

**Mark D. Burow**  
**Curriculum Vitae through Dec. 31, 2023**

**I. POSITION INFORMATION**

Professor, Sept. 1, 2014 - present

Associate Professor, Sept. 1, 2007 - Aug. 31, 2014

Assistant Professor, Feb. 15, 2001 - Aug. 31, 2007

Unit: Texas A&M AgriLife Research, Lubbock Center, Texas A&M University, Dept. of Soil and Crop Science (75%), and Texas Tech University, Department of Plant and Soil Science (25%)

**II. PREVIOUS EDUCATION AND EXPERIENCE**

***Education:***

Ph.D., University of Wisconsin-Madison. 1990. Majors in Plant Breeding/ Plant Genetics, Biochemistry.

B.A., St. Olaf College, Northfield, Minnesota. 1981. Major in Chemistry, plus an individualized major entitled "Development in Latin America."

***Professional Experience:***

Assistant Research Scientist, University of Georgia, Department of Crop and Soil Science, Jan. 1999 - Jan. 2001.

Postdoctoral Research Associate, Texas A&M University, Department of Soil and Crop Science. Feb. 1994 - Jan. 1998.

Postdoctoral Research Associate, Louisiana State University, Department of Botany. Feb. 1991 - Dec. 1993.

Postdoctoral Research Associate, Louisiana State University, Department of Plant Pathology. Mar. 1989 - Dec. 1990.

Graduate student, University of Wisconsin. Dept of Horticulture. Sep. 1982 - Jan. 1990.

Research Assistant, NSF- Undergraduate Research Program, Iowa State Univ. Jun. - Aug. 1980.

**III. POSITION DESCRIPTION**

Title: Professor - Peanut and Guar Breeding and Genetics.

Appointment: Research/ Teaching, Texas A&M AgriLife Research Research and Extension Center at Lubbock (75%), and the Texas Tech University Department of Plant and Soil Science (25%).

Expectations: Conduct independent research and as part of a multidisciplinary team; procure contract and grant funding, develop and teach courses in plant breeding/genetics, develop and sustain a strong graduate training program, develop and release new and improved peanut and guar cultivars; communicate effectively with producers, agribusiness, industry, students, government agency personnel, and academic audiences through writing and public speaking.

Description: Individual will develop and implement a strong research program in peanut and guar) breeding that attracts extramural funding and includes yield improvement, drought resistance, and pest resistance for peanuts and guar. Research emphasis will be on peanut quality, developing disease resistance, improving resistance to plant stress, and improving peanut yield and adaptation for Texas and Southwestern U. S. growers. Individual will collaborate and coordinate with scientists affiliated with the Texas A&M AgriLife Research and TTU peanut programs, Texas A&M AgriLife Extension, the USDA-ARS, and scientists at TAMU College Station on aspects of peanut breeding, genomics, agronomic production, and crop performance testing. Individual will be expected to guide graduate student research, teach an undergraduate and a graduate course at TTU, and participate in professional activities at international, national, regional, and local levels. The program developed will be seamless and synergistic with the peanut breeding program at the Texas A&M AgriLife Research and Extension Center at Stephenville and the Department of Soil and Crop Science in College Station.

#### IV. REPORT OF ASSIGNED ACTIVITIES.

##### *A. Teaching:*

##### **1. Formal Courses**

<b>Institution</b>	<b>Course</b>	<b>Credit Hours</b>	<b>Title</b>	<b>Semester</b>	<b>Number of Students</b>
St. Olaf College	CHEM26 (T.A.)	4	Thermodynamics and Kinetics	Interim 1981	est. 30
University of Wisconsin-Madison	GEN160 (T.A.)	4	Introduction to Genetics	Fall 1984	est. 50
Texas Tech Univ.	PSS6324	4	Plant Genetics and Genomics	Spring 2002	8
Texas Tech Univ.	PSS3421	4	Introduction to Genetics	Spring 2003	50
Texas Tech Univ.	PSS6424	4	Molecular Genetics and Plant Genomics	Spring 2004	8
Texas Tech Univ.	PSS3421	4	Introduction to Genetics	Spring 2005	38
Texas Tech Univ.	PSS6424	4	Molecular Genetics and Plant Genomics	Spring 2006	5
Texas Tech Univ.	PSS6001	3	Structural Genomics of Plants and Animals	Spring 2008	4

Texas Tech Univ.	PSS3421	4	Intro to Genetics	Spring 2009	23
Texas Tech Univ.	PSS6424	4	Structural Genomics of Plants and Animals	Spring 2010	7
Texas Tech Univ.	PSS3421	4	Intro to Genetics	Spring 2011	24
Texas Tech Univ.	PSS6424	4	Structural Genomics of Plants and Animals	Spring 2012	6
Texas Tech Univ.	PSS6001	3	Methods in SNP Identification and Utilization	Spring 2012	1
Texas Tech Univ.	PSS3421	4	Intro to Genetics	Spring 2013	16
Texas Tech Univ.	PSS6001	3	Bioinformatic Analysis of Transcriptome Sequence Data	Summer 2013	1
Texas Tech Univ.	PSS6001	3	Structural Genomics	Spring 2014	3
Texas Tech Univ.	PSS3421	4	Intro to Genetics	Spring 2015	23
Texas Tech Univ.	PSS6424	4	Structural Genomics of Plants and Animals	Spring 2016	6
Texas Tech Univ.	PSS3421	4	Intro to Genetics	Spring 2017	38
Texas Tech Univ.	PSS6424	4	Structural Genomics of Plants and Animals	Spring 2018	5
Texas Tech Univ.	PSS6001	3	Methods of Analysis of SNP Sequence Data	Summer 2018	1
Texas Tech Univ.	PSS3421	4	Intro to Genetics	Spring 2019	38
Texas Tech Univ.	PSS6424	4	Structural Genomics of Plants and Animals	Spring 2020	9
Texas Tech Univ.	PSS3421	4	Intro to Genetics	Spring 2021	35
Texas Tech Univ.	PSS6001	3	Analysis of SNP Sequence Data	Summer 2021	1

Texas Tech Univ.	PSS6424	4	Structural Genomics of Plants and Animals	Spring 2022	8
Texas Tech Univ.	PSS3421	4	Intro to Genetics	Spring 2021	40

### Formal Course Evaluations

Formal student evaluations are done using 16 criteria, on a scale of 1 (worst) to 5 (best). Evaluations data are given as Instructor Effectiveness and Course Overall.

#### Student Evaluation Statistics for PSS6424 - Structural Genomics

Term	Burow - Instructor Effectiveness	Department Average	Burow - Course Overall	Department Average
Spring 2002	3.67	4.37	4.00	4.29
Spring 2004	3.63	4.44	3.38	4.32
Spring 2006	3.60	4.34	4.00	4.28
Spring 2008	4.50	4.40	4.50	4.38
Spring 2010	4.86	4.40	4.71	4.35
Spring 2012	4.80	4.44	4.40	4.37
Spring 2014	n.a.		n.a.	
Spring 2016	5.00	4.61	5.00	4.55
Spring 2018	4.17	4.48	3.83	4.44
Spring 2020	4.50	4.44	4.63	4.42
Spring 2022	4.45	4.65	4.45	4.61

#### Student Evaluation Statistics for PSS3421 - Introduction to Genetics

Year	Burow - Instructor Effectiveness	Department Average	Burow - Course Overall	Department Average
Spring 2003	2.89	4.25	2.76	4.17
Spring 2005	3.30	4.30	3.30	4.25
Spring 2009	3.00	4.40	2.95	4.35
Spring 2011	3.88	4.42	3.75	4.34
Spring 2013	4.80	4.57	4.60	4.45
Spring 2015	3.85	4.45	3.90	4.42
Spring 2017	4.23	4.41	4.19	4.34
Spring 2019	4.05	4.27	3.95	4.26
Spring 2021	3.85	4.46	3.95	4.44
Spring 2023	3.26	4.50	3.26	4.47

## 2. Direction of Graduate Students

Degree	As Major Professor	As Committee Member	Other
M.S.	8 graduated +1 in progress	5 graduated	1 graduated
Ph.D.	4 graduated +3 in progress	11 graduated +1 in progress	0

### a. Major Advisor for the Following Graduate Students who received degrees:

Name	Degree Sought	Nationality	Title	Date Completed	Current Position
Amade Muitia	MS (thesis) in Crop Science, TTU	Mozambique	Development of Varieties incorporating Nematode Resistance, High-Oleic, and Early Maturity and Adapted to Mozambique.	August 2005	Peanut Breeder, Instituto Nacional de Investigaçao Agronomica, Nampula, Mozambique
Jennifer Wallace	MS (thesis) in Crop Science, TTU	US	Physiological-genetics analysis of drought and heat stress in peanut.	August 2005	Greenhouse Manager, TTU, and PhD student
Vikas Belamkar	M.S. (thesis) in Biotechnology at Texas Tech	India	A first insight into population structure, linkage disequilibrium, and association mapping of drought tolerance-related traits in the U.S. peanut minicore collection.	May, 2010	Research Assistant Professor, University of Nebraska
Jamie Ayers	MS (thesis) in Crop Science, TTU	US	Determining optimal conditions for maximum peanut profitability under reduced irrigation in West Texas.	Dec., 2010	Cotton Varietal Test Manager, Monsanto, Lubbock TX

Nicholas Denwar	PhD in Agronomy, TTU	Ghana	Evaluation of interspecific lines and breeding populations of <i>Arachis hypogaea</i> L. for yield and resistance to leafspot diseases in Ghana and Texas.	May, 2011	Peanut and Soybean Breeder, Savannah Agricultural Research Institute, Tamale, Ghana
Hardik Patel	MS (Internship) in Biotechnology at	India	Screening of the mini-core collection of <i>Arachis hypogaea</i> for thermo-tolerance and DNA marker analysis of peanut.	May, 2011	Family construction business
Ratan Chopra	MS (non-thesis) in Crop Science, TTU	India		May, 2013	continued as PhD student in the Peanut Breeding and Genetics Program, TTU
Ratan Chopra	PhD in Plant and Soil Science	India	Identification of Single Nucleotide Polymorphisms (SNPs) in <i>Arachis</i> (Peanut) Wild Species and Cultivated Accessions by Solexa Transcriptome Sequencing and Utilization of SNPs for Linkage Mapping in an <i>Arachis</i> A Genome Diploid F <sub>2</sub> Population.	December, 2014	Postdoctoral Scientist, University of Minnesota
Jennifer Chagoya	MS in Plant and Soil Science	US	Physiological Screening and Marker-Assisted Selection for Drought Tolerance in Peanut	December, 2016	Technician II, Texas A&M AgriLife
Roshan Kulkarni	MS in Plant and Soil Science	India	Phenotypic Evaluation for Water Deficit Stress Tolerance and the Study of Targeted Re-Sequencing Approach in Peanut	May, 2017	PhD student, Iowa State University

Theophilus Tengey	PhD in Plant and Soil Science	Ghana	Genetic Mapping of Leafspot resistant QTLs, and Introgression into West African Adapted and US-high Oleic peanuts	August 2018	Cowpea Breeder, Savanna Agricultural Research Institute
Pradip Sapkota	MS in Plant and Soil Science	Nepal	Evaluation of Breeding Populations of Guar ( <i>Cyamopsis tetragonoloba</i> L.) for Profitable Production in the Southwestern United States	December, 2020	PhD student, Texas A&M University
Cheng-Jung ("Joy") Sung	PhD	Taiwan	Genomic and Economic Study for Improvement of Peanut Water Deficit Stress Tolerance.	December, 2022.	Postdoc, University of Washington

**Committee Member for the Following Graduate Students who received degrees:**

- Jeff Wilson Ph.D. in Soil and Crop Sciences at Texas A&M (graduated Aug. 2013; successfully defended dissertation Jun. 12, 2013). Ph.D. dissertation title: Inheritance of oil production and quality factors in peanut.
- Heejeong Yang, Department of Plant Pathology and Microbiology, Texas A&M University. (graduated Aug. 2004) Major advisor: James Starr. M.S. Project Title: Development of SCAR Markers linked to root-knot nematode resistance in peanut.
- Ram Babu Shrestha, Department of Biological Sciences, Texas Tech University (graduated May, 2012). Major Advisor: Megha Parajulee. Ph.D. Dissertation title: Genetic diversity in *Lygus*.
- Jeff Wilson, Department of Plant and Soil Sciences, Texas Tech University. Advisor: Terry Wheeler. M. S. Thesis title: Greenhouse screening for resistance to peanut diseases.
- Menashki Mittal, Department of Biological Sciences, Texas Tech University (Paxton Payton, advisor). PhD Dissertation Title: Micro RNA Regulation of Drought Tolerance in Peanut. Graduated May, 2014.
- Xing Qi. Department of Plant and Soil Sciences, Texas Tech University (Robert Wright, major advisor). Ph.D. Dissertation title: Transposon mutagenesis for cotton functional genomics. Graduated May, 2014.
- Nicholas Sanford, Department of Biology, Texas Tech University. PhD Dissertation Title: Sugar Signaling and Metabolism Regulate Carbon Partitioning in Developing Cotton Fiber. Graduated May 2015.
- Niraj Rayamajhi M. S. (Thesis) in Plant and Soil Science at Texas Tech (major advisor, Jyotsna Sharma). M.S. thesis title: Conservation genetics of *Sclerocactus brevihamatus* subsp. *tobuschii* and an assessment of its phylogenetic relationship with *Sclerocactus brevihamatus* subsp. *brevihamatus*. Graduated May, 2015.

Namanh Buiphu, Department of Plant and Soil Sciences, Texas Tech University (major advisor, Venugopal Mendu). PhD dissertation title: Understanding the Molecular Mechanism Of Cotton Fiber Initiation. Graduated Dec. 2017.

Haydee Echvarria Laza, Department of Biology, Texas Tech University (Paxton Payton, major advisor). Ph.D. Dissertation title: Interactive Effects of Elevated CO<sub>2</sub>, Water Deficit, and Thermal Stress on Peanut Productivity, Physiology, and Transcriptomics. Graduated May 2018.

Christopher J. Cobos, Department of Plant and Soil Science at Texas Tech (Venu Mendu, major advisor). M.S. thesis title: The developmental biology and biochemistry of peanut (*Arachis hypogaea*) testa and its role in *Aspergillus* resistance. Graduated August 2018.

Vimal Balasubramanian, Department of Plant and Soil Sciences, Texas Tech University (Venugopal Mendu, major advisor). Ph.D. Dissertation title: Understanding the Genetic Factors Involved in Cell Wall Biosynthesis and Biomass Production. Graduated December, 2018.

Ai Kitazumi, Department of Plant and Soil Sciences, Texas Tech University (Benildo de los Reyes, major advisor). Projected Ph.D. Dissertation title: Understanding the molecular basis of transgressive stress tolerance phenotypes in rice: Probing into the possible roles of genomic complementation, genomic shuffling, and DNA methylation in rewiring the regulatory networks of recombinants. Graduated May 2019.

Kharenn Nunes, Department of Plant and Soil Sciences, Texas Tech University (Robert Wright, major advisor). Graduated August 2021.

Swarupa Nanda Mandal, (Fall 2018- present), Department of Plant and Soil Science, Texas Tech University, (Benildo G. de los Reyes, major advisor). PhD dissertation title: "Into the wild: quest on the novel regulatory mechanism, phenotypes, and genes in *Oryza rufipogon*, progenitor of cultivated rice." Graduated May, 2023.

Bishwoyog Bhattarai, Department of Plant and Soil Science, (Haydee Laza, major advisor) PhD dissertation title: Understanding the Morphophysiological Basis and Biomass Allocation Strategies of Legume Under Water-Deficit Conditions. Graduated December, 2023.

**Advising Current Graduate Students: (list student names and thesis/dissertation title and graduation/anticipated graduation date for your advisees.)**

**PhD.**

**a. Students Completed:**

**b. Students in Progress:**

Leslie Commey, (Fall 2019-present), Department of Plant and Soil Sciences, Texas Tech University, (Venu Mendu, co-major advisor). Projected PhD dissertation title: Seed coat-mediated resistance to aflatoxin contamination in peanut. Anticipated graduation date: August, 2023.



Teresa Gaus, (began Summer 2019). Projected PhD dissertation title: Breeding for disease resistance in peanut. Anticipated graduation date: August, 2024.

Yaswant Kumar Pankaj, (August 2022-present), Department of Soil and Crop Science, Texas A&M University (David Stelly co-PI). Projected PhD dissertation title: Genomics and breeding of peanut for high oil content. Anticipated graduation date: December, 2025.

c. Other Graduate Committees:

Shan Wong, (Fall 2017 - present), PhD Department of Plant and Soil, (Jyotsna Sharma, major advisor)

**M.S. Thesis.**

a. Students Completed.

b. Students in Progress

Merlin Malayka Yerra, (August 2022-present), Department of Soil and Crop Science, Texas A&M University (Nithya Rajan co-PI). Projected MS dissertation title: Breeding for tolerance to water deficit stress in peanut. Anticipated graduation date: December, 2024.

c. Other M.S. Committees

**M.S. Non-thesis.**

a. Students Completed:

none

**3. Postdocs and Visiting Scientists:**

<b>Name</b>	<b>Category</b>	<b>Nationality</b>	<b>Project</b>	<b>Dates</b>	<b>Current Position</b>
Yolanda López	Postdoc	US	Development of early-maturing high-oleic varieties, and molecular markers for the high-oleic trait.	Jun. 2002 - Jul. 2006.	Research Scientist, University of Florida
Michael Gomez Selvaraj	Postdoc	India	Screening of the peanut minicore collection for heat and drought tolerance, and mapping of microsatellites markers in peanut;	Jun. 2005 - Oct. 2011	Project Leader in Phenomics, CIAT

Lilibeth Miranda	Postdoc	Philippines	Testing of algal species suitable for biofuels production and collection and identification of local algae species.	Jun. 2009 - July 2010.	Postdoc, University of Maine
Junling Zhang	Postdoc	China	Testing of algal species for oil quantity and quantity, Screening of peanut and castor for oil quality and content	Jul. 2010-Mar. 2011.	Professional Engineer, Salt Lake City
Jeff Wilson	Postdoc	US	Identify QTLs for oil content and concentration	2013-2014	Breeder, Ready Roast, Inc.
Izhack Wallerstein	Professor and Visiting Scientist	Rehovot Center, Israel	Study of genetic variation in peanut response to light quality, and relation to yield and water consumption under field conditions.	Feb. 2004-Dec. 2005	retired
Israella Wallerstein	Professor and Visiting Scientist	Rehovot Center, Israel	Study of the effects of light quality and shading on apical dominance and phytochrome B expression in peanut.	Feb. 2004-Dec. 2005	retired
Narayana Manivannan	Associate Professor and Visiting Scientist	Tamil Nadu Agricultural University, Coimbatore, India	Mapping a recombinant inbred peanut population, and QTL analysis for quality traits.	Jan. 2007 - Jun. 2007.	Professor
Anita Sehrawat	Professor and Dept. Chair	Haryana University, India	Screening of peanut for salinity stress, and development of DNA-based markers for selection.	Nov. 2014 - Oct. 2015	Professor
Hanh Pham	Postdoc	Vietnam	Peanut breeding	Sep. 2021-present	

**4. Number of Undergraduate Advisees:** none

**5. Undergraduate Interns:**

Ashlynn Fix, Dept. of Plant and Soil Science, Texas Tech University (Sept. 2015-May 2016). Duties: assisting with greenhouse care, DNA extraction, DNA marker analysis.

**6. International Student Short-Term Training.**

Fidele Neya (major advisor, Prof Philippe Sankara, Département de Phytopathologie, Université Ouaga I Prof. Joseph Ki-Zerbo, Ouagadougou, Burkina Faso). Jul -

Nov 2016. Goal: training in use of SNP-based markers, with the goal of use for breeding for leafspot resistance. Funding from USAID through the Peanut and Mycotoxin Innovation Laboratory.

Fidele Neya (major advisor, Prof Philippe Sankara, Département de Phytopathologie, Université Ouaga I Prof. Joseph Ki-Zerbo, Ouagadougou, Burkina Faso). Jun-Nov 2012. Goal: Training in seed multiplication. Funding from USAID through the Peanut Collaborative Research Support Project.

Issa Faye (major advisor, Dr. Ousmane Ndoye, Institut Sénégalais de Recherches Agricoles, Bambey, Senegal) Jun-Nov 2012. Goal: Training in seed multiplication. Funding from USAID through the Peanut Collaborative Research Support Project.

## **7. Course Development/Other Teaching-Related Activities:**

a. PSS3421, Introduction to Genetics. Developed an undergraduate genetics course. The course has undergone some changes over time. As the course is in the Plant and Soil Science Department, I focus more on plants and on topics of interest to the students, as indicated on informal course surveys and topics of interest to students. The course was designated as a writing intensive course, so I use grant proposals to allow the students to propose a use of genetics in a subject of their own interest. In the fall of 2016, it was decided that the course would become a communications literacy course, and so I discussed this with the other faculty teaching the course, and altered the course to meet this goal. This classification has been changed, and with the past year, the last students under the original catalog have graduated. I have developed problem sets or questions that are handed out each class period and returned at the weekly discussion sessions. These are designed to keep students on track and from falling behind. For teaching of quantitative genetics, I have found it helpful to not teach equations as in the book, but to present the students with sets of data and have them help derive the statistical tests in class. I also include in class demonstrations of genetics where possible.

b. Graduate Course in Genomics. This was originally taught on short notice by modifying an outline provided by my predecessor, who accepted a job elsewhere, but who provided no lecture materials. I revised the course to PSS6424 Molecular Genetics and Plant Genomics by revising the syllabus and adding a laboratory. When Dr. T. Wilkins was hired, it was agreed that she would teach Functional Genomics, so the course was modified again to PSS6424 Structural Genomics of Plants and Animals.

Although the course is to provide an general introduction to genomics, every time I teach the class, I update it to keep current with the field. I assign current research articles on applications of genomics for students to present, and these change each time the course is taught. This is to complement the lectures, which focus more on principles, and to increase student participation and promote active learning. Thirdly, I require a research proposal to spur thinking beyond the class material, and also a paper on the societal implications of genomics. Oral presentation and

discussion of these papers spur the class to think through the ideas. Finally, for the hands-on skills, I have added a laboratory to the class. The most recent time the course was taught, this covered growing, phenotyping, SSR amplification, mapping, and QTL analysis of an Arabidopsis RIL population, followed by linkage disequilibrium and association mapping, DNA sequencing, and SNP analysis.

