

Wendy Ann Peer
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Education

Ph.D. Biology	University of California, Santa Cruz	1996
B.S. Biology	California State University, Bakersfield	1989
B.S. Chemistry	California State University, Bakersfield	1989

Academic Positions

2006 – present	Research Assistant Professor*, Dept. of Horticulture and Landscape Architecture, Purdue University
2001 – 2006	Research Scientist, Dept. of Horticulture and Landscape Architecture, Purdue University
2001	Visiting Scholar, Purdue University
1997 – 2000	Postdoctoral Fellow, Molecular, Cell and Developmental Biology Dept., University of California, Santa Cruz

*Search, interview, hiring, evaluation and promotion procedures identical to Assistant Professor, except Research Professor position is not tenure-track.

Other Affiliations

Center for Enhancing Foods to Protect Health <http://www.efph.purdue.edu/>
Oncological Sciences Center <http://discoverypark.purdue.edu/wps/portal/Oncological>

Confocal Laser Scanning Microscopy, Epifluorescence Microscopy

Experience using Leitz, Lieca, Olympus, Zeiss/Biorad, Zeiss LS 510 Meta systems. 10 years experience using fluorescent microscopy. Published first paper using CLSM in 2000. Developed techniques to visualize small molecules and co-visualize small molecules with fluorescence markers and dyes *in planta*.

Web sites: <http://www.hort.purdue.edu/hort/people/faculty/peer.shtml>
<http://www.hort.purdue.edu/hort/research/murphy/mainpage.htm>

Teaching

Hort 601 Planning and Presenting Horticulture Research Seminar, Purdue University
Successful Poster Preparation and Presentation (Oct 24, 2005; Oct 30, 2006)

Hort 590 Plant Transport Regulation, Purdue University
Development – AVP1, pH and auxin transport (Aug 30, 2005)
Development – Fertilization to Germination (April 18, 2005)
Plant Growth from Germination to Seed Set (April 13, 2004)
Successful Poster Preparation and Presentation (April 27, 2004)
Flavonoid Regulation of Membrane Transporters (May 4, 2004)

Graduate Symposium, Entomology Dept., Purdue University. Sept 2, 2003.
Successful Poster Preparation and Presentation

Molecular, Cell and Developmental Biology Dept., University of California, Santa Cruz, 1989-1997. Eukaryotic molecular biology (lecture), biochemistry (lecture), genetics (lecture), cell biology (lecture), microbiology (lecture & lab), plant anatomy (lecture & lab), mycology (lecture & lab), general biology (lecture & lab)

Invited presentations/lectures

Genome sizes of metal accumulating Brassicaceae. Informal presentation. Kew Gardens, UK. August 30, 2006.

Flavonoid targets. Warwick Horticulture Research Institute, Warwick, UK. June 22, 2006.

Flavonoids and reactive oxygen species. Plant Sciences, Oxford University. May 10, 2006.

Integrated Academic Year/Summer Research Experience: A Model Program. Howard Hughes Medical Institute Lecture. Diversity in the life sciences. University of Louisiana, Monroe, LA. April 8, 2006.

Targets of flavonoid regulation. Colloquium in Life Sciences. Dept. of Biology, Colorado State University, Fort Collins, CO. April 3, 2006.

Phytoremediation – model systems. Dept. of Biology, Colorado State University, Fort Collins, CO. April 4, 2006.

Integrated Academic Year/Summer Research Experience: A Model Program. MSIRP conference, University of Texas – Pan American, February 1-4, 2006.

Howard Hughes Medical Institute Lecture, University of Texas – Pan-American, TX. Targets of flavonoid regulation. Nov 7, 2005.

Variation in *PIN* gene expression and protein localization in flavonoid mutants with altered auxin transport. International Workshop for Plant Membrane Biology, Society for Experimental Biology. CEA Research Center, Cadarache, France, July 5, 2004.

