectinata*. *J Plant Physiol* (in preparation)

Wang Y, ZY Chen, MA Cohn. Comparative proteomics reveals a suite of heat-stable proteins associated with differential seed desiccation tolerance of *Spartina* species. *Plant Physiol* (in preparation)

Chappell JH, MA Cohn. Oxidative stress products form during desiccation of both orthodox and recalcitrant *Spartina* seeds. *New Phytol* (in preparation).

Chappell JH, FD Gatz, MA Cohn. Dormancy, germination and viability of recalcitrant *Spartina alterniflora* seeds. *Annals of Botany* (in preparation)

Wang Y, JH Chappell, MA Cohn. Critical water content for recalcitrant *Spartina alterniflora* seed death is independent of temperature and drying rate. *Seed Sci Res* (in preparation)

Cohn MA. Seed dormancy in red rice. XIV. Development and maintenance of dormancy under ambient conditions (in preparation).

Cohn MA. Seed dormancy in red rice. XV. Role of medium acidification in the dormancy-breaking action of applied compounds (in preparation).

Cohn MA, TY Lin, DF Church, V Sanchez. Seed dormancy in red rice. XVIII. Hydroxyl functional group position alters dormancy-breaking activity of alcohols (in preparation)

Johnson D, DR Gossett, SW Banks and MA Cohn. Seed dormancy in red rice. XVI. Changes in GSH, GSSG, cysteine, and cystine during dry afterripening. *Seed Science Research* (in preparation)

Lin TY, MA Cohn. Seed dormancy in red rice. XVII. Pyrazole inhibition of the dormancy-breaking action of alcohols (in preparation)

Subudhi PK, A Parco, PK Singh, T DeLeon, R Karan, H Biradar, MA Cohn, DS Brar, T Sasaki. 2012. Genetic architecture of seed dormancy in U.S. weedy rice in different genetic backgrounds. *Crop Science* 52:2564-2575.

Oard S., J Ham, MA Cohn. 2012. Thionins - Nature's weapons of mass protection. pp. 415-443. In R. Rajasekaran, R.W. Cary, J.M. Jaynes, E. Montesinos (Eds) *Small Wonders: Peptides for Disease Control*. American Chemical Society Symposium Series 1095. American Chemical Society, Washington, DC.

Chappell JH, MA Cohn. 2011. Corrections for interferences and extraction conditions make a difference: use of the TBARS assay for lipid peroxidation of orthodox *Spartina pectinata* and recalcitrant *Spartina alterniflora* seeds during desiccation. *Seed Sci. Res.* 21: 153-158.

McAvoy R, J Siedow, M Cohn. 2011. Mary Musgrave – obituary. *ASPB News* 38 (6): 39.

Cohn, M.A. 2008. Seed development, dormancy and germination. *Annual Plant Reviews* 27. Bradford, K.B. and Nonogaki, H. (Eds). *Ann Bot* 102:877-878 (Book review)

Gianinetti A, MA Cohn. 2008. Seed dormancy in red rice. XIII. Interaction of dry afterripening and hydration temperature. *Seed Science Research* 18: 151-159.

Gianinetti A, MA Cohn. 2007. Seed dormancy in red rice. XII. Population-based analysis of afterripening with a hydrotime model. *Seed Science Research* 17: 253-271.

Cohn MA, JH Chappell. 2007. Recalcitrance and dormancy in smooth cordgrass seeds. *Louisiana Agriculture*, 50 (2), 25.

Cohn MA. 2006. Dormancy. pp. 177-181 in Black, M.; Bewley, J.D.; Halmer, P. (Eds) *The encyclopedia of seeds. Science, technology and uses*. Wallingford, CABI Publishing.

Kucera, B, MA Cohn, G Leubner-Metzger. 2005. Plant hormone interactions during seed dormancy release and germination (Invited Review) *Seed Science Research* 15: 281-307.