Sequence analysis, bioinformatics, and SNP analysis have become an increasingly important part of the course. In 2016, I added a major bioinformatics laboratory component to PSS6424. Included labs on alignment of sequences against a genome reference, calling of SNPs, designing KASP markers, performing SNP analysis using KASP markers, and use of the Integrated Breeding Platform developed under Gates Foundation funding. To make room for this, the section on physical mapping of BAC clones has been dropped, as was preparation and sequencing of cDNA clones by Sanger sequencing. In 2020, it was necessary to move the course online after spring break. This worked satisfactorily for the lecture part of the class. The second half of the lab was primarily bioinformatics, as the wet lab part of the course had mostly finished by spring break. For students using Windows, we were able to conduct the bioinformatics satisfactorily; for Mac users, some parts had to be demonstrated due to deficiencies in the ability of MacOS to run some of the software or to be able to connect remotely to computers behind TTU's firewall.

- c. PSS6001 Independent Study. I have taught five sections of independent study since 2012. The titles of these are “Methods in SNP Identification and Utilization”, “Bioinformatic Analysis of Transcriptome Sequence Data”, and “Methods of Analysis of SNP Sequence Data.” These were taught in response to the needs of a graduate student, and because of the lack of in-depth coursework available for these needs at Texas Tech.

## ***B. Research***

### **1. Research Projects:**

- Peanut and Guar Breeding and Genetics (RI-8835), Sep. 2017 - present. Goals: develop improved peanut and guar varieties, and use genomics to assist in this effort.
- Peanut Breeding and Genetics (RI-8835), Jun. 2012 - June 2017. Goals: develop improved peanut varieties, and study inheritance of agronomically-useful traits in peanut.
- Peanut Breeding and Genetics (RI-8835), Mar. 2007 - present. Goals: develop improved peanut varieties, and study inheritance of agronomically-useful traits in peanut.
- Peanut Breeding and Genetics (RI-8835), Feb. 2001 - present. Goals: develop improved peanut varieties, and study inheritance of agronomically-useful traits in peanut.
- Molecular Biology, University of Georgia, Jan. 1999 - Jan. 2001. Develop a molecular map for peanut, and BAC libraries for peanut.
- Molecular Biology, Texas A&M University. Feb. 1994 - Jan. 1998. Develop molecular markers for nematode resistance in peanut, and develop a marker map of peanut.
- Molecular Biology, Louisiana State University. Feb. 1991 - Dec. 1993. Identify genes

associated with reduced photorespiration in the C3 alga *Chlamydomonas reinhardtii*. Molecular Biology, Louisiana State University. Mar. 1989 - Dec. 1990. Identify *cis*-acting elements controlling expression of the  $\beta$ -phaseolin gene.  
Bean Breeding, University of Wisconsin. Sep. 1982 - Jan. 1990. Develop double mutants of bean for seed proteins, and study effects on chemical and agronomic properties.  
Research Assistant, Iowa State Univ. Jun. - Aug. 1980. Identify the crystal and molecular structure of alachlor (Lasso) by X-ray crystallography.  
Undergraduate student, St. Olaf College. Sep. 1977- May 1981. Chemistry of organometallic complexes.

## **2. Support personnel.**

Jamie Ayers, Texas Agricultural Experiment Station, Lubbock, TX., Jun. 2001 -Nov. 2010. Supervision of field plots on day-to-day basis, and of J Leek farm. Also pursuing MS in Crop Science at TTU.  
Trisha Escobar, Texas AgriLife Research, Lubbock, TX., Mar. 2009 -. Assisting with algal growth experiments, procurement, and data management.  
Elizabeth Hawkins, Texas AgriLife Research, Lubbock, TX, Dec. 2009 - Feb. 2010. Was technician for the late Dr. Mike Schubert. Projects: (a) Screening peanut germplasm for oil content and composition. (b) Screening of algal species for oil content and composition.  
Jennifer Chagoya, Texas AgriLife Research, Lubbock, TX., Jul. 2010 - present. (a) Assisting with algal growth experiments, procurement, and data management. (b) Lab analysis of peanut for oil composition, hybridity, and for DNA marker analysis. (c) Greenhouse supervision and assistance with crossing. (d) Screening peanut germplasm and crosses for drought and heat stress tolerance.  
Dillon Spradley, Texas AgriLife Research, Lubbock, TX., Jan. 2011 - Nov. 2011. supervision of field plots on day-to-day basis.  
Jake Halfmann, Texas AgriLife Research, Lubbock, TX., Nov. 2011 -Jun. 2013. supervision of field plots on day-to-day basis.  
Michael Drachenberg,, Texas A&M AgriLife Research, Lubbock, TX., Jun. 2013 - Jun. 2014. supervision of field plots on day-to-day basis.  
David Bush, Texas AgriLife Research, Lubbock, TX., Jun. 2014 - Sep. 2016. Supervision of field plots on day-to-day basis.  
Carroll French, Texas AgriLife Research, Lubbock, TX., Sept. 2016 - April 2018. Supervision of field plots on a day-to-day basis, planting, harvest, seed processing.  
Hanh Pham, Texas AgriLife Research, Lubbock, TX., Oct. 2018 - Sep. 2021. Supervision of field plots on a day-to-day basis, planting, harvest, seed processing, use of marker-assisted selection in breeding.  
Juan Mendez, Texas AgriLife Research, Lubbock, TX., Jun 2022 - present. Supervision of field plots on a day-to-day basis, planting, harvest, seed processing, use of marker-assisted selection in breeding.  
Donny Valdez, Texas AgriLife Research, Lubbock, TX., Mar. 2023 - present. Supervision of field plots on a day-to-day basis, planting, harvest, seed processing.

### 3. Acquisition of research funds:

	Total	Account Manager
Lifetime	\$21,715,730	\$6,629,779
External	\$20,257,921	\$5,225,771
Internal	\$1,752,809	\$397,340

**a. External funds** (\* = lead PI; numbers in parentheses denote the amounts for which M.D.B. is account manager).

Funded 2023 \$358,548 (\$155,307 account manager total):

- Burow, M., C. Trostle, D. McCallister, W. Ravelombola, and D. Min. Improving Profitability of Guar as an Alternative Crop for Dryland Production. Ogallala Aquifer Initiative, \$108,837 (38,107), 10/1/23-9/30/25.
- Cason, J., M. D. Burow, C. E. Simpson, M. Baring, P. Payton, and H. Pham. Breeding to Increase Peanut Yields and Production Efficiency by Developing Breeding Lines with Improved Drought, Heat Tolerance, and Multiple Disease Resistance. National Peanut Board. \$185,090 (\$86,700), 3/1/23-6/30/24.
- Cason, J., C. Simpson, M. Burow, and J. Brady. Marker Assisted Selection in Peanut Cultivar Development. Peanut Research Foundation, \$25,000 (\$6,500), 2/1/24-1/31/25.
- Burow, M. D., C. E. Simpson, J. Cason, and B. McCutchen. Spanish And Spanish Hybrid Peanut Research, JLA International \$8,000 (0). 1/1/23-6/30/24.
- Burow, M., J. Cason, C. Simpson, H. Pham, and P. Payton. Marker-Assisted Backcrossing of Breeding Lines for Drought Tolerance, Improved Grade, High-Oleic Oil, and Resistance to Root-knot Nematodes. Peanut Research Foundation. \$31,621 (\$24,000). 2/1/23-1/31/24.

Funded 2022 \$6,437,261 (\$780,479 account manager total):

- Burow, M. D., C. E. Simpson, P. Ozias-Akins, A. Hillhouse, C.-J. Sung, and R. Kulkarni. Genotyping by Resequencing – Development and Testing of a Community Resource for Inexpensive Genotyping to Identify QTLs in New Peanut Breeding Populations. Peanut Research Foundation. \$34,779 (\$34,779), 2/1/22-1/31/23.
- Mendu, V. and M. D. Burow. Developing *Aspergillus flavus* resistant peanut using seed coat biochemical marker(s). Peanut Innovation Lab, \$84,000 (\$84,000), 6/1/22-12/31/22.
- Cason, J., M. D. Burow, C. E. Simpson, M. Baring, P. Payton, and H. Pham. Breeding to Increase Peanut Yields and Production Efficiency by Developing Breeding Lines with Improved Drought, Heat Tolerance, and Multiple Disease Resistance. National Peanut Board. \$185,090 (\$86,700), 1/1/21-6/30/22.
- Cason, J., L. Ribera, B. McCutchen, D. Baltensperger, M. Burow, C. Simpson, M. Baring, E. Kimura, P. DeLaune, B. Whitney, D. Kourouski, J. Brady, J. Verchot, M. Molina, J. Grichar, W. Ravelombola, K. Lewis, W. Keeling, J. Benavidez, L.

Young, N. Meki. Research, Development, and Evaluation of ‘Diesel Nut’ OilCrop Feedstocks. \$6,359,344 (\$565,000), 3/1/22-2/28/26.

Funded 2021 983,472 (\$323,025 account manager total):

- Burow, M. D., C. E. Simpson, J. Cason, C. Monclova-Santana, V. Mendu, R. Bennett, T. Tengey, R. Oteng-Frimpong, J. Asibuo, and T. Gaus-Bowling. PLANT BREEDING PARTNERSHIPS: Genomics-Assisted Introgression and Molecular Dissection of Resistance to Pests and Diseases in Peanut. USDA-NIFA-AFRI. \$650,000 (\$176,384), 1/15/21 - 1/14/24.
- Cason, J., M. D. Burow, C. E. Simpson, M. Baring, P. Payton, and H. Pham. Breeding to Increase Peanut Yields and Production Efficiency by Developing Breeding Lines with Improved Drought and Heat Tolerance combined with Multiple Disease Resistance. National Peanut Board. \$185,090 (\$89,750), 1/1/21-6/30/22.
- Burow, M. D., C. E. Simpson, N. Denwar, R. Oteng-Frimpong, I. Faye, J. Asibuo, V. Mendu, T. Tengey, and J. Cason. Peanut Innovation Lab, \$42,211 (\$9,735), 10/1/20-9/30/21.
- Burow, M., J. Cason, C. Simpson, H. Pham, and P. Payton. Marker-Assisted Backcrossing of Breeding Lines for Drought Tolerance, Improved Grade, High-Oleic Oil, and Resistance to Root-knot Nematodes. Peanut Research Foundation. \$24,000 (\$7,050). 3/1/21-2/28/22.
- Cason, J., J. Brady, C. E. Simpson, and M. D. Burow. Transcriptome Analysis of Wild Species Peanut under Induced Drought Stress. Peanut Research Foundation, \$35,000 (6,103), 2/1/21-1/31/22.
- Burow, M. D., C. E. Simpson, P. Ozias-Akins, A. Hillhouse, C.-J. Sung, and R. Kulkarni. Genotyping by Resequencing – A Community Resource for Inexpensive Genotyping to Identify QTLs in New Peanut Breeding Populations. Peanut Research Foundation. \$20,000 (\$20,000), 2/1/21-1/31/22.
- Narayanan, S., M. Burow, and S. Rustgi. Breeding for climate resilient peanut varieties. South Carolina Peanut Board. \$13,171 (\$0). 7/1/21-6/30/22.

Funded 2020 (\$581,826, \$285,794 account manager):

- Burow, M. D., C. E. Simpson, N. Denwar, R. Oteng-Frimpong, I. Faye, J. Asibuo, V. Mendu, T. Tengey, and J. Cason. Marker-Assisted Breeding and Enhancement of Genetic Diversity for Resistance to Leaf spot, Tolerance to Water Deficit, and Improved Oil in Peanut. Peanut Innovation Lab, \$59,274 (\$15,656), 10/1/19-9/30/20.
- Cason, J., M. D. Burow, C. E. Simpson, M. Baring, and P. Payton. Breeding to Increase Peanut Yields and Production Efficiency by Developing Breeding Lines with Improved Drought and Heat Tolerance combined with Multiple Disease Resistance. National Peanut Board, \$180,090 (\$89,753), 1/1/20-6/30/21.
- Burow, M., J. Cason, C. Simpson, J. Chagoya, and P. Payton. Marker-Assisted Backcrossing of Breeding Lines for Drought Tolerance, Improved Grade, High-Oleic Oil, and Resistance to Root-knot Nematodes. Peanut Research Foundation. \$30,000 (\$23,935). 3/1/20-2/28/21.
- Baltensperger, D., X. Dong, and M. Burow. Commercial Analysis of Hemp. \$312,462 (\$156,630), Green Ocean Sciences, Inc. DBA Ionization labs, 6/1/20-12/31/21.

Funded 2019 (\$380,443; account manager of \$81,199)

- Burow, M. D., C. E. Simpson, N. Denwar, R. Oteng-Frimpong, I. Faye, J. Asibuo, V. Mendu, T. Tengey, and J. Cason. Marker-Assisted Breeding and Enhancement of Genetic Diversity for Resistance to Leaf spot, Tolerance to Water Deficit, and Improved Oil in Peanut. Peanut Innovation Lab, \$28,168 (\$10,442), 10/1/18-9/30/19.
- Cason, J., M. D. Burow, C. E. Simpson, M. Baring, and P. Payton. Molecular and Conventional Breeding to Increase Peanut Yields and Production Efficiency by Developing Breeding Lines with Improved Drought and Heat Tolerance combined with Multiple Disease Resistance. National Peanut Board \$101,000 (\$51,000), 1/1/19-6/30/20.
- Burow, M. D., G. Ritchie, and R. B. Williams. Testing of Spineless Prickly Pear Cactus for Profitable Forage Production under Dryland Conditions (Part of Precipitation and Irrigation Management to Optimize Profits from Crop Production). Ogallala Aquifer Initiative, \$201,275 (\$19,757).
- Mendu, V., L. Dampanaboina, M. D. Burow, H. Falalou, H. K. Sudini, T. Temgey, R. Akromah, and R. Varshney. Developing *Aspergillus flavus* resistant peanut using seed coat biochemical marker(s). Peanut Innovation Lab, \$50,000 (\$0).

Funded 2018 (\$396,275; account manager of \$176,044)

- Burow, M. D., C. Trostle, S. Angadi, and R. Williams. Testing of Management Practices and Advanced Guar Breeding Lines for Profitable Production under Water-Limited Conditions. Ogallala Aquifer Initiative, \$82,667 (\$56,867). 1/1/18-12/31/19.
- Baring, M. R., M. D. Burow, C. E. Simpson, and P. Payton. Molecular and Conventional Breeding to Increase Peanut Yields and Production Efficiency by Developing Breeding Lines with Improved Drought and Heat Tolerance combined with Multiple Disease Resistance. National Peanut Board \$101,000 (\$48,000), 1/1/18-6/30/19.
- Holbrook, C., T. Brenneman, M. Burow, K. Chamberlin, C. Chen, Y. Chu, A. K. Culbreath, S. Jackson, C. Kvien, and P. Ozias-Akins. Phenotyping and Genotyping of RIL Populations for Gene Discovery and Marker Development. Peanut Foundation. \$151,719 (\$14,929). 4/14/18-4/13/19.
- Burow, M., M. R. Baring, C. Simpson, R. Carter, and C. Muntean. Peanut Development Program. Golden Peanut and Tree Nuts. \$60,889 (\$56,248). 4/1/18 - 10/1/18.

Funded 2017 (\$1,093,000, account manager of \$286,126)

- Burow, M. D., C. E. Simpson, J. Cason, T. Tengey, J. Chagoya, D. Hillhouse, R. Chopra, and R. Kulkarni. SNP Genotyping of a RIL Population Developed from a Synthetic Amphidiploid, and Release of a Near-Isogenic Introgression Line (NIIL) Population Resource for the Peanut Community. Peanut Foundation, \$20,000 (\$14,000), 1/15/17-1/14/18.
- Balota, M., P. Payton, J. Mahan, K. Chamberlin, R. Nelson, and M. D. Burow. Development of Advanced Physiological and Molecular Markers for Stress Tolerance in Peanut. USDA-NIFA, \$470,000 (\$222,101 to MDB and PP;



- \$110,211 to MDB), 3/1/17 - 2/28/20.
- Baring, M. R., M. D. Burow, C. E. Simpson, and P. Payton. Molecular and Conventional Breeding to Increase Peanut Yields and Production Efficiency by Developing Breeding Lines with Improved Drought and Heat Tolerance combined with Multiple Disease Resistance. National Peanut Board \$101,000 (\$48,000), 1/1/17-6/30/18.
- Holbrook, C., T. Brenneman, M. Burow, K. Chamberlin, C. Chen, Y. Chu, A. K. Culbreath, T. G. Isleib, S. Jackson, C. Kvien, P. Ozias-Akins, and T. Sinclair. Phenotyping and Genotyping of RIL Populations for Gene Discovery and Marker Development. Peanut Foundation. \$165,000 (\$11,200). 7/1/17-6/30/18.
- Deom, C., M. Burow, C. Simpson, N. Puppala, B. Tillman, N. Barkley, D. K. Okello, P. Sankara, N. Denwar, and A. Muitia. An Integrated Global Breeding and Genomics Approach to Intensifying Peanut Production. Peanut and Mycotoxin Innovation Lab (USAID). \$43,000 (\$15,298), 3/23/17-9/30/17.
- Burow, M. D., C. E. Simpson, M. R. Baring, P. Payton, J. Mahan, N. Puppala, and S. Tallury. An Integrated, Inter-Regional Approach to Breeding Multiple Market Classes of Peanut for Enhanced Productivity and Sustainability under Water Deficit. USDA-AFRI-CARE. \$294,000 (\$87,417). 3/1/17 - 2/28/20.

Funded 2016 (\$510,168, account manager of \$167,596)

- Burow, M. D., C. E. Simpson, J. Cason, T. Tengey, J. Chagoya, D. Hillhouse, R. Chopra, and R. Kulkarni. SNP Genotyping of a RIL Population Developed from a Synthetic Amphidiploid, and Release of a Near-Isogenic Introgression Line (NIIL) Population Resource for the Peanut Community. Peanut Foundation, \$15,000 (\$12,500), 2/1/16-1/31/17.
- Burow, M. D., C. E. Simpson, M. R. Baring, R. Kulkarni, S. Sennoune, R. Chopra, K. R. Kottapalli, N. Puppala, and K. Chamberlin. Development of a Transcriptome-Based GBS System for Peanut Breeding Peanut Foundation, \$20,000 (\$17,500), 2/1/16-1/31/17.
- Baring, M. R., M. D. Burow, C. E. Simpson, and P. Payton. Molecular and Conventional Breeding to Increase Peanut Yields and Production Efficiency by Developing Breeding Lines with Improved Drought and Heat Tolerance combined with Multiple Disease Resistance National Peanut Board \$85,500 (\$49,000), 1/1/15-6/30/16.
- Holbrook, C., T. Brenneman, M. Burow, S. Cannon, C. Chen, A. K. Culbreath, A. Farmer, T. G. Isleib, S. Jackson, C. Kvien, P. Ozias-Akins, and T. Sinclair. Phenotyping and Genotyping of RIL Populations for Gene Discovery and Marker Development. Peanut Foundation. \$230,00 (\$15,040). 1/15/16- 1/14/17.
- Tillman, B., M. Burow, J. Wang, and N. Dufault. Development and Maintenance of PGI RIL Populations and Phenotyping for White Mold Resistance. Peanut Foundation, \$35,000 (\$10,030).
- Deom, C., M. Burow, C. Simpson, N. Puppala, B. Tillman, N. Barkley, D. K. Okello, I. Faye, P. Sankara, N. Denwar, and A. Muitia. An Integrated Global Breeding and Genomics Approach to Intensifying Peanut Production. Peanut and Mycotoxin Innovation Lab (USAID). \$89,250 (\$58,938), 1/28/16-8/31/17.
- Burow, C. Trostle, N. Abidi, S. Angadi, B. Avant, P. DeLaune, N. Dunford, B. Faulkner,

K. Grover, W. Hagood, T. Isakeit, P. Laughlin, A. Muraviyov, K. Nolte, L. Norman, S. Park, S. Park, R. Powell, G. Smith, and G. Strickland. Guar Improvement and Utilization in the U.S. Southwest: A Research and Extension Planning Proposal. USDA-NIFA-SCRI, \$35,418 (\$27,627), 9/1/16-8/31/17.

Funded 2015 (\$434,000, account manager of \$93,500)

Baring, M. R., M. D. Burow, C. E. Simpson, and P. Payton. Molecular and Conventional Breeding to Increase Peanut Yields and Production Efficiency by Developing Breeding Lines with Improved Drought and Heat Tolerance combined with Multiple Disease Resistance. National Peanut Board \$85,500 (\$50,000), 1/1/15-6/30/16.

Baring, M. R., M. D. Burow, and C. E. Simpson. Breeding Peanut for Improved Grower Profitability. Texas Peanut Producers Board. \$63,500 (\$17,500), 5/1/15-4/30/16.

Holbrook, C., T., Z. Abdo, T. Brenneman, M. Burow, S. Cannon, C. Chen, A. K. Culbreath, A. Farmer, T. G. Isleib, S. Jackson, C. Kvien, P. Ozias-Akins, and T. Sinclair. Phenotyping and Genotyping of RIL Populations for Gene Discovery and Marker Development. Peanut Foundation. \$270,000 (\$14,040). 2/1/15-2/14/16.

Burow, M., C. E. Simpson, A. Hillhouse, J. Cason, T. Tengey, K. R. Kottapalli, and S. Sennoune. SNP Genotyping of a RIL Population Developed from a Synthetic Amphidiploid, and Release of a Near-Isogenic Introgression Line Population Resource for the Peanut Community. Peanut Foundation. \$15,000 (\$12,000). 2/27/15-2/26/16.

Funded 2014 (\$1,370,120, account manager of \$282,107)

Burow, M., and P. Payton. Breeding of Peanut for Growth under Water-Limited Conditions on the Southern High Plains, and Combination with Improved Water Management Practices. Ogallala Aquifer Project, 10/1/14-9/30/16, \$32,000 (\$32,000).

Burow, M. D., C. E. Simpson, and A. Farmer. Development of a Transcriptome- Based GBS System for Peanut. Peanut Foundation. \$22,860 (\$22,860).

Lyford, C., V. Mendu, and M. Burow. Support for Ghana Students. BHEARD. \$599,064 (\$150,750, funds through and joint with V. Mendu). 9/1/14-8/31/18.