PIN gene expression and protein localization are altered in flavonoid-deficient mutants. Horticulture and Landscape Architecture Departmental Research Retreat. Purdue University, West Lafayette, IN. May 10, 2004.

PIN auxin efflux carriers are mislocalized in flavonoid-deficient mutants. Auxin Membrane Transporters Symposium, Tübingen University, Germany. August 16, 2003.

PIN1 & *PIN4*, but not *PIN2*, auxin efflux carriers are mislocalized in flavonoid-deficient mutants. American Society of Plant Biologists Annual Meeting, Honolulu, HI. July 25-30, 2003.

Influence of phytochrome on leaf monoterpene variation in *Satureja douglasii*. American Institute of Biological Sciences Annual Meeting, Seattle, WA. Aug 4-6, 1996.

Dark chlorophyll synthesis, the plastidic signal, and *cab* genes in *Pinus palustris*. Bay Area Photomorphogenesis Meeting, Santa Cruz, CA. Dec 8, 1991.

Publications – refereed journals

Blakeslee JJ, Bandyopadhyay A, Lee OR, Mravec J, Sauer M, Titapiwatanakun B, Makam SN, Cheng Y, Bouchard R, Adamec J, Geisler M, Nagashima A, Sakai T, Martinoia E, Friml J, Peer WA, Murphy AS (2007) Interactions among PIN and PGP auxin transporters in Arabidopsis *Plant Cell, January 19, 2007; 10.1105/tpc.106.040782*. WA Peer corresponding author.

Carrera E, Holman T, Medhurst A, Peer WA, Schmuths H, Footitt S, Baker A, Theodoulou FK, Holdsworth MJ. (2007). The ABC transporter COMATOSE regulates the seed transcriptome late in phase II of germination. *Plant Physiol, in press*.

Blakeslee JJ, Bandyopadhyay A, Lee OR, Sauer M, Mravec J, Titapiwatanakun B, Makam S, Bouchard R, Adamec J, Geisler M, Martinoia E, Friml J, Peer WA, Murphy AS (2006) Interactions between PGP, PIN, and AUX/LAX auxin transport proteins from Arabidopsis. *Plant Growth Regulation Society America Quarterly 34 (3), in press*.

Orlova I, Marshall-Colón A, Schnepf J, Wood B, Varbanova M, Fridman E, Blakeslee JJ, Peer WA, Murphy AS, Rhodes D, Pichersky E, Dudareva N. (2006) Reduced benzylbenzoate synthesis in petunia increases flux from the non-oxidative pathway to benzenoid compounds in a light-dependent manner. *Plant Cell 18: 3458-3475*.

Peer WA, Mahmoudian M, Lahner B, Richards EL, Reeves RD, Murphy AS, Salt DE. (2006) Assessment of plants from the Brassicaceae family as genetic models for the study of nickel and zinc hyperaccumulation. *New Phytologist 172: 248-260*.

Li J, Yang H, Peer WA, Richter G, Blakeslee JJ, Bandyopadhyay A, Titapiwatanakun B, Undurraga S, Khodakovskaya M, Richards EL, Krizek B, Murphy AS, Gilroy S, Gaxiola R. (2005) Arabidopsis H⁺-PPase AVP1 regulates auxin mediated organ development. *Science 310: 121-125*.

Terasaka K, Blakeslee JJ, Titapiwatanakun B, Peer WA, Bandyopadhyay A, Makam SN, Lee OR, Richards EL, Murphy AS, Sato F, Yazaki K (2005) PGP4, an ATP-binding cassette P-glycoprotein, catalyzes auxin transport in *Arabidopsis thaliana* roots. *Plant Cell 17: 2922-2939*.

