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# ICGI Research Conference, Brazil

Brasília-DF

September 18-20, 2006

Program & Posters



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## Conference Committee

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Jun Zhu *Bioinformatics*  
Andy Paterson *Evolutionary & Comparative Genomics*  
Norma Trolinder *Functional Genomics*  
Richard Percy *Germplasm & Genetic Stocks*  
Tianzhen Zhang *Structural Genomics*

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Edina Moresco *Chair*  
Maria Fátima Grossi *Co-Chair*  
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Paulo Barroso *Co-chair*  
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# PROGRAM

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY
08:00		REGISTRATION POSTER SETUP		
08:30		OPENING	STRUCTURAL	FUNCTIONAL 2
09:30		COFFEE		COFFEE
10:00		GERMPLASM 1		COFFEE
10:30			BIOINFORM C & EVOL	
11:00				
12:00		LUNCH	LUNCH	LUNCH
13:30		FUNCTIONAL 1	GERMPLASM 2	LOCAL TOUR FACILITIES
15:00		COFFEE	COFFEE	
15:30		POSTERS VIEWING	BUSINESS DISCUSSION	
15:45				
16:00	REGISTRATION			
16:15	POSTER SETUP			
17:00				
17:15				
19:00				
20:00	RECEPTION		DINNER	
21:00				
22:00				



## ICGI Research Conference, Brazil

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### PROGRAM

#### 09/17/2006 (Sunday)

16:00 – Registration opening

16:15 – Poster setup

17:00 – Reception

#### 09/18/2006 (Monday)

08:00 – Registration

08:15 – Poster setup

08:30 – Opening

#### Welcome and Acknowledgments

Dr. Russ Kohel - ICGI Chair

Dr. Edina Moresco - Local Chair

#### 08:45 – Cotton in Brazil: a Historical Approach

Álvaro Salles – President of Facual

#### 9:30 – Coffee

## 09/18/2006 (Monday)

### Session I – Germplasm & Genetic Stocks

Chair: Richard Percy

Time	Title	Presenter
10:00	Study of the determinism of the glanded-plant and glandless-seed trait introgressed in <i>G. hirsutum</i> from <i>G. Sturtianum</i> .	<b>Halima Benbouza</b> , Gembloux Agricultural University, Belgium
10:15	New low gossypol cotton germplasm.	<b>Jodi Sheffler</b> , USDA-ARS, USA
10:30	Breeding and heritage of an upland cotton germplasm with delayed gland morphogenesis from <i>Gossypium bickii</i> .	<b>Shuijin Zhu</b> , Zhejiang University, China
10:45	Transformation of cotton <i>Gossypium hirsutum</i> L. for abiotic stress tolerance through <i>Agrobacterium</i> -mediated transformation.	<b>Annamalai Muthusamy</b> , Jawaharlal Nehru University, India
11:00	Genetic engineering and in vitro selection of India cotton ( <i>Gossypium hirsutum</i> L.) for improved fungal disease tolerance.	<b>Ganesan Markkandan</b> , Bharathidasan University, India
11:15	Identification of resistant sources against Burewala virus disease	<b>Yusuf Zafar</b> , National Institute for Biotechnology & Genetic Engineering, Pakistan

## 09/18/2006 (Monday)

### Session I – Germplasm & Genetic Stocks

Chair: Richard Percy

Time	Title	Presenter
11:30	NILs of <i>G. herbaceum</i> introgressed with <i>G. Anomalum</i> .	<b>Ishwarappa Katageri</b> , University of Agricultural sciences Dharwad, India
11:45	Interspecific chromosome substitution lines in Upland cotton improvement.	<b>Sukumar Saha</b> , USDA-ARS, USA