Baring, M. R., M. D. Burow, and C. E. Simpson. Molecular and Conventional Breeding to Increase Peanut Yields and Production Efficiency by Developing Breeding Lines with Improved Drought and Heat Tolerance combined with Multiple Disease Resistance. National Peanut Board \$84,400 (\$49,000), 1/1/14-12/31/14.

Baring, M. R., M. D. Burow, and C. E. Simpson. Breeding Peanut for Improved Grower Profitability. Texas Peanut Producers Board, \$63,500 (\$17,500), 4/1/14-3/31/15.

Burow, M. D., C. E. Simpson, and M. R. Baring. Development of a Second-Generation, High-Yielding Early-Maturing Runner Peanut for Texas. Peanut Foundation, \$16,000 (\$6,500), 10/1/14-9/30/15.

Tillman, B., J. Wang, N. Dufault, and M. Burow. Development and Maintenance of PGI RIL Populations and Phenotyping for White Mold Resistance. Peanut Foundation, \$41,250 (\$11,800), 10/1/14-9/30/15.

Holbrook, C., T. Brenneman, S. Cannon, C. Chen, A. K. Culbreath, A. Farmer, T. G.

Isleib, S. Jackson, C. Kvien, P. Ozias-Akins, T. Sinclair, and M. Burow. Phenotyping and Genotyping of RIL Populations for Gene Discovery and Marker Development. Peanut Foundation. \$273,340 (\$19,040),  
Deom, C., M. Burow, C. Simpson, N. Puppala, B. Tillman, N. Barkley, D. K. Okello, I. Faye, P. Sankara, N. Denwar, and A. Muitia. An Integrated Global Breeding and Genomics Approach to Intensifying Peanut Production. Peanut and Mycotoxin Innovation Lab (USAID). TX subaward: \$87,706 (\$48,032), 12/1/14-8/31/17.  
Smith, C. W., et al.. Feeding Our World Grand Challenge Proposal - Seminal Genetic Gain in Sustainable Crop Productivity. TAMU OVPR, 2015-2016. \$150,000 (\$0).

Funded 2013.(\$457,106, account manager of \$127,900)

Michelmore, R. W, R. K. Varshney, B. Liao, S. Jackson, H.D. Upadhyaya, N. Barkley, L. Froenicke, M. Pandey, C. Holbrook, T. B Brenneman, C. Chen, J. Damicone, M. Burow, T. Isleib, L. Dean, and M. L. Wang. Genome-wide association studies of gene-rich regions associated with target traits for peanut breeding using diverse global germplasm collections. Peanut Foundation, \$156,000 (\$0).  
Burow, M. D., T. A. Wilkins, C. E. Simpson, R. Chopra, M. R. Baring, J. Mudge, and C. Johnson. Development and Use of SNP-Based Markers for Eventual Development of a Peanut DNA Chip for Marker-Assisted Breeding. National Peanut Board, \$20,000 (\$20,000), 1/1/13-12/31/13.  
Baring, M. R., M. D. Burow, J. L. Starr, J. E. Woodward, and C. E. Simpson. Molecular and Conventional Breeding to Increase Peanut Yields and Production Efficiency by Developing Breeding Lines with Improved Drought and Heat Tolerance combined with Multiple Disease Resistance \$59,500 (\$24,000).  
Burow, M. D., and M. R. Baring. Development of a Second-Generation, High-Yielding Early-Maturing Runner Peanut for Texas. Peanut Foundation, \$15,000 (\$7,500). 4/1/13-3/30/14.  
Baring, M. R., M. D. Burow, and C. E. Simpson. Breeding Peanut for Improved Grower Profitability. Texas Peanut Producers Board, \$60,000 (\$16,500), 4/1/13-3/31/14.  
Payton, P., J. Mahan, and M. Burow. Physiological and morphological comparison of root growth in peanut genotypes selected for production under water limited conditions on the Southern High Plains. Ogallala Aquifer Project, 10/1/13-9/30/15, \$57,249 (\$25,629).

Funded 2012 (\$288,796, account manager of \$151,344)

Baring, M., M. D. Burow, C. E. Simpson, J. Woodward, J. W. Grichar, and M. Black. Breeding Peanut for Improved Grower Profitability. Texas Peanut Producers Board. \$60,000 (\$22,500). 4/1/12-3/31/13.  
Burow, M. D., T. A. Wilkins, C. E. Simpson, and R. Chopra. Development and Use of SNP-Based Markers for Eventual Development of a Peanut DNA Chip for Marker-Assisted Breeding. National Peanut Board, 1/1/12-12/31/12, \$20,000 (\$20,000).  
Baring, M. R., M. D. Burow, C. E. Simpson, J. L. Starr, and J. E. Woodward. Molecular and Conventional Breeding to Improve Peanut Yields and Production Efficiency by Reduced Disease and Water Usage, National Peanut Board 1/1/12-12/31/12, \$60,000 (\$23,000).

Burow, M. D., C. E. Simpson, P. Sankara, O. Ndoye, N. Denwar, M. G. Selvaraj, M. Ouedraogo, Z. Bertin, L. Zinsson, M. R. Baring, and J. Burke. Overcoming Abiotic and Biotic Constraints to Yield, and Production of High-Quality Peanuts in West Africa and Texas. Peanut Collaborative Research Support Project (USAID), \$92,996 (\$55,344), 4/1/11-12/31/12.

Burow, M. D., P. R. Payton, J. J. Burke, G. B. Burow, K. Kottapalli, and J. Chagoya. Provision and use of advanced analytical methods for developing drought-tolerant peanut. Ogallala Aquifer Project, 10/1/12-9/30/14, \$49,800 (\$24,500).

Support for Mark Gregory M.S. Program, \$6000 in supplies. Source: ACI Seeds, Inc.

Funded 2011 (\$347,535, account manager of \$151,500)

Baring, M.R., M. D. Burow, and C. E. Simpson. Breeding Peanut for Increased Yield and Quality via Genetic Gains, Improved Disease and Pest Resistance, and Improved Water Use Efficiency. Texas Peanut Producers Board, 4/1/11-3/31/12, \$70,000 (\$23,000).

Simpson, M. D. Burow, M. R. Baring, J. L. Starr, and J. E. Woodward. Molecular and Conventional Breeding to Improve Peanut Yields and Production Efficiency by Reduced Disease and Water Usage, National Peanut Board, 1/1/11-12/31/11, \$60,000 (\$26,000).

Burow, M. D., T. A. Wilkins, M. G. Selvaraj, and C. E. Simpson. Genotyping the U.S. Peanut Minicore Collection and Southwest Cultivars using a Chip-based SNP Array, 1/1/11-12/31/11. \$20,000 (\$20,000).

Burow, M. D., J. J. Burke, P. R. Payton, K. Kottapalli, and J. Chagoya. Use of Physiological Trait Screen Data to Design Improved Peanut Plants with Improved Yield Under Water Deficit and Heat Stresses. Ogallala Aquifer Project, 10/1/11-9/30/12, \$59,500 (\$30,500).

Baltensperger, D., and T. Miller (M. Burow, C. Simpson, and M. Baring). Identification and Enhancement of Texas Oilseed Crops for Second Generation Biodiesel Feedstocks. TAES- Chevron Joint Venture, 2011: \$49,000 for peanut (\$7,000), 12/1/10-3/31/11.

Burow, M. D., J. Chagoya, and A. Quigg. Species selection, media development, optimization of growth and lipid production. USAF Strategic Fuel Supply, 10/16/10-5/15/11. \$89,035 (\$45,000)

Funded 2010 (\$738,507 overall, account manager \$270,756)

Burow, M. D., M. G. Selvaraj, and C. E. Simpson. Identification of Markers for Breeding for Maturity, High-Oleic Ratio, Resistance to Heat and Drought, and Disease. National Peanut Board, 1/1/10-12/31/10, \$19,350 (\$14,350).

Burow, M. D., C. E. Simpson, A. M. Schubert, and M. R. Baring. Increase and Selection of High-Yielding, Early-Maturing Peanut Lines. National Peanut Board, 1/1/10-12/31/10, \$32,040 (\$20,040).

Burow, M. D., A. Quigg, and M. A. Schubert, and C. Fedler. Strategic Fuels Supply. \$168,000 (\$74,400), 5/1/09-4/30/10.

Burow, M., and L. Miranda. Growth and Oil Production. USAF Strategic Fuel Supply, 3/1/10-8/31/10. \$108,000 (\$44,000), 4/1/10-9/30/10.

Baltensperger, D., and T. Miller (M. Burow, C. Simpson, and M. Baring). Identification

- and Enhancement of Texas Oilseed Crops for Second Generation Biodiesel Feedstocks. TAES- Chevron Joint Venture, 2010: \$148,617 for peanut (\$22,187), 1/1/10-12/31/10.
- Burow, M. D., C. E. Simpson, P. Sankara, O. Ndoeye, N. Denwar, M. G. Selvaraj, M. Ouedraogo, Z. Bertin, L. Zinsonne, A. M. Schubert, M. R. Baring, and J. Burke. Overcoming Abiotic and Biotic Constraints to Yield, and Production of High-Quality Peanuts in West Africa and Texas. Peanut Collaborative Research Support Project (USAID), \$115,000 (\$30,779), 10/1/09-9/30/10.
- Simpson, C. E., M. D. Burow, M. R. Baring, M. C. Black, J. L. Starr, and W. J. Grichar. Breeding Peanut for Increased Yield and Quality via Genetic Gains, Improved Disease and Pest Resistance, and Improved Water Use Efficiency. Texas Peanut Producers Board. \$60,000 (\$26,000), 4/1/10-3/31/11.
- Burow, M. D., J. J. Burke, P. R. Payton, and J. Johnson. Completion of Identification of Water-Use Efficient Peanut Genotypes, and Economic Estimates of Effects of Reduced Water Usage and Potential of Improved Water Use Efficiency in Peanut. Ogallala Aquifer Initiative, \$59,500 (\$30,000), 9/1/09-8/31/11.
- Simpson, C. E., A. M. Schubert, M. D. Burow, and M. R. Baring. Development of High-Oil Peanuts for Use as Biodiesel Fuel. National Peanut Board, \$9,000 (\$3,000), 1/1/10-12/31/10.
- Simpson, C. E., M. D. Burow, and M. R. Baring. Peanut quality evaluations of Texas Peanut Breeding lines (in developing new Varieties with Early Maturity and/or Resistance to Root-knot Nematode, Sclerotinia blight, Southern blight, Leafspot, and Tomato Spotted Wilt Virus and with High O/L.) National Peanut Board, \$9,000 (\$3,000), 1/1/10-12/31/10.
- Michael R. Baring, M. D. Burow, and C.E. Simpson. Early Generation Screening for the High O/L Trait in Segregating F<sub>2</sub> Peanut Populations. National Peanut Board, \$10,000 (\$3,000).]

Funded 2009 (\$1,825,223, account manager of \$357,834)

- Mahan, J., Z. Xin, R. Aiken, R. Allen, M. Burow, D. Gitz, B. Payne, P. Payton, S. Van Pelt, Y. Weng, and W. Xu. Physiological and Genetic Basis for Improved Water Use Efficiency. Ogallala Aquifer Large Project, \$1,000,000; 9/1/07-8/30/11. 2009: \$333,000 (\$40,000)
- Baltensperger, D., and T. Miller (M. Burow, C. Simpson, and M. Baring). Identification and Enhancement of Texas Oilseed Crops for Second Generation Biodiesel Feedstocks. TAES- Chevron Joint Venture, \$6,881,858; 2008: \$148,617 for peanut (\$22,187), 1/1/09-12/31/09.
- Burow, M. D., C. E. Fedler, and M. A. Foster. Affordable algae-derived JP-8 surrogate project: Rigorous species screening program. DARPA \$1,046,066 1/1/09-6/30/10, (\$150,260, 1/1/09-12/31/09).
- Burow, M. D., C. E. Simpson, P. Sankara, O. Ndoeye, N. Denwar, M. G. Selvaraj, M. Ouedraogo, Z. Bertin, L. Zinsonne, A. M. Schubert, M. R. Baring, and J. Burke. Overcoming Abiotic and Biotic Constraints to Yield, and Production of High-Quality Peanuts in West Africa and Texas. Peanut Collaborative Research Support Project (USAID), \$100,000 (\$34,587), 10/1/08-9/30/09.
- Burow, M. D., M. Gomez S., and C. E. Simpson. Identification of Markers for Breeding

- for Maturity, High-Oleic Ratio, Leafspot Resistance, and Resistance to Heat and Drought. National Peanut Board, \$27,000 (\$20,000), 1/1/09-12/31/09.
- Burow, M. D., C. E. Simpson, A. M. Schubert, and M. R. Baring. Increase and Selection of Early-Maturing Peanut Lines. National Peanut Board, \$35,000 (\$26,000), 1/1/09-12/31/09.
- Simpson, C. E., A. Michael Schubert, M. D. Burow, and M. R. Baring. Development of High-Oil Peanuts for Use as Biodiesel Fuel. National Peanut Board, \$10,000 (\$4,000), 1/1/09-12/31/09.
- Simpson, C. E., M. D. Burow, and M. R. Baring. Peanut quality evaluations of Texas Peanut Breeding lines (in developing new Varieties with Early Maturity and/or Resistance to Root-knot Nematode, Sclerotinia blight, Southern blight, Leafspot, and Tomato Spotted Wilt Virus and with High O/L.) National Peanut Board, \$12,000 (\$4,000), 1/1/09-12/31/09.
- Michael R. Baring, M. D. Burow, and C.E. Simpson. Early Generation Screening for the High O/L Trait in Segregating F<sub>2</sub> Peanut Populations. National Peanut Board, \$10,000 (\$3,300), 1/1/09-12/31/09.
- Burow, M. D., A. M. Schubert, C. E. Simpson, M. R. Baring, J. Cason, and J. Ayers. Breeding for Quality Peanut - Selection for High-Oleic Fatty Acid Content and Improved Kernel Quality Traits. Texas Peanut Producers Board, \$33,500 (\$20,500), 5/1/09-4/30/10.
- Burow, M. D., and T. Wilkins. Genotyping the U.S. peanut minicore collection and cultivars using a chip-based SNP array. Texas Peanut Producers Board, \$20,000 (\$20,000), 5/1/08-4/30/09.
- Burow, M. D., M. R. Baring, C.E. Simpson, J. M. Cason, J. Ayers. Breeding and Testing. Texas Peanut Producers Board, \$39,500 (\$13,000), 5/1/09-4/30/10.
- Wheeler, T., and M. D. Burow. Use of Greenhouse Leaf Assays to Predict Peanut Lines with Sclerotinia Blight Resistance. National Peanut Board, \$10,000 (\$0), 5/1/09 - 4/30/10.

Funded 2008 (\$841,517, account manager of \$261,757)

- Mahan, J., Z. Xin, R. Aiken, R. Allen, M. Burow, D. Gitz, B. Payne, P. Payton, S. Van Pelt, Y. Weng, and W. Xu. Physiological and Genetic Basis for Improved Water Use Efficiency. Ogallala Aquifer Large Project, \$1,000,000; 9/1/07-8/30/11. 2008: \$333,000 (\$25,000).
- Baltensperger, D., and T. Miller (M. Burow, C. Simpson, and M. Baring). Identification and Enhancement of Texas Oilseed Crops for Second Generation Biodiesel Feedstocks. TAES- Chevron Joint Venture, \$6,881,858; 2008: \$148,617 for peanut (\$27,669)., 1/1/08-12/31/08.
- Burow, M. D., M. A. Foster, A. M. Schubert, C. B. Fedler, and J. V. Moroney. Development of Algal Culture for Biodiesel Production. TAES Biofuels Initiative, \$211,680 for 2008: (\$61,000), 1/1/08-11/30/08.
- Burow, M. D., C. E. Simpson, P. Sankara, O. Ndoeye, N. Denwar, M. G. Selvaraj, M. Ouedraogo, Z. Bertin, L. Zinsonne, A. M. Schubert, M. R. Baring, and J. Burke. Overcoming Abiotic and Biotic Constraints to Yield, and Production of High-Quality Peanuts in West Africa and Texas. Peanut Collaborative Research Support Project (USAID), \$100,000 (\$58,988), 1/1/08-9/30/08.

- Zhang, H. and M. D. Burow. Making peanut significantly more drought-tolerant. National Peanut Board, \$22,000 (\$0), 1/1/08-12/31/08.
- Burow, M. D., and T. A. Wilkins. Identification of SNPs for genotyping the peanut minicore collection, and for genetic mapping of cultivated crosses. National Peanut Board, \$20,000 (\$20,000), 1/1/08-12/31/08.
- Burow, M. D., and T. A. Wilkins. Identification of SNPs for genotyping the peanut minicore collection, and for genetic mapping of cultivated crosses. Peanut Foundation, \$15,000 (\$15,000), 8/15/08-4/30/09.
- Burow, M. D., M. Gomez S., and C. E. Simpson. Identification of Markers for Breeding for Maturity, High-Oleic Ratio, Leafspot Resistance, and Resistance to Heat and Drought. National Peanut Board, \$29,500 (\$25,500), 1/1/08-12/31/08.
- Burow, M. D., C. E. Simpson, A. M. Schubert, and M. R. Baring. Increase and Selection of Early-Maturing Peanut Lines. National Peanut Board, \$33,000 (\$24,500), 1/1/08-12/31/08.
- Simpson, C. E., A. Michael Schubert, M. D. Burow, and M. R. Baring. Development of High-Oil Peanuts for Use as Biodiesel Fuel. National Peanut Board, \$10,000 (\$4,000), 1/1/08-12/31/08.
- Simpson, C. E., M. D. Burow, and M. R. Baring. Peanut quality evaluations of Texas Peanut Breeding lines (in developing new Varieties with Early Maturity and/or Resistance to Root-knot Nematode, Sclerotinia blight, Southern blight, Leafspot, and Tomato Spotted Wilt Virus and with High O/L.) National Peanut Board, \$12,000 (\$4,000), 1/1/08-12/31/08.
- Michael R. Baring, M. D. Burow, and C.E. Simpson. Early Generation Screening for the High O/L Trait in Segregating F2 Peanut Populations. National Peanut Board, \$12,000 (\$4,300), 1/1/08-12/31/08.
- Burow, M. D., A. M. Schubert, C. E. Simpson, M. R. Baring, J. Cason, and J. Ayers. Breeding for Quality Peanut - Selection for High-Oleic Fatty Acid Content and Improved Kernel Quality Traits. Texas Peanut Producers Board, \$33,500 (\$19,500), 5/1/08-4/30/09.
- Burow, M. D., T. Wilkins, M. Gomez S. and C. E. Simpson. Development of Single Nucleotide Polymorphism Markers for DNA Chip-Based Marker-Assisted Selection in Peanut. Texas Peanut Producers Board, \$23,000 (\$20,000), 5/1/08-4/30/09.
- Burow, M. D., M. R. Baring, C.E. Simpson, J. M. Cason, J. Ayers. Breeding and Testing. Texas Peanut Producers Board, \$39,900 (\$13,300), 5/1/08-4/30/09.
- Wheeler, T., and M. D. Burow. Use of Greenhouse Leaf Assays to Predict Peanut Lines with Sclerotinia Blight Resistance. National Peanut Board, \$10,000 (\$0), 5/1/08 - 4/30/09, 5/1/08-4/30/09.

Funded 2007 (\$255,200, account manager of \$132,916)

- Simpson, C. E., A. M. Schubert, M. D. Burow, and M. R. Baring. Development of High-Oil Peanuts for Use as Biodiesel Fuel. National Peanut Board, \$8,000 (\$1,600), 1/1/07-12/31/07.
- Burow, M. D., C. E. Simpson, and M. R. Baring. Increase and Selection of Early-Maturing Peanut Lines. National Peanut Board, \$31,000 (\$23,000), 1/1/07 - 12/31/07.

- Burow, M. D., M. G. Selvaraj, and C. E. Simpson. Identification of Markers for Breeding for Maturity, High-Oleic Ratio, Leafspot Resistance, and Resistance to Heat and Drought. National Peanut Board, \$22,000 (\$19,000), 1/1/07 - 12/31/07.
- Burow, M. D., M. R. Baring, C.E. Simpson, J.M. Cason, J. Ayers. Breeding and Testing. Texas Peanut Producers Board, \$19,920 (\$6,640), 5/1/07 - 4/30/08.
- Burow, M. D., C. E. Simpson, M. R. Baring, A. M. Schubert, J. Cason, and J. Ayers. Breeding for Quality Peanut - Selection for High-Oleic Fatty Acid Content and Improved Kernel Quality Traits. Texas Peanut Producers Board, \$18,780 (\$12,780), 5/1/07 - 4/30/08.
- Burow, M., C. E. Simpson, N. Puppala, K. Chenault, P. Payton, M. G. Selvaraj, K. R. Kottapalli. Development of a Reference SSR Map of Tetraploid Peanut, and Mapping SNPs for Selected Major Traits. Texas Peanut Producers Board \$22,500 (\$19,000).
- Stalker, H. T., M. D. Burow, S. J. Knapp, B. Guo, and M. Gallo-Meager. Genomics Databases For Peanut ESTs And Proteins. Peanut Foundation, \$20,000 (\$0), 5/1/06 - 4/30/07.
- Kenerley, C. M., and M. D. Burow. Variability of *Sclerotinia minor*. Texas Peanut Producers Board, \$10,000 (\$0), 5/1/06 - 4/30/07.
- Burow, M D., Charles E. Simpson, O. Ndoye, and P. Sankara. Collection, Preservation, and Utilization of *Arachis* Germplasm for Breeding Peanut for Early Maturity, Pest Resistance, Better Productivity, and Improved Quality. Peanut Collaborative Research Support Program (USAID), \$90,000 (\$37,896).
- Burow, M. D., M. G. Selvaraj, and J. J. Burke. Enhancing water use efficiency of peanut. Ogallala Aquifer Initiative, \$13,000 (\$13,000).