Geisler M, Blakeslee JJ, Bouchard R, Lee OR, Vincenzetti V, Bandyopadhyay A, Titapiwatanakun B, Peer WA, Bailly A, Richards EL, Ejendal KFK, Smith AP,

- Baroux C, Grossniklaus U, Muller A, Hrycyna CA, Dudler R, Murphy AS, Martinoia E (2005) Cellular efflux of auxin catalyzed by the Arabidopsis MDR/PGP transporter AtPGP1. *The Plant Journal* 44: 179-194.
- Blakeslee JJ, Peer WA, Murphy AS (2005a) Auxin transport. *Current Opinion in Plant Biology* 8: 494-500.
- Murphy AS, Bandyopadhyay A, Holstein SE, Peer WA (2005) Endocytotic cycling of PM proteins. *Annual Review of Plant Biology* 56: 221-251.
- Baxter IR, Young JC, Armstrong G, Foster N, Peer WA, Murphy AS, Harper JF (2005) A plasma membrane H⁺-ATPase is required for the formation of proanthocyanidins in the seed coat endothelium of *Arabidopsis thaliana*. *PNAS* 102: 2649-2654.
- Makam SN, Peer WA, Blakeslee JJ, Murphy AS (2005) Cultural conditions contributing to vine decline syndrome in watermelon. *HortScience* 40: 597-601.
- Peer WA, Bandyopadhyay A, Blakeslee JJ, Srinivas MN, Chen RJ, Masson PH, Murphy AS (2004) Variation in expression and protein localization of the PIN family of auxin efflux facilitator proteins in flavonoid mutants with altered auxin transport in *Arabidopsis thaliana*. *Plant Cell* 16: 1898-1911. WA Peer, corresponding author.
- Freeman JL, Persans MW, Nieman K, Albrecht C, Peer WA, Pickering IJ, Salt DE. (2004) Increased glutathione synthesis plays a key role in nickel tolerance in *Thlaspi* nickel hyperaccumulators. *Plant Cell* 16: 2176-2191.
- Blakeslee JJ, Bandyopadhyay A, Peer WA, Makam SN, Murphy AS (2004) Relocalization of the PIN1 auxin efflux facilitator plays a role in phototropic responses. *Plant Physiology* 134: 28-31.
- Smith AP, Nourizadeh SD, Peer WA, Xu JH, Bandyopadhyay A, Murphy AS, Goldsbrough PB (2003) Arabidopsis AtGSTF2 is regulated by ethylene and auxin, and encodes a glutathione S-transferase that interacts with flavonoids. *Plant Journal* 36: 433-442.
- Peer WA, Murphy AS (2003) Floral scent of *Arabidopsis lyrata* (Brassicaceae). *Biochemical Systematics and Ecology* 31: 1193-1195. WA Peer, corresponding author.
- Muday GK, Peer WA, Murphy AS (2003) Vesicular cycling mechanisms that control auxin transport polarity. *Trends in Plant Science* 8: 301-304.
- Peer WA, Mahmoudian M, Lahner B, Reeves RD, Murphy AS, Salt DE (2003) Identifying model metal hyperaccumulating plants: germplasm analysis of 20 Brassicaceae accessions from a wide geographical area. *New Phytologist* 159: 421-430. WA Peer, corresponding author.

Noh B, Bandyopadhyay A, Peer WA, Spalding EP, Murphy AS (2003) Enhanced gravi- and phototropism in plant *mdr* mutants mislocalizing the auxin efflux protein PIN1. *Nature* 423: 999-1002.

Murphy AS, Hoogner KR, Peer WA, Taiz L (2002) Identification, purification, and molecular cloning of N-1-naphthylphthalamic acid-binding plasma membrane-associated aminopeptidases from Arabidopsis. *Plant Physiology* 128: 935-950.

Brown DE, Rashotte AM, Murphy AS, Normanly J, Tague BW, Peer WA, Taiz L, Muday GK (2001) Flavonoids act as negative regulators of auxin transport in vivo in Arabidopsis. *Plant Physiology* 126: 524-535.

Peer WA, Brown DE, Tague BW, Muday GK, Taiz L, Murphy AS (2001) Flavonoid accumulation patterns of *transparent testa* mutants of Arabidopsis. *Plant Physiology* 126: 536-548. WA Peer, corresponding author.

