

## **ELIZABETH E. E. HOOD, Ph.D.**

Arkansas State University  
PO Box 639  
State University, AR 72467  
Phone: 870-926-9566 (cell)  
Fax: 870-680-4348  
[enzymehood@gmail.com](mailto:enzymehood@gmail.com)

### **SUMMARY**

Thirty-five years of experience in biology. Lipscomb Distinguished Professor of Agriculture at Arkansas State University; CEO of two biotechnology start-up companies; Previously, Associate Vice Chancellor for Research and Technology Transfer at ASU; Program Director in Molecular and Cellular Biosciences at the National Science Foundation: Leader in forming one of the world's foremost transgenic plant research groups at ProdiGene, a plant biotechnology company; Director of the cell biology group for plant production of therapeutic proteins at Pioneer Hi-Bred International, a Fortune 500 Company; Internationally recognized for research program and associated expertise as evidenced by over 80 publications and patents as well as invitations to speak nationally and internationally; Advisor for Biotechnology graduate programs; Ph.D. in Plant biology awarded by Washington University and Master of Science in Botany awarded by Oklahoma State University.

### **PROFESSIONAL EXPERIENCE**

#### **ARKANSAS STATE UNIVERSITY—Jonesboro, Arkansas**

**2004-present**

Lipscomb Distinguished Professor of Agriculture (2008-present)

- **Chair, AR Research Alliance conference on Bioenergy and Biobased Products, Oct. 2011**
- Senior faculty in agricultural biotechnology
- Director, Center of Excellence for Bio-products—ad hoc faculty research group
- Managed \$3.7 million DOE research grant for enzymes in plants
- Research cluster lead for statewide NSF EPSCoR grant
- Teach plant biotechnology, graduate orientation, experiment to patent, and advanced cell biology
- Honors program representative for college
- PRT and graduate committees in college
- Chair of Institutional Biosafety Committee

Associate Vice Chancellor for Research and Technology Transfer. (2004-2008)

Chief research officer for ASU responsible for grant proposal submissions; funding information dissemination; committees for compliance with federal guidelines in research; implementation of conflict of interest policy, contracts, invention disclosures and patent filing, and technology transfer in the interest of regional economic development.

- Set up research office functions
- Established the ASU Research and Innovation Foundation and associated infrastructure (501.c3)
- Instituted an Intellectual Property policy
- Instituted a Conflict of Interest and Commitment policy
- Filed 8 patent applications based on invention disclosures, a new activity for ASU
- Led discussions on Business Incubator and Research Park implementation plan
- Instituted an ORTT Newsletter
- Composed new RFPs for internal funding sources
- Generated database for pre-award tracking and reporting
- Managed government relations for Congressionally directed funding
  - \$6 MM in FY 2005
  - \$7 MM in FY 2006
  - \$4 MM in FY 2007 (Dept. of Defense and Homeland Security)
  - \$3.5 MM with Dept. of Energy
- Spear-headed Symposium and Workshop on Identity Solutions with grant from AR Science and Technology Authority.
- Spear-headed effort to secure state-wide EPSCOR infrastructure grant from NSF
- Mentored 3 start-up technology companies.

- Established research investment with indirect cost recovery budget.
- **Established an active research laboratory in plant-based enzyme production technologies.**

**INFINITE ENZYMES, LLC—Jonesboro, AR**

**2006-present**

CEO, Responsible for fund-raising and scientific decisions as well as partnerships  
Incorporated company in July, 2006 to commercialize enzymes for industrial applications; Currently addressing issues for cost-effective enzymes for the cellulosic ethanol industry

- Raised and leveraged state funds to develop transgenic corn lines for production
- Received 2 Phase I SBIR grants and one Phase II
- Four grain production fields completed
- Organized collaborators and licenses to accomplish production
- First sales accomplished fall 2012
- Manage collaborations to establish new products
- Initiated de-regulation discussions and implementation

**INFINITE-EVERSOLE STRATEGIC CROP SERVICES, LLC—Jonesboro, AR**

**2009-present**

CEO, Responsible for agreements, budget, grant-writing and scientific consultation with programmers  
Incorporated company in April, 2009, as a joint venture between Infinite Enzymes and Eversole Associates to address issues in deregulation of Specialty Crops and for small crop developers

- Funded through USDA SBIR Phase I (2009)
- Collaborative research to establish new paradigm for achieving non-regulated status for transgenic crops
- Set up agreements among participants—NDAs, letters of intent, MOUs, subaward agreements
- Filed first patent application for business model

**NATIONAL SCIENCE FOUNDATION – Arlington, Virginia**

**2003-2004**

Program Director, Molecular and Cellular Biosciences, Signal Transduction/Cellular Regulation program

Responsible for funding decisions on proposals submitted to the NSF from non-industry groups. Worked with colleagues to assign proposals to appropriate panels, solicit peer reviews, assemble and direct review panels, make funding decisions, manage program budget (~\$10 million). Conducted site visits and outreach

**PRODIGENE - College Station, Texas**

**1997 - 2004**

Consultant, Industrial Proteins (2003-2004)

Responsible for oversight and advice for the industrial enzymes program; assisted with progress reports, strategy, grant writing and project review.

Principal Investigator, SBIR grants, Industrial Proteins (2003)

Responsible for achieving objectives laid out in each of 2 Phase I SBIR awards from the USDA. Projects: 1) Cellulases for Biomass Conversion from the Transgenic Maize Production System; and 2) Efficacy of Recombinant Redox Enzymes from Corn in Wood and Textile Applications.

- Wrote applications meriting the awards—two awards from one panel.
- Organized applications trials for two redox enzymes with three collaborators and established contracts.
- Organized employees at ProdiGene to develop and perform assays to determine expression of cellulases in transgenic maize.
- Wrote successful Phase II application for the cellulase project.

Vice President, Industrial Proteins Business Unit (2002)

Responsible for setting business unit goals and writing the business plan for this unit within ProdiGene  
Established and maintained business unit budget; Managed the program in biomass conversion.

- Developed the product plan for two protein products from research and negotiated a contract for commercialization of products developed through a collaborator.
- Established and managed contractual applications-testing in numerous industries resulting in identification of lucrative product markets to pursue.
- Established and managed critical contracts for research collaborations resulting in added value to the company.
- Evaluated invention disclosures and filed intellectual property documentation.

**ELIZABETH E. HOOD, Ph.D.**

- Participated fully in the management of the company and represented the company and business unit at scientific and trade meetings generating increased interest in the company.
- Assembled a deregulation package for first product to present to USDA, meeting all time and budgetary constraints.

Vice President, Technology (1999 - 2002)

Responsible for setting priorities and goals for 30 full and part-time staff; Functional groups included: Molecular Biology, Transformation, Biochemistry, Genetics, Greenhouse, Laboratory Support Services and New Technologies.

- Developed, implemented and managed a technology program that addressed goals in foreign protein expression, plant health and research efficiency.
- Represented the company in developing new collaborative efforts by presenting talks on the technology of the company, developing collaborator confidence in company technology.
- Reviewed and implemented programs that improved the efficiency of the process for developing products in the research group.
- Wrote business rules for, implemented and managed database for company research groups that contained over two million entries.
- Managed product projects for major company collaboration on two products, motivating the collaborator to increase the project numbers three-fold.
- Acted as liaison with outside patent counsel for searches, disclosures and patent writing.
- **Developed a program in biomass conversion that encompassed design of research, applications for funding, gathering tools and identification of collaborators.**

Director, Cell Biology (1997 - 1999)

- Developed and implemented a transformation system for maize suitable for commercial production of protein products.
- Hired personnel and set up group to perform transformation and cell biology experiments, including DNA hybridization screening of transgenic plants.
- Led effort to achieve USDA approval for greenhouse and laboratory facilities to conduct experiments with transgenic plants.
- Designed the laboratory layout and greenhouse for new building. Set up greenhouse operations in first ProdiGene location.