Funded 2006 (\$264,900, account manager of \$164,350)

- Burow\*, M. D., C. E. Simpson, J. Ayers, M. R. Baring, and Y. López. Increase of Early-Maturing Peanut Lines, National Peanut Board, \$45,000 (\$34,000), 1/01/06 - 12/31/06.
- Burow\*, M. D., Y. López, and C. E. Simpson. Identification of Markers for Maturity and O/L Ratio, Leafspot Resistance, and Resistance to Heat and Drought for Varietal Development. National Peanut Board, \$29,500 (\$25,500), 1/01/06 - 12/31/06.
- Baring, M. R., C. E. Simpson, and M. D. Burow. Heritability Estimates for High Yield Traits Transferred from Wild Species Hybrids to a Conventional Variety. National Peanut Board, \$6,200 (\$0), 1/01/06 - 12/31/06.
- Simpson, C. E., M. D. Burow, and M. R. Baring. Peanut Quality Evaluation of Texas Peanut Breeding Lines. National Peanut Board, \$21,000 (\$6,950), 1/1/06 - 12/31/06.
- Burow\*, M. D., Y. López, A. M. Schubert, M. R. Baring, and C. E. Simpson. Use of Molecular Markers and Unadapted Germplasm for Improved Edible Seed Quality. Peanut Foundation, \$15,000 (\$13,000), 6/1/05-5/31/06.
- Stalker, H. T., M. D. Burow, S. J. Knapp, B. Guo, and M. Gallo-Meager. Genomics Databases For Peanut ESTs And Proteins. Peanut Foundation, \$20,000 (\$0), 5/1/06 - 4/30/07.
- Burow\*, M. D., Y. López, and C. E. Simpson. Breeding and Testing. Texas Peanut Producers Board, \$43,200 (\$14,400), 5/1/06 - 4/30/07.



- Burow\*, M. D., C. E. Simpson, Y. López, M. R. Baring, A. M. Schubert, J. Cason, and J. Ayers. Breeding for Quality Peanut - Selection for High-Oleic Fatty Acid Content and Improved Kernel Quality Traits. Texas Peanut Producers Board, \$45,000 (\$40,500), 5/1/06 - 4/30/07.
- Kenerley, C. M., and M. D. Burow. Variability of *Sclerotinia minor*. Texas Peanut Producers Board, (\$0), 5/1/06 - 4/30/07.
- Burow\*, M. D., J. Burke, and N. Puppala. Development of Markers for Breeding Heat Stress Tolerant Peanuts. Southwest Consortium for Plant Genetics and Water Resources, \$40,000 (\$30,000) for the second year of a 2-year award, 8/10/05-7/31/06.
- Burow\*, M. D., Charles E. Simpson, O. Ndoye, and P. Sankara. Collection, Preservation, and Utilization of *Arachis* Germplasm for Breeding Peanut for Early Maturity, Pest Resistance, Better Productivity, and Improved Quality. Peanut Collaborative Research Support Program (USAID), \$90,000 (\$37,896).
- Funded 2005: (\$678,000, account manager of \$216,432)
- Burow\*, M. D., C. E. Simpson, M. R. Baring, and Y. López. Breeding for Early-Maturing Peanuts. National Peanut Board, \$33,500 (\$25,000), 1/01/05 - 12/31/05.
- Burow\*, M. D., Y. López, and C. E. Simpson. Accelerating Development of Peanut Varieties through Molecular Markers. National Peanut Board, \$29,500 (\$25,500), 1/01/05 - 12/31/05.
- Baring, M. R., C. E. Simpson, and M. D. Burow. Breeding for Maximized Yield Potential by Genetic Gains through Wild Species Hybrids. National Peanut Board, (\$0), 1/01/05-12/31/05.
- Simpson, C. E. M. D. Burow, and M. R. Baring. Quality evaluations of Peanut Breeding lines in developing new Varieties with Resistance to Root-knot Nematode, Sclerotinia blight, Southern Blight, Leafspot, and Tomato Spotted Wilt Virus and with High O/L and Early maturity. National Peanut Board, \$17,000 (\$5,400), 1/1/05 - 12/31/05.
- Burow\*, M. D., Y. Lopez, A. M. Schubert, M. R. Baring, and C. E. Simpson. Use of Molecular Markers and Unadapted Germplasm for Improved Edible Seed Quality. Peanut Foundation, \$20,000 (\$16,000), 6/1/05-5/31/06.
- Wallerstein, Izh., Isr. Wallerstein, and M. D. Burow. How to Increase Yield and Conserve Water in Peanut Fields. Peanut Foundation, \$10,000 (\$10,000), 6/1/05-5/31/06.
- Stalker, H. T., M. D. Burow, S. J. Knapp, B. Guo, and M. Gallo-Meager. Genomics Databases For Peanut ESTs And Proteins. Peanut Foundation. \$20,000 (\$0), 6/1/05-5/31/06.
- Burow\*, M. D., Y. López, and C. E. Simpson. Breeding and Testing. Texas Peanut Producers Board. \$48,000 (\$15,000), 5/1/05 - 4/30/06.
- Aiken, R., L. Almas, J. Baker, J. Bordovsky, M. Burow, G. Clark, P. Colaizzi, S. Evett, C. Green, T. Howell, N. Klocke, F. Lamm, R. Lascano, S. Maas, S., T. Marek, M. Maurer, L. New, B. Payne, D. Porter, A. Schlegel, L. Stone, R. Thomason, J. Tolk, S. van Pelt, D. Wanjura, J. Winslow, and W. Xu. Ogallala Aquifer Initiative Project. USDA-ARS. \$300,000 (\$10,000), 9/1/05-5/31/08.
- Burow\*, M. D., Charles E. Simpson, Yolanda López, Michael R. Baring, A. Michael

- Schubert, John Cason, Jamie Ayers, Jacob Reed, Wendy M. Lacken. Breeding for Quality Peanut - Maturity, Oil, and Sugar Content. National Peanut Board, \$50,000 (\$34,000), 1/01/05-12/31/05.
- Burow\*, M. D., C. E. Simpson, O. Ndoeye, and P. Sankara. Collection, preservation, and utilization of *Arachis* germplasm for breeding peanut for early maturity, pest resistance, better productivity, and improved quality. Peanut Collaborative Research Support Program (USAID), \$115,000 (\$50,532), 8/01/05 - 7/31/06.
- Burow\*, M. D., J. Burke, and N. Puppala. Development of Markers for Breeding Heat Stress Tolerant Peanuts. Southwest Consortium for Plant Genetics and Water Resources. 8/10/05-7/31/06, \$35,000 (\$25,000) for the first year of a 2-year award.
- Funded 2004: (\$621,855, account manager of \$171,183)
- Burow\*, M. D., C. E. Simpson, M. R. Baring, and Y. López. Breeding for Early-Maturing Peanuts. National Peanut Board, \$24,000 (\$18,000), 1/01/04 - 12/31/04.
- Burow\*, M. D., Y. López, and C. E. Simpson. Accelerating Development of Peanut Varieties through Molecular Markers. National Peanut Board, \$24,000 (\$20,500), 1/01/04 - 12/31/04.
- Baring, M. R., C. E. Simpson, and M. D. Burow. Breeding for Maximized Yield Potential by Genetic Gains through Wild Species Hybrids. National Peanut Board, \$13,855 (\$0), 1/01/04 - 12/31/04.
- Simpson, C. E., M. D. Burow, and M. R. Baring. Quality evaluations of Peanut Breeding lines in developing new Varieties with Resistance to Root-knot Nematode, Sclerotinia blight, Southern Blight, Leafspot, and Tomato Spotted Wilt Virus and with High O/L and Early Maturity. National Peanut Board, \$10,000 (\$3,000), 1/1/04 - 12/31/04.
- Burow\*, M. D., Y. López, and C. E. Simpson. Breeding and Testing. Texas Peanut Producers Board, \$45,000 (\$15,000), 5/1/04 - 4/30/05.
- Burow\*, M. D., C. E. Simpson, Y. López, M. R. Baring, A. M. Schubert, J. Cason, J. Ayers, J. Reed, and W. M. Lacken. Breeding for Quality Peanut - Maturity, Oil, and Sugar Content. Texas Peanut Producers Board, \$50,000 (\$34,000), 5/1/04 - 4/30/05.
- Burow\*, M. D., C. E. Simpson, O. Ndoeye, and P. Sankara. Collection, preservation, and utilization of *Arachis* germplasm for breeding peanut for early maturity, pest resistance, better productivity, and improved quality. Peanut Collaborative Research Support Program (USAID), \$115,000 (\$48,683), 8/01/04 - 7/31/05.
- Burow\*, M. D., Y. Lopez, N. Klueva, C. Simpson, A. M. Schubert, and M. R. Baring. Use of Molecular Markers and Unadapted Germplasm for Improved Edible Seed Quality. Peanut Foundation, 6/1/04-5/31/05. \$25,000 (\$22,000).
- Aiken, R., L. Almas, J. Baker, J. Bordovsky, M. Burow, G. Clark, P. Colaizzi, S. Evett, C. Green, T. Howell, N. Klocke, F. Lamm, R. Lascano, S. Maas, S., T. Marek, M. Maurer, L. New, B. Payne, D. Porter, A. Schlegel, L. Stone, R. Thomason, J. Tolk, S. van Pelt, D. Wanjura, , J. Winslow, and W. Xu. Ogallala Aquifer Initiative Project. USDA-ARS, \$300,000 (\$10,000), 9/1/03-5/31/08.
- Oliver, M., and P. Payton (M. Burow, H. Melouk - consultants.) Development of Molecular Markers for Sclerotinia Blight Resistance and Drought Tolerance.

National Peanut Board, \$15,000 (\$0), 1/01/04-12/31/04.

Funded 2003:(\$641,525, account manager of \$203,440)

Burow\*, M. D., C. E. Simpson, M. R. Baring, and Y. López. Breeding for Early-Maturing Peanuts, National Peanut Board, \$39,500 (\$29,500), 1/01/03-12/31/03.

Burow\*, M. D., Y. López, and C. E. Simpson. Accelerating Development of Peanut Varieties through Molecular Markers. National Peanut Board, \$24,000 (\$18,000), 1/01/03 - 12/31/03.

Burow\*, M. D., M. R. Baring, Y. López, C.E. Simpson, B.A. Besler, J. M. Cason, J. Ayers, and W. M. Lacken. Breeding and Testing. Texas Peanut Producers Board, \$45,000 (\$15,000), 5/01/03 - 4/30/04.

Burow\*, M. D., C. E. Simpson, Y. López, M. R. Baring, A. M. Schubert, J. Cason, J. Ayers, J. Reed, and W. M. Lacken. Breeding for Quality Peanut - Maturity, Oil, and Sugar Content. Texas Peanut Producers Board, \$50,000 (\$36,000), 5/1/03 - 4/30/04.

Burow\*, M. D., C. E. Simpson, Y. López, M. R. Baring, N. Klueva, and A. M. Schubert. Use of Molecular Markers and Unadapted Germplasm for Improved Edible Seed Quality. American Peanut Council, \$15,000 (\$12,000), 5/01/03-4/30/04.

Burow\*, M. D., J. Burke, A. M. Schubert, and D. Rowland. Genetic Improvement of Peanuts for Water and Heat Stress Response. Southwest Consortium for Plant Genetics and Water Resources (2<sup>nd</sup> Year Renewal), \$35,000 (\$20,000), 6/01/03-5/31/04.

Burow\*, M. D. Anticipated Research Costs for Amade Muitia, USAID (through INTSORMIL), \$18,025 (\$15,525), 6/01/03-3/31/05.

Simpson, C. E., M. D. Burow, P. Sankara, and O. Ndoye. Collection, preservation, and utilization of *Arachis* germplasm for breeding peanut for early maturity, pest resistance, better productivity, and improved quality. Peanut Collaborative Research Support Project, \$115,000 (\$47,415), 8/01/03-7/31/04.

Aiken, R., L. Almas, J. Baker, J. Bordovsky, M. Burow, G. Clark, P. Colaizzi, S. Evett, C. Green, T. Howell, N. Klocke, F. Lamm, R. Lascano, S. Maas, S., T. Marek, M. Maurer, L. New, B. Payne, D. Porter, A. Schlegel, L. Stone, R. Thomason, J. Tolk, S. van Pelt, D. Wanjura, J. Winslow, and W. Xu. Ogallala Aquifer Initiative Project. USDA-ARS, \$300,000 (\$10,000), 9/01/03-8/31/08.

Funded 2002: (\$299,663, account manager of \$133,284)

Burow\*, M. D., C. E. Simpson, M. R. Baring, and Y. López. Breeding for Early-Maturing Peanuts. National Peanut Board, \$39,500 (\$29,500), 2/01/02 - 12/31/02.

Burow\*, M. D., Y. López, and C. E. Simpson. Accelerating Development of Peanut Varieties through Molecular Markers. National Peanut Board, \$21,500 (\$15,500), 2/01/02 - 12/31/02.

Burow, M. D., M. R. Baring, C.E. Simpson, Y. Lopez, J. Ayers, J. M. Cason, B.A. Besler, and W. M. Lacken. Breeding and Testing. Texas Peanut Producers Board. \$27,000 (\$9,000), 5/1/02 - 4/1/03.

Starr, J. L., C. E. Simpson, and M. D. Burow. Developing high yielding Root-knot Nematode Resistant Peanut Varieties with High O/L, and Resistance to Tomato Spotted Wilt Virus and Sclerotinia blight. National Peanut Board, \$14,000 (\$0),

2/1/02 - 12/31/03.

Burow\*, M. D., J. Burke, A. M. Schubert, and D. Rowland. Genetic Improvement of Peanuts for Water and Heat Stress Response. Southwest Consortium for Plant Genetics and Water Resources (USDA), 49,773 (\$25,307) 9/01/02-8/31/03.

Burow\*, M. D., C. E. Simpson, O. Ndoye, and P. Sankara. Collection, preservation, and utilization of *Arachis* germplasm for breeding peanut for early maturity, pest resistance, better productivity, and improved quality. Peanut Collaborative Research Support Program (USAID), \$115,000 (\$46,087), 8/01/02 - 7/31/03.

Simpson, C. E., Mark D. Burow, and Michael R. Baring. Quality evaluations of Peanut Breeding lines in developing new Varieties with Resistance to Root-knot Nematode, Sclerotinia blight, Southern Blight, Leafspot, and Tomato Spotted Wilt Virus and with High O/L and Early Maturity. National Peanut Board, \$30,000 (\$5,000), 2/1/02 - 1/31/03.

Burow\*, M. D., Anticipated Research Costs for Amade Muitia. USAID (through INTSORMIL), \$2,890 (\$2,980), 6/01/02-5/31/03.

Funded 2001:(\$236,750, account manager of \$158,549)

Burow\*, M. D. Startup Equipment for a Peanut Breeding/Molecular Breeding Program. National Peanut Board, \$65,000 (\$65,000), 2/01/01 - 12/31/01.

Burow\*, M. D., C. E. Simpson, M. R. Baring, and Y. López. Breeding for Early-Maturing Peanuts. National Peanut Board, \$47,260 (\$29,800).

Starr, J. L., C. E. Simpson, and M. D. Burow. Developing high yielding Root-knot Nematode Resistant Peanut Varieties with High O/L, and Resistance to Tomato Spotted Wilt Virus and Sclerotinia Blight. National Peanut Board, \$49,490 (\$3,300), 2/01/01 - 12/31/01.

Simpson, C.E., M. D. Burow, M. R. Baring, Y. Lopez, W. H. Higgins, B.A. Besler, J. M. Cason, W. M. Lacken. Breeding and Testing. Texas Peanut Producers Board, \$42,000 (\$10,500), 5/01/01- 4/30/02.

Burow\*, M. D., Y. López, C. E. Simpson, and H. T. Nguyen. Accelerating Development of Peanut Varieties through Molecular Markers, National Peanut Board, \$21,500 (\$15,500), 2/01/01 - 12/31/01.

Burow\*, M. D., C. E. Simpson, O. Ndoye, and P. Sankara. Collection, preservation, and utilization of *Arachis* germplasm for breeding peanut for early maturity, pest resistance, better productivity, and improved quality. Peanut Collaborative Research Support Program (USAID), \$115,000 (\$34,439), 8/01/01 - 7/31/02.

Funded 2000: (\$25,000, account manager of \$12,500)

Burow\*, M. D., Simpson, C. E., Starr, J. L., and A. H. Paterson. (2000) Development of Advanced Molecular Tools in Peanut. Peanut Foundation \$25,000 (\$12,500), 1/01/00 - 12/31/00.

Funded 1995:(\$100,000, account manager of \$0)

Starr, J. L., M. D. Burow, A. H. Paterson, and C.E. Simpson. (1995) Genetic study of a multigenic system for nematode resistance in peanut- utility in gene management. USDA-NRICGP, \$100,000 (\$0).

**b. Internal Funds:**

- Xu, W., .... M. D. Burow (2023). Subsurface Drip Irrigation System. Texas A&M AgriLife Research FY24 Equipment Funding RFP. \$100,000 (\$0). Wheeler, T. A., J. Dever, C. Monclova-Santana, and M. Burow. Request for Equipment (Raman Spectroscopy) \$35,000 (\$0). Texas A&M AgriLife Research.
- Burow, M. D., C. E. Simpson, M. R. Baring, J. Chagoya, R. Kulkarni, R. Chopra. Genotype-By-Sequencing Screening of the U.S. Peanut Minicore Collection for Genome Wide Association Study of Tolerance to Abiotic Stress. Texas A&M Water Genomics Seed Grant. \$7,193 (\$0), 4/1/16-8/31/17.
- Burow, M. D., C. Trostle, J. Chagoya, D. Bush, R. Kulkarni, and R. Chopra. Genotype-By-Sequencing screening of the Texas guar collection, a drought-tolerant crop. Texas A&M Water Genomics Seed Grant. \$9,108 (\$0), 4/1/16-8/31/17.
- Burow, M., and P. Payton. Improved Water Deficit Irrigation Methods for Peanut.. Funded by CASNR, 10/1/15-9/30/17, \$22,000 (\$22,000).
- Auld, D., J. Dever, G. Peterson, M. Burow, G. Ganjegunt, G. Niu, C. Trostle, P. Payton, H. Zhang, N. Castillo, and K. Meeks. Developing Salt Tolerance Oilseed Crops for Bioenergy Production in the Trans-Pecos Region of Texas. 9/1/12-8/31/13. \$100,000 (\$12,500).
- Auld, D., J. Dever, G. Peterson, M. Burow, G. Ganjegunt, G. Niu, C. Trostle, P. Payton, H. Zhang, N. Castillo, and K. Meeks. Developing Salt Tolerance Oilseed Crops for Bioenergy Production in the Trans-Pecos Region of Texas. 9/1/11-8/31/12. \$100,000 (\$12,500).
- Foster, M. A., J. K. Dever, G. Peterson, M. D. Burow, and D. Auld. : Evaluating Salt Tolerance of Oilseed Feedstocks and Salt Management Techniques. AgriLife Research Bioenergy Initiatives Program. \$55,000 (\$0).
- Burow, M. D., M. A. Foster, A. M. Schubert, C. B. Fedler, and J. V. Moroney. Development of Algal Culture for Biodiesel Production. TAES Biofuels Initiative, \$211,680 for 2008: (\$57,477), 1/1/09-11/30/09.
- Burow, M. D., A. M. Schubert, D. L. Auld, C. E. Simpson, M. R. Baring, M. Gomez, TAES PUF Equipment Grant, \$15,000. 11/1/08-4/30/09. Analytical Equipment Request for Biofuels Development.
- Burow, M. D., M. R. Baring, C. E. Simpson, A. M. Schubert, M. G. Selvaraj, K. R. Kottapalli, and P. Payton. Developing Molecular Markers and an Introgression Pathway to Produce Peanut Cultivars with Greater than 60% Oil Content. TAES Biofuels Initiative, \$50,000 (\$25,000) for 1/1/08-12/31/08.
- Allen, R., C. W. Bednardz, M. D. Burow, A. S. Holaday, D. B. Knaff, P. W. Pare, C. D. Rock, H. Shi, D. Tissue, R. J. Wright, Z. Xie, W. Xu, and H. Zhang. Integrated Plant Stress Research Program. TTU Vice President for Research Integrated Research Program, \$487,648 (\$0), 9/1/06 - 8/31/09.
- Xu, W., and M. D. Burow. FY 2005 Research Equipment and Facilities Upgrade Proposal. Texas Agric. Expt. Station, \$23,500 (\$16,863), 11/1/06 - 4/30/06.
- Burow\*, M. D. Towards Development of Peanut with Reduced Allergenicity. Texas Tech University, \$10,000 (\$10,000), 6/01/02-8/31/02.
- TAES Startup Funds, \$15,000. 2003.
- TAES Startup Funds, \$25,000. 2002.
- TAES Startup Funds, \$55,000. 2001

TAES Startup Funds, \$70,000. 2000.

**4. Documentation of research and other scholarly activity.**

	<b>Total</b>	<b>2001 - present</b>
<b>Peer-reviewed, refereed journal articles</b>	91	74
<b>Nonrefereed journal articles</b>	3	1
<b>Book chapters</b>	9	6
<b>Conference proceedings</b>	2	2
<b>Experiment station publications</b>	19	19
<b>Invited Proceedings and Abstracts</b>	41	35
<b>Volunteered Proceedings and abstracts</b>	209	196
<b>Other presentations</b>	102	102
<b>Popular articles</b>	14	14
<b>Varietal releases</b>	13	13
<b>Germplasm releases</b>	13	13
<b>MTAs signed</b>	20	20
<b>Electronic Media</b>	1	1
<b>Computer databases or software</b>	2	1

**a. Publications:**

**1. Peer-reviewed journal articles:**(\* senior author; †major advisor; ‡project PI). (91).

Baring, M. R., Cason, J. M., Burow, M. D., Simpson, C. E., **Chagoya, J.**, & Bennett, B. D. (2023). Registration of ‘NemaTAM II’ peanut. *Journal of Plant Registrations*, 17, 291–298. <https://doi.org/10.1002/plr2.20257>

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**2. Nonrefereed journal articles:** (\* senior author; † major advisor; ‡ project PI)  
**3 total, 1 since 2001)**

Cobos, C.J., T.K. Tengey, V. K. Balasubramanian, L. D. Williams, H. K. Sudini, R. K. Varshney, H. Falalou, M.D. Burow, and V. Mendu. 2018. Employing Peanut Seed Coat Cell Wall Mediated Resistance Against *Aspergillus flavus* Infection and Aflatoxin Contamination. Preprints 2018:2018080292 (doi: 10.20944/preprints201808.0292.v1).

Burow\*, M., and F. A. Bliss. (1988) Effects of the genetic suppression of phaseolin and lectin proteins on agronomic characteristics of the common bean, *Phaseolus vulgaris* L. *Ann. Rep. Bean Impr. Coop.* 31: 176-177.

Burow\*, M., Delaney, D., and F. A. Bliss. (1987) Genetic suppression of phaseolin and lectin in seeds of the common bean, *Phaseolus vulgaris* L. *Ann. Rep. Bean Impr. Coop.* 30: 52-53.