Murphy A, Peer WA, Taiz L (2000) Regulation of auxin transport by aminopeptidases and endogenous flavonoids. *Planta* 211: 315-324.

Peer WA, Briggs WR, Langenheim JH (1999) Shade-avoidance responses in two common coastal redwood forest species, *Sequoia sempervirens* (Taxodiaceae) and *Satureja douglasii* (Lamiaceae), occurring in various light quality environments. *American Journal of Botany* 86: 640-645. WA Peer, corresponding author.

Peer WA, Langenheim JH (1998) Influence of phytochrome on leaf monoterpene variation in *Satureja douglasii*. *Biochemical Systematics and Ecology* 26: 25-34.

Peer W, Silverthorne J, Peters JL (1996) Developmental and light-regulated expression of individual members of the light-harvesting complex b gene family in *Pinus palustris*. *Plant Physiology* 111: 627-634.

Publications – Non-refereed papers

Bandyopadhyay A, Blakeslee JJ, Lee OR, Mravec J, Sauer M, Titapiwatanakun B, Makam SN, Bouchard R, Geisler M, Martinoia E, Friml J, Peer WA, Murphy AS (2007) Interactions of PIN and PGP auxin transport mechanisms. Intercellular Signalling in Plants. *Biochemical Society Transactions* 35: 137-141.

Publications – Book Chapters

Peer WA, Murphy AS (2005) “Flavonoid signaling: Targets of flavonoid action.” In *The Science of Flavonoids*, E Grotewold, ed. Springer-Verlag, Berlin. <http://www.springer.com/0-387-28821-X>.

Blakeslee JJ, Peer WA, Murphy AS (2005b) MDR/PGP auxin transport proteins and endocytotic cycling. *Plant Cell Monographs: Plant Endocytosis* Springer, Berlin, pp. 159-176.

Peer WA, Baxter IR, Richards EL, Freeman JL, Murphy AS (2005) Phytoremediation and hyperaccumulator plants. In *Molecular Biology of Metal Homeostasis and Detoxification*. Topics in Current Genetics Vol 14, Tamas M and Martinoia E, eds. Springer, Berlin, pp. 299-340. WA Peer, corresponding author.

Manuscripts submitted

Silbart L, Peer W, Rajagopal D, Knapp J, Yang H, Murphy A, Gaxiola R (2007) Enhanced phosphorus nutrition in monocots and dicots overexpressing a phosphorus-responsive type I H⁺-PPase. *Plant Biotechnology Journal*, in review.

Plaza S, Lee OR, Makam SN, Bovet L, Freeman JL, Antunes C, Scheonenberger N, Llemmit SM, Persans MW, Geisler M, Peer WA, Martinoia E, Murphy AS (2007) Metal tolerance in non-excluding Arabidopsis species with high non-protein thiol content. *Planta*, in revision. WA Peer, corresponding author.

Jain A, Poling, MD, Karthikeyan AS, Blakeslee JJ, Peer WA, Titapiwatanakun B, Murphy AS, Raghothama KG. (2007). Differential Effects of Sucrose and Auxin on Localized Pi-deficiency Induced Modulation of Different Traits of Root System Architecture in Arabidopsis. *Plant Physiology*, in review.

Manuscripts in preparation

Peer WA, Li N, Persans M, Murphy AS. (2007). Flavonoids scavenge reactive oxygen-species during auxin oxidation in *Arabidopsis thaliana*. For *Planta*. WA Peer, corresponding author.

Posters

Bandyopadhyay A, Titapiwatanakun B, Hosein F, Blakeslee B, Makam SN, Peer W, Murphy A. Aminopeptidase M1 (APM1) plays a role in development in Arabidopsis. American Society of Plant Biologists, Chicago, IL, July 7-11, 2007.

