

JAMES A. PATINDOL

*Food Scientist/Professional Chemist
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EDUCATION

Doctor of Philosophy (major in Food Science; minor in Biochemistry),
University of Arkansas, Fayetteville, AR, USA, May 2004; Dissertation:
Studies on the fine structures of carbohydrates in relation to rice quality

Master of Science (major in Biochemistry; minor in Food Science) University
of the Philippines-Los Baños, Los Baños, Laguna, May 1995; Thesis:
*Influence of grain tempering and variety on the biochemical and functional
properties of milled rice flour*

Bachelor of Science in Agricultural Chemistry, Visayas State University,
Baybay City, Leyte, April 1988; Thesis: *Improvement of the quality of abaca
fibers through chemical treatment*

AREA OF SPECIALIZATION

Food Chemistry and Analysis

WORK EXPERIENCE

Teaching

Teaching Assistant, University of Arkansas, Fayetteville, AR, USA (2000-2004;
2013-2015); *taught Food Chemistry/Analysis laboratory; developed/edited
laboratory manuals, mentored undergraduate thesis and exchange students
with research topics on cereal chemistry, processing, and utilization*

Affiliate Faculty, Central Luzon State University, Muñoz, Nueva Ecija,
Philippines (1995 –1999); *taught laboratory courses in Cereal Chemistry,
Analytical Chemistry and Organic Chemistry, and served as thesis critic/co-
adviser to undergraduate students in BS Chemistry and BS Food Technology*

Instructor I, Visayas State University, Baybay, Leyte, Philippines (1988-1990);
*taught laboratory courses in General Chemistry, Inorganic Chemistry, Industrial
Chemistry and Biochemistry*

Research

Research Fellow, Rice Processing Program, University of Arkansas,
Fayetteville, AR, USA (2012-2017); *conducted research re: rice starch
properties in relation to breakfast cereal quality, and micronutrient fortification
of rice by parboiling; completed projects re: (1) impact of elevated nighttime
temperature on starch fine structure and functionality, (2) parboiling properties
of purelines and hybrids, (3) rice quality traits of importance to export markets,
and (4) design/process optimization of a pilot-scale parboiling unit; peer*

reviewed papers for Journal of Food Science, Starch/Starke, Cereal Chemistry, and Journal of Cereal Science

Research Food Technologist, USDA-ARS Southern Regional Research Center, New Orleans, LA, USA (2008-2011); *conducted research re: utilization of rice and rice derivatives as a source and/or delivery system for nutrients and bioactive compounds; completed research on (a)cultivar variation of nutritionally-important starch fractions in the rice grain, and (b)stability assessment of quick-cooking brown rice; peer reviewed papers for Journal of Food Science, Starch/Starke, Cereal Chemistry, and Journal of Cereal Science*

Postdoctoral Research Associate, University of Arkansas, Fayetteville, AR, USA (2005-2007); *worked as laboratory manager; conducted research on rice bran oligosaccharide extraction and characterization, optimized procedure for molecular characterization of starch by HPSEC-MALLS-RI; conducted chemical analysis of raw materials and by-products of beer brewing*

Science Research Specialist, Philippine Rice Research Institute, Muñoz, Nueva Ecija, Philippines (1992-1999); *implemented and/or supervised research and development activities concerning rice grain quality, processing, and utilization; worked with the breeders in the development of high-yielding and good-eating quality rice cultivars.*

Research Assistant, Postharvest Horticulture Training and Research Center, University of the Philippines-Los Baños, College, Laguna, Philippines (1992); *studied the biochemical reactions/mechanisms involved in the processing of winter squash flour and their effects on quality*

SPECIAL TRAININGS, SCHOLARSHIPS, and TRAVEL GRANTS

Microencapsulation for Foods, Institute of Food Technologists, July 2010

Nanoencapsulation and Controlled Release for Food Application, Controlled Release Society, July 2007

Wyatt Light Scattering University HPSEC-MALLS-RI Training Course, January 2005

Carbohydrates: Characterization and Their Roles in Human Nutrition, Summer 2004, University of Arkansas