**3. Book chapters:** (\* senior author; † major advisor; ‡ project PI)  
**(9 total, 6 since 2001)**

Bera, S. K. Rani, J. H. Kamdar, M. D. Jasani, S. S. Bera, M. K. Pandey, P. Janila, R. K. Varshney, H. Desmae, C. C. Holbrook, M. D. Burow, N. Manivannan, R. S. Bhat, A. M. Badigannavar, G. Sunkad, and G. C. Wright. 2022. Genomic Designing for Biotic Stress Resistant Peanut. In: Kole, C. (eds) *Genomic Designing for Biotic Stress Resistant Oilseed Crops*. Springer, Cham. [https://doi.org/10.1007/978-3-030-91035-8\\_4](https://doi.org/10.1007/978-3-030-91035-8_4).

Gangurde, S. S., R. Kumar, A. K. Pandey, M. Burow, H. E. Laza, S. N. Nayak, B. Guo, B. Liao, R. S. Bhat, N. Madhuri, S. Hemalatha, H. K. Sudini, P. Janila, P. Latha, H. Khan, B. N. Motagi, T. Radhakrishnan, N. Puppala, R. K. Varshney, and M. K. Pandey. 2019. Climate-smart groundnuts for achieving high productivity and improved quality: current status, challenges, and opportunities in Genomic Designed of Climate-Smart Oilseed Crops. Springer. Cham, Switzerland. Pages 133-172.

Holbrook, C. C., Burow, M. D., Chen, C. Y., Pandey, M. K., Liu, L., Chagoya, J. C., Chu, Y., and Ozias-Akins, P., 2016. Recent Advances in Peanut Breeding and Genetics. In: Stalker, H.T., Wilson, R.F. (Eds.), *Peanuts: Genetics, Processing, and Utilization*. Academic Press and AOCS Press, pp. 111–145.

Burow\*, M. D., S. C. M. Leal-Bertioli, C. E. Simpson, P. Ozias-Akins, Y. Chu, N. Denwar, J. Chagoya, J. L. Starr, M. C. Moretzsohn, M. K. Pande, R. K. Varshney, C. C. Holbrook, and D. J. Bertioli. (2013) Marker-Assisted Selection for Biotic Stress Resistance in Peanut. Chapter 13 in: *Translational Genomics for Crop Breeding, Volume I: Biotic Stresses*, First Edition. (ed) Rajeev K. Varshney and Roberto Tuberosa (eds). New York: John Wiley & Sons, Inc., pp. 125-150.

Burow\*, M. D., M. Gomez S., H. Upadhyaya, P. Ozias-Akins, B. Guo, D. J. Bertioli, S. C. de Macedo Leal-Bertioli, M. de Carvalho Moretzsohn, and P. Messenberg Guimarães. (2008) Genomics of Peanut, a Major Source of Oil and Protein. *in* *Genomics of Tropical Crop Plants*, P. H. Moore and R. Ming (eds.) Springer-Verlag, pp 421-440.

Paterson, A. H., H. T. Stalker, M. Gallo-Meagher, M. D. Burow, S. L. Dwivedi, J. H. Crouch, and E. S. Mace. (2004) Genomics and Genetic Enhancement of

Peanut. Chapter 6 in *Legume Crop Genomics*, American Oil Chemists Society.

- Burow<sup>\*</sup>, M. D., and T. K. Blake. (1998) Molecular tools for the study of complex traits. in Paterson, A. H. (ed.) *Molecular analysis of complex traits*. Boca Raton: CRC Press, pp. 13-29.
- Moroney, J. V., Burow, M., Chen, Z.-Y., Borkhsenius, O. N., Mason, C. B., and A. Somanchi. (1998) Adaptation of *Chlamydomonas reinhardtii* to limiting CO<sub>2</sub> conditions. in *Photosynthesis: Mechanisms and Effects*. Vol. V, (ed) G. Garab. Dordrecht: Kluwer Academic, pp. 3443-3446.
- Chen, Z.-Y., M. D. Burow, and J. V. Moroney. (1995) Characterization of genes induced by low CO<sub>2</sub> in *Chlamydomonas reinhardtii*. in Mathis, P. (ed.) *Photosynthesis: from light to biosphere*. Vol. 5. Dordrecht: Kluwer Academic Publishers. pp 619-622.

#### **4. Conference Proceedings: (2 total, 2 since 2001)**

- Peanut Crop Germplasm Committee. (2003) Report on the Status of *Arachis* Germplasm in the United States. American Peanut Research and Education Society.
- White Paper. (2001) U.S. Legume Crops Genomics Workshop. [http://soybase.agron.iastate.edu/Legume\\_Initiative/LegGenomicsPaper10Oct01.html](http://soybase.agron.iastate.edu/Legume_Initiative/LegGenomicsPaper10Oct01.html)

#### **5. Experiment Station Publications (19 total, 19 since 2001):**

- Branch, W.D., M. Balota, J. C. Dunne, D. J. Anco, K. Balkcom, C. Y. Chen, B. L. Tillman, M. D. Burow, J. M. Cason, M. R. Baring, and K. D. Chamberlin. (Apr. 2020). Uniform Peanut Performance Tests 2019. Research Progress Report 4-20. University of Georgia Coastal Plain Experiment Station, Tifton, GA.
- Branch, W.D., M. Balota, T. G. Isleib, J. C. Dunne, D. J. Anco, K. Blacom, C. Y. Chen, B. L. Tillman, M. D. Burow, M. R. Baring, J. Cason, and K. D. Chamberlin. (Apr. 2019). Uniform Peanut Performance Tests 2018. Research Progress Report 4-19. University of Georgia Coastal Plain Experiment Station, Tifton, GA.
- Branch, W.D., M. Balota, T. G. Isleib, D. J. Anco, J. P. Bostick, C. Y. Chen, B. L. Tillman, M. D. Burow, M. R. Baring, and K. D. Chamberlin. (Apr. 2018). Uniform Peanut Performance Tests 2017. Research Progress Report 4-18. University of Georgia Coastal Plain Experiment Station, Tifton, GA.
- Branch, W.D., M. Balota, T. G. Isleib, D. J. Anco, J. P. Bostick, C. Chen, B. L. Tillman, M. D. Burow, M. R. Baring, and K. D. Chamberlin. (Apr. 2017). Uniform Peanut Performance Tests 2016. Research Progress Report 4-17. University of Georgia Coastal Plain Experiment Station, Tifton, GA.
- Branch, W.D., M. Balota, T. G. Isleib, S. P. Tallury, J. W. Chapin, J. P. Bostick, C. Chen, B. L. Tillman, M. D. Burow, M. Baring, and K. D. Chamberlin. (April 2016). Uniform Peanut Performance Tests 2015. Research Progress Report 4-16. University of Georgia Coastal Plain Experiment Station, Tifton, GA.
- Branch, W.D., M. Balota, T. G. Isleib, W. S. Montfort, J. P. Bostick, B. L. Tillman, M. D. Burow, M. Baring, and K. D. Chamberlin. (April 2015). Uniform Peanut Performance Tests 2014. Research Progress Report 4-15.

- University of Georgia Coastal Plain Experiment Station, Tifton, GA.  
 Branch, W.D., M. Balota, T. G. Isleib, W. S. Montfort, J. P. Bostick, B. L. Tillman, M. D. Burow, M. Baring, and K. D. Chamberlin. (April 2014).  
 Uniform Peanut Performance Tests 2013. Research Progress Report 4-14.  
 University of Georgia Coastal Plain Experiment Station, Tifton, GA.
- Branch, W.D., M. Balota, T. G. Isleib, W. S. Montfort, J. P. Bostick, B. L. Tillman, M. D. Burow, M. Baring, and K. D. Chamberlin. (April 2013).  
 Uniform Peanut Performance Tests 2012. University of Georgia Coastal Plain Experiment Station, Tifton, GA.
- Branch, W.D., M. R. Baring, M. Balota, T. G. Isleib, J. W. Chapin, J. P. Bostick, B. L. Tillman, M. D. Burow, and K. D. Chamberlin. (April 2012).  
 Uniform Peanut Performance Tests 2011. University of Georgia Coastal Plain Experiment Station, Tifton, GA.
- Branch, W., D. L. Coker, T. G. Isleib, J. W. Chapin, J. P. Bostick, D. W. Gorbet, B. L. Tillman, C. E. Simpson, M. D. Burow, M. R. Baring, and B. Greenhagen. Uniform Peanut Performance Tests 2010. (Apr. 2011)  
 University of Georgia Coastal Plain Experiment Station, Tifton, GA.
- Branch, W., D. L. Coker, T. G. Isleib, J. W. Chapin, J. P. Bostick, D. W. Gorbet, B. L. Tillman, C. E. Simpson, M. D. Burow, M. R. Baring, and B. Greenhagen. Uniform Peanut Performance Tests 2009. (Apr. 2010)  
 University of Georgia Coastal Plain Experiment Station, Tifton, GA.
- Branch, W., D. L. Coker, T. G. Isleib, J. W. Chapin, J. P. Bostick, D. W. Gorbet, B. L. Tillman, C. E. Simpson, M. D. Burow, M. R. Baring, and B. Greenhagen. Uniform Peanut Performance Tests 2008. (Apr. 2009)  
 University of Georgia Coastal Plain Experiment Station, Tifton, GA.
- Branch, W., D. L. Coker, T. G. Isleib, J. W. Chapin, J. P. Bostick, D. W. Gorbet, B. L. Tillman, C. E. Simpson, M. D. Burow, M. R. Baring, and B. Greenhagen. Uniform Peanut Performance Tests 2007. (Apr. 2008)  
 University of Georgia Coastal Plain Experiment Station, Tifton, GA.
- Branch, W., D. L. Coker, T. G. Isleib, J. W. Chapin, J. P. Bostick, D. W. Gorbet, B. L. Tillman, C. E. Simpson, M. D. Burow, M. R. Baring, and B. Greenhagen. Uniform Peanut Performance Tests 2006. (Apr. 2007)  
 University of Georgia Coastal Plain Experiment Station, Tifton, GA.
- Branch, W., D. L. Coker, T. G. Isleib, J. W. Chapin, J. P. Bostick, D. W. Gorbet, B. L. Tillman, C. E. Simpson, M. D. Burow, M. R. Baring, and B. Greenhagen. Uniform Peanut Performance Tests 2005. (Apr. 2006)  
 University of Georgia Coastal Plain Experiment Station, Tifton, GA.
- Branch, W., R. W. Mozingo, D. L. Coker, T. G. Isleib, J. P. Bostick, D. W. Gorbet, B. L. Tillman, C. E. Simpson, M. D. Burow, M. R. Baring, and K. E. Dashiell, and B. Greenhagen. Uniform Peanut Performance Tests 2004. (Apr. 2005) University of Georgia Coastal Plain Experiment Station, Tifton, GA.
- Branch, W., R. W. Mozingo, T. G. Isleib, J. P. Bostick, D. W. Gorbet, C. E. Simpson, M. D. Burow, M. R. Baring, and K. E. Dashiell. Uniform Peanut Performance Tests 2003. (Apr. 2004) University of Georgia Rural Development Center, Tifton, GA.
- Branch, W., R. W. Mozingo, T. G. Isleib, J. P. Bostick, D. W. Gorbet, C. E. Simpson, M. D. Burow, M. R. Baring, and K. E. Dashiell. Uniform Peanut Performance Tests 2002. (Apr. 2003) University of Georgia Rural



Development Center, Tifton, GA.

Branch, W., R. W. Mozingo, T. G. Isleib, J. P. Bostick, D. W. Gorbet, C. E. Simpson, M. D. Burow, M. R. Baring, and K. E. Dashiell. Uniform Peanut Performance Tests 2001. (Apr. 2002) University of Georgia Rural Development Center, Tifton, GA.

## **6. Abstracts and papers (\* presenter).**

### **a. Invited Presentations. (41 total, 35 since 2001)**

*International:* (13 total, 11 after began current position)

Chopra, R., G. Burow, A. Farmer, J. Mudge, C. E. Simpson, Z. Xin, T. Wilkins, and M. D. Burow. (Jun. 2013) Transcriptome Analysis in an Array of Cultivated and Wild Peanut Accessions Using Illumina Sequencing. 6<sup>th</sup> International Meeting Advances in Arachis Genomics and Biotechnology, Zhengzhou, China.

Chopra, R., G. Burow, A. Farmer, J. Mudge, C. E. Simpson, T. Wilkins, and M. D. Burow. (Jun. 2013) Assessment of De Novo Assemblers in Cultivated Tetraploid and Wild Diploid Peanuts. 6<sup>th</sup> International Meeting Advances in Arachis Genomics and Biotechnology, Zhengzhou, China.

Simpson, C. E., M. D. Burow, and J. L. Starr. (Jun. 2011). Developing Introgression Pathways for Gene Transfer to *Arachis hypogaea* L. Advances in Arachis Genomics and Biotechnology - Fifth International Conference, A07. Brasilia, Brazil.

Burow, M. D., C. E. Simpson, J. L. Starr, C.-H. Park, and A. H. Paterson. (Jun. 2011). QTL analysis of early leaf spot resistance and agronomic traits in an introgression population of peanut. Advances in Arachis Genomics and Biotechnology - Fifth International Conference, A09. Brasilia, Brazil.

Burow, M. D. (Nov. 2008) Towards and integrated RFLP-SSR marker map of tetraploid peanut. Advanced in *Arachis* Genomics and Biotechnology. ICRISAT: Hyderabad, India.

Burow, M. D. (Jul. 2009) Texas Peanut Breeding and Genetics Program at Lubbock. EMBRAPA -Laboratório de Interações Moleculares Planta-Praga III, Brasilia, Brazil.

Burow, M. D., C. E. Simpson, J. L. Starr, M. Gomez, N. Puppala, A. H. Paterson, J. J. Burke, K. Kottapalli, G. Burow, and P. Payton (Aug. 2009). Development of Genomics Tools for Breeding for Biotic and Abiotic Stress Tolerance in Peanut. EMBRAPA Recursos Genéticos e Biotecnologia. Brasilia, Brazil.

Burow, M. D. (Aug. 2009) Texas Peanut Breeding and Genetics Program at Lubbock. Universidade do Estado de São Paulo, Jaboticabal, Brazil.

Burow, M.D., C. E. Simpson, J. L. Starr, M. Gomez, N. Puppala, A. H. Paterson, J. J. Burke, K. Kottapalli, G. Burow, and P. Payton. Biotechnology in the Texas Peanut Breeding and Genetics Program. (Aug. 2009). Instituto Agronômico de Campinas, Campinas, Brazil.

Burow\*, M. D. Breeding for Early-Maturing Peanuts for Texas and Africa. (2002) Presentation to the Institute Sénégalais des Recherches Agricoles, Bambey, Senegal.

Burow\*, M. D. Conventional and Molecular Breeding for Maturity and Disease Resistance in Peanut. (2002) Presentation to the University of Ouagadougou, Ouagadougou, Burkina Faso.

- Burow\*, M. D., Starr, J. L., Simpson, C. E., and Paterson, A. H. (Aug. 1999) Genomics and Implications for Marker-Assisted Selection. American and Canadian Societies for Phytopathology.
- Burow\*, M. D., Starr, J. L., Simpson, C. E., and A. H. Paterson. (1994) Identification of molecular markers linked to root knot nematode (*Meloidogyne arenaria*) resistance in peanut. University of the Philippines at Los Baños, Institute for Plant Breeding.

*National:* (19 total, 17 since 2001)

- Chagoya, J., M. G. Selvaraj, J. L. Ayers, R. Kulkarni, V. Belamkar, R. Chopra, M. R. Baring, J. Mahan, P. Payton, C. C. Holbrook, and M. D. Burow. (Jul. 2016) Use of Genomics for Breeding Drought-Tolerant Peanut. Amer. Peanut Res. Educ Soc. Annual Meeting.
- Burow, M. D., J. N. Wilson, A. M. Schubert, M. R. Baring, and C. E. Simpson. (Sep. 2008) Identification of High Oil Peanut Accessions for a Peanut Biodiesel Breeding Program. Amer. Assoc. of Industrial Crops.
- Burow, M. D., M. G. Selvaraj, K. R. Kottapalli, G. Burow, P. Payton, J. Ayers, D. Porter, N. Puppala, and J. J. Burke. (Mar. 2008) Identification of Mechanisms of Heat Stress Tolerance in Peanut, for Use to Screening Populations for Improved Heat Stress Tolerance. Ogallala Aquifer Meeting.
- Burow, Mark D. (Jan. 2007) Peanut Breeding and Genetics. USDA-ARS, Dawson, GA.
- Burow, Mark D. (Feb. 2007) Uses of Markers and Benefits of Genomics for West Texas. Peanut Optimization Meeting. Burow, M. D. (Oct. 2006) Populations for Mapping. USDA Genomics Workshop.
- Burow, M. D. (Oct. 2006) Making Genetics Maps Using Mapmaker/EXP. USDA Genomics Workshop.
- Burow\*, M. D., Izh. Wallerstein, Isr. Wallerstein, J. R. Wallace, and J. L. Ayers. (Jul. 2006) Effects of shade avoidance, spacing, and irrigation on peanut production. Masterfoods USA Multi-Disciplinary Research Unit Symposium "Genetics, Crop Breeding and Applications to the Business."
- Burow\*, M. D., C. Simpson, Y. López, M. Baring, A. M. Schubert, M. Black, J. Ayers, and J. Cason. (Jul. 2006) Improvement of Edible Seed Quality in Peanut. Masterfoods USA Multi-Disciplinary Research Unit Symposium "Genetics, Crop Breeding and Applications to the Business."
- Burow\*, M. (Mar. 2006) Marker-Assisted Selection. American Peanut Council Annual Meeting.
- Burow\*, M. D., C. Simpson, Y. López, M. Baring, A. M. Schubert, M. Black, J. Ayers, J. Cason, R. Kottapalli, G. Burow, Izh. Wallerstein, Isr. Wallerstein, N. Puppala, and J. Burke. (Feb. 2006) Breeding for Enhanced Edible Seed Quality in Peanut. Peanut Optimization Meeting.
- Baring, M. R., C. Simpson, Y. López, and M. Burow. Large-Seeded Spanish Peanut. (Feb. 2006) Peanut Optimization Meeting. Burow\*, M. D., Y. Lopez, J. Ayers, and M D. Baring. (Jan. 2005) Progress in Developing Early-Maturing Peanut Varieties. Peanut Optimization Meeting.
- Baring, M. R., C. Simpson, Y. Lopez, and M. Burow. Large-Seeded Spanish Peanut. (Jan. 2005) Peanut Optimization Meeting.
- Burow\*, M. D. (Jul. 2004) Genetic Tools in Peanut: Markers, Maps, and

- Allergens. Amer. Peanut Res. Educ Society Annual Meeting.
- Burow\*, M. D., Y. Lopez, M. R. Baring, J. Ayers, A. M. Schubert, J. D. Reed, N. Klueva, and C. E. Simpson. (Dec. 2003) Breeding for Improved Peanut Quality. Peanut Optimization Meeting.
- Burow\*, M. D., C. E. Simpson, M. R. Baring, Y. López, J. Ayers, J. Reed, and A. M. Schubert. (Feb. 2003) Breeding Peanut for Seed Quality. Peanut Optimization Meeting.
- Burow\*, M. D. (Feb. 2003) Status of Peanut Genomics. American Peanut Council, Atlanta, GA.
- Paterson, A. H., M. D. Burow, M. Ferguson, C.-H. Park, G. Kochert, B. Yuksel, G. Gunawan, S. R. Schulze, J. L. Starr, and C. E. Simpson. (Jan. 2002) Status of Genomics in Peanut. Plant, Animal, and Microbes Genome Conference.
- Burow\*, M. D., Simpson, C. E., Starr, J. L., and Paterson, A. H. (Jan. 2000) Marker-Assisted Selection in Peanut. Plant and Animal Genome Meeting.
- Burow\*, M. D. (Summer 2000) Approaches towards Reduced-Allergenicity Peanuts. American Peanut Council.

*State:* (8 total, 6 since 2001)

- Burow, M. D., C. E. Simpson, and M. R. Baring. (Mar. 13, 2013; invited). New AgriLife Varieties. Presentation to the Texas and Oklahoma Peanut Shellers Annual Meeting, Quartz Mountain, OK.
- Baring, M. R., M. D. Burow, and C. E. Simpson. (Nov. 2008) Breeding peanut for enhanced oil content. TAMU-Dow meeting.
- Burow, M. D. (Apr. 2009). Peanut Breeding and Genetics. Texas A&M - Monsanto Graduate Training project meeting.
- Burow\*, M. D. (May 2006) Peanut Breeding and Genetics. USDA Plant Science Seminar.
- Burow\*, M. D. (Feb. 2005) Peanut Breeding and Genetics. Texas Tech University Dept. of Plant and Soil Science Seminar.
- Burow\*, M.D. Peanut Breeding and Genetics. (2002) Presentation to PSS 4100 Senior Seminar, Texas Tech University.
- Burow\*, M., and R. A. Jacobson. (Apr. 1981). Determination of the structure ofalachlor (Lasso) by X-ray crystallography. Minnesota state conference on undergraduate research in chemistry.
- Burow\*, M., and R. A. Jacobson. (Aug. 1980). Determination of the structure ofalachlor (Lasso) by X-ray crystallography. Iowa State University.

**b. Abstracts and Proceedings - Volunteered Presentations** (\*, presenter).  
(209 total, 196 since 2001)

*International Meetings* - (16 total, 16 since 2001)

- Pooja, S., P. Joshi, J. Devi Mura, V. Vadez, J. Pasupuleti, S. S. Singh1, M. Pandey, R. Varshney, P. Payton, M. Burow, and N. Puppala\*. (Mar. 2020) Identification and Mapping of QTLs Associated with Drought-Responsive Traits in a JUG-03 X Valencia-C Peanut Population Measured in the Field and Root Cylinders. Interdrought.
- Tengey\*, T. K., C. E Simpson, N. Denwar, P. Sankara, A. Hillhouse, V. Mendu, and M. D. Burow. (Nov. 2018) Identification of QTLs for Leaf Spot and Rust Resistance in a BC<sub>3</sub>F<sub>6</sub> Interspecific Peanut Introgression Population

- in West Africa and Texas using SNP Markers. *Advances in Arachis Genomics and Biotechnology*. Saly, Senegal.
- Holbrook, C. C., P. Ozias-Akins, Y. Chu, T. G. Isleib, J. Clevenger, C. Chavarro, S. Jackson, A. Culbreath, T. Brenneman, R. Cui, C. Chen, C. Butts, M. Lamb, T. Sinclair, B. Tillman, M. Burow, C. K. Kvien, and B. Guo. (Mar., 2017) Phenotyping and genotyping of RIL populations for gene discovery and marker development. *Advances in Arachis Genomics and Biotechnology*, Cordoba, Argentina.
- Burow, M. D., M. G. Selvaraj, J. Chagoya\*, J. L. Ayers\*, V. Belamkar\*, R. Chopra\*, P. Sankara, B. Zagré M'bi Bertin, and C. Corley Holbrook. (Nov. 2015) Use of Genomics for Breeding for Tolerance to Water Deficit Stress in Peanut. Eighth International Conference of the Peanut Research Community. *Advances in Arachis through Genomics & Biotechnology*, Brisbane, Australia.
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Congress.