Knoeller A, Blakeslee J, Richards E, Peer W, Murphy A. The Benefits of Being Short - Impact of P-Glycoproteins for Auxin Transport in Monocotyledons. American Society of Plant Biologists, Chicago, IL, July 7-11, 2007.

Makam SN, Li N, Legas S, Sanjai D, Peer WA, Murphy AS. Arabidopsis APP1 is a rate limiting component of auxin signalling required for activation of DR5-like auxin response elements. American Society of Plant Biologists, Chicago, IL, July 7-11, 2007.

Makam SN, Sanjai D, Li N, Legas S, Peer WA, Murphy AS. Arabidopsis APP1 is a rate limiting component of auxin signalling required for activation of DR5-like auxin response elements. Society for Experimental Biology, Glasgow, UK, March 31- April 4, 2007.

Peer WA, Murphy AS, Persans, MW. Academic-year continuity of summer research programs and faculty mentoring as components of MSI partnerships. Annual Meeting American Society of Plant Biologists, Boston MA, August 5-9, 2006.

Bandyopadhyay A, Titapiwatanakun B, Hosien F, Blakeslee JJ, Makam SN, Peer WA, Murphy AS. Functional analysis of the aminopeptidase APM1 suggest a role in tissue differentiation and development in *Arabidopsis*. Annual Meeting American Society of Plant Biologists, Boston MA, August 5-9, 2006.

Mahmoudian M, Bruce JD, Adame JD, Cavazos E, Collins A, Hockaday D, Eubanks T, Legas S, Li, N, Zuniga J, Vasquez R, del Rio SY, Hinohosa-Kettelkamp D, Lahner B, Peer WA, Murphy AS, Whelan T, Lowe K, Persons MW. A study of trace metal composition, the influence of sediment microbial communities, and the monitoring of oxidative stress indicators, in the seagrass *Thalassia testudinum* from the Lower Laguna Madre, Texas. Annual Meeting American Society of Plant Biologists, Boston MA, August 5-9, 2006.

Peer WA, Murphy AS. Flavonoid roles in signaling, trafficking and reactive oxygen species scavenging. Annual Meeting American Society of Plant Biologists, Seattle, WA, July 16-20, 2005.

Plaza S, Lee OR, Makam SN, Antunes C, Freeman JL, Scheonenberger N, Bovet L, Geisler M, Murphy AS, Martinoia E, Peer WA. Mechanisms of metal tolerance and accumulation in two *Arabidopsis* species: Defining a model indicator species. Annual Meeting American Society of Plant Biologists, Seattle, WA, July 16-20, 2005.

Persans MW, Bruce J, Lloren C, Cordova T, Reyes M, Llemit S, Edionwe S, Peer WA, Murphy AS. An integrated research experience in phytoremediation for faculty and undergraduates at an undergraduate institution serving traditionally under-represented populations. Annual Meeting American Society of Plant Biologists, Seattle, WA, July 16-20, 2005.

Blakeslee JJ, Lee OR, Geisler M, Peer WA, Terasaka K, Bandyopadhyay A, Titapiwatanakun B, Richards EL, Bouchard R, Vincenzetti V, Bailly A, Ejendal, KFK, Smith AP, Baroux C, Grossinklaus U, Muller A, Hrycyna CA, Dudler R, Sato F, Yazaki K, Martinoia E, Murphy AS. Cellular transport of auxin by MDR-type, ATP-binding cassette transporters of *Arabidopsis thaliana*. Annual Meeting American Society of Plant Biologists, Seattle, WA, July 16-20, 2005.

Li J, Yang H, Lopea L, Richter G, Blakeslee JJ, Bandyopadhyay A, Peer WA, Titapiwatanakun B, Undurraga S, Murphy AS, Gilroy S, Gaxiola RA. The H⁺-PPase AVP1 is required for organ development in *Arabidopsis*. Annual Meeting American Society of Plant Biologists, Seattle, WA, July 16-20, 2005.