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**12:00 Lunch**

## 09/18/2006 (Monday)

### Session II: Functional Genomics

Chair: Norma Trolinder

Time	Title	Presenter
13:30	Accumulation of genome-specific transcripts, transcription factors and phytohormonal regulators during early stages of fiber cell development in allotetraploid cotton.	<b>Jeffrey Chen</b> , University of Texas at Austin, USA.
13:45	A platform construction for cotton functional genomics.	<b>Xianlong Zhang</b> , Huazhong Agricultural University, China
14:00	A step toward expression profiling of cotton fiber.	<b>Mehboob-ur-Rahman</b> , National Institute for Biotechnology & Genetic Engineering, Pakistan
14:15	A proteomic approach toward understanding fiber development of <i>Gossypium hirsutum</i> .	<b>Kang Liu</b> , Nanjing Agricultural University, China
14:30	Improving cotton fiber quality.	<b>Tony Arioli</b> , Bayer Bioscience, Belgium
14:45	<i>Calotropis procera</i> , a proposed model system, to study fiber characteristics.	<b>Aftab Bashir</b> , National Institute for Biotechnology and Genetic Engineering, Pakistan

15:00 Coffee

15:30 Poster Viewing

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## 09/19/2006 (Tuesday)

### Session III Structural Genomics

Chair: Tianzhen Zhang

Time	Title	Presenter
8:30	Construction of a PCR-based genetic linkage map with functional markers.	<b>Tianzhen Zhang</b> , Nanjing Agricultural University, China
8:45	Physical mapping of fiber genes in cotton.	<b>John Yu</b> , USDA-ARS, USA
9:00	A strategy for developing SNP markers for the MIC-3 root-specific gene family associated with nematode resistance in <i>Gossypium</i> spp.	<b>Sukumar Saha</b> , USDA-ARS, USA
9:15	QTL mapping for resistance to root-knot nematodes in the M-120 RNR Upland cotton line.	<b>Peng Chee</b> , University of Georgia, USA
9:30	Identification of DNA markers linked with cotton leaf.	<b>Mehboob-ur-Rahman</b> , National Institute for Biotechnology & Genetic Engineering, Pakistan

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## 09/19/2006 (Tuesday)

### Session III Structural Genomics

Chair: Tianzhen Zhang

Time	Title	Presenter
9:45	Cotton molecular breeding in CRI.	<b>Shuxun Yu</b> , Cotton Research Institute, Chinese Academy of Agricultural Sciences, China
10:00	Linkage disequilibrium based association mapping of fiber quality traits in cotton using diverse cotton germplasm from Uzbekistan.	<b>Ibrokhim Y. Abdurakhmonov</b> , Institute of Genetics and Plant Experimental Biology, Uzbekistan
10:15	LTR-retrotransposons-based molecular markers in cultivated Egyptian cottons <i>G. barbadense</i> L.	<b>Essam Zaki</b> , Genetic Engineering and Biotechnology Research Institute, Egypt

10:30 Coffee

## 09/19/2006 (Tuesday)

### Session IV Joint Session: Bioinformatics and Evolutionary & Comparative Genomics.

Chairs: Jun Zhu & Andy Paterson

Time	Title	Presenter
11:00	Methylation filtering analysis of <i>Gossypium</i> genomes.	<b>Brian Scheffler</b> , USDA-ARS, USA
11:15	Computational mining of SSRs in ESTs of cotton and other dicotyledonous crops.	<b>Siva Prasad Kumpatla</b> , Dow AgroSciences LLC, USA
11:30	Cotton Microsatellite Database for comparative characterization of SSRs in <i>Gossypium</i> .	<b>Michael Palmer</b> , Clemson University, USA
11:45	CottonDB.org: new website for cotton genome database.	<b>Jing Yu</b> , USDA-ARS, USA
12:00	New methods for analyzing complex traits.	<b>Jun Zhu</b> , Zhejiang University, China