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- Burow\*, M. D., Sen, P., Chlan, C. A., and N. Murai. (Jan. 1991) Two positive and one negative regulatory elements are involved in developmental control of  $\beta$ -phaseolin expression in transgenic tobacco. 20<sup>th</sup> Annual Meetings of the Keystone (UCLA) Symposia on Molecular and Cellular Biology.
- Burow\*, M., and F. A. Bliss. (Nov. 1987) Effects of the genetic suppression of phaseolin and lectin upon seeds of the common bean, *Phaseolus vulgaris* L. Annual Meeting of the American Society of Agronomy.
- Burow\*, M., and J. G. Coors. (Nov. 1987) Diallel Analysis and Simulation. Annual meeting of the American Society of Agronomy.

*State Meetings* (5 total, 5 since 2001)

- Cason, J. M., Simpson, C. E., Bennett, B. D., Chang, A., Bahandari, M., and Burow, M. D. (2020). Using Unmanned Aircraft Systems for evaluation of Peanut (*Arachis hypogaea* L.). In Proceedings for the 2020 Texas Plant Protection Conference December 8-10. Texas Plant Protection Association.
- Carrillo, D. W., J. M. Cason, C. E. Simpson, B. D. Bennett, A. Chang, M. Bhandari, and M. D. Burow, . (Dec. 2020) Evaluating of Spanish Peanut (*Arachis hypogaea* L.) breeding lines for Organic Peanut Production. In Proceedings for the 2020 Texas Plant Protection Conference December 8-10. Texas Plant Protection Association
- Carrillo, W., J. M. Cason, B. D. Bennett, A. Chang, M. Bhandari, and M. D. Burow. (Nov. 2020) Evaluating of Spanish Peanut (*Arachis hypogaea* L.) breeding lines for Organic Peanut Production. Texas Plant Protection Conference
- Cason J. M., C. E. Simpson, B. D. Bennett, A. Chang, M. Bhandari, M. D. Burow. (Nov. 2020) Using Unmanned Aircraft Systems for evaluation of Peanut (*Arachis hypogaea* L.). Texas Plant Protection Conference
- Rayamajhi, N., J. Sharma, and M. Burow. (Oct. 2014) Conservation Genetics of *Sclerocactus brevihamatus* Subsp. Tobuschii. Native Plant Society of Texas Symposium 214, Texarkana, TX

**c. Other Seminars, presentations, and grant reports** (102 total, 102 since 2001)

- Burow, M. D., **T. Tengey**, R. Oteng-Frimpong, R. S. Bennett, T. A. Wheeler, **T. Gaus-Bowling**, V. Mendu, H. Pham, J. Cason, and C. Simpson. (Sep. 2023). Making More-Effective Use of Wild Species for Pest and Disease Resistance. Texas Peanut Producers Board.
- Burow, M. D., J. M. Cason, M. R. Baring, C. E. Simpson, **J. Chagoya**, H. Pham, P. Payton (Mar. 2023). New Peanut Varieties and Work on Tolerance to Water Deficit Stress. Texas Peanut Industry Annual Roundtable Meeting: “Moving Forward from 2022”
- Yerra, M. M.**, and M. D. Burow. (Sep. 2023) Improving Drought Tolerance and Marker Assisted Breeding in Peanut (*Arachis hypogaea*) and Testing High-Throughput Phenotyping Methods. Texas Peanut Producers Board.

- Commey, L. C.** and M. D. Burow. (Sep. 2023) Employing peanut seed coat biochemicals to manage aflatoxin contamination. Texas Peanut Producers Board.
- Burow, M., H. Pham, and **Y. K. Pankaj** (Jun 2023). DieselNut Research and Development. Joint Meeting of Texas A&M AgriLife and Chevron.
- Cason, J. M.; De Laune, P. B.; Burow, M. D.; Kimura, E.; Ravelombola, W. S.; Lewis, K. L.; Meki, N.; Ribera, L. A.; Simpson, C.; Whitney, B.(2023). Chevron Diesel Nut Spring Kickoff Conference. Chevron Diesel Nut Conference.
- Cason, J. M., Burow, M. D., and Ravelombola, W. S. (2023). Annual Fall Board Meeting Research Showcase. Texas Peanut Producers Board.
- Cason, J. M., Burow, M. D., Brown, N., Tillman, B., Chen, C., Chamberlin, K., ... Dunne, J. (2023). American Peanut Council Roundtable on the Impact of Peanutbase. 2023 American Peanut Research and Education Society Meetings.
- Burow, M., R. Oteng-Frimpong, T. Tengey, D. Ndela, I. B. Akpatsu, C. Simpson, J. Asibuo, J. Cason, N. Denwar. (Jul. 2022) Breeding and Enhancement of Resistance to Leaf Spot, Tolerance to Water Deficit, and Improved Oil Composition in Groundnut. Peanut Innovation Lab Annual Meeting, Saly, Senegal.
- Burow, M., D., I. Faye, C. Simpson, and J. Cason. (Sep. 2022) Breeding and Enhancement of Resistance to Leaf Spot, Tolerance to Water Deficit, and Improved Oil Composition in Groundnut. Peanut Innovation Lab Annual Meeting, Tamale, Ghana.
- Burow, M. D., R. Oteng-Frimpong, I. Faye, and Charles E. Simpson. (Aug 2021) Breeding and Enhancement of Resistance to Leaf Spot, Tolerance to Water Deficit, and Improved Oil Composition in Groundnut. Annual Meeting of the Peanut Innovation Laboratory.
- Burow, M. D., R. Oteng-Frimpong, I. Faye, and Charles E. Simpson. (Jun 2020) Breeding and Enhancement of Resistance to Leaf Spot, Tolerance to Water Deficit, and Improved Oil Composition in Groundnut. Annual Meeting of the Peanut Innovation Laboratory.
- Burow, M. R. Oteng-Frimpong, I. Faye, and C. Simpson. (Jul. 2019). Breeding and Enhancement of Resistance to Leaf Spot, Tolerance to Water Deficit, and Improved Oil Composition in Groundnut. Peanut Innovation Lab Groundnut Projects Launching Workshop, Tamale, Ghana.
- Burow, M., R. Oteng-Frimpong, I. Faye, J. Y. Asibuo, and C. Simpson (Apr. 2019) Breeding and enhancement of tolerance to water deficit, resistance to leafspot, and improved oil composition in peanut. Peanut Innovation Lab Meeting, Raleigh NC (invited).
- Burow, M., N. Denwar, R. Oteng-Frimpong, P. Sankara, and Z. Bertin (Apr. 2019) PMIL West Africa/Texas Breeding and Genetics Report and Lessons Learned. Peanut Innovation Lab Meeting, Raleigh NC (invited).
- Burow, Mark D., Richard Oteng-Frimpong, Issa Faye, James Asibuo, and Charles E. Simpson. (Nov. 2018) Breeding and Enhancement of Tolerance to Water Deficit, Resistance to Leaf spot, and Improved Oil Composition in Peanut. Peanut Innovation Lab Annual Meeting. Saly, Senegal.
- Burow, M. D., C. E. Simpson, and M. R. Baring. (Mar. 2018). Current and New AgriLife Varieties. Texas and Oklahoma Peanut Shellers Annual Meeting,

- Altus, OK.
- Burow, M. D. (Dec. 2018). Guar Breeding - Past and Present. American Society of Agronomy Guar Webinar.
- Burow, M. D. (Oct. 2018). Conventional and Molecular Breeding of Peanut. Texas Tech University, Dept. of Plant and Soil Science Departmental Seminar.
- Tengey\*, T., C. E. Simpson, R. Kulkarni\*, R. Chopra\*, D. Hillhouse, and M. D. Burow. (Dec. 2017). SNP Genotyping of a RIL Population Developed from a Synthetic Amphidiploid, for Release of a Near-Isogenic Introgression Line (NIIL) Population Resource for the Peanut Community. Peanut Foundation Annual Review of Research, Washington, DC. Invited.
- Burow, M. D., C. E. Simpson, and M. R. Baring. (Mar. 2017). Current and New AgriLife Varieties. Texas and Oklahoma Peanut Shellers Annual Meeting, Altus, OK. Invited.
- Burow, M. D. Guar Breeding and Assessment - Past and Future. (Aug. 2017) USDA-NIFA-SCRI Guar Planning Proposal Conference.
- Burow, M. D. (Jun. 2017) An Integrated, Inter-Regional Approach to Breeding Multiple Market Classes of Peanut for Enhanced Productivity and Sustainability under Water Deficit. Presentation to NIFA Annual Review of Results.
- Burow, M. D., N. Denwar, P. Sankara, and B. M'bi Zagr . (Aug. 2016) West Africa/Texas Breeding and Genetics Report 2016. Peanut and Mycotoxin Innovation Lab Annual Meeting. Tamale, Ghana. Invited.
- Denwar, N. N, R. Oteng-Frimpong, J. Ayuba, R. Masauduand, A-R. Issah, and M. D. Burow. (Aug. 2016) Progress in peanut cultivar development in SARI under PMIL. Peanut and Mycotoxin Innovation Lab Annual Meeting. Tamale, Ghana. Invited.
- Sankara, P., B. M'Bi Zagr , and M. Burow. (Aug. 2016) Performance of Peanut Genotypes Selected in 2015 at Burkina Faso for Drought Resistance. Peanut and Mycotoxin Innovation Lab Annual Meeting. Tamale, Ghana. Invited.
- Burow, M. D., J. Chagoya\*, M. G. Selvaraj, R. Kulkarni\*, J. L. Ayers\*, V. Belamkar\*, R. Chopra\*, M. R. Baring, C. C. Holbrook, J. Mahan, and P. Payton. (Mar. 2016) Breeding of Peanut for Water-Limited Conditions. Ogallala Aquifer Initiative Meeting. Invited.
- Baring, M. R., M. D. Burow, C. Simpson, and J. Cason. (Nov. 2016) 2016 NPB Results & 2017 NPB Proposal. Texas Peanut Producers Board and National Peanut Board. Invited.
- Burow, M. D., M. R. Baring, and C. E. Simpson. (June, 2016) Spanish Peanut Breeding. Presentation to GWK, Inc. Volunteered.
- Tengey\*, T., R. Kulkarni\*, R. Chopra\*, C. E. Simpson, D. Hillhouse, and M. D. Burow. (Dec. 2016). SNP Genotyping of a RIL Population Developed from a Synthetic Amphidiploid, and Release of a Near-Isogenic Introgression Line (NIIL) Population Resource for the Peanut Community. Peanut Foundation Annual Review of Research, Washington, DC. Invited.
- Kulkarni\*, R., R. Chopra\*, A. Hillhouse, C. E. Simpson, N. Puppala, K. Chamberlin, and M. D. Burow. (Dec. 2016) Peanut Foundation Annual

- Review of Research, Washington, D.C. Invited.
- Burow, M. D., C. E. Simpson, and M. R. Baring. (Mar. 2016). Current and New AgriLife Varieties. Texas and Oklahoma Peanut Shellers Annual Meeting, Altus, OK. Invited.
- Kulkarni\*, R., R. Chopra\*, J. Chagoya\*, and M. D. Burow. (Jul 2016) Use of a Genotype-by-Targeted Resequencing Approach in Peanut. Amer. Peanut Res. Educ Soc. Annual Meeting.
- Tengey\*, T. K., R. Chopra\*, C. E Simpson, V. Mendu, and M. D. Burow. (Jul. 2016) Using Sub-Genome Specific Transcriptome-derived SNP Markers to Develop a Genetic Linkage Map for a BC1 Mapping population in Peanut (*Arachis hypogaea* L.) Amer. Peanut Res. Educ Soc. Annual Meeting.
- Chagoya, J. (Oct. 2016) Physiological Screening and Marker-Assisted Selection for Drought Tolerance in Peanut. MS Defense Seminar, Texas Tech University.
- Kulkarni\*, R., J. C. Chagoya\*, and M. D. Burow. (Oct. 2015) Phenotypic Evaluation of Drought Tolerance Related Traits in a Segregating Peanut Population. Presentation to PSS5100.
- Burow, M. D., M. R. Baring, and C. E. Simpson (Dec. 2015). Development of a Second-Generation Early-Maturing Runner Peanut Variety. Peanut Foundation Annual Review of Research, Atlanta, GA. Invited.
- Chopra\*, R., C. E. Simpson, A. Hillhouse, and Mark D. Burow. (Dec. 2015). SNP Genotyping of a RIL Population Developed from a Synthetic Amphidiploid, and Release of a Near-Isogenic Introgression Line (NIIL) Population Resource for the Peanut Community. Peanut Foundation Annual Review of Research, Atlanta, GA. Invited.
- Chopra\*, R., C. E. Simpson, A. Farmer, R. Martinez-Zaguilan, and Mark D. Burow. (Dec. 2015). Development of a Transcriptome-Based Resequencing (GBS) System for Mapping and QTL Identification in Peanut Breeding. Peanut Foundation Annual Review of Research, Atlanta, GA. Invited.
- Baring, M. R., M. D. Burow, C. Simpson, and J. Cason. (Nov. 2015). 2016 NPB Proposal & 2015 NPB Research Results. Texas Peanut Producers Board and National Peanut Board. Invited.
- Burow, M. D., C. E. Simpson, and M. R. Baring. (Mar. 2015). New AgriLife Varieties. Texas and Oklahoma Peanut Shellers Annual Meeting, Quartz Mountain, OK. Invited.
- Burow, M. D., M. R. Baring, and C. E. Simpson (Dec. 2014). Development of a Second-Generation Early-Maturing Runner Peanut Variety. Peanut Foundation Annual Review of Research, Atlanta, GA.
- Chagoya, J., D. Bush, R. Chopra, and M. D. Burow. (Dec. 2014). Evaluation of a CAPS RIL Population for Drought Tolerance. Peanut Foundation Annual Review of Research, Atlanta, GA.
- Chopra, R., G. Burow, C. E. Simpson, and Mark D. Burow. (Dec. 2014). Use of SNPs from Transcriptome Sequencing for Mapping and QTL Identification. Peanut Foundation Annual Review of Research, Atlanta, GA.
- Baring, M. R., M. D. Burow, C. Simpson, and J. Cason. (Nov. 2014). 2015 NPB Proposal & 2014 NPB Research Results. Texas Peanut Producers Board

- and National Peanut Board.
- Burow, M., C. Simpson, P. Sankara, and N. Denwar. (Jul. 2014) West Africa/Texas Breeding and Genetics Report. Peanut and Mycotoxin Innovation Lab.
- Burow, M. D., C. E. Simpson, and M. R. Baring. (Mar. 2014). New AgriLife Varieties. Texas and Oklahoma Peanut Shellers Annual Meeting, Quartz Mountain, OK.
- Chopra, R., A. Farmer, J. Mudge, G. Burow, C. E. Simpson, T. A. Wilkins, and M. D. Burow. (Dec. 10, 2013) Towards Use of Transcriptome Sequencing and Identification of Genetic Diversity for Marker-Assisted Breeding. Presentation to the Peanut Foundation Annual Review of Research, Washington, DC..
- Baring, M. R., C. Simpson, and M. Burow. (Mar. 2013). Peanut Breeding. Report to the Texas Peanut Producers Board.
- Baring, M. R., C. Simpson, and M. Burow. (Dec. 2013). Breeding and Genetics. Report to the National Peanut Board.
- Burow, M. D., and M. R. Baring. Development of a Second-Generation Early-Maturing Runner Peanut Variety. (Dec. 10, 2013). New Peanut Varieties. Presentation to the Peanut Foundation Annual Review of Research, Washington, DC..
- Chopra, R., A. Farmer, J. Mudge, G. Burow, C. E. Simpson, T. A. Wilkins, and M. Burow (Mar. 12, 2013). Transcriptome Sequencing to Identify Genetic Diversity in Peanut. Presentation to the Peanut Foundation Annual Review of Research, Atlanta, GA.
- Burow, M. D., C. E. Simpson, and M. R. Baring. (Mar. 12, 2013). New Peanut Varieties. Presentation to the Peanut Foundation Annual Review of Research, Atlanta, GA.
- Burow, M. D., J. J. Burke, P. R. Payton, J. Johnson, M. G. Selvaraj, J. Ayers, K. R. Kottapalli. (Apr. 2012) Completion of Identification of Water-Use Efficient Peanut Genotypes, and Estimated of Effects of Reduced Water Usage and Potential of Improved Water Use Efficiency in Peanut. Ogallala Aquifer Initiative.
- Burow, M. D., T. A. Wilkins, and C. E. Simpson. (Jul. 2012). Genotyping an Array of Peanut Germplasm, including the U.S. Peanut Minicore Collection, Southwest Varieties, and a Mapping Population using SNP-based Markers. National Peanut Board.
- Baring, M.R., M. D, Burow, and C. E. Simpson. (Jul. 2012) Molecular and Conventional Breeding to Improve Peanut Yields and Production Efficiency by Reduced Disease and Water Usage. National Peanut Board.
- Baring, M.R., M. D, Burow, and C. E. Simpson. (Jul. 2012) Breeding, Genetics and Molecular Genetics. Texas Peanut Producers Board.
- Burow, M. D., C. E. Simpson, A. M. Schubert, and M. R. Baring. (Mar. 2011). Increase and Selection of High-Yielding, Early-Maturing Peanut Lines. National Peanut Board.
- Burow, M. D., M. R. Baring, and C. E. Simpson. (May 2011). Breeding Peanut for Increased Yield and Quality via Genetic Gains, Improved Disease and Pest Resistance, and Improved Water Use Efficiency. Texas Peanut Producers Board.
- Chagoya, C., L. Lollis, J. Zhang., and M. D. Burow, (Sep. 2010). Growth Studies

- for Temperature, Media, and Salinity Optimization. Pres. to Saudi Aramco.
- Burow, M. D., M. Baring, A. M. Schubert, J. Ayers, J. Cason, and C. E. Simpson. (Oct 2010). New Varietal Releases. Texas Peanut Producers Board.
- Burow, M. D., V. Belamkar, M. G. Selvaraj, C. E. Simpson, J. L. Starr, M. R. Baring, T. A. Wilkins, and H. Zhang (Oct. 2010). Markers for Breeding, Genomics, and Transgenic Peanut . Texas Peanut Producers Board.
- Chagoya, J., C. Lollis, J. Zhang, and M. D. Burow. (Oct. 2010). *in* GA Project 30301 (“5911”). SFS Quarterly Management Review.
- Baring, M. R., C. E. Simpson, and M. D. Burow (Oct. 2010). Research Update. Presentation to Chevron Technology Ventures.
- Burow, M., C. Simpson, P. Sankara, B. Zagre, N. Denwar, and O. Ndoye. (Mar. 2011). TAM137 – Overcoming Biotic and Abiotic Constraints to Peanut Production in West Africa - Goals 2012/2017. Peanut CRSP.
- Burow, M. D., M. Baring, A. M. Schubert, J. Ayers, J. Cason, and C. E. Simpson. (Apr. 2011) New Varietal Releases. Texas Peanut Producers Board.
- Burow, M. D., V. Belamkar, M. Gomez S., C. E. Simpson, J. L. Starr, M. R. Baring, and T. A. Wilkins. (Apr. 2011). Genomics and Single Nucleotide Markers (SNPs) for Marker-Assisted Breeding. Texas Peanut Producers Board.
- Miranda, L., M. D. Burow, C. Lollis, and C. Fedler. (Nov. 2009) AgriLife Algal Group - Lubbock. DARPA Growth Meeting.
- Burow, V. Belamkar\*, S. Swaroop\*, G. B. Burow, C. E. Simpson, and T. A. Wilkins. (Mar. 2010). SSR and SNP-Based Markers for Peanut Breeding by Association Mapping. Amer. Peanut Council Ann. Mtng.
- Miranda, L., C. Lollis\*, and M. D. Burow. (Jan. 2010). SFS Project - Lubbock. SFS Quarterly Management Review.
- Miranda, L., C. Lollis\*, and M. D. Burow. (Jun. 2010). *in* SFS Past, Present, and Future. SFS Quarterly Management Review.
- Burow, M. D., C. Simpson, O. Ndoye, P. Sankara, N. Denwar, and B. Zagre. (May 2010). Overcoming Abiotic and Biotic Constraints to Peanut Production and Quality in Texas and West Africa. Peanut Collab. Res. Support Proj.
- Burow, M. D., A. M. Schubert, C. Fedler, A. Quigg, M. Foster, C. Lollis, and E. Hawkins (Oct. 2008). Algal species selection for biofuels production. GA/SFS Project Review.
- Burow, M. D., S. Swaroop, M. Gomez, V. Belamkar, C. E. Simpson, and T. A. Wilkins. (Mar. 2009). SSR and SNP-Based Markers to Assist with Peanut Breeding. American Peanut Council.
- Burow, M. D., M. Baring, A. M. Schubert, J. Ayers, J. Cason, and C. E. Simpson. (Mar. 2009) Increase and Breeding for Quality Peanut. Texas Peanut Producers Board.
- Burow, M. D., M. Gomez, M. Narayana, A. M. Schubert, V. Belamkar, C. E. Simpson, and M. R. Baring (Mar. 2009) Molecular Markers to Assist with Peanut Breeding. Texas Peanut Producers Board.
- Avant, B., S. Simpson, J. Moore, M. Burow, C. Fedler, L. Brown, C. Lollis, and Y. Brown. (May 2009) AgriLife Algal Genetics Group DARPA Tasks 200 and 1000 - Spring 2009. DARPA Project Review.
- Lollis, C., L. Miranda, C. Fedler, and M. D. Burow. (Aug. 2009) AgriLife Algal



Genetics Group Summer 2009 Quarterly Report.