Cohn MA. 2002. Seed dormancy in red rice. A balance of logic and luck. *Weed Science* 50:261-266.

Harrison SA, TP Croughan, MD Materne, BC Venuto, GA Breitenbeck, MA Cohn, XB Fang, A Ryan, RW Schneider, RA Shadow, P Subudhi and H Utomo. 2001. Improving native plants to protect and preserve Louisiana=s coastal marshes. *Louisiana Agriculture* 44:4-5.

Footitt S and MA Cohn. 2001. Developmental arrest: from sea urchins to seeds. *Seed Science Research* 11: 3-16.

Cohn MA. 2001. Book review: Andersen=s *Guide to Practical Methods of Propagating Weeds and Other Plants*. *Seed Science Research* 11: 100.

Cohn MA and HWM Hilhorst. 2000. Alcohols that break seed dormancy: the anesthetic hypothesis, dead or alive? in J.D.Viemont and J.Crabbe (eds) *Dormancy in Plants: From Whole Plant Behaviour to Cellular Control*. CAB Publishing, Wallingford. pp 259-274.

Hilhorst HWM and MA Cohn. 2000. Are cellular membranes involved in the control of seed dormancy? in J.D.Viemont and J. Crabbe (eds) *Dormancy in Plants: From Whole Plant Behaviour to Cellular Control*. CAB Publishing, Wallingford. pp 275-289.

Doherty LC and MA Cohn. 2000. Seed dormancy in red rice (*Oryza sativa*). XI. Commercial liquid smoke elicits germination. *Seed Science Research* 10: 415-421.

Oard J, MA Cohn, S Linscombe, D Gealy, K Gravois. 2000. Field evaluation of seed production, shattering and dormancy in hybrid populations of transgenic rice (*Oryza sativa*) and the weed, red rice (*Oryza sativa*). *Plant Science* 157: 13-22.

Doherty LC and MA Cohn. 1998. Commercial liquid smoke breaks dormancy of red rice. *Louisiana Rice Research Station, Annual Progress Report* 90:346-347.

Bradford KJ, MA Cohn. 1998. Seed biology and technology: At the crossroads and beyond. *Seed Sci Res* 8:153-160

- Cohn MA (editor). 1998. Seed biology and technology: Applications and advances. *Seed Sci Res* 8:147-301.
- Chun S-C, RW Schneider, MA Cohn. 1997. Sodium hypochlorite: effect of solution pH on rice seed disinfestation and its direct effect on rice seedling growth. *Plant Disease* 81:821-824
- Cohn MA, F Jodari. 1997. The importance of evaluating seed dormancy in the development of new rice varieties. *La Rice Res Stn Ann Prog Report* 88: 150.
- Cohn MA. 1997. QSAR modeling of dormancy-breaking chemicals. In RH Ellis, M Black, AJ Murdoch, TD Hong (eds). *Basic and Applied Aspects of Seeds*. Kluwer Academic, Dordrecht, pp 289-295.
- Cohn MA. 1996. Chemical mechanisms of breaking seed dormancy. *Seed Science Research* 6:95-99
- Cohn MA. 1996. Operational and philosophical decisions in seed dormancy research. *Seed Science Research* 6: 147-153
- Cohn MA. 1996. Chemical mechanisms of breaking seed dormancy. In G Lang (ed), *Plant Dormancy*, CAB International, pp 257-265.
- Footitt S, MA Cohn. 1995. Seed dormancy in red rice. IX. Levels of fructose 2,6-bisphosphate in red rice embryos during dormancy-breaking and germination. *Plant Physiol* 107:1365-1370
- Footitt S, D Vargas, MA Cohn. 1995. Seed dormancy in red rice. X. A ¹³C NMR study of metabolism of dormancy-breaking chemicals. *Physiol Plant* 94:667-671
- Ingham BH, TCY Hsieh, FJ Sundstrom, MA Cohn. 1993. Volatile compounds released during dry afterripening of tabasco pepper seeds. *J Agr Food Chem* 41:951-954.
- Cohn MA, S Footitt. 1993. Initial signal transduction steps during the dormancy-breaking process. IN D Come, F Corbineau, eds, *Proceedings of the Fourth International Workshop on Seeds: Basic and Applied Aspects of Seed Biology, Volume 2*. Association pour la Formation Professionnelle de l'Interprofession Semences (ASFIS), Paris France. pp 599-605. ISBN: 2-9507351-4-2
- Cohn MA. 1993. Chemical structure versus physiological activity: studies of dormancy-breaking chemicals for seeds. *SEARCH* 28:1-6.
- Cohn MA. 1993. Development of chemicals for breaking seed dormancy. *La Rice Res Stn Ann Prog Report* 85:373-377.
- Footitt S, MA Cohn. 1992. Seed dormancy in red rice. VIII. Embryo acidification during dormancy-breaking and subsequent germination. *Plant Physiol* 100:1196-1202.
- Cohn MA, TM Murphy (ed) 1991. Developmental control of embryogenesis and germination. *Physiol Plant* 81:265-288.
- Griffin JL, RT Dunand, JB Baker, RP Regan, MA Cohn. 1991. Integrating red rice control measures in soybean-rice rotations. *Louisiana Agriculture* 34(3):6-7.
- Cohn MA. 1989. Factors influencing the efficacy of dormancy-breaking chemicals. IN *Recent Advances in*