**PIONEER HI-BRED INTERNATIONAL - Johnston, IA**

**1994 - 1996**

Research Manager, Cell Biology

- Set up cell biology group for new functional area, Protein Products, within Pioneer research.
- Set up transformation systems for soybean, canola and corn.
- Redesigned laboratory for more efficient use of space and to allow addition of equipment.
- Managed product development for first Protein Products collaborator comprising four products. **One of the products, *avidin*, was the first protein commercialized from a transgenic plant.  $\beta$ -glucuronidase and trypsin were the second and third protein products commercialized from transgenic plants. Aprotinin was the fourth.**

**UTAH STATE UNIVERSITY, Logan UT**

**1988 – 1994**

Assistant Professor of Biology

**SWEDISH UNIV. OF AGRICULTURAL SCIENCES, Uppsala, Sweden**

**1988**

Visiting Researcher

**WASHINGTON UNIVERSITY, St. Louis MO**

**1981 - 1988**

Ph.D. student and Post-doctoral research associate

**EDUCATION**

Ph.D. Washington University, St. Louis, MO, Plant Biology

1985

M.S. Oklahoma State University, Stillwater, OK, Botany

1980

B.A. University of Oklahoma, Norman, OK, Sociology

1974

**ELIZABETH E. E. HOOD, Ph.D.**

**SUPPLEMENTAL INFORMATION**

OTHER PROFESSIONAL EXPERIENCE

2011-present	Advisory Board, AR Advanced Energy Foundation
2009-present	Advisory Board, AgBioWorks Foundation
2011	Chair, ARA conference on Biobased Products and Bioenergy
2002-present	Advisory Board, Plant Biotechnology Journal
2005-2007	Handling Editor, Reviews Editor, Plant Biotechnology Journal
2004-present	Specialty Crops Regulatory Assistance Executive Committee
1990-present	Grant Panels: USDA Risk Assessment; NSF BES; Teacher Preparation and Enhancement; USDA Non-Food Uses of Crops; NSFMRI
2003-Present	Editorial Board, Transgenic Research
2000-2007	Member, Faculty of 1000, Agricultural Biotechnology
2000-2003	Editorial Board, Molecular Breeding
2002-2005	Advisory Board-TAMU Institute of Food Science and Engineering
2000-2002	Member, TAMU, Center for Nutrition, Health and Food Genomics
2000	Workshop organizer, IBC conference; Agricultural Genomics
2000-2002	Advisor, Univ. of South Carolina Professional Master's Program
1999	Adjunct Professor, Dept. of Biology, Texas A&M University
1997-2005	Adjunct Professor, Dept. of Biochem/Biophys Texas A&M Univ.
1997-2004	TAMU Molec and Environmental Plant Sciences (MEPS) Faculty
1992	Specialist on Review Panel; Nordic Fund, Sweden

RESEARCH INTERESTS

**Renewable resources—particularly biomass to biobased products**

Foreign gene expression in transgenic plants  
Plant cell wall structure and function  
Plant cell biology and protein targeting

HONORS AND PROFESSIONAL AFFILIATIONS

Academic Professional of the Year, Who's Who Worldwide 2012  
Fellow, American Society of Plant Biologists, 2010  
Member, American Society of Plant Biologists (ASPB) 1977-present  
Chair, Board of Trustees, ASPB 2004-2005; Board of Trustees, ASPB 2002-2005  
Candidate for President, ASPB 2002  
Executive Committee, ASPB 2002, 2005  
Chair, ASPB Women in Plant Biology Committee, 2001-2002  
Member, International Society for Plant Molecular Biology  
Member, Society for In Vitro Biology  
2000-Woman to Watch, Business & Professional Women, Brazos County, TX  
Sigma Xi, Phi Kappa Phi

**REFEREED PUBLICATIONS**

**Molecular farming**

**Hood, E.E.**, D.R. Witcher, S. Maddock, T. Meyer, C. Baszczyński, M. Bailey, P. Flynn, J. Register, L. Marshall, D. Bond, E. Kulisek, A. Kusnadi, R. Evangelista, Z. Nikolov, C. Wooge, R.J. Mehigh, R. Hernan, W.K. Kappel, D. Ritland, C.P. Li and J.A. Howard 1997 **Commercial production of avidin from transgenic maize: Characterization of transformant, production, processing, extraction and purification.** Molecular Breeding 3:291-306

Witcher, D.R., **E.E. E. Hood**, D. Peterson, M. Bailey, D. Bond, A. Kusnadi, R. Evangelista, Z. Nikolov, C. Wooge, R. Mehigh, W. Kappel, J.C. Register, and J.A. Howard 1998 **Commercial production of**

**$\beta$ -glucuronidase (GUS): A model system for the production of proteins in plants.**  
Molecular Breeding 4:301-312

- Kusnadi, A.R., **E.E. E. Hood**, D.R. Witcher, J.A. Howard and Z.L. Nikolov 1998 **Production and purification of two recombinant proteins from transgenic corn** Biotechnol. Prog. 14:149-155
- Kusnadi, AR, RL Evangelista, **EE Hood**, JA Howard and ZL Nikolov 1998 **Processing of transgenic corn seed and its effect on the recovery of recombinant  $\beta$ -Glucuronidase** Biotechnol and BioEngineering 60:44-52
- Zhong, G.Y., D. Peterson, D.E. Delaney, M. Bailey, D.R. Witcher, J.C. Register III, D. Bond, C.-P. Li, L. Marshall, E. Kulisek, D. Ritland, T. Meyer, **E.E. E. Hood** and J.A. Howard 1999 **Commercial production of aprotinin in transgenic maize seeds** Molecular Breeding 5: 345-356
- Hood, E.** and J. Howard 1999 **Protein products from transgenic plants** Agro-Food-Industry Hi-Tech, 3, Vol.10, May/June pp. 35-36
- Hood, E.** and J. Jilka 1999 **Plant based production of xenogenic proteins** Current Opinion in Biotechnology, 10:4, 382-386
- Jilka, J.M., **E.E. E. Hood**, R. Dose and J.A. Howard 1999 **The benefits of proteins produced in transgenic plants.** AgBiotechNet, Vol. 1, September, ABN 027
- Streatfield, S. J., J. M. Jilka, **E. E. E. Hood**, D. D. Turner, M. R. Bailey, J. M. Mayor, S. L. Woodard, K. K. Beifuss, M. E. Horn, D. E. Delaney, I. R. Tizard and J. A. Howard 2001 **Plant-based vaccines: unique advantages** Vaccine 19:2742-2748
- Streatfield, S.J., J.M. Mayor, D.K. Barker, C. Brooks, B.J. Lamphear, S.L. Woodard, K.K. Beifuss, D.V. Vicuna, L.-A. Massey, M.E. Horn, D.E. Delaney, Z.L. Nikolov, **E.E. E. Hood**, J.M. Jilka and J.A. Howard 2002 **Development of an edible subunit vaccine in corn against enterotoxigenic strains of *Escherichia coli*.** In Vitro Cell. Dev. Biol.-Plant 38:11-17 (Highlighted in 'In Vitro Report')
- Hood, E.E.** 2002 **From Green Plants to Industrial Enzymes** Enzyme and Microbial Technology 30:279-283
- Hood, E.E.**, Z.L. Nikolov 2002 **Making therapeutic proteins in transgenic corn. Tutorial: Manufacturing low-cost, high-purity, clinical-grade proteins in corn** Genetic Engineering News 22:48
- Hood, E.E.**, S.L. Woodard and M.E. Horn 2002 **Antibody manufacturing in transgenic plants: Myths and Realities** Current Opinion in Biotechnology, 13, 630-635
- Lamphear, B.J., Streatfield, S.J., Jilka, J.M., Brooks, C.A., Barker, D.K., Turner, D.D., Delaney, D.E., Garcia, M., Wiggins, B., Woodard, S.L., **Hood, E.E.**, Tizard, I.R., Lawhorn, B. and Howard, J.A. 2002 **Delivery of subunit vaccines in maize seed.** J. Controlled Release, 85. 169-180
- Hood, E.E.**, M.R. Bailey, K. Beifuss, M. Horn, M. Magallanes-Lundback, C. Drees, D. E. Delaney, R. Clough and J. A. Howard 2003 **Criteria for high-level expression of a fungal laccase gene in transgenic maize** Plant Biotechnology Journal. 1, 129-140
- Streatfield, S.J., Lane, J.R., Brooks, C.A., Barker, D.K., Poage, M.L., Mayor, J.M., Lamphear, B.J., Drees, C.F., Jilka, J.M., **Hood, E.E.** and Howard, J.A. 2003 **Corn as a production system for human and animal vaccines** Vaccine 21:812-815
- Bailey, M.R., S.L. Woodard, E. Callaway, K Beifuss, D. Delaney, M. Magallanes-Lundback, J. Lane, M.E. Horn, M. Ward, F. Van Gastel, J.A. Howard, **E.E. E. Hood** 2004 **Improved recovery of active recombinant laccase from maize seed** Applied Microbiology and Biotechnology 63(4):390-7, (2003 Epub)