American Association of Cereal Chemists Graduate Fellowship, 2003-2004

University of Arkansas Graduate Assistantship, 2000-2004

American Association of Cereal Chemists Student Travel Award, October 2003

American Association of Cereal Chemists Student Travel Award, October 2002

American Association of Cereal Chemists Student Travel Award, October 2001

American Association of Cereal Chemists Student Travel Award, October 2000

Japan International Cooperation Agency Rice Quality Training Course, May-Oct 1996, Tsukuba Science City, Japan

Philippine Council for Advanced S&T Graduate Scholarship, 1990-1992

Chemistry Licensure Examination, September 1989

DOST/UP-Diliman Intensive Training Program in Chemistry, April-May 1989

College/University Scholarship, Visayas State University, 1984-1988

AWARDS AND HONORS

Outstanding Ph.D. Student, Food Science Department, University of Arkansas, 2002-2003
Dale Bumper's College of Agriculture Top Ten Graduate Students, University of Arkansas, 2003
Institute of Food Technologists Certificate of Merit for Outstanding Scholastic Ability, 2003-2004
Champion, South Central Regional Institute of Food Technologists College Bowl, Irving Texas, March 2002
Best Poster, 11th National Rice R&D Review and Planning Workshop, Munoz, Nueva Ecija, Philippines, March 1998
Graduated *magna cum laude*, Visayas State University, April 1988
Presidential Medal for Highest Scholastic Rating, Visayas State University, April 1988
Outstanding Student of the Year, Visayas State University, March 1988
Class Valedictorian, Saint Anthony Academy, March 1984
Class Salutatorian, Batuan Central Elementary School, March 1980

PROFESSIONAL MEMBERSHIPS

American Association of Cereal Chemists
Institute of Food Technologists
Integrated Chemists of the Philippines

PUBLICATIONS

Jannasch, A., Carvalho, L., **Patindol, J.** and Wang, Y.J. 2020. Impact of kernel thickness on parboiled rice properties. *Cereal Chemistry* 97:755-761

Patindol, J., Fragallo, L., and Wang, Y.J. 2018. Impact of feedstock, parboiling condition, and nutrient concentration on simultaneous fortification of two U.S. long-grain rice cultivars with iron and zinc. *Cereal Chem* 95:984-990

Patindol, J., Domingues, W., and Wang, Y.J. 2017. Impact of soaking temperature and duration on rough rice fissure incidence. *Cereal Chemistry* 94:798-800

Patindol, J., Jinn, J.R., Wang, Y.J. and Siebenmorgen, T.J. 2016. Kernel and starch properties of United States and imported medium- and short-grain rice cultivars. *Cereal Chemistry* 93:529-535.

Patindol, J.A., Siebenmorgen, T.J., and Wang, Y.J. 2015. Impact of environmental factors on rice starch structure: a review. *Starch/Starke* 67:42-54

Basutkar, N.N, Siebenmorgen, T.J., Wang, Y-J., and **Patindol, J.A.** 2015. Functional properties of commingled rice-cultivar lots. *Cereal Chemistry* 92:114-119

Cheuk, S.Y., Shih, F.F., Champagne, E.T., Daigle, K.W., **Patindol, J.A.**, Mattison, C.P. and Boue, S.M. 2015. Nano-encapsulation of coenzyme Q10 using octenyl succinic anhydride modified starch. *Food Chem* 174:585-590

Patindol, J.A., Siebenmorgen, T.J., Wang, Y.J., Lanning, S.B., and Counce, P.A. 2014. Impact of elevated nighttime air temperatures during kernel development on starch properties of field-grown rice. *Cereal Chemistry* 91:350-357

Patindol, J., Siebenmorgen T, and Daffour, A. 2013. Design and processing performance of a pilot-scale parboiling unit. *Applied Engineering in Agriculture* 29:943-951

Patindol, J., Shih, F., Ingber, B, Champagne, E, and Boue, S. 2013. Porous rice powder from the precipitation of gelatinized flour or starch paste with ethanol. *Starch/Starke* 65: 296–303

Patindol, J., Mendez-Montealvo, G. and Ya-Jane Wang, Y.J. 2012. Starch properties of malted barley in relation to real degree of fermentation. *Starch/Starke* 64:517-523

Guraya, H., and **Patindol, J.** 2011. Storage stability of flour-blasted brown rice. *Cereal Chemistry* 88:56-63.