Development and Germination of Seeds, ed. R.B. Taylorson, Plenum Press, NY, pp 261-267.

Cohn MA, KL Jones, LA Chiles, DF Church. 1989. Seed dormancy in red rice. VII. Structure-activity studies of germination stimulants. *Plant Physiol* 89:879-882.

Cohn MA, LA Chiles. 1989. Dormancy. IN McGraw-Hill Yearbook of Science and Technology. McGraw-Hill, NY, pp 103-105.

Leopold AC, R Glenister, MA Cohn. 1988. Relationship between water content and afterripening in red rice. *Physiol Plant* 74:659-662.

Cohn MA. 1987. Mechanisms of physiological seed dormancy. IN *Seed and Seedbed Ecology of Rangeland Plants*, GW Frazier, RA Evans eds., USDA-ARS, Washington DC, pp 14-20.

Cohn MA, LA Chiles, JA Hughes, KJ Boullion. 1987. Seed dormancy in red rice. VI. Monocarboxylic acids: a new class of pH-dependent germination stimulants. *Plant Physiol* 84:716-719.

Cohn MA, JA Hughes. 1986. Seed dormancy in red rice. V. Response to azide, cyanide, and hydroxylamine. *Plant Physiol* 80:531-533.

Griffin JL, RP Regan, RT Dunand, JB Baker, MA Cohn. 1986. An integrated approach to red rice control. *La Rice Res Stn Ann Prog Report* 77:309-313.

Griffin JL, RP Regan, RT Dunand, JB Baker, MA Cohn. 1985. An integrated approach to red rice control. *La Rice Res Stn Ann Prog Report* 76:312-316.

Cohn MA, L Castle. 1984. Dormancy in red rice. IV. Response of unimbibed and imbibing seeds to nitrogen dioxide. *Physiol Plant* 60:552-556.

Cohn MA. 1984. Factors associated with seed dormancy. *Assoc Off Seed Analysts Newsletter* 58(3):111-113.

Cohn MA, DL Butera, JA Hughes. 1983. Seed dormancy in red rice. III. Response to nitrite, nitrate, and ammonium ions. *Plant Physiol* 73:381-384.

Cohn MA, DL Butera. 1982. Seed dormancy in red rice. II. Response to cytokinins. *Weed Sci* 30:200-205.

Cohn MA, JA Hughes. 1981. Seed dormancy in red rice. I. Effect of temperature on dry-afterripening. *Weed Sci* 29:402-404.