- Woodard, S.L., J.M. Mayor, M.R. Bailey, D.K. Barker, R.T. Love, J.R. Lane, D.E. Delaney, J.M. McComas-Wagner, H.D. Mallubhotla, E.E. Hood, L.J. Dangott, S.E. Tichy and J.A. Howard. 2003 **Maize-derived bovine trypsin: Characterization of the first large-scale, commercial protein product from transgenic plants.** Biotechnology and Applied Biochemistry 38:123-130
- Streatfield, S.J., M.E. Magallanes-Lundback, K.K. Beifuss, C.A. Brooks, R.L. Harkey, R.T. Love, J. Bray, J.A. Howard, J.M. Jilka and E.E. Hood. 2004 **Analysis of the maize *polyubiquitin-1* promoter heat shock elements and generation of promoter variants with modified expression characteristics.** Transgenic Research 13(4):299-312
- Lamphear, BJ DK Barker, CA Brooks, DE Delaney, JR Lane, K Beifuss, R Love, K Thompson, J Mayor, R Clough, R Harkey, M Poage, C Drees, ME Horn, SJ Streatfield, Z Nikolov, SL Woodard, EE Hood JM Jilka, and JA Howard. 2005 **Expression of the Sweet Protein Brazzein in Maize for Production of a New Commercial Sweetener** Plant Biotechnology J 3:103-114
- Hood, EE** 2004 **Bioindustrial and Biopharmaceutical Products from Transgenic Plants** Online publication at 4<sup>th</sup> ICSC, Brisbane Australia  
[http://www.cropsscience.org.au/icsc2004/symposia/3/5/1955\\_hoode.htm](http://www.cropsscience.org.au/icsc2004/symposia/3/5/1955_hoode.htm)
- Howard, JA and **Hood, EE**. 2005 **Bioindustrial and Biopharmaceutical Products Produced in Plants** Adv in Agron 85:91-124
- Clough, RC, Beifuss, K, Lane, J, Pappu, K, Thompson, K, Bailey, MR, Delaney, DE, Harkey, R, Drees, C, Howard, JA and **Hood, EE**. 2006 **Recombinant manganese peroxidase from the white-rot fungus *Phanerochaete chrysosporium* is enzymatically active and accumulates to high levels in transgenic corn seed.** Plant Biotechnology Journal 4:53-62
- Hood, EE** and Woodard, SL 2006 **Commercialization of a Protein Product from Transgenic Maize, NABC Report 17: Agricultural Biotechnology: Beyond Food and Energy to Health and the Environment:** 147-158.
- Howard, JA and **Hood, EE** 2007 **Methods for growing nonfood products in transgenic plants;** Crop Science; 47:1255-1262.
- Hood, EE**, Love R, Bray, J, Lane, J, Clough, RC, Pappu, K Drees, C, Hood, KR, Yoon, S, Ahmad, A and Howard, JA; 2007 **Subcellular targeting is a key condition for high-level accumulation of cellulase protein in transgenic maize seed.** Plant Biotechnology J; 5:709-719
- Jimenez-Flores, R, G Fake, J Carroll, **EE Hood** and J Howard; 2010; **A Method for Evaluating the Release of Fermentable Sugars from Cellulosic Feedstock;** Enzyme and Microbial Technology; 47 (5) 206-211
- Vicuna Requesens, D, E Egelkrout, SP Devaiah and **EE Hood**; 2011; **A method for transient expression in maize endosperm;** In Vitro Cellular and Developmental Biology--Plant 46 (6):485-490
- Johnson, D, K Teoh, C Ashby, **EE Hood**, X Huang; **Microarray analysis to determine factors of protein expression enhancement in transgenic maize seed;** Proceedings of IEEE BIBM Workshop of Integrative Data Analysis in Systems Biology (IDASB), 2010.
- Hood, EE**, SP Devaiah, G Fake, E Egelkrout, K Teoh, D Vicuna Requesens, Y-K Chang, C Hayden, KR Hood, K Pappu, J Carroll and JA Howard; 2012 **Manipulating corn germplasm to increase recombinant protein accumulation;** Plant Biotechnology Journal, [10 \(1\)](#): 20–30 doi: 10.1111/j.1467-7652.2011.00627.
- Hayden, C, G Fake, J Carroll, **EE Hood** and JA Howard; 2012; **Synergistic Activity of Plant Extracts with Microbial Cellulases for the Release of Free Sugars;** BioEnerg Res, 5 [\(2\)](#) : 398-406 DOI 10.1007/s12155-011-9149-z

**ELIZABETH E. HOOD, Ph.D.**

Sparrow, Penelope, Devos, Yann, Broer, Inge, Hood, Elizabeth E, Eversole, Kellye, Hartung, Frank, Schiemann, Joachim; 2013; **Risk assessment and regulation of molecular farming – a comparison between Europe and US**; *Current Pharmaceutical Design*, 19:

Devaiah, Shivakumar Pattada, Vicuna Requesens, Deborah, Chang, Yeun-Kyung, Hood, Kendall R, Flory, Ashley, Howard, John A. and **Hood, Elizabeth E**; **Heterologous expression of cellobiohydrolase II (Cel6A) in maize endosperm**; *Transgenic Research—Plant*, 22 (3):477-488; DOI 10.1007/s11248-012-9659-2.

Egelkrout, Erin, McGaughey, Karen, Keener, Todd, Ferleman, Amberlyn, Woodard, Susan, Devaiah, Shivakumar, Nikolov, Zivko, **Hood, Elizabeth**, Howard, John. 2013; **Enhanced expression levels of cellulase enzymes using multiple transcription units**; *Bioenergy Research*, 6 (2):699-710 DOI 10.1007/s12155-012-9288-x.