12:15 Lunch



## 09/19/2006 (Tuesday)

### Session V Germplasm & Genetic Stocks

Chair: Richard Percy

Time	Title	Presenter
13:45	Diversity among landraces of <i>Gossypium hirsutum</i> and D-genome species determined by SSR markers.	<b>Mauricio Ulloa</b> , USDA-ARS, USA
14:00	Genetic structure of and in situ conservation of natural populations of <i>Gossypium mustelinum</i> .	<b>Paulo Barroso</b> , Embrapa Cotton, Brazil
14:15	Genetic, biochemical and molecular study on colored cottons.	<b>Xiongming Du</b> , Cotton Research Institute, CAAS, China
14:30	Biotechnology of accelerated breeding and improvement of cotton varieties.	<b>Jodi Scheffler</b> , USDA-ARS, USA
14:45	Toward to the construction of mutant library induced by T-DNA insertion and EMS in diploid and tetraploid cotton.	<b>Baoliang Zhou</b> , Nanjing Agricultural University, USA
15:00	Genetic variability in absorption of K <sup>+</sup> and Na <sup>+</sup> among tetraploid Cotton cultivars under salinity stress.	<b>Moghaddam Ramazani</b> , Majidi Agricultural Biotechnology Research Institute, Karaj, Iran

15:15 - Coffee

15:45 - Business Discussion

20:00 - Dinner

## 09/20/2006 (Wednesday)

### Session VI - Functional Genomics

Chair: Norma Trolinder

Time	Title	Presenter
8:30	Expression profiling identifies genes expressed early during lint fiber initiation in cotton.	<b>Elizabeth S. Dennis</b> , CSIRO Plant Industry, Australia
8:45	A transcriptome model of gene response to osmotic stress.	<b>James McD. Stewart</b> , University of Arkansas, USA
9:00	Proteomic analysis of cotton leaf under <i>Verticillium dahliae</i> stress.	<b>Zhiying Ma</b> , Hebei Agricultural University, China
9:15	Over-expression GbERF2 transcription factor enhances <i>Alternaria longipes</i> disease resistance by activating expression of downstream genes.	<b>Kaijing Zuo</b> , Shanghai Jiaotong University, China
9:30	Survey of 42,000 <i>Gossypium hirsutum</i> cv. Maxxa BAC-end sequences and frequency, type, and annotation of BAC-derived SSRs.	<b>Michael Palmer</b> , Clemson University, USA
9:45	The biochemical inheritance and QTLs of short-seasoned cotton cultivars that express early maturity without premature senility.	<b>Shuli Fan</b> , Cotton Research Institute, Chinese Academy of Agricultural Sciences, China

10:00 - Coffee

10:30 - Special Topics

11:15 - Adjourn

11:30 - Extra Meetings

12:30 - Lunch

14:00 - City Tour



## POSTER SESSION

## GERMPLASM AND GENETIC STOCKS

### **P1. Tracking Gene Flow Between *Gossypium barbadense* And *Gossypium hirsutum* in the Region of the Mato Grosso, using Microsatellite Markers.**

Y. G. Castilho, Campus UniCEUB Brasília DF, Brazil.  
P. A. V. Barroso, EMBRAPA Algodão, Rua Osvaldo Cruz, 1143 Centenário Campina Grande PB, Brazil.  
**Ana Y. Ciampi**, ([aciampi@cenargen.embrapa.br](mailto:aciampi@cenargen.embrapa.br)), EMBRAPA Cenargen, PqEB Av. W5 Norte Final Brasília DF, Brazil.