- Wilson, J. N., M. D. Burow, A. M. Schubert, C. E. Simpson, and M. R. Baring. (Jul. 2008) Evaluating Total Oil Content of Peanut Germplasm Using Nuclear Magnetic Resonance (NMR) Spectroscopy. Chevron Biofuels Meeting.
- Burow, M. D., M. Baring, A. M. Schubert, J. Ayers, J. Cason, and C. E. Simpson. (Mar. 2008) Increase and Breeding for Quality Peanut. Texas Peanut Producers Board.
- Burow, M. D., M. Gomez, M. Narayana, A. M. Schubert, V. Belamkar, C. E. Simpson, and M. R. Baring. (Mar. 2008) Molecular Markers to Assist with Peanut Breeding.
- Burow, M. D., J. L. Ayers, J. J. Burke, and D. Porter. (Mar. 2008). Optimizing Varietal Choice and Seeding Rate for Maximizing Profitability of Peanut under Limiting Irrigation. Ogallala Aquifer Initiative.
- Burow, M. D., M. G. Selvaraj, K. R. Kottapalli, N. Puppala, P. Payton, D. Porter, and J. J. Burke. (Mar. 2008) Identification of Mechanisms of Heat Stress Tolerance in Peanut, and Use for Screening a Population for Improved Heat Stress Tolerance. Ogallala Aquifer Initiative.
- Burow, Mark D., M. G. Selvaraj, J. L. Ayers, J. Wallace, J. J. Burke, and D. Porter (Mar. 2007) Development Of Peanut Varieties With Resistance To Abiotic Stress. Ogallala Aquifer Initiative.
- Burow, M. D., M. G. Selvaraj, K. R. Kottapalli, N. Puppala, D. Porter, and J. J. Burke. (Mar. 2007) Identification of Mechanisms of Heat Stress Tolerance in Peanut, and Use for Screening a Population for Improved Heat Stress Tolerance. Ogallala Aquifer Initiative.
- Burow, M. D., J. L. Ayers, J. J. Burke, and D. Porter. (Mar. 2007) Optimizing Varietal Choice and Seeding Rate for Maximizing Profitability of Peanut under Limiting Irrigation. Ogallala Aquifer Initiative.
- Burow, M. D., C. E. Simpson, M. G. Selvaraj, M. Narayana, Y. Lopez, A. M. Schubert, and Michael R. Baring. (Apr. 2007) Markers for Edible Seed Quality and Yield in Peanut. Texas Peanut Producers Board.
- Burow, M. D., M. Baring, Y. Lopez, A. M. Schubert, J. Ayers, J. Cason, and C. E. Simpson. (Apr. 2007) Line Increase and Breeding for Quality Peanut. Texas Peanut Producers Board.
- Burow, M. D., M. Gomez, Y. Lopez, and C. E. Simpson. Identification of Markers for Maturity and O/L Ratio, Leafspot Resistance, and Resistance to Heat and Drought for Varietal Development. (Apr. 2007) Texas Peanut Producers Board.
- Burow, M. D., J. J. Burke, J. Ayers, J. Wallace, and D. Porter. (Mar. 2006) Improving Peanut Stress Response by Breeding and Crop Management. Annual Research Review of the Ogallala Aquifer Initiative.
- Burow, M. D., Y. López, C. E. Simpson, A. M. Schubert, A. Muitia, J. Cason, M. Black, and M. R. Baring. (Mar. 2006) Breeding for Improved Edible Seed Quality and Other Important Traits. Texas Peanut Producers Board Annual Meeting.
- Baring, M. R., C. Simpson, Y. López, and M. Burow. Breeding and Genetics. (Mar. 2006) Texas Peanut Producers Board Annual Meeting.
- Wallace, J. R., J. J. Burke, J. Ayers, D. Porter, A. M. Schubert, M. D. Burow. (Mar. 2005) Evaluation of Peanut Varieties for Drought and Heat

- Tolerance. Annual Research Review of the Ogallala Aquifer Initiative.
- Burow, M. D., Y. López, I. Wallerstein, I. Wallerstein, M. R. Baring, and C. E. Simpson. (Mar. 2005) Markers for Edible Seed Quality and Yield in Peanut. American Peanut Council Annual Meeting.
- Baring, M. R., C. Simpson, Y. López, and M. Burow. Breeding and Genetics. (Mar. 2005) American Peanut Res. Educ. Soc. Annual Meeting.
- Burow, M. D., Y. Lopez, C. E. Simpson, A. M. Schubert, A. Muitia, J. Cason, M. Black, and M. R. Baring. (Mar. 2005) Breeding for Improved Edible Seed Quality and Other Important Traits. Texas Peanut Producers Board Annual Meeting.
- Burow, M. D., C. E. Simpson, O. Ndoeye, and P. Sankara. (Jan. 2005) Vision for the Next Ten Years for the Peanut CRSP Texas A&M Project. Annual PI Meeting of the Peanut Collaborative Research Program, Bangkok, Thailand.
- Burow, M. D., J. J. Burke, J. R. Wallace, A. M. Schubert, D. L. Rowland, J. Ayers, D. Porter, and C. Holbrook. (Oct. 2004) Toward Genetic Improvement of Peanuts for Water and Heat Stress Response. Annual Meeting of the Southwest Consortium on Plant Genetics and Water Resources.
- Burow, M. D., Y. López, N. Y. Klueva, C. E. Simpson, A. M. Schubert, and M. R. Baring. (Mar. 2004) Use of Molecular Markers and Unadapted Germplasm for Improved Edible Seed Quality. American Peanut Council.
- Burow, M. D., C. E. Simpson, O. Ndoeye, and P. Sankara. (Jan. 2004). Utilization of Peanut Germplasm for Varietal Development in Texas and West Africa. Annual PI Meeting of the Peanut Collaborative Research Program.
- Burow, M. D., Y. López, C. E. Simpson, A. M. Schubert, M. R. Baring, K. Dashiell, M. Black, and H. Melouk. (Mar. 2004). Breeding and Improved Edible Seed Quality. Texas Peanut Producers Board.
- Burow, M. D., M. R. Baring, Y. Lopez, C. E. Simpson, B. A. Besler, J. M. Cason, J. Ayers, and W. M. Lacken (Mar. 2003) Breeding and Genetics. Texas Peanut Producers Board.
- Burow, M. D., O. Ndoeye, P. Sankara, and C. E. Simpson (Feb. 2003) Peanut Breeding for Maturity and High Oleic Content. Peanut CRSP Annual PI Meeting, Griffin GA.
- Burow, M. D., M. R. Baring, Y. Lopez, C. E. Simpson, J. M. Cason, J. Ayers, and W. M. Lacken (Mar. 2002) Breeding for Early Maturity. Texas Peanut Producers Board.

#### **7. Popular Press Articles** (14 total, 14 since 2001).

- Peanut Genome Consortium (Apr. 2, 2014) Public release of the first chromosomal-scale draft sequences of peanut (*Arachis*) species.
- Byrns, S. (Apr. 15, 2014). Peanut breakthrough involved Texas A&M AgriLife scientists. AgriLife Today.
- Musico, J. (Apr. 19, 2014) Breeding peanuts the West Texas way - Research team develops hardier peanuts. Lubbock Avalanche-Journal.
- Anonymous. (2006) Masterfoods USA Awards \$10,000 to Texas Peanut Producers Board. Peanut Sun-Times. [article about program]
- Burow\*, M. D., C. E. Simpson, Y. Lopez, M. R. Baring, A. M. Schubert, J. Cason, and J. L. Ayers. (2005) Goals of the Texas Peanut Breeding Program.

Western Peanut News.

- Burow<sup>\*</sup>, M. D., C. E. Simpson, Y. López, M. R. Baring, J. Ayers, J. M. Cason, J. Wallace, A. Muitia, and W. M. Lacken. (2004) Breeding for Peanuts with Improved Edible Seed Quality and Drought Tolerance. Western Peanut News.
- Burow<sup>\*</sup>, M. D., C. E. Simpson, Y. López, M. R. Baring, J. Ayers, J. M. Cason, A. Muitia, and W. M. Lacken. (2003) Breeding for Early-Maturing, High Quality Peanuts. Texas Peanut Producers Board Newsletter.
- Simpson, C. E., M. R. Baring, M. D. Burow, A. M. Schubert, H. A. Melouk, K. Dashiell, Y. López, J. M. Cason, J. Ayers, W. M. L., and J. D. Reed. (2003) Breeding High O/L Peanuts: 2002 Crop Year. Texas Peanut Producers Board Newsletter.
- Simpson, C.E., M. Burow, M. R. Baring, Y. Lopez, and H.A. Melouk. (2003) Spanish Peanuts for the Southwest. Texas Peanut Producers Board Newsletter.
- Burow<sup>\*</sup>, M. D., C. E. Simpson, Y. López, M. R. Baring, J. Ayers, J. M. Cason, A. Muitia, and W. M. Lacken. (2003) Peanut Breeding at the Western Peanut Growers' Research Farm. Western Peanut News 5(2):11.
- Burow<sup>\*</sup>, M. Breeding for Early-Maturing Peanuts. (2002). West Texas Peanut Producers Board Reporter.
- Simpson, C. E., M. Burow, M. R. Baring, Y. Lopez, and H.A. Melouk. Spanish Peanuts for the Southwest. (2002) Western Peanut News. Vol. 4.
- Burow<sup>\*</sup>, M., C. Simpson, Y. López, M. Baring, J. Ayers, A. Muitia, M. Schubert, and J. Reed. Breeding for Early-Maturing Peanuts. Western Peanut News. v 4.
- Anonymous. West Teas Peanut Breeder . The Texas Peanut Report. Winter, 2000, pp. 1,4. [article about program]

## **8. Electronic Media**

American Society of Agronomy guar webinar presentation put online, along with those of Calvin Trostle and Noureddine Abidi, December 2018. (see Seminars and Presentations).

### **b. Technology Transfer.** (\* senior author; † major advisor; ‡ project PI)

#### **1. Release of Plant Varieties**

**(13 total + 2 submitted, 13 + 2 since 2001)**

- Burow, M. D., M. R. Baring, J. Chagoya, C. E. Simpson, J. M. Cason, and Y. López. (2022) Proposal to Release 'Tamrun OL18L' and 'Tamrun OL19' Peanut
- Baring, M. R., M. Burow, J. Cason, C. E. Simpson, J. Chagoya, and B. Bennett. (2021). Proposal to Release 'AG18' peanut.
- Baring, M. R., M. Burow, J. Cason, C. E. Simpson, J. Chagoya, and B. Bennett. (2021). Proposal to Release 'NemaTAM 2' peanut.
- Sankara, P., M. D. Burow, M. Ouedraogo, M. R. Baring, et Bertin M'Bi Zagré. (submitted) Criblage des variétés 'BF Nagouri1' et 'BF Nagouri2' d'arachide résistante à la cercosporieuse. Burkina Faso.
- Burow, M. D., M. R. Baring, J. Chagoya<sup>\*</sup>, C. Trostle, N. Puppala, C. E. Simpson, J. L. Ayers<sup>\*</sup>, J. M. Cason, A. M. Schubert, A. Muitia<sup>\*</sup>, and Y. López. 2017. Release of 'TAMVal OL14' Peanut. Texas AgriLife Research. Approved

1/13/2016.

- Burow \*, M. D., M. R. Baring, J. L. Ayers, A. M. Schubert, Y. López, and C. E. Simpson. 2012. Release of 'Schubert' Peanut. Texas AgriLife Research. Approved 11/9/2012.
- Burow \*, M. D., M. R. Baring, J. L. Ayers, A. M. Schubert, Y. López, and C. E. Simpson. 2012. Release of 'Tamrun OL12' Peanut. Texas AgriLife Research. Approved 8/14/2012.
- Simpson, C. E., J. L. Starr, M. R. Baring, M. D. Burow, J. M. Cason, and J. N. Wilson. 2012. Release of 'Webb' Peanut. Texas AgriLife Research. Approved 8/14/2012.
- Baring, M. R., C. E. Simpson, M. D. Burow, J. M. Cason, and J. L. Ayers. 2011. Proposal to Release 'Tamrun OL11' Peanut.
- Melouk, H. A., K. Chamberlin, C. B. Godsey, J. Damicone, M. D. Burow, M. R. Baring, C. E. Simpson, K. E. Dashiell, and M. Payton. 2011. Release of 'Red River Runner Peanut'.
- Baring, M. R., C.E. Simpson, M. D. Burow, M.C. Black, J. C Cason, J. Ayers, and Y. Lopez. 2007. Proposal to release the peanut breeding line Tx033630 as a peanut cultivar 'Tamrun OL07'.
- Baring, M. R., Y. Lopez. C.E. Simpson, M.C. Black, J. C. Cason, J. Ayers, and M. D. Burow 2006. Proposal to release the peanut breeding line Tx034342 as peanut cultivar 'Tamnut OL06'.
- Simpson, C. E., J. L. Starr, G. T. Church, M. D. Burow, and A. H. Paterson. 2002. 'NemaTAM' Peanut, Texas Agricultural Experiment Station, Crop Science Society of America, Crop Cultivar, Registration Number CV-74, 12/31/2002.

## **2. Release of Germplasm or Germplasm Disclosures (13 total, 13 since 2001)**

- Chamberlin, K. D., J. P. Damicone, M. R. Baring, M. D. Burow, C. B. Godsey, R. S. Bennett, H. A. Melouk, and C. E. Simpson. 2015. Registration of High-Oleic Peanut Germplasm Line ARSOK-S1 (TX996784) with Enhanced Resistance to Sclerotinia Blight and Pod Rot.
- Burow, M. D., L. Miranda, J. C. Chagoya, C. Lollis, L. Brown, and J. Brown. 2011. TAMU-LBK-009 (*Nitzschia* sp.), to General Atomics.
- Burow, M. D., J. C. Chagoya, L. Miranda, and C. Lollis. 2011. TAMU-LBK-011 (*Nitzschia* sp.), to General Atomics.
- Burow, M. D., J. C. Chagoya, L. Miranda, and C. Lollis. 2011. TAMU-LBK-016 (*Nitzschia* sp.), to General Atomics.
- Burow, M. D., J. C. Chagoya, L. Miranda, and C. Lollis. 2011. TAMU-LBK-018 (*Nitzschia* sp.), to General Atomics.
- Burow, M. D., J. C. Chagoya, L. Miranda, and C. Lollis. 2011. TAMU-LBK-020 (*Nitzschia* sp.), to General Atomics.
- Burow, M. D., J. C. Chagoya, L. Miranda, and C. Lollis. 2011. TAMU-LBK-021 (*Nitzschia* sp.), to General Atomics.
- Burow, M. D., J. C. Chagoya, L. Miranda, C. Lollis, and L. Brown. 2011. TAMU-LBK-023 (*Nitzschia* sp.), to General Atomics.
- Simpson, C. E., M. D. Burow, and M. R. Baring. Diesel Nut Peanut, 7 high oil germplasm lines, to Chevron, Inc. June 29, 2010.
- Simpson, C. E., M. D. Burow, and M. R. Baring. Introgression pathway for high oil gene transfer from wild species *Arachis* (GKP 10573) to *Arachis*

hypogaea, to Chevron, Inc. June 29, 2010.  
Burow, M.D., L. Miranda, C. Lollis, E. Hawkins, and T. Escobar. TAMU-LBK-002 (*Nitzschia* sp.), to General Atomics. Feb. 2. 2010.  
Burow, M.D., L. Miranda, C. Lollis, E. Hawkins, and T. Escobar. TAMU-LBK-003 (*Scenedesmus rubens*) to General Atomics, Feb. 2, 2010.  
López, Y., M. D. Burow<sup>‡</sup>, J. L. Ayers, M. R. Baring, and C. E. Simpson. Registration of 'Golden Virginia' Peanut Germplasm.

### **3. MTAs Signed (20 total, 20 since 2001)**

Savanna Agricultural Research Institute and Texas A&M AgriLife (Sept. 2021). Transfer of ca. 330 BC3 breeding lines developed from a cross between Florunner and TxAG-6 for evaluation for resistance to leaf spots and *A. flavus* contamination.  
Institut Sénégalais de Recherches Agricoles (Aug. 2020). Transfer of 105 F5 breeding lines developed from a cross between 55-437 and TxL054520-27 for evaluation for drought tolerance.  
Savanna Agricultural Research Institute, Ghana. (2019). Amendment of existing MTA, for evaluation of a Spanish peanut population combining high oleic oil and drought tolerance.  
Severn Peanut Co. (2019). Evaluation of 1 Valencia and 5 Virginia breeding lines.  
Wilco Peanut Co. (2019) Evaluation of 5 Virginia breeding lines.  
Golden Peanut Co. (2019). Licensing of Schubert peanut. Texas A&M AgriLife and the Savanna Agricultural Research Institute (Ghana), for peanut breeding lines. Signed July, 2017  
Texas A&M AgriLife Research and the Université Ouaga I Professeur Joseph Ki-Zerbo (Burkina Faso), for peanut breeding lines. Signed March, 2017.  
First Amendment to the Material Evaluation Agreement between Mars Chocolate North America and Texas A&M AgriLife Research effective September 25, 2015.  
Mars Chocolate North America and Texas A&M AgriLife Research (Sep. 2015), for evaluation of 7 early-maturing runner breeding lines.  
TAMU-LBK-009 (*Nitzschia* sp.), to General Atomics, 2011.  
TAMU-LBK-011 (*Nitzschia* sp.), to General Atomics, 2011.  
TAMU-LBK-016 (*Nitzschia* sp.), to General Atomics, 2011.  
TAMU-LBK-018 (*Nitzschia* sp.), to General Atomics, 2011.  
TAMU-LBK-020 (*Nitzschia* sp.), to General Atomics, 2011.  
TAMU-LBK-021 (*Nitzschia* sp.), to General Atomics, 2011.  
TAMU-LBK-023 (*Nitzschia* sp.), to General Atomics, 2011.  
TAMU-LBK-002 (*Nitzschia* sp.), to General Atomics. Feb. 2. 2010.  
TAMU-LBK-003 (*Scenedesmus rubens*) to General Atomics, Feb. 2, 2010.  
Mars Snackfood US LLC and Texas Agrilife Research, for seed edible quality testing of 6 early-maturing breeding lines. (May 2008).  
Masterfoods USA and Texas A&M University, for delivery of 4 large-seeded Spanish lines for quality evaluation. (submitted Jun.2004; finalized Sep. 2004)

### **3. Computer Databases or Software (2 total, 1 since 2001)**

Jesubatham, A. M., and M. D. Burow<sup>‡</sup>. (Jul. 2004) PeanutMAP Molecular Marker Map Database. <http://peanutgenetics.tamu.edu/cmap>.  
Burow<sup>\*</sup>, M. D. and J. G. Coors (1991) DIALLEL analysis and simulation [A microcomputer program for the IBM-PC]. Available from University of Wisconsin, Department of Agronomy. Over 100 requests for program, latest request May 2006.

## **7. Continuing Education:**

### **a. Sabbatical Leave**

June 2009 - November, 2009. Cloning and mapping of selected peanut oil biosynthetic and quality genes. Host: Dr. David John Bertioli, Universidade Católica de Brasília and EMBRAPA-CENARGEN.

### **b. Other**

TAMU Radioisotope Training (Nov. 2008).

TTU Radioisotope Training (Mar. 2008).

TAMU Information Security Awareness (May, 2008).

TAMU Affirmative Action in the Workplace Training (May, 2008).

TTU Field Day/ Pesticide Application CEUs (August, 2008).

TAMU Radioisotope Training, Aug. 2007.

Workshop on Grant Preparation, Texas Agric. Expt. Station, May, 2006.

Workshop on Effective Teaching, Texas Tech University, Aug. 2004.

Noncommercial Pesticide Applicator License. Texas Dept. of Agriculture. Oct. 2003.

Priority Management Class. Texas Agricultural Experiment Station. Jan. 2002.  
Grant Writing Seminar. Texas Agricultural Experiment Station Annual System

Meeting. Jan. 2002.

Novell Network Administrator Training Course, University of Georgia. Aug.

1999.

Diploma, Restriction Landmark Genome Scanning. Riken Institute of Physical

and Chemical Research, Tsukuba, Japan. Oct. 1995.

Diploma, Spanish Language Study. Casa Nicaragüense de Español. Managua,

Nicaragua. Aug. 1984.

## ***C. Service Activities.***

### **1. International Activities.**

#### **a. NIFA Plant Breeding Partnership, 2021-present.**

Title: Genomics-Assisted Introgression and Molecular Dissection of Resistance to Pests and Diseases in Peanut

Role: Principal Investigator.

Countries involved: U.S. (Texas, Oklahoma), Ghana

Project Goals: Develop near-isogenic introgression lines from wild species, identify QTLs for resistance to root-knot nematodes, leaf spots,

and aflatoxin contamination

**b. Peanut Innovation Laboratory, 2018-present.**

Title: Marker-Assisted Breeding and Enhancement of Genetic Diversity for Resistance to Leaf spot, Tolerance to Water Deficit, and Improved Oil in Peanut.

Role: Project Coordinator for West Africa.

Countries involved: U.S. (Texas), Ghana, Senegal.

Project Goals: Develop peanut varieties possessing one or more of these traits, for use in West Africa or the U.S.

**c. Peanut and Mycotoxin Innovation Laboratory, 2013-2017.**

Title: An Integrated Global Breeding and Genomics Approach to Intensifying Peanut Production.

Role: Project Coordinator for West Africa.

Countries involved: U.S. (Texas), Burkina Faso, Ghana.

Project Goals:

Identify additional accessions with tolerance to drought and heat stress and early maturity, and use them to develop drought-tolerant varieties.

Develop and release early-maturing, high-quality peanuts that have improved flavor and larger seeds that have higher value for the edible market.

Combine high yield, early maturity, and leafspot resistance.

Improvement of the seed release mechanism, multiplication of seed for varietal release, and distribution to farmers.

Develop and apply molecular markers for trait breeding.

Short-term training of a graduate student in DNA marker technology for breeding.

**d. Borlaug Higher Education for Agricultural Research and Development (BHEARD) Program, 2014-2018.**

Title: Ghana Cohort

Role-co-PI at TTU.

Student involved: Theophilus Tengey

Project Goals: Training of a PhD student at Texas Tech, and visit to Ghana by the co-PIs to establish a research project in the country as part of the PhD dissertation.

**e. TAM17 Peanut Collaborative Support Program Project, 2008- 2012**

Title: Overcoming biotic and abiotic constraints to peanut production.