Teoh, Keat (Thomas), Vicuna Requesens, Deborah, Devaiah, Shivakumar P, Johnson, Daniel, Huang, Xiuzhen, Howard, John A, and **Hood, Elizabeth E**. 2013 **Transcriptome analysis of embryo maturation in maize**, *BMC Plant Biology*, 13:19-35 doi:10.1186/1471-2229-13-19

Egelkrout, E., Dabul, A.M., Keener, T. **Hood, E.E.** and Howard, J.A.; **Identification and characterization of a pericarp-preferred promoter in maize**; Manuscript submitted

Yoon, S. and **E.E. Hood**; **Characterization of Transgenic Maize Expressing Cucumber Expansin**; Manuscript in preparation

Garda, M., Vicuna Requesens, D.V. and **Hood, E.E.**; **Substantial Equivalence of Maize Lines Expressing Fungal and Bacterial Cellulases**; Manuscript in preparation

#### Plant cell walls

**Hood, E.E.**, Q.X. Shen and J.E. Varner 1988 **A developmentally regulated hydroxyproline-rich glycoprotein in maize pericarp cell walls**; *Plant Physiol.* 87:138-142

**Hood, E.E.**, K.R. Hood and S.E. Fritz 1991 **Hydroxyproline-rich glycoproteins in cell walls of pericarp from maize**. *Plant Science*. 79:13-22

Fritz, S.E., K.R. Hood, and **E.E. Hood** 1991 **Localization of soluble and insoluble fractions of hydroxyproline-rich glycoproteins during maize kernel development**. *J. Cell Sci.* 98:545-550

Hood, K.R., R.A. Baasiri, S.E. Fritz, and **E.E. Hood** 1991 **Biochemical and tissue print analyses of hydroxyproline-rich glycoproteins in cell walls of sporophytic maize tissues**. *Plant Physiol.* 96:1214-1219

Murphy, J.M. and **E.E. Hood** 1993 **Molecular basis of the size heterogeneity of extensin from two maize varieties**. *Plant Mol. Biol.* 21:885-893

**Hood, E.E.**, J.M. Murphy and R.C. Pendleton 1993 **Molecular characterization of maize extensin expression**; *Plant Mol. Biol.* 23:685-695

Flory, A.R., Vicuna Requesens, D., Devaiah, S.P, Teoh, K, Mansfield, S.D and **Hood, E.E.** 2013. **Development of a green binder system for paper products**; *BMC Biotechnology*; 13:28 <http://www.biomedcentral.com/1472-6750/13/28>

Dabul, A.M and **E.E. Hood**; **Bioinformatic Analysis of the B73 Extensin Gene and Promoter**; Manuscript in preparation

Dabul, A.M. and **E.E. Hood**; **Extensin Protein Characterization in Reproductive Tissues of the Maize B73 Inbred**; Manuscript in preparation

Yoon, S. and **E.E. Hood**; **Development of a Novel Expansin Assay**; Manuscript submitted.

**Agrobacterium**

- Hood, E.E.**, G Jen, L Kayes, J Kramer, RT Fraley, and M.-D Chilton; 1984; Restriction endonuclease map of pTi Bo542, a potential Ti plasmid vector for genetic engineering of legumes. Bio/Technology 2:702-708
- Chilton, W.S., **E.E. Hood** and M.-D Chilton 1985; Absolute stereochemistry of leucinopine, a crown gall opine. Phytochem. 24:221-224
- Chilton, W.S., **E.E. Hood**, K.L. Rinehart, Jr., and M.-D Chilton 1985 L,L-succinamopine: An epimeric crown gall opine. Phytochem. 24:2945-2948
- Hood, E.E.**, G.L. Helmer, R.T. Fraley and M.-D. Chilton 1986 The non-T-DNA portion of pTiBo542 is responsible for the hypervirulence of *Agrobacterium tumefaciens* A281. J.Bacteriol. 168:1291-1301
- Hood, E.E.**, W.S. Chilton, M.-D. Chilton and R.T. Fraley 1986 T-DNA and opine synthetic loci in tumors incited by *Agrobacterium tumefaciens* A281 on soybean and alfalfa plants. J. Bacteriol. 168:1283-1290
- Hood, E.E.**, R.T. Fraley, and M.-D. Chilton 1987 Virulence of *Agrobacterium tumefaciens* strain A281 on legumes. Plant Physiol. 83:529-534
- Hood, E.E.**, D.H. Clapham, I. Ekberg and T. Johansson 1990 T-DNA presence and opine production in tumors of *Picea abies* (L.) Karst induced by *Agrobacterium tumefaciens* A281. Plant Mol. Biol. 14:111-117
- Clapham, D., I. Ekberg, G. Eriksson, **E.E. E. Hood**, and L. Norell 1990 Within-population variation in susceptibility to *Agrobacterium tumefaciens* A281 in *Picea abies* (L.) Karst. Theor. Appl. Genet. 79:654-656
- Hood, E.E.**, S.B. Gelvin, L.S. Melchers, and A. Hoekema 1993 New *Agrobacterium* helper plasmids for gene transfer to plants. Trans. Res. 2:208-218
- Smith, R.H., and **E.E. E. Hood** 1994 *Agrobacterium tumefaciens* transformation of monocotyledons Crop Science 35:301-309

**Other**

- Hood, E.E.**, S. Armour, J. Ownby, A. Handa, and R. Bressan 1979 Cyclic adenosine 3', 5'-monophosphate in *Anabaena variabilis*: Effects of nitrogen starvation Biochem Biophys. Acta 588:193-200
- Ownby, J., M. Shannahan, and **E.E. E. Hood** 1979 Protein synthesis and degradation in *Anabaena* during nitrogen starvation. J. of Gen Microbiol. 110:225-261
- Lanoue, K.Z., P.G. Wolf, S. Browning and **E.E. E. Hood** 1996 Phylogenetic analysis of restriction site variation in wild and cultivated *Amaranthus* species (Amaranthaceae). Theor. Appl. Genet. 93:722-732
- Fitzgerald, M.S., E.V., Shakirov, **E.E. E. Hood**, T.D. McKnight and D.E. Shippen 2001 Different modes of de novo telomere formation by plant telomerase. Plant J. 26(1): 77-87
- Hood, E.E.** 2000 Riding the Waves. Science's Next Wave June 2, 2000
- Hood, E.E.** "Selecting the Fruits of Your Labors" 2003. Trends in Plant Science. 8:357-358.
- Hood, E.E.** "Where, Oh Where Has My Protein Gone?" 2004. Trends in Biotechnology 22:53-55.



### BOOKS

- Hood, EE and J Howard, Eds. *Plants as Factories for Protein Production*; 2002; Kluwer Academic Publishers, Dordrecht, The Netherlands. 209 pp.
- Hood, EE, P Nelson and R Powell, Eds. *Plant Biomass Conversion*; 2011; Wiley Press, Ames, IA 328 pages; 14 chapters
- Howard, JA and EE Hood, Ed., *Commercial Plant-Produced Recombinant Protein Products: Case Studies*, Series: *Biotechnology in Agriculture and Forestry*; Springer, Dordrecht, Netherlands, In preparation.