Cohn MA, RL Obendorf, GT Rytco. 1979. Relationship of stelar lesions to radicle growth in corn seedlings. *Agron J* 71:954-958.

Cohn MA, RL Obendorf. 1978. Occurrence of a stelar lesion during imbibitional chilling of *Zea mays* L. *Amer J Bot* 65:50-56.

Cohn MA. 1977. Studies on the cause of imbibitional chilling injury in *Zea mays* L.: the stelar lesion. Ph.D. Thesis. Cornell University, Ithaca NY.

Cohn MA, RL Obendorf. 1976. Independence of imbibitional chilling injury and energy metabolism in corn. *Crop Sci*

16:449-452.

Cohn MA. 1974. Studies on the mechanism of imbibitional chilling injury during the germination of *Zea mays* L. - Growth experiments and investigation of the mitochondrial hypothesis. M.S. Thesis. Cornell University, Ithaca NY.

Labuza TP, M Silver, M Cohn, ND Heidelbaugh, M Karel. 1971. Metal-catalyzed oxidation in the presence of water in foods. *J Amer Oil Chem Soc* 48:527-531.

ABSTRACTS:

Subudhi PK, De Leon T, Singh PK, Parco A, Cohn MA (2015) A chromosome segment substitution library of weedy rice for genetic dissection of complex agronomic and domestication traits. *Plant and Animal Genome XXIII*, San Diego, CA, Jan 10-14, 2015. Final abstract guide pp242, Poster No. 488.

Cohn, M.A. (2014) Dealing with seed dormancy. Invited symposium presentation. *Crop Science Society of America Annual Meeting*, Long Beach, CA. November 2-6, 2014.

Subudhi PK, DeLeon T, Parco A, Singh P, Karan R, Cohn M (2014) Weedy red rice as a model for breeding and genetic studies. The 35th RTWG meeting, Sheraton New Orleans, New Orleans, Louisiana, February 18 – February 21, 2014.

Cohn, M.A. (2013) Death by drying: exploiting comparative *Spartina* seed physiology to reexamine recalcitrant seed mortality. *American Society of Plant Biologists Annual Meeting*, Providence, RI. July 20-24, 2013.

Cohn, M.A. (2013) The basis of *Spartina* seed desiccation tolerance using comparative proteomics. *Crop Science Society of America Annual Meeting*. Tampa, FL. November 3-6, 2013.

Wang Y, Hasan A, Chen, ZY, Cohn MA (2012) Lack of protective proteins and autophagy may be associated with recalcitrant seed death in *Spartina alterniflora*. *American Society of Plant Biologists Annual Meeting*, Austin TX July 20-24 2012. <http://precis.preciscentral.com/utills/ip/ShowSummary.asp?AbstractId=142&Presenter=>

Wang Y, Chappell JH, Hasan A, Chen ZY and Cohn MA (2012) Study of recalcitrance of *Spartina alterniflora* seeds for coastal restoration in Louisiana. *State of the Coast, Preparing for a Changing Future*. New Orleans, LA. June 25-27 2012. <http://www.stateofthecoast.org/2012-soc-conference/poster-presentations.html>

Wang, Y., Hasan, A., Chen, Z.Y. and Cohn, M.A. (2012) Comparative proteomics of recalcitrant seed death in *Spartina alterniflora*. *Southern Section – American Society of Plant Biologists annual meeting*, Myrtle Beach, SC. March 3-5 2012. <http://www.ss-aspb.org/resources/2011-Titles-and-Abstracts-SS-ASPB-2011.pdf>

Subudhi, P.K., A. Parco, P.K. Singh, T. DeLeon, R. Karan, H. Biradar, M.A. Cohn (2012) Genetic dissection of two key domestication traits, seed dormancy and seed shattering, in the U.S. weedy rice. The 34th RTWG meeting. Hot Springs, AR 71901, February 27 – March 1, 2012.