Baxter IR, Young J, Bogenschutz N, Cordova T, Peer WA, Hazen S, Murphy AS, Harper JF. A plasma membrane H⁺-ATPase is required for the formation of proanthocyanidins in

the seed coat endothelium of *Arabidopsis thaliana*. Annual Meeting American Society of Plant Biologists, Seattle, WA, July 16-20, 2005.

Peer WA, Murphy AS. Flavonoid roles in signaling, trafficking and reactive oxygen species scavenging. Auxins and Cytokinins in Plant Development, Prague, July 7-12, 2005.

Peer WA, Bandyopadhyay A, Blakeslee JJ, Makam SN, Chen RJ, Masson PH, Murphy AS. *PIN* gene expression and protein localization are altered in flavonoid-deficient mutants. Auxin 2004, Kolymapri, Crete, May 22-27, 2004.

Blakeslee JJ, Geisler M, Bandyopadhyay A, Peer WA, Lee OR, Bouchard R, Vincenzetti V, Smith AP, Baroux C, Grossniklaus U, Dudler R, Martinoia E, Murphy AS. Multidrug resistance-like P-glycoproteins in auxin transport. Auxin 2004, Kolymapri, Crete, May 22-27, 2004.

Peer WA, Bandyopadhyay A, Blakeslee JJ, Makam SN, Chen RJ, Masson PH, Murphy AS. Variation in *PIN* gene expression and protein localization in flavonoid mutants with altered auxin transport. International Workshop on Plant Membrane Biology, Montpellier, July 6-10, 2004.

Murphy AS, Blakeslee JJ, Geisler M, Bandyopadhyay A, Lee OR, Bouchard R, Peer WA, Vincenzetti, Makam SN, Smith AP, Dudler R, Martinoia E. Multiple drug-resistance-like P-glycoproteins mediate auxin transport in *Arabidopsis*. International Workshop on Plant Membrane Biology, Montpellier, July 6-10, 2004.

Geisler M, Blakeslee JJ, Bouchard R, Bandyopadhyay A, Lee OR, Peer WA, Dudler R, Murphy AS, Martinoia E. Primary active export of the plant hormone auxin by MDR ABC transporters. International Workshop on Plant Membrane Biology, Montpellier, July 6-10, 2004.

Peer WA, Bandyopadhyay A, Blakeslee JJ, Makam SN, Murphy AS. *PIN* gene expression and protein localization are altered in flavonoid-deficient mutants. Annual Meeting American Society of Plant Biologists, Honolulu, HI, July 25-30, 2003.

Bandyopadhyay A, Lee OR, Peer WA, Makam SN, Murphy AS. Functional and spatial analysis of AtAPM1 supports a role in membrane targeting. Annual Meeting American Society of Plant Biologists, Honolulu, HI, July 25-30, 2003.

Peer WA, Murphy AS. Floral scent of *Arabidopsis lyrata* (Brassicaceae). Annual Meeting American Society of Plant Biologists, Honolulu, HI, July 25-30, 2003.

Noh, B, Bandyopadhyay A, Blakeslee JJ, Peer, WA, Spalding EP, Murphy AS. PIN1 auxin efflux carrier is mislocalized in *MDR* mutants with enhanced tropisms. Annual Meeting American Society of Plant Biologists, Honolulu, HI, July 25-30, 2003.

Blakeslee JJ, Bandyopadhyay A, Peer WA, Makam SN, Murphy AS. Relocalization of the PIN1 auxin efflux facilitator plays a role in phototropic responses. Annual Meeting American Society of Plant Biologists, Honolulu, HI, July 25-30, 2003.

Peer WA, Mahmoudian M, Lahner B, Reeves RD, Murphy AS, Salt DE. Development of a wild Brassicaceae model species to study the molecular genetics of metal hyperaccumulation. Annual Meeting American Society of Plant Biologists, Honolulu, HI, July 25-30, 2003.

Peer WA, Bandyopadhyay A, Blakeslee JJ, Makam SN, Murphy AS. *PIN* gene expression and protein localization are altered in flavonoid-deficient mutants. 14th International Conference on Arabidopsis Research, Madison, WI, June 20-24, 2003.