Role: Project Coordinator.

Countries involved: U.S. (Texas), Senegal, Burkina Faso, Ghana.

Project Goals:

Identify additional accessions with tolerance to drought and heat stress and early maturity, and use them to develop drought-tolerant varieties.

Develop and release early-maturing, high-quality peanuts that have improved flavor and larger seeds that have higher value for the edible market.

Combine high yield, early maturity, and leafspot resistance, and test fungicide applications for their effectiveness and costs.

Improvement of the seed release mechanism, multiplication of seed for

varietal release, and distribution to farmers.  
Develop and apply molecular markers for trait breeding.  
Training of a PhD scientist in peanut breeding, and personnel in seed multiplication.  
Improve infrastructure in Burkina Faso

**f. Peanut Collaborative Support Program Project 2001-2007**

Title: Collection, preservation, and utilization of *Arachis* germplasm for breeding peanut for early maturity, pest resistance, better productivity, and improved quality.

Role: Project Coordinator.

Countries involved: U.S. (Texas), Senegal, Burkina Faso, Ghana.

Project Goals:

Develop high-yielding, early-maturing peanut varieties for better edible seed quality in Texas and Senegal

Combine the high-oleic trait with maturity and yield for Texas and Senegal.

Develop leafspot-resistant varieties for Texas and Burkina Faso

Develop erect peanut types with fresh seed dormancy.

Collect, preserve, and utilize wild *Arachis* species from South America.

Develop molecular markers for leafspot resistance, and identify the nature of the 2 missing chromosomes in *A. praecox*.

Train and graduate student from West Africa in breeding and biotechnology, and train undergraduate students in breeding-related aspects.

Project-related travel:

Senegal, Burkina Faso. (Oct. 9 - 22, 2005).

Thailand (Jan. 10-16, 2005) Peanut CRSP International Meeting, goal was planning for the next CRSP cycle.

Burkina Faso, Senegal. (Oct. 9-19, 2003) Peanut CRSP project "Collection, preservation, and utilization of *Arachis* germplasm for breeding peanut for early maturity, pest resistance, better productivity, and improved quality."  
Visited University of Ouagadougou, Burkina Faso, ISRA and CERAAS.

Senegal, Burkina Faso. (Sept. - Oct. 2002) Peanut CRSP project. Presented two seminars on research, one each at the Institute Sénégalais des Recherches Agricoles, Bambey, Senegal, and the other at the Université de Ouagadougou, Burkina Faso.

**g. USAID Mozambique Training Program (INTSORMIL as US contractor), 2002- 2005.**

Project Goal: Training of Graduate Student from Mozambique

Role: Major Advisor for M.S. student, graduated from Texas Tech Aug. 2005

Countries involved: U.S. (Texas), Mozambique

Project-related travel: Mozambique. (Mar. 11-20, 2004) The goal was to make linkages to allow establishment of a long-term tie between Mozambique and Texas. Traveled with Amade Muitia. We met Director of INIA (Instituto Nacional de Investigação Agronomica), USAID officials, and visited Amade's field plots.



#### **h. Other.**

Attended CGIAR/ CRSP Joint Meeting in Dubai, May 2012. Participated in rewriting CGIAR-CRP 3.5 Grain Legumes Ten Year Research Proposal, joint with representatives of ICRISAT, IITA, ICARDA, CIAT, Peanut CRSP, Pulse CRSP, GCP, and EMBRAPA.

Philippines (Nov. 1999). Visited the International Rice Research Institute.

Japan. (Oct. 1995) Attended two-week training course on Restriction Landmark Genome Scanning, Riken Institute of Physical and Chemical Research, Tsukuba, Japan.

Philippines. (Sep. 1994) Visited farms, the International Rice Research Institute, and presented a seminar at the University of the Philippines at Los Baños, Institute for Plant Breeding.

Nicaragua. (Aug. 1984) Took a one-month Spanish language class at the Casa Nicaragüense de Español and lived with a host family.

#### **i. Foreign Visitors Hosted** (listed for those who presented papers or seminars).

Drs. David Bertioli and Soraya C. M. Leal-Bertioli. (Jun. 2010) EMBRAPA-Recursos Genetics e Biotecnologia-Brasilia and Universidade Catolica de Brasilia.

Dr. Ofer Goren and 5 other Israeli Scientists. (Sep. 2007) Volcani Institute-Rehovot, Israel and other locations.

Drs. Ignacio Godoy and Alessandra Favero (Sep. 2007). EMBRAPA-Brasilia and IAC-Campinas, Brazil.

Dr. Alan Cruickshank (Jul. 2006) Peanut Breeder - Department of Primary Industries and Fisheries, Agency for Food and Fibre Sciences, Kingaroy, Queensland, Australia.

Dr. Hari Upadhyaya (Jul. 2006). Head- Genetic Resources and Enhancement Program, ICRISAT (International Crops Research Institute for the Semi-Arid Tropics), Patancheru, India.

Dr. Hari Upadhyaya (Oct. 2005). Head- Genetic Resources and Enhancement Program, ICRISAT (International Crops Research Institute for the Semi-Arid Tropics), Patancheru, India.

Dr. Hari Upadhyaya (Oct. 2004). Head- Genetic Resources and Enhancement Program, ICRISAT (International Crops Research Institute for the Semi-Arid Tropics), Patancheru, India.

Dr. Ousmane Ndoye, (Jul. 2004). Director, Bambey Station, ISRA-CNRA (Institute Sénégalais des Recherches Agricoles- Centre National de Recherche Agricoles), Bambey, Senegal.

Dr. Philippe Sankara (Jul. 2004). Professor, Département de Phytopathologie, Université de Ouagadougou, Burkina Faso.

Dr. Hari Upadhyaya, (Oct. 2003) Head, ICRISAT Germplasm Division.

## **2. Extension Activities.**

### **a. Meetings Organized (4 total, 4 after began current position)**

Peanut and Sesame Breeding, Sep. 26 to Sep 28 2022, Visit of representatives of EMBRAPA-Algodão and affiliated organizations at Texas A&M AgriLife Research - Lubbock.

USDA-NIFA-SCRI Guar Planning Proposal Conference (organized jointly with Calvin Trostle), Lubbock TX, Aug.14 to Aug.16, 2017. A total of 31 growers, researchers, industry representatives, and students attended. Goal was to develop stakeholder Relevance Statement and plans for a USDA-NIFA-SCRI preproposal.

Pecos Biofuels Meeting. (Mar. 2008) Purpose: have PIs of algal species screening project meet to discuss project.

Session Moderator, International Arachis Genome Meeting, Oct. 2007.

**b. Workshops (3 total, 3 after began current position)**

Burow, M. D., and J. Burke. (Aug. 2005) Peanut Research. Texas Teachers Tour.

Burow, M., T. Baughmann, C. Trostle, J. Ayers, A. Muitia, and N. Puppala. (March 2004) Peanut Varieties for West Texas in 2004. Texas South Plains Peanut Production Workshop.

Burow, M. Breeding Peanut for Seed Quality. (Oct. 2002) Presentation to the U. S. Tour of European Peanut Buyers, Lubbock, Texas.

**c. Field Days (33 total, 33 after began current position)**

Burow, M. D., **L. Commey, M. M. Yerra, Y. K. Pankaj**, H. Pham, Y. Emendack, W. Guo, and J. Cason. (Aug. 15, 2023) Tolerance to Water Deficit Stress in Peanut and Guar. Field Tour at the USDA-ARS-CSRL Research Farm

Peanut and Sesame Breeding, Sep. 26 to Sep 28 2022, Visit of representatives of EMBRAPA-Algodão and affiliated organizations at Texas A&M AgriLife Research - Lubbock.

Peanut Breeding and Genetics Program, June 11, 2021 to visiting Congressional delegation, Texas A&M AgriLife Research - Lubbock.

Tolerance to Water Deficit Stress in Peanut, Field Tour at the USDA-ARS-CSRL Research Farm, August 8, 2019

Peanut Experiments at the USDA-ARS-CSRL Farm, August 7, 2018

Peanut Experiments at the USDA-ARS-CSRL Farm, September 15, 2017

Tour of demonstration plots of Valencia peanut breeding lines, and increases of Virginia breeding lines (Brownfield, TX) to representatives of the Severn Peanut Co, Aug. 29, 2017. Demonstrated the variety TamVal OL14, and other breeding lines.

Visit of Severn Peanut Company to Texas A&M AgriLife, to discuss building a peanut processing plant in Lubbock, in cooperation with the Lubbock Economic Development Authority, Feb, 23, 2016. As a follow-up, Severn contracted to use space at the LEDA railport on FM1294 for building an almond butter plant for now, with potential expansion into peanut processing in the future.

Tour of increase plot of TamVal OL14 (Morton, TX), and visit to Valencia test plots (Brownfield, TX) to representatives of the Severn Peanut Co, Sept. 8. 2016. Demonstrated the variety TamVal OL14, and other

breeding lines.

- Trostle, C., M. Burow, and N. Puppala. Valencia Peanut Field Day. Visit with farmers. Morton, TX. Sept. 28, 2015
- Burow, M., J. Chagoya\*, and T. Tengey\*. Populations under Development for the PMIL project. Presentation to Peanut and Mycotoxin Innovation Lab visitors from Africa. Lubbock, TX. July 28, 2015
- McDonald, G., M. Burow, N. Puppala. Field Tour of West African Materials for Peanut and Mycotoxin Innovation Lab visitors from Africa. Citra, FL. July 16, 2015
- Burow, M. D., J. Halfmann, J. Chagoya, M. Baring, C. Simpson, and J. Cason. (Sep. 2012). New Peanut Variety Releases and Testing. Texas Tech University Quaker Experimental Farm Field Day.
- Burow, M., M. Baring, C. Simpson, and J. Cason. (Jul. 2011). Peanut Breeding at the Texas AgriLife Farm. Tour of visiting Israeli scientists.
- Burow, M. D., J. Ayers, M. Baring, C. Simpson, J. Cason, and M. Gomez. (June, 2010) Peanut Breeding at the J. Leek and Texas Tech Farms. Tour for representatives of EMBRAPA.
- Burow, M. D., J. Ayers, N. Puppala, C. Simpson. (Sep. 2008). Peanut Breeding and Genetics. New Mexico State University Field Day.
- Burow, M. D., J. Ayers, N. Puppala, C. Simpson. (Sep. 2007). Peanut Breeding and Genetics. New Mexico State University Field Day.
- Burow, M. D. (Oct. 2007) Peanut Cultivar Development. J. Leek/ Masterfoods Peanut Training course.
- Burow, M. D., J. Ayers, M. Gomez S., and N. Denwar. (Aug. 2008) Peanut Breeding for Improved Edible Seed Quality, Drought Tolerance, Disease Resistance, and Potential for Biofuels. TTU Quaker Farm Field Day.
- Burow, M. D., J. Ayers, N. Puppala, C. Simpson. (Sep. 2006). Peanut Breeding and Genetics. New Mexico State University Field Day.
- Burow, M. D. (Oct. 2006) Peanut Cultivar Development. J. Leek/ Masterfoods Peanut Training course.
- Burow, M. D., J. Ayers, M. Baring, C. Simpson, J. Cason, and M. Gomez. (Aug. 2007) American Peanut Council Peanut Leadership Tour: Peanut Breeding at the J. Leek (TPPB) Farm.
- Burow, M. D., J. Ayers, M. Baring, C. Simpson, J. Cason, and M. Gomez. (Aug. 2006) Breeding for Improved Peanuts at the Texas Tech Farm. Texas Tech Field Day.
- Burow, M. D., J. Ayers, M. Baring, C. Simpson, J. Cason, and M. Gomez. (Aug. 2006) Peanut Breeding at the J. Leek (TPPB) Farm. Texas Peanut Producers Board Big Ol' Texas Peanut Tour.
- Burow, M. D. J. Ayers, Y. López, J. Wallace, C. Lowery, C. Simpson, M. Baring, J. Burke, and J. Cason. (Aug. 2005). Texas Tech Peanut Plot Tour.
- Burow, M., A. Muitia, and J. Ayers. (Sep. 2005) Peanut Breeding: Spanish and Valencia Varietal Development. New Mexico State University Ag. Science Center at Clovis Field Day.
- Burow, M., Y. López, J. Wallace, A. Muitia, J. Ayers, C. Simpson, and J. J. Burke. (Sep. 2005) Peanut Breeding and Genetics. Texas Tech University Farm Tour at Lubbock.
- Burow, M., M. Baring, C. Simpson, J. Ayers, and M. Black. (Sep. 2005)

Peanut Breeding and Genetics: Early-Maturing Varieties. Frio County Peanut Field Day.

- Burow, M., Y. López, J. Wallace, I. Wallerstein, J. Ayers, M. Baring, C. Simpson, A. M. Schubert, J. Reed, J. Burke, D. Porter, M. Black, J. Grichar, J. Starr, and N. Puppala. (Sep. 2004) Peanut Breeding and Genetics. Western Peanut Growers Research Farm Tour at Denver City.
- Burow, M., A. Muitia, and J. Ayers. (Sep. 2004) Spanish and Valencia Varietal Development. New Mexico State University Ag. Science Center at Clovis Field Day.
- Burow, M., Y. López, J. Wallace, A. Muitia, J. Ayers, C. Simpson, and J. J. Burke. (Sep. 2004) Peanut Breeding and Genetics. Texas Tech Farm Tour at Lubbock.
- Burow, M., M. Baring, C. Simpson, J. Ayers, and M. Black. (Sep. 2004) Development of Early-Maturing Peanuts with TSWV Resistance. Frio County Peanut Field Day.
- Burow, M. D., and A. Muitia. (Aug. 2003) Peanut Breeding and Genetics - Breeding for Improved Spanish and Valencia Crosses. New Mexico State University - Clovis, NM.
- Burow, M. D. (Sep. 2003) Peanut Breeding and Genetics - Breeding for Early Maturity. Collingsworth County - Wellington, TX.
- Simpson, C. M. Burow, Y. López, J. Ayers, M. Baring, A. Muitia, J. Wallace, A. M. Jesubatham. (Sep. 2003) Breeding and Genetics. Western Peanut Growers Research Farm - Denver City, TX.
- Burow, M. D., Y. López, M. Baring, and O. D. Smith. (Sep. 2002) Breeding for High-Oleic Valencia and Spanish Peanuts. Field Day - New Mexico State University, Clovis, New Mexico.
- Burow, M. D., C. E. Simpson, Y. López, and M. Baring. (Sep. 2002) Breeding for Improved Peanuts. Field Day - West Texas Peanut Growers Farm, Denver City, Texas.
- Breeding for Improved Peanuts. (Sep. 2001) Mark D. Burow and Charles E. Simpson. Field Day - West Texas Peanut Growers Farm.

#### **d. Web Pages**

- Burow, M. D. <http://www.myweb.ttu.edu/mburow/> (2014)
- Burow, M. D. Peanut Breeding and Genetics. (2002) Project web page at <http://lubbock.tamu.edu/peanuts>.

#### **E. Teaching**

- Burow, M. D., G. B. Burow, and P. D. Burow (May 2010). Visit to Brazil. Murfee Elementary School 3<sup>rd</sup> grade class, Lubbock Independent School District.
- Burow, M.D. (Apr. 2007). Peanuts in Texas. 2<sup>nd</sup> grade class, Frenship School District.

### **3. Administrative Duties**

#### **a. Committee Assignments**

- International  
International Peanut Genome (Sequencing) Project Executive Committee, Jun.

2009 - present.

Peanut Collaborative Research Support Program (USAID), PI of West African

breeding project, Jul. 2001 - Dec. 2012.

Peanut and Mycotoxin Innovation Lab (USAID), PI of West African breeding project, Dec. 2013 - 2017.

Peanut Innovation Lab (USAID), PI of West African breeding project, Nov. 2018

- present.

#### National

Peanut Crop Germplasm Committee, Jul. 2001 - present

Chair, Peanut Crop Germplasm Committee, Jul. 2016 - present

American Peanut Research and Education Society

Chair, Peanut Quality Committee, Jul. 2002 - 2004.

Fellows Committee, 2005 - 2007; 2015-2017.

Chair, Fellows Committee, 2015.

Dow Elanco Awards Committee 2008-2010.

Judge, Bailey Award committee, 2019-2021.

Southwest Regional Representative to Board of Directors, 2019-2021

President-elect, 2021-2022

President, 2022-present

Legume Crop Genome Initiative - Representative for Peanut, Jul. 2001 - 2003

Peanut Genome Initiative, 2004 - 2009.

Legume Information System, Peanut representative, 2005-2010

#### Department

Promotion and Tenure Committee, Texas A&M University, Jul. 2016 - Jun. 2018

Texas Tech Genetics Teaching Committee, 2008-present

Texas Tech Greenhouse Committee, 2006 -2008

Seeds of Change Teaching Committee, Texas Tech University,

Department of

Plant and Soil Science. Jun. 2005 - 2006.

TAES - Texas Peanut Program Strategic Plan Committee, 2002-2004

Texas Tech University, Dept. of Plant and Soil Science.

Search Committee, Cotton Genomics position, 2002.

Louisiana State University, Department of Botany, Staff Representative to Faculty, 1993.

St. Olaf College, Paracollege Senior Tutor Search Committee, 1981.

#### **b. Meetings Hosted.**

Peanut Seed Quality Summit, American Peanut Research and Education Society Annual Meeting. (July 2004)

#### **4. Editorial Assignments**

Associate Editor, *Peanut Science*, Jul. 2001 - Jul. 2007

Assistant Technical Editor for abstracts, American Peanut Research and

## 5. Review Panels

### **a. Grant Review Panels**

USDA NP301 Review panel, 2017-2018  
American Peanut Council, Mar. 2013.  
Ogallala Aquifer Initiative, Mar. 2012  
American Peanut Council, Mar. 2011.  
American Peanut Council, Mar. 2010.  
American Peanut Council, Mar. 2009.  
American Peanut Council, Mar. 2008.  
American Peanut Council, Mar. 2007.  
American Peanut Council, Mar. 2006.  
National Science Foundation Plant Genome, *ad hoc* reviewer, 2003 - 2006  
USDA-SBIRR, *ad hoc* reviewer, 2002.  
USDA NP301 reviewer, 2017

### **b. Germplasm Review Panels.**

TAES *ad hoc* reviewer, 2002 - 2004.

### **c. Other**

IPGB Scientific Advisory Board, Texas A&M Department of Soil and Crop Science, 2001 - 2002.

## 6. Membership in Professional Societies.

American Peanut Research and Education Society, 1998-present  
Crop Science Society of America, 1988-present  
American Association for the Advancement of Science  
American Peanut Council, 2001 - present

## 7. Other:

Represented St. Olaf College at inauguration of TTU President Duane Nellis, Dec. 11, 2013, at request of St. Olaf President David Anderson

## E. Awards

Texas A&M Office of Technology Commercialization award for commercialization of Tamrun OL14 peanut, joint with Mike Baring, Charles Simpson, John Cason, and Jennifer Chagoya. Sept 2020.  
Bailey Award for best paper presented, American Peanut Research and Education Society meeting. Burow, M. D., R. Chopra, R. Kulkarni, T. Tengey, V. Belamkar, J. Chagoya, J. Wilson, M. G. Selvaraj, C. E. Simpson, M. R. Baring, F. Neya, P. Sankara, and N. Denwar. (Jul. 2017) Development of SNP-Based Molecular Markers for a Peanut Breeding Program. Proc. Amer. Peanut Res. Educ Soc. Awarded July, 2018 at the 50<sup>th</sup> Annual Meeting of the American Peanut Research and Education Society.  
Texas A&M Office of Technology Commercialization award for commercialization of Tamrun OL11 peanut, joint with Mike Baring, Charles Simpson, John Cason. May 2017.

- Texas A&M Office of Technology Commercialization award for commercialization of Webb peanut, joint with Mike Baring, Charles Simpson, John Cason. May 2017.
- Peanut Genome Consortium of the International Peanut Genome Initiative award, joint with C. Holbrook, T. Isleib, C. Chen, B. Tillman, Y. Chu, B. Guo, P. Ozias-Akins, A. Culbreath, T. Brenneman, N. Barkley, and T. Sinclair. "For developing, maintaining, and characterizing genetically-structured populations to establish links between gene sequences and key traits in cultivated peanut." Given at the 7<sup>th</sup> International Meeting Advances in Arachis Genomics and Biotechnology, Savannah, Georgia. November, 2014.
- Texas A&M Office of Technology Commercialization award for commercialization of Tamrun OL07 peanut, joint with Mike Baring, Charles Simpson, John Cason. April 2014
- Texas A&M Office of Technology Commercialization award for commercialization of Red River Runner peanut, joint with Mike Baring, Charles Simpson, John Cason. April 2014
- AgriLife Office of Technology Commercialization award, for release of the peanut cultivar Tamrun OL06, award given April, 2013.
- Nomination for Bailey Award for best paper presented, American Peanut Research and Education Society meeting. Burow, M. D., J. L. Starr, C. E. Simpson, C-H. Park, and A. H. Paterson. (Jul. 2013) Identification of Orthologous QTLs for Resistance to the Root-knot Nematode (*Meloidogyne arenaria* (Neal) Chitwood) in Peanut (*Arachis hypogaea* L.)
- Nomination for Bailey Award for best paper presented, American Peanut Research and Education Society meeting. Burow, M. D., J. L. Ayers, A. Muitia, A. M. Schubert, Y. Lopez, C. E. Simpson, N. Puppala, and M. R. Baring. (Jul. 2011). Development of High-Yielding, High-Oleic, Early-Maturing Spanish Peanuts. Proc. Amer. Peanut Res. Educ. Soc., p81.
- Nomination for Bailey Award, American Peanut Research and Education Society, for best graduate student paper presented: Ayers\*, J. L., and M. D. Burow (Jul. 2010) Oil Content of Commercial Peanut Varieties Grown under Reduced Irrigation and Seeding Rate in West Texas. Amer. Peanut Res. Educ. Soc. Annual Meeting.
- George Washington Carver award for grad student/technician Jamie Ayers, for measurable impact on peanut cultivation or peanut product development and strength of character as reflected by community involvement or service, from the National Peanut Board, 2007
- Nomination for Bailey Award, American Peanut Research and Education Society for seminar, for best paper presented: López, Y., and M. D. Burow. (Jul. 2004) Development and Validation of CAPS Markers for the High Oleic Trait in Peanuts. Amer. Peanut Res. Educ. Soc. Annual Meeting.