### BOOK CHAPTERS

- Varner, J.E. and E.E. E. Hood. 1988. Gel properties of the cell wall. In: J.E. Varner, (ed), Developmental Biology Series: Self assembling architecture. Alan R. Liss, Inc., New York. pp. 97-103.
- Hood, E.E., K.R. Hood and S.E. Fritz. 1992. Localization of Extensin in Maize Cell Walls Using Monoclonal Antibodies. In: P. Reid, R. Pont-Lezica, E. del Campillo and R. Taylor, eds., Tissue Printing, Tools for the Study of Anatomy, Histochemistry and Gene Expression. Academic Press, Inc., San Diego. pp. 32-35.
- Hood, E.E., K. Lanoue, K.R. Hood, S.E. Fritz and R.A. Baasiri. 1994. Molecular Similarities among *Amaranthus* Species. In: Biotechnology for Aridland Plants, T.J. Mabry, H. T. Nguyen, R. A. Dixon, and M.S. Bonness, eds. IC<sup>2</sup> Institute, The University of Texas at Austin, Austin, TX.
- Hood, E.E. 1996. Biochemical, immunological and molecular characterization of extensin. In: H.F. Linskens and J.F. Jackson, eds., Modern Methods of Plant Analysis. Vol. 17: Plant Cell Wall Analysis. pp.117-128.
- Hood, E.E., A. Kusnadi, Z. Nikolov and J.A. Howard. 1999. Molecular Farming of Industrial Proteins from Transgenic Maize. In: P. Kolodziejczyk, Shahidi, et al eds., Chemicals via Higher Plant Bioengineering, Kluwer Academic/Plenum Publishers, N.Y.
- Hood, E.E., 1999. Analysis of Plant Transformation Systems in "Application of transformation technology in plant breeding". Published as Proceedings of the 30<sup>th</sup> Annual Symposium of the Korean Breeding Society, held in Suwon, Korea, November 18-21, 1999. pp. 33-38.
- Hood, E.E. and Woodard, S. 2002. Industrial proteins produced from plants. In: *Plants as Factories for Protein Production*. E.E. Hood and J. A. Howard, Eds., Kluwer Academic Publishers, Dordrecht, The Netherlands. pp. 119-135.
- Hood, E.E., M.E. Horn and J.A. Howard. 2003. "Production and Application of Proteins from Transgenic Plants" In: I. Vasil, Ed., Plant Biotechnology 2002 and Beyond, Proceedings of the 10<sup>th</sup> IAPTC&B Congress, Orlando, FL. Kluwer Academic Publishers, Dordrecht, The Netherlands. pp. 377-382.
- Delaney, D., J. Jilka, D. Barker, P. Irwin, M. Poage, S. Woodard, M. Horn, A. Vinas, K. Beifuss, M. Barker, B. Wiggins, C. Drees, R. Harkey, Z. Nikolov, E. E. Hood and J. Howard. 2003. "Production of aprotinin in transgenic maize seeds for the pharmaceutical and cell culture markets" In: I. Vasil, Ed., Plant Biotechnology 2002 and Beyond, Proceedings of the 10<sup>th</sup> IAPTC&B Congress, Orlando, FL. Kluwer Academic Publishers, Dordrecht, The Netherlands. pp. 393-394.
- Hood, E.E., Plants as Enzyme Factories, In: *Handbook of Plant Biotechnology* Vol. 2; R. Fischer and N. Emans, Eds., John Wiley & Sons Ltd., West Sussex, 2004.
- Hood, E.E. and J.A. Howard; 2008; "Over-expression of Novel Proteins in Maize" In: A. Kriz and B. Larkins, Eds., *Molecular Genetic Approaches to Maize Improvement* Springer—Berlin, Heidelberg, Germany pp. 91-105

Nelson, P, **EE Hood**, R Powell; The Bioeconomy: A New Era of Products Derived from Renewable Plant-Based Feedstocks; **In:** Hood, EE, P Nelson and R Powell, Eds. Plant Biomass Conversion; 2011; Wiley Press, Ames, IA, pp. 3-20

Teoh, K, SP Devaiah, D Vicuna-Requesens, **EE Hood**; Dedicated Herbaceous Energy Crops; **In:** Hood, EE, P Nelson and R Powell, Eds. Plant Biomass Conversion; 2011; Wiley Press, Ames, IA, pp. 85-108

Howard, JA, Z Nikolov and **EE Hood**; Enzyme Production Systems for Biomass Conversion; **In:** Hood, EE, P Nelson and R Powell, Eds. Plant Biomass Conversion; 2011; Wiley Press, Ames, IA; pp. 227-253

**Hood' E.E.**, D.Vicuna Requesens, K.A. Eversole, Regulatory issues of biotechnologically-improved plants; **In:** A. Altman and M. Hasegawa, Eds., Plant Biotechnology and Agriculture, Prospects for the 21<sup>st</sup> Century; 2011; Academic Press, Elsevier, Amsterdam; pp. 541-550

**Hood' E.E.**, C. Cramer, G. Medrano' J.Xu; Protein Targeting: Strategic Planning for Optimizing Protein Products through Plant Biotechnology; **In:** A. Altman and M. Hasegawa, Eds., Plant Biotechnology and Agriculture, Prospects for the 21<sup>st</sup> Century; 2011; Academic Press, Elsevier, Amsterdam; pp. 35-54

**Hood EE**, Vicuna Requesens DV (2012) Recombinant protein Production in Plants: Challenges and Solutions. In "Recombinant Gene Expression: Reviews and Protocols, Third Edition" A Lorence (editor). Humana Press/Springer, New York, pp. 469-481.

**Hood, E.E.** and D. Vicuna Requesens; Production of Industrial Proteins in Plants; **In:** A. Wang and S. Ma, Eds., "Molecular Farming in Plants: Recent Advances and Future Prospects"; Springer Science + Business Media, 2012 Dordrecht

**Hood, EE**, Teoh, K, Devaiah, SP, and Vicuna Requesens, D, "Biomass Crops for Biofuels and Bio-based Products" **In** Robert Meyers (ed.) *Encyclopedia of Sustainability Science and Technology*, Springer Verlag, 2012 (forthcoming)

Howard, J.A. and **E.E. Hood**; 2013 **Strategies to maximize recombinant protein expression in maize seeds** **In:** Azhakanandam, Silverstone, Daniell, and Davey, eds., *Recent Advancements in Protein Expression in Crop Plants*; Springer Science + Business, New York In press

### **PATENTS**

1. Commercial Production of Avidin in Plants—5,767,379: C. Baszczynski, **E. E. Hood**, S. Maddock, T. Meyer, J. Register, D. Witcher, J. Howard.
2. Commercial Production of B-Glucuronidase in Plants—5,804,694: W. Bruce, **E. E. Hood**, D. Peterson, J. Register, D. Witcher, J. Howard.
3. Commercial Production of Aprotinin in Plants — 5,824,870: C. Baszczynski, T. Czapla, **E. E. Hood**, T. Meyer, D. Peterson, G. Rao, J. Register, D. Witcher, J. Howard.
4. Commercial Production of Proteases in Plants — 6,087,558: **E. E. Hood**, J. Howard.
5. Commercial Production of Laccase in Plants — 6,800,792: **E. E. Hood**, J. Howard, J. Jilka
6. Novel Plant Promoter Sequences and Methods of Use for Same— **E. E. Hood**, J. Jilka, J. Howard. 6,977,325
7. Method of Increasing Recovery of Heterologous Active Enzymes Produced in Plants—6,632,930: **E. E. Hood**, J. Howard, M. Bailey, F. van Gastel, H. Wang, M. Ward, S. Woodard.
8. Method of Increasing Heterologous Protein Expression in Plants—Issued 7,541,515; **E. E. Hood**, J. Howard, D. Delaney.
9. Commercial production of recombinant manganese-dependent peroxidase in plants— 7,067,226 **E. E. Hood**, J. Howard, R. Clough, K. Pappu.
10. Methods for commercial production of heterologous laccase in plant tissue and extraction of the laccase from plant seed—7,071,384; J. Howard, **E. E. Hood**, M. Bailey-Piatchek; Issued July 2006
11. Methods for the cost effective saccharification of lignocellulosic biomass—20030109011; **E. E. Hood**, J. Howard