Noh, B, Bandyopadhyay A, Blakeslee JJ, Peer, WA, Spalding EP, Murphy AS. PIN1 auxin efflux carrier is mislocalized in MDR mutants with enhanced tropisms. 14th International Conference on Arabidopsis Research, Madison, WI, June 20-24, 2003.

Bandyopadhyay A, Lee OR, Peer WA, Makam SN, Murphy AS. Functional and spatial analysis of AtAPM1 supports a role in membrane targeting. 14th International Conference on Arabidopsis Research, Madison, WI, June 20-24, 2003.

Peer WA, Bandyopadhyay A, Blakeslee JJ, Makam SN, Murphy AS. *PIN* gene expression and protein localization are altered in flavonoid-deficient mutants. Membrane Trafficking in Plants, Society of Experimental Biologists, Glasgow, Aug 23-26, 2003.

Bandyopadhyay A, Lee OR, Peer WA, Makam SN, Murphy AS. Functional and spatial analysis of AtAPM1 supports a role in membrane targeting. Membrane Trafficking in Plants, Society of Experimental Biologists, Glasgow, Aug 23-26, 2003.

Noh, B, Bandyopadhyay A, Blakeslee JJ, Peer, WA, Spalding EP, Murphy AS. PIN1 auxin efflux carrier is mislocalized in MDR mutants with enhanced tropisms. Membrane Trafficking in Plants, Society of Experimental Biologists, Glasgow, Aug 23-26, 2003.

Blakeslee JJ, Bandyopadhyay A, Peer WA, Makam SN, Murphy AS. Relocalization of the PIN1 auxin efflux facilitator plays a role in phototropic responses. Membrane Trafficking in Plants, Society of Experimental Biologists, Glasgow, Aug 23-26, 2003.

Peer WA, Mamoudian M, Lahner B, Reeves RD, Murphy AS, Salt DE. Development of a wild Brassicaceae model species to study the molecular genetics of metal hyperaccumulation. 9th Annual New Phytologist Symposium on Heavy Metals and Plants, Philadelphia, PA, Sept 20-Oct 1, 2002.

Peer WA, Murphy AS. Zinc-accumulating Arabidopsis species at the Friedensville, PA mine site. 9th Annual New Phytologist Symposium on Heavy Metals and Plants, Philadelphia, PA, Sept 20-Oct 1, 2002.

Peer WA, Mamoudian M, Lahner B, Reeves RD, Murphy AS, Salt DE. Development of a wild Brassicaceae model species to study the molecular genetics of metal hyperaccumulation. Annual Meeting American Society of Plant Biologists, Denver, CO, Aug 3-7, 2002.

Murphy AS, Peer WA, Bandyopadhyay A, Yadav BS, Markham SN, Blakeslee JJ. Evidence that an Arabidopsis homolog of the Insulin-Responsive Microsomal Aminopeptidase (IRAP) functions in the asymmetric distribution of plasma membrane proteins. Annual Meeting of the American Society of Plant Biologists, Denver, CO, Aug 3-7, 2002.

Peer WA, Murphy AS. Characterization of a new sub-species, *Arabidopsis lyrata* ssp. *friedensville*: a model system to study the co-evolution of floral scent, flower morphology and self-incompatibility. Annual Meeting of the American Society of Plant Biologists, Denver, CO, Aug 3-7, 2002.

Peer WA, Murphy AS. *Arabidopsis* or *Arabis*? Identification of a zinc hyperaccumulator from the Friedensville, PA, mine site. Annual Meeting of the American Society of Plant Biologists, Providence, RI, July 21-25, 2001.

Peer WA, Murphy AS. Cloning and expression of Arabidopsis plasma membrane aminopeptidases implicated in auxin transport regulation. Annual Meeting of the American Society of Plant Biologists, Providence, RI, July 21-25, 2001.