Wang Y., Hasan, A., Chen, Z-y, Cohn, M. (2011) Comparative proteomics of recalcitrant seed death in *Spartina alterniflora*. *Crop Science Society of America Annual Meeting*, San Antonio, TX. October 16-19, 2011. <http://a-c-s.confex.com/crops/2011am/webprogram/Paper65894.html>

Wang Y, A Hasan, Z-Y Chen, MA Cohn (2011) Comparative proteomics of recalcitrant seed death in *Spartina alterniflora*. *Southern Section – Amer Soc Plant Biol annual meeting*, Ocean Springs, MS. April 9-11 2011.

Subudhi, P.K., A. Parco, P. Singh, T. DeLeon, and M. A. Cohn (2011) Genetic dissection of seed shattering and seed dormancy in US red rice. Plant and Animal Genome Conference, San Diego, CA. January 15-19, 2011
http://www.intl-pag.org/19/abstracts/P05b_PAGXIX_267.html

Subudhi, P.K., A. Parco, P. Singh, T. DeLeon, and M. A. Cohn (2010) Quantitative trait loci for seed shattering and seed dormancy in weedy red rice. CSSA Abstracts. 2010 Annual Meeting. Long Beach, CA. <http://a-c-s.confex.com/crops/2010am/webprogram/Paper61295.html>

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Subudhi, P.K., A. Parco, P. Singh, T. DeLeon, N. Baisakh, and M. A. Cohn (2009) Development of an introgression library of red rice for mapping and cloning of genes for weedy traits. Plant & Animal Genomes XVII Conference, January 10-14, 2009. San Diego, CA

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TEACHING:

Sedberry Graduate Teaching & Mentoring Award, 2009
 Alumni Association Distinguished Teaching Award, 2011
 Alumni Association Teacher of the Year Award, 2012
 Tiger Athletic Foundation President's Award, 2015

Seed Biology (PLHL/BIOS 4444). 1999, 2000, 2003-to date (Cohn initiated)
 Current Literature in Plant Physiology (PLHL 7068)(Cohn initiated)
 Professional Development for Plant Scientists (PLHL/BIOS 7067) 2001-to date (Cohn initiated)
 Instructor, Introduction to Plant Physiology (PLHL 3060): 1990.
 Co-Supervisor, Departmental Seminar, 1994-95; 2000-2001, 2005-06, 2009-2010
 Instructor, Seed Physiology (special topics), 1995
 Guest Lecturer: Plant Growth & Development (PLHL 7061): 1978, 80, 82-84, 87, 94, 96, 98, 2000, 2002, 2004, 2006, 2011
 Mineral Nutrition of Plants (PLHL 7065): 1979, 81. Plant Physiology (PLHL 3060): 1981, 84.
 Volunteer Teaching Assistant, History of Jazz (Music 2000), 1990-1996
 Graduate Advisory Committee member for 10 M.S. and 12 Ph.D. recipients.
 Major professor for two M.S. and eight Ph.D. candidates.

ADMINISTRATIVE ACTIVITIES:

LSU College of Agriculture Courses and Curriculum Committee: 2005-2007; 2010 -
 LSU College of Agriculture Faculty Council: 2006-2009
 Dept Graduate Student Recruiting Coordinator: 2006-
 LSU Faculty Senate: College of Agriculture representative, 1993-1996
 Faculty Search Committees: Flores, Jordan, Kitchen, MacKenzie, Murai, Terry, Tully, Musgrave, Buehl, Berggren
 LSU Distinguished Dissertation Award Committee: 1985, 1986, 2014.
 Dept Promotion and Tenure Committee: 1984, 1985, 1989, 1990, 1991 (chair), 1994-96; 2009-.