Patindol, J., Guraya, S., Champagne, E. and McClung, A. 2010. Nutritionally-important starch fractions of rice cultivars grown in southern United States. *Journal of Food Science* 75:H137-144.

Patindol, J., Guraya, S., Champagne, E. Chen, M., McClung, A. 2010. Relationship of cooked-rice nutritionally important starch fractions with other physicochemical properties. *Starch/Starke* 62:246-256

Patindol, J., Gu, XF., and Wang YJ. 2010. Chemometric analysis of cooked rice texture in relation to starch fine structure and leaching characteristics. *Starch/Starke* 62:188-197

Patindol, J., Gu, X., and Wang, Y.-J. 2009. Chemometric analysis of the gelatinization and pasting properties of long-grain rice starches in relation to fine structure. *Starch* 61(1):3-11

Patindol, J., Newton, J., and Wang, Y.-J. 2008. Functional properties as affected by laboratory-scale parboiling of rough rice and brown rice. *Journal of Food Science* 73:E370-E377

Patindol, J., Wang, L., and Wang, Y.-J. 2007. Cellulase-assisted extraction of oligosaccharides from defatted rice bran. *Journal of Food Science* 72(9):C516-C521

Wang, Y.-J., Kuo, M., Wang, L., and **Patindol, J.** 2007. Chemical composition and structure of granule periphery and envelope remnant of rice starches as revealed by chemical surface gelatinization. *Starch* 59:445-453

Patindol, J., Gonzalez, B, Wang, Y.-J., and McClung, A. 2007. Starch fine structure and physicochemical properties of specialty rice for canning. *Journal of Cereal Science* 45: 209-218

Patindol, J., Flowers, A., Kuo, M.-I., Wang, Y.-J., and Gealy, D. 2006. Comparison of physicochemical properties and starch structure of red rice and cultivated rice. *Journal of Agricultural and Food Chemistry* 54:2712-2718

Patindol, J., Wang, Y.J., and Jane, J.-L. 2005. Structure-functionality changes in starch following rough rice storage. *Starch/Starke* 57:197-207

Patindol, J. and Wang, Y.J. 2003. Fine structures and properties of starches from chalky and translucent rice kernels. *Journal of Agricultural and Food Chemistry* 51:2777-2784

Patindol, J., Wang, Y.J., Siebenmorgen, T., and Jane, J.L. 2003. Properties of flours and starches as affected by rough rice drying regime. *Cereal Chemistry* 80:30-34

Patindol, J. and Wang, Y.J. 2002. Fine structures and properties of starches from long-grain rice cultivars with different functionality. *Cereal Chemistry* 79:465-469

Wang, Y.J., Wang, L., Shephard, D., Wang, F., and **Patindol, J.** 2002. Properties and structures of flours and starches from whole, broken, and yellowed kernel in a model study. *Cereal Chemistry* 79:383-386

Patindol, J.A. 2000. Methods and standards for rice grain quality assessment in the Philippines. *In: Quality assurance in agricultural produce. ACIAR Proceeding No. 100. Proceedings of the ed at the 19th ASEAN and 1st APEC Seminar on Postharvest Technology, Ho Chi Minh City, Vietnam, November 1999*

Patindol, J., Okadome, H., and Ohtsubo, K. Discriminating the quality of Philippine rice cultivars with the new tensipresser. *In: Asian Crop Science 1998. Proceedings of the 3rd Asian Crop Science Conference, Taichung, Taiwan, 2 May 1998*

Patindol, J.A., and Juliano, B.O. Effect of tempering milled rice on the properties of dry-milled flour. *Philippine Agriculturist* 79(1996):207

Patindol, J.A., Herrera, E.M., Naito, S. and Ogawa, T. A proposed sensory analysis system for disseminating information on eating quality of world rices. *Proceedings of the 2nd Asian Crop Science Conference, Fukui, Japan, August 1995*

Orge, R.F., Bautista, E.U., Regalado, M.J., and **Patindol, J.A.** Design and development of a flour mill for rice food products. *Philippine Agricultural Engineering Journal* 23(1994):12

REFERENCES

Ya-Jane Wang

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