12. Commercial production of polysaccharide degrading enzymes in plants and methods of using same published—20060026715; **E. E. Hood** and J. Howard
13. Method and system for data collection and analysis to assist in facilitating regulatory approval of a product—13/019,083; **Hood, E.**, Eversole, K., Berleant, D., Segall, R., Mustell, R., Vicuna Requesens, D.
14. Methods of expressing and detecting activity of expansin in plant cells—2013/ 61771965; **E.E. Hood**, S. Yoon

INVITED PRESENTATIONS—International, Keynote

- Hood, E.E. *A comparison of transformation methods for plants***, 30<sup>th</sup> Annual Symposium of the Korean Breeding Society, Suwon, Korea, Nov. 18-21, 1999
- Hood, E.E. *New century, new technology and new products***; Plenary presentation - 6<sup>th</sup> International Congress of Plant Molecular Biology, Québec, Canada, June 18-24, 2000
- Hood, E.E. *Plant Production Platforms for Industrial Applications***; Plenary presentation; Genome Alberta annual meeting; Banff, Canada, March 18-21, 2007
- Hood, E.E. *Reducing the regulatory Burden for Molecular Farming in the US***: Plenary presentation; COST Action committee, FA0804, Prague, Czech Republic, October 6, 2009
- Hood, E.E. *Manipulating Corn Germplasm to Overexpress Recombinant Proteins***, COST Action committee FA0804, Molecular farming: plants as a production platform for high value proteins; Valencia, Spain, May 6, 2013

INVITED PRESENTATIONS—International

- Hood, E.E., A. Kusnadi, Z. Nikolov and J.A. Howard; *Molecular farming of industrial proteins from transgenic maize***; Molecular Farming Conference, Saskatoon, Canada; October, 1997
- Hood, E.E. *The history and host range of Agrobacterium strains***, Brassica Genetic Technologies for the Future; Montreal Canada, October, 1998
- Hood, E.E. *Molecular farming of industrial proteins from transgenic maize***. IX Pacific Science Inter-Congress: Sustainable development in the Pacific. Taipei, Taiwan. November, 1998
- Hood, E.E. *A most a-maize-ing system***, Advances in Plant Production Systems, International Molecular Farming Conference, London, Ontario, Canada, Aug. 29-Sept. 1, 1999
- Hood, E.E. *The maize production system for edible vaccines and industrial enzymes***; Intl. Symposium of Plant Molecular Farming, Tsukuba, Japan, March 7-8, 2000.
- Hood, E.E. *From green plants to industrial enzymes***. Third International Symposium on Industrial Proteins, Netherlands Congress Centre, The Hague, The Netherlands, March 15-16, 2001
- Hood, E.E. *New Century, New Technology and New Products***. Crucell Holland BV. Leiden, The Netherlands. March, 2001
- Hood, E.E. *New Century, New Technology and New Products***. Nestle Research Center, Laussane, Switzerland. March, 2001
- Hood, E.E. *New Century, New Technology and New Products***. Syngenta BV. Leiden, The Netherlands. March, 2001
- Hood, E.E. *Molecular farming in corn to produce industrial enzymes***. High Value-Added Proteins, Cambridge University, UK, July, 2002.

**ELIZABETH E. HOOD, Ph.D.**

- Hood, E.E. **Maximizing recombinant protein accumulation in corn.** NIAS-COE International Symposium "Protein Trafficking Mechanism and its Application to Molecular Farming" Tsukuba, Japan, November 11-12, 2003
- Hood, E.E. **Bioindustrial and Biopharmaceutical Products from Transgenic Plants** 4<sup>th</sup> International Crop Science Congress, Brisbane Australia, Sept. 26-October 1, 2004
- Hood, E.E. **Women in Biotechnology—An Academic Perspective**, US-EC Task Force on Biotechnology; June 23-24, 2009, San Francisco, CA
- Hood, E.E. **Cellulases from the Transgenic Maize Seed Production System**, BIO World Congress on Industrial Biotechnology and Bioprocessing; July 19-22, 2009, Montreal, CA
- Hood, E.E., **Design and Analysis of Experimental Field Releases of GM Plants—the US Experience**; ISBGMO, Buenos Aires, Argentina, November 19, 2010
- Hood, E.E. **Status and regulation of non-food/feed crops in the USA**; ISBGMO, Buenos Aires, Argentina, November 17, 2010
- Hood, E.E., Howard, J.A. **Utilizing Plant-Produced Enzymes for Biomass Conversion**; World Biotechnology Congress; Boston, MA USA, June 3-6, 2013

INVITED PRESENTATIONS —National, Keynote

- Hood, E.E. **Maize production system for edible vaccines & industrial enzymes**, Keynote speaker at the Annual Meeting of the Arkansas Biotechnology Association, Little Rock, Arkansas, September 15, 1999.

INVITED PRESENTATIONS - National

- Hood, E.E. **Molecular similarities among Amaranthus species.** Applications and Prospects of Biotechnology for Arid and Semi-arid Lands., Texas Tech University, 1992
- Hood, E.E. **Commercial production of avidin from transgenic maize.** Dept. of Biochem. and Biophysics, Texas A&M University. March, 1997
- Hood, E.E. and J.A. Howard. **Transgenic corn: A new source of valuable industrial products.** Corn Utilization and Technology Conference. St. Louis, MO June, 1998
- Hood, E.E. **Production of industrial proteins from transgenic maize.** Dept. of Plant Pathology, Texas A&M University. September, 1998
- Hood, E.E. and J.A. Howard. **Commercial production of industrial proteins from transgenic corn**, 90<sup>th</sup> AOCS Annual Meeting & Expo, Marriott's Orlando World Center, Orlando, Florida, May 9-12, 1999
- Hood, E.E. **Novel uses of agricultural crops through biotechnology**, Texas State Extension Conference, Texas A&M University, College Station, TX, July 14-16, 1999
- Hood, E.E. **The maize production system for edible vaccines and industrial enzymes.** 219<sup>th</sup> ACS National Meeting, March 26-30, 2000
- Hood, E.E. **New century, new technology and new products.** Horticulture and Landscape Architecture Seminar, Purdue University, West Lafayette, Indiana, September 21, 2000
- Hood, E.E. **New century, new technology and new products.** IBC's Agricultural Genomics, Coral Gables, Florida, December 6-8, 2000

ELIZABETH E. HOOD, Ph.D.