Peer WA, Murphy AS, Taiz L. The role of flavonoids in Arabidopsis auxin transport, growth, and development. 11th International Conference on Arabidopsis Research, Madison, WI, June 24-28, 2000.

Peer WA, Murphy AS, Kelly DR, Taiz L. Developmental growth characteristics and flavonoids localization in the transparent testa mutants of *Arabidopsis thaliana*. Annual Meeting of the American Society of Plant Physiologists, San Deigo, CA, July 15-19, 2000.

Murphy AS, Peer WA, Taiz L. Aminoacyl-naphthylamide conjugates with phyto tropin activity increase net ¹⁴C IAA uptake in Arabidopsis and zucchini hypocotyls. Annual Meeting of the American Society of Plant Physiologists, Baltimore, MD, July 24-28, 1999.

Peer WA, Langenheim JH. Influence of phytochrome on leaf monoterpene variation in *Satureja douglasii*. 47th Annual Meeting of the American Institute of Biological Sciences. Seattle, WA, Aug 4-8, 1996.

Peer WA, Langenheim JH. Effects of red and far-red light on monoterpenes in native Pacific coast labiate species. 46th Annual Meeting of the American Institute of Biological Sciences. San Diego, CA, Aug 6-10, 1995.

Current Support: This does not include expired funding

Indiana Elks Cancer Centre Grant “Carcinogenic risk of commonly used lawn chemicals to children and dogs.” \$25,000. 4/2004 - 3/2006

Angus Murphy PI (60% responsibility), Debbie Knapp, Larry Glickman coPIs. Wendy Peer, senior scientist.

BBSRC

Underwood Fellowship

Cellular analysis of regulators of the trafficking of auxin transport proteins

Collaborative Research at Oxford University. Angus Murphy, Wendy Peer, Ian Moore. \$86,000. 4/1/2006- 9/30/2006.

Entire funds awarded for research by Murphy lab group at Oxford.

NSF

An Undergraduate Research Training Program Focused on Plant Responses to Copper in the Environment. Michael Persans, PI. \$790,482. Purdue share \$108,000 for summer internship program. Funded for 1/1/2004- 12/30/2006

Wendy Peer is paid as the summer program coordinator for this program. Her commitment to this project involves three month’s work per year. Dr. Peer also coordinates academic year research in Texas with work at Purdue.

NSF

The role of the NPA-binding, plasma membrane aminopeptidase AtAPM1 in cellular trafficking and auxin-regulated growth. Angus Murphy, PI. Wendy Peer senior scientist. \$450,000. 7/15/2005-7/14/2008.

Department of Energy- Energy Biosciences

Analysis of MDR/PGP auxin transport proteins and their contribution to monocot biomass, structural stability, and productivity

Angus Murphy PI, Wendy Peer senior scientist

\$390,000. 7/15/2006-7/14/2009

Professional Societies

American Society of Plant Biologists, Phytochemical Society of North America, Sigma Xi

Service to Scientific Community

Reviewer - Grants

United States National Science Foundation

Binational Agriculture Research Development Fund (US-Israel)

Netherlands Organization for Scientific Research

Reviewer - Journals

Plant Cell, Plant Physiology, New Phytologist, Functional Plant Biology, Cellular and Molecular Life Sciences, Annals of Botany, Experimental and Environmental Botany, Bioremediation Journal, Journal of Hazardous Materials

Service to Horticulture Dept., Purdue

Photobiology Room design and maintenance

Guest lecture in Hort 590 and Hort 601

Recruit and host graduate students

Invite and host seminar speakers

Mentor undergraduate and graduate students and post-docs

Service to Larger Community

Program coordinator of academic-year research, University of Texas, Pan American

MARC/AIM Program Mentor, Purdue University

Science Fair Mentor and Judge: Santa Cruz, CA; Lafayette, IN

Collaboration with Dr. Mike Conjalka, St. John's Cancer Center, Anderson, IN.