Dept Graduate Student Awards Committee (chair): 1989-1998.
 Dept Student Standards Committee: 1990.
 Dept Facilities and Planning Committee: 1984, 1985.
 Dept Faculty Research Seminar Co-chairman: 1983-84, 1994-95.
 Dept. CSRS Review Document Co-editor: 1984-85.
 Dept. CSRS Review Steering Committee, Chair, 1991.
 Amer Soc Hort Sci, Dormancy Terminology Committee: 1987, 1988.

Ad-Hoc Reviewer: NSF; USDA Competitive Grants Program, La Agr Exp Stn; USDA-ARS manuscript peer review system; *Proceedings of the National Academy of Sciences (USA)*, *Plant Journal*; *Plant Molecular Biology*; *Canadian Journal of Botany*; *Seed Science and Technology*; *Canadian Journal of Plant Science*; *J Amer Soc Hort Sci*; *HortScience*; *Seed Science Research*; *Plant Growth Regulation*, *J Exp Botany*, *Annals of Botany*, *Journal of Plant Growth Regulation*, *Journal of Sciences*, *Journal of Plant Physiology*, *Physiologia Plantarum*, *Nature*. Dept of Wetlands Resources (LSU); Dept of Horticulture (LSU); Dept of Plant Pathology & Crop Physiology (LSU); Dept of Botany (LSU); Dept of Agronomy (LSU); Research Corporation, Tucson AZ; Foundation for Research Development, Pretoria.

HONORS AND HONORARY SOCIETIES:

Tiger Athletic Foundation President's Award, 2015
 Alumni Association Teacher of the Year Award (Agriculture), 2012
 Alumni Association Excellence in Teaching Award (Outstanding Teacher in the LSU College of Agriculture), 2011
 Sedberry Graduate Teaching & Mentoring Award, 2009
 Tipton Team Research Award, 2007 (co-recipient)
Seed Science Award, Crop Science Society of America, 2006
Editor-in-Chief, *Seed Science Research*, 1999-2008
 American Society of Plant Biologists (Southern Division), Distinguished Service Award, 2001
 Associate Editor, *Seed Science Research*, 1997-1998
 Executive Committee, American Society of Plant Physiologists, 1996-1999
 LSU College of Agriculture Distinguished Dissertation Award (with S Footitt), 1993
 Associate Editor, *Crop Science*, 1990-1992
 Association of Official Seed Analysts; Phi Sigma; Sigma Xi; Gamma Sigma Delta;
 LSU Science Club (President 2009-2010)

Related student awards:

JH Chappell. 2008. Finalist, LSU Distinguished Dissertation Award
 JH Chappell. 2007 Best Student Presentation Award, SS-ASPB, Mobile, AL
 JH Chappell. 2007. Best Graduate Student Paper Award (Seed Sci & Technol), Crop Sci Soc Amer, New Orleans, LA
 JH Chappell. 2007. Edgerton Outstanding Graduate Student Award, LSU Plant Pathol & Crop Physiol
 TY Lin. 1997 Best Student Presentation Award. SS-ASPP. Tuskegee, AL
 TY Lin. 1997 Best Student Presentation Award (2nd place). La. Plant Protection Assoc. Baton Rouge, LA.
 LC Doherty, Goldwater Scholar (1997-1999)
 S. Footitt. LSU College of Agriculture Distinguished Dissertation Award, 1993
 S. Footitt. Edgerton Award, LSU, 1993

RECENT SOCIETY MEETING ATTENDANCE:

Crop Science Society of America: Minneapolis (2015); Long Beach (2014); Tampa (2013); San Antonio (2011); New Orleans (2007); Indianapolis (2006)

South Soc Plant Physiol: Dauphin Island (AL)(2015), Ocean Springs (2011); Shreveport (2008), Mobile (2007),
Daytona Beach (2005)
Intl Seed Sci Soc: Poland (2008), Wageningen (2004), Salamanca (2002)
Amer Soc Plant Biologists: Austin (2012), Providence (2013)

08/2015