Hood, E.E. **Maize as a production system for biopharmaceuticals and industrial enzymes.** Workshop presentation. IBC's Agricultural Genomics, Coral Gables, Florida, December 6-8, 2000

Hood, E.E. **Riding the Waves.** WISE Conference at TAMU (Achieving your vision), College Station, Texas, February 17, 2001

Hood, E.E. **Functional products from transgenic plants** PITTCON 2002, New Orleans, Louisiana, March 2002

Hood, E.E. **Challenges for commercialization of products from a new technology—pharmaceuticals, vaccines and industrial enzymes from transgenic maize** USPTO Tech Fair, Washington, D.C., August 2002

Hood, E.E. **Molecular Farming in Corn to Produce Industrial Enzymes.** Bioengineering group, Iowa State University, Ames, Iowa, Sept. 18, 2002

Hood, E.E. **Enzymes from the Transgenic Maize Production System—Advantages for producers** Iowa Biotechnology Association Annual Meeting Sept. 19, 2002

Hood, E.E. **Enzymes from the Transgenic Maize Production System** Iowa Quality Producer's Association Annual Meeting March 28, 2003

Hood, E.E. **Transgenic plant-produced cellulases for biomass conversion** SIVB Society for In Vitro Biology Portland, OR June 4, 2003

Hood, E.E. **Production and Application of Proteins from Transgenic Plants** Ohio State University, Dept. of Plant molecular and cellular biology, May, 2004

Hood, E.E. **Commercialization of a Protein Product from Transgenic Maize** 17<sup>th</sup> National Agricultural Biotechnology Council, Nashville, TN, June 27-29, 2005

Hood, E.E. **Bioethanol as a Sustainable Energy Alternative,** for the Memphis BioWorks Development Council series luncheon at the University of Memphis, Memphis TN. July 26, 2006

Hood, E.E. **Plant Production Platforms for Industrial Applications;** MAESC, Oxford, MS May 17-18, 2007

Hood, E.E. **Cellulase Enzymes from the transgenic maize production system;** Syngenta invited seminar, Raleigh, NC, January 15, 2008

Hood, E.E. **Process for Commercialization of Products from Transgenic Plants;** LSU invited seminar, Baton Rouge, LA, April 8, 2008

Hood, E.E., JA Howard, R Jimenez-Flores, G McChesney **Maize-Produced Cellulases Degrade Lignocellulosic Feedstocks;** BIO World Congress for Industrial Biotechnology and Bioprocessing, Chicago, IL April 28-30, 2008

Hood, E.E. **"Cellulase enzymes for biomass conversion from the transgenic maize production system;** Worcester Polytechnic Institute conference: Growing Fuel and Medicine: Advancing Biofuels and Plant-Produced Therapeutics; Worcester, MA, October 27, 2008

Hood, E.E. **"New Applications of Plants—Bio-Factories for Bio-Based Products";** Planting Seeds for the Future--New Crops Conference; November 13, 2008

Hood, E.E. **"Biomass-based ethanol and renewable resources for the Bio-Economy";** North Delta AgExpo, Arkansas Farm Bureau; February 5, 2009

Hood, E.E. **Biomass-based ethanol and renewable resources for the Bio-Economy;** Lion's Club of Greater Jonesboro, Jonesboro, AR; March 30, 2009

- Hood, EE ***Applications of Plant Biotechnology to Create Biofuels and Biobased products***; Lion's Club of Pocahontas, AR; March 31, 2010
- Hood, EE ***Easing the Regulatory Burden Surrounding Biotechnology-Derived Crops***; International Association of Plant Tissue Culture and Biotechnology, St. Louis, MO, June 10, 2010
- Hood, E.E., ***Cellulase from the Transgenic Maize Seed Production System***, Biomass South, October 13, 2010, Memphis, TN
- Hood, E.E., ***The corn seed bio-factory to manufacture enzymes for biofuels and biobased products***, ABI Board of Directors meeting, April 26, 2011, Little Rock, AR
- Hood, E.E., ***Biochemical Platform for Production of Biofuels***; MS State Univ. Extension Biomass and Bioenergy Short Course MSU, August 4, 2011; Starkville, MS
- Hood, E.E., ***Cellulases from the Transgenic Maize Production System***, Inaugural meeting of the MS/MO River Biomass Consortium; January 11, 2012, Columbia, MO
- Hood, E.E., ***Infinite Enzymes' SBIR Experiences***, participation in USDA SBIR webinar-- From Submission to Award; Sponsored by ASBTDC in Little Rock; April 3, 2013

#### OTHER RELEVANT ABSTRACTS

- Murphy, J.M. and E.E. E. Hood. 1991. ***Protein size heterogeneity of cell wall extensin protein in 2 maize varieties***. American Society of Plant Physiologists Annual Meeting, Albuquerque, New Mexico
- Hood, E.E. and R.A. Baasiri. 1991. ***Similarity among 24 breeding lines of grain amaranth based on leaf and seed protein heterogeneity***. American Society of Plant Physiologists Annual Meeting, Albuquerque, New Mexico
- Hood, E.E., K.R. Hood, W. McManus and J.M. Murphy. 1991. ***Position and regulation of extensin in the structure of maize pericarp***. International Conference of Plant Molecular Biology, Tuscon, Arizona
- Hood, E.E., J.M. Murphy and R.C. Pendleton. 1992. ***Cell and molecular biology of maize extensin***. Vth International Conference on Plant Cell Walls, Nijmegen, The Netherlands
- Hood, E.E., J.M. Murphy and R.C. Pendleton. 1993. ***Molecular characterization of maize extensin expression***. Keystone Symposium on Cell Wall Structure and Function, Santa Fe. New Mexico
- Hood, E.E. and S.B. Gelvin. 1993. ***EHA105, A Versatile Ti Helper Plasmid Useful in Transformation of a Wide Variety of Plants***. Plant Cell and Tissue Culture Gordon Conference, Wolfeboro, New Hampshire
- Lanoue, K.Z. and E.E. E. Hood. 1994. ***Phylogenetic relationships in the genus Amaranthus by restriction site analysis***. American Society of Plant Physiologists Annual Meeting, Portland, OR
- Hood, E.E., H.G. Levine, K.Z. Lanoue and D.L. Bishop. 1995. ***Wheat cell wall structure in microgravity: Chromex-06, STS-63. I. Plant growth parameters, morphology and carbohydrate analysis***. ASGSB Annual Meeting, Washington, D.C.
- Bishop, D.L., W. McManus, H.G. Levine, A.J. Anderson and E.E. E. Hood. 1995. ***Wheat cell wall structure in microgravity: Chromex-06, STS-63. II. Lignin and hydrogen peroxide accumulation, calcium localization and cell wall ultrastructure***. ASGSB Annual Meeting, Washington D.C.

ELIZABETH E. HOOD, Ph.D.

- Hood, E.E., A. Singh-Cundy, K.Z. Lanoue and D.L. Bishop. 1995. ***Wheat cell wall structure in microgravity: Chromex-06, STS-63. III. Peroxidase activity and isozymes and cell wall extensibility.*** ASGSB Annual Meeting, Washington D.C.
- Hood, E.E., D.R. Witcher, B. Kappel, C. Wooge, S. Maddock and J.A. Howard. 1996. ***Commercial production of avidin from transgenic maize.*** SIVB Annual Meeting, San Francisco, CA.
- Hood, E.E., D.R. Witcher, M. Bailey, Z. Nikolov, A. Kusnadi, D. Peterson and J.A. Howard. 1997. ***Commercial production of  $\beta$ -glucuronidase from transgenic maize.*** SIVB Annual Meeting, Washington D.C.
- Hood, E.E. 2005 ***Bio-industrial Products from Genetically Engineered Plants*** The World Congress on Industrial Biotechnology and Bioprocessing, Orlando FL
- Hood, E.E. 2005 ***Production of enzymes in transgenic maize for industrial applications*** American Society of Plant Biologists, Annual Meeting, Seattle, WA
- Hood, E.E. and J.A. Howard 2007 ***Cellulases from the transgenic maize production system;*** World Congress on Industrial Biotechnology and Bioprocessing; Orlando FL March 21-24, 2007
- Vicuna-Requesens, D., S. Devaiah, A. Flory and E.E. Hood; **Seed targeted expression of the CBHI & CBHII exocellulases in maize;** Poster Presentation at the Annual Meeting of the American Society of Plant Biologists, Honolulu, HI, July, 2009
- Devaiah, S., K.R. Hood, J.A. Howard, E.E. Hood; **High oil lines enhance the accumulation and activity of cellulase in maize seed;** Poster Presentation at the Annual Meeting of the American Society of Plant Biologists, Honolulu, HI, July, 2009
- Teoh, T., Y-K Chang, E.E. Hood; **Identifying biological and genetic factors affecting protein accumulation in transgenic maize seeds;** Poster Presentation at the Annual Meeting of the American Society of Plant Biologists, Honolulu, HI, July, 2009
- Hood, E.E., Thomas Teoh, Deborah Vicuna-Requesens, Shivakumar Devaiah, Sangwoong Yoon, Audrey Dabul, Yeun-Kyung Chang and Ashley Flory; 2009 **Production of Cellulases in Transgenic Maize;** International Society for Plant Molecular Biology; St. Louis, MO October 25-30, 2009
- Vicuna Requesens, D., A. Flory and E. E. E. Hood; **Seed targeted expression of the CBHI & CBHII exocellulases in maize;** Poster Presentation at the IPMB Congress, St. Louis, MO October, 2009
- Hood, E.E., T. Teoh, D. Vicuna-Requesens, S. Devaiah, S. Yoon, A. Dabul, Y-K.Chang and A. Flory; **Production of Cellulases in Transgenic Maize;** Poster Presentation at the IPMB Congress, St. Louis, MO October, 2009
- Dabul, A.N. and E.E. Hood; **Structural and Functional studies of hydroxyproline-rich glycoprotein in the reproductive system of maize (*Zea mays* L.);** Poster Presentation at the IPMB Congress, St. Louis, MO October, 2009
- Fake, G., J. Carroll, R. Jimenez-Flores, E. Hood, and J. Howard; **Measuring Cellulase Activity in Transgenic and Non-Transgenic Maize Tissue through the Release of Fermentable Sugars;** Poster Presentation at the IPMB Congress, St. Louis, MO October, 2009
- Yoon, S., A. Biris, B. Savary and E. Hood;  **$\beta$ -Expansin (*Zea m 1*) Action and Synergy with Cellulase on the Lignocellulosic Material;** Poster Presentation at the IPMB Congress, St. Louis, MO October, 2009
- Teoh, T., A. Flory, E.E. Hood; **Identifying biological and genetic factors affecting protein accumulation in transgenic maize seeds;** Poster Presentation at the IPMB Congress, St. Louis, MO October, 2009

- Devaiah, S., K.R. Hood, J.A. Howard, **E.E. Hood**; **Enhanced accumulation of cellulase in maize seed**; Poster Presentation at the IPMB Congress, St. Louis, MO October, 2009
- Woodard, Susan, Shazia Shaik, Zivko Nikolov and **Elizabeth Hood**; **Removal of phenolics improves recombinant cellulase purification from transgenic corn flour**; Spring 2010 ACS Meeting (Abstract #14818).
- Vicuna Requesens, Deborah V, Kellye Eversole, Robert Mustell, Richard Segall, Dan Berleant and **Elizabeth Hood**; **Establishing a baseline database to demonstrate substantial equivalence of GE and non-GE crops through data-mining and text-mining**; Poster Presentation at the Annual Meeting of the American Society of Plant Biologists, Montreal, Quebec, Canada July, 2010
- Thomas Teoh, Daniel Johnson, Yuen Kung Chang, Xiuzhen Huang and **Elizabeth Hood**; **Understanding biological and genetic factors influencing protein accumulation in transgenic maize seeds** Poster Presentation at the Annual Meeting of the American Society of Plant Biologists, Montreal, Quebec, Canada July, 2010
- Devaiah, Shivakumar P., Kendall R. Hood and **Elizabeth E. Hood**; **Enhanced accumulation of cellulase in maize seeds**; Poster Presentation at the Annual Meeting of the American Society of Plant Biologists, Montreal, Quebec, Canada July, 2010
- Humphrey, K. Savary, B.J., Green, S., Xu, J., **Hood, E.**, Armah, P.W., and Patel, P.2010. **Plant Biomass Research, Education, and Public Outreach at the Arkansas State University's College of Agriculture and Technology**. Biomass South 2010. Oct.14-15, 2010. Memphis, TN
- Teoh, Keat, Daniel Johnson, Yeun-Kyung Chang, Ashley Flory, Xiuzhen Huang and **Elizabeth Hood**; **Transcriptome Analysis of Maize Embryos**; Invited Oral and Poster Presentations at the Cambridge Healthtech Institute's Inaugural Plant Sequencing: *Genotype to Phenotype Correlations*; San Diego, CA; March 16-18, 2011
- C. Biedenbender (UALR), D. Berleant (UALR), K. Eversole (IE-SCS), **E. Hood** (ASU), L. Leach (IE-SCS), R. Mustell (IE-SCS), R. Segall (ASU), and D. Vicuna (ASU), **Text Mining: Using Rule Based and Neural Network Based Approaches**, 2011 UALR Student Research Expo, Little Rock, April 11.
- Yoon, S., Devaiah, S.P., Hayden, C., Howard, J., Hood, E.E.; **Novel Expansin Assay Development and Characterization of Transgenic Corn Expansin**; 2011 P3 meeting at AR P3 Symposium & AR NSF EPSCoR Annual Meeting; Heber Springs, July 26-28, 2011
- Vicuna Requesens, D., Devaiah, S., Chang, Y-K., and **Elizabeth E. Hood**; **Stable endosperm-production of CBHI exocellulase in maize**; Invited oral presentation at the American Council for Medicinally Active Plants; Arkansas State University Biosciences Institute, May 22-25, 2012—first place winner for conference oral presentations.
- Yoon, S., Devaiah, S.P., Hayden, C, Howard, J.A., **Hood, E.E.**; **Novel Expansin Assay Development and Characterization of Transgenic Corn Expansin**; 3<sup>rd</sup> Annual Conference American Council for Medicinally Active Plants May 22 – 25, 2012 Arkansas State University, Jonesboro, AR
- Dabul, A.N., Vicuna Requesens, D., & **Hood, E.E.** **Promoter study of the HRGP gene from B73 corn**; 3<sup>rd</sup> Annual Conference American Council for Medicinally Active Plants May 22 – 25, 2012 Arkansas State University, Jonesboro, AR

#### **STUDENTS AND POST-DOCs MENTORED**

Deborah Vicuna Requesens, post-doctoral, ASU 2008-present  
Thomas (Keat) Teoh, post-doctoral, ASU 2006-present  
Shivakumar Devaiah, post-doctoral, ASU 2008-present



Maria Jose Truco, post-doctoral, USU 1993-94  
Sue Fritz, post-doctoral, USU 1989-1992  
Sangwoong Yoon, PhD student, ASU, 2006-present  
Audrei Dabul, PhD student, ASU, 2007-present  
Ashley Flory, MS student, ASU, 2010-2011  
Martina Garda, MS student, ASU, 2009-2011  
Leah Chunestudy, undergraduate student, ASU 2007-2010  
April Prunty, high school and undergraduate student, Jonesboro and ASU 2007-2011  
Ne'Cura White, undergraduate student, ASU 2011  
Mindalyn Breckenridge, undergraduate student, ASU 2009-2011  
Amanda Vinas, undergraduate student, ProdiGene  
Lacy Lovelace, undergraduate student, USU  
Susan Brown, undergraduate student, USU  
Jenifer Murphy, MS student, USU  
Karen Lanoue, MS student, USU  
Chalapathi Koka, MS student, USU