### **P2. Determination of Genetic Diversity of *Gossypium Hirsutum* Accessions in Argentina with SSR Markers**

**Guillermo Gomez**, ([ggomez@chaco.inta.gov.ar](mailto:ggomez@chaco.inta.gov.ar)), INTA-EEA Saenz Pena, CC 164 (3700) Pcia. R. S. Pena, Chaco, Argentina.  
Daniel Diaz, ([ddiaz@cnia.inta.gov.ar](mailto:ddiaz@cnia.inta.gov.ar)), INTA-EEA Saenz Pena, CC 164 (3700) Pcia. R. S. Pena, Chaco, Argentina.  
Olegario Royo, ([oroyo@chaco.inta.gov.ar](mailto:oroyo@chaco.inta.gov.ar)), INTA-EEA Saenz Pena, CC 164 (3700) Pcia. R. S. Pena, Chaco, Argentina.  
Juan Poisson, ([jpoisson@chaco.inta.gov.ar](mailto:jpoisson@chaco.inta.gov.ar)), INTA-EEA Saenz Pena, CC 164 (3700) Pcia. R. S. Pena, Chaco, Argentina.  
Gabriela Pacheco, ([mpacheco@cnia.inta.gov.ar](mailto:mpacheco@cnia.inta.gov.ar)), INTA-EEA Saenz Pena, CC 164 (3700) Pcia. R. S. Pena, Chaco, Argentina.

### **P3. Genetic Diversity Among Feral Populations of Mocé Cotton from the Brazilian Semiarid Region.**

**Lucia Viera Hoffmann**, ([hoff@cnpa.embrapa.br](mailto:hoff@cnpa.embrapa.br)), EMBRAPA Algodão, Rua Osvaldo Cruz, 1143 Campina Grande, PB, Brazil  
Ivandilson Pessoa Pinto de Menezes, EMBRAPA Algodão, Rua Osvaldo Cruz, 1143 Campina Grande, PB, Brazil.  
Milena Ferreira Alves, EMBRAPA Algodão, Rua Osvaldo Cruz,

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Ana Carolina Assis Dantas, EMBRAPA Algodão, Rua Osvaldo Cruz, 1143 Campina Grande, PB, Brazil.  
Paulo Augusto Vianna Barroso, EMBRAPA Algodão, Rua Osvaldo Cruz, 1143 Campina Grande, PB, Brazil.

### **P4. GISH-NORs in Cotton Generated by FISH.**

**Kunbo Wang**, ([wkbcric@cricaas.com.cn](mailto:wkbcric@cricaas.com.cn)), Key Lab of Cotton Genetic Improvement of Ministry of Agriculture, Cotton Research Institute of Chinese Academy of Agricultural Sciences, Anyang City, Henan Province, China.

### **P5. Plant Regeneration of TM-1 via Tissue Culture.**

**Chuanliang Liu**, ([Liucl@cricaas.com.cn](mailto:Liucl@cricaas.com.cn)), Cotton Research Institute, Kafaqu, Anyang, Henan Province, China.  
Uguang Li, ([lifug@cricaas.com.cn](mailto:lifug@cricaas.com.cn)), Cotton Research Institute, Kafaqu, Anyang, Henan Province, China.  
Chunxu Leng, ([lengchunxu@sohu.com](mailto:lengchunxu@sohu.com)), Cotton Research Institute, Kafaqu, Anyang, Henan Province, China.

### **P6. A Low Cost and Low Hazard Method for Extracting Cotton DNA.**

**Mohammad Reza Ramazani Moghaddam**, ([Rezaramazani@yahoo.com](mailto:Rezaramazani@yahoo.com)), Cotton Research Station of Kashmar, Kashma, Iran.  
I. Majidi, Agricultural Biotechnology Research Institute, Karaj, Iran.  
H. R. Zamanizadeh, Islamic Azad University Science and Research Campus, Tehran, Iran.  
S.A. Mohammadi, Tabriz University, Iran.

### **P7. Isolation of Mutant Lines for Improved Oil, Lipid Content and Fatty Acid Compositions through Ovule Culture of Cotton with *in vitro* Mutagenesis.**

**Annamalai Muthusamy**, ([mnaveen07@yahoo.co.in](mailto:mnaveen07@yahoo.co.in)), School

of Life Sciences, Jawaharlal Nehru University, New Delhi, India.  
Narayanasamy Jayabalan, ([jayabalan54@yahoo.co.in](mailto:jayabalan54@yahoo.co.in)),  
School of Life Sciences, Jawaharlal Nehru University, New Delhi, India.

**P8. New Germplasm and Breeding Strategy for Developing Wide Adaptability Extra Long Staple GMO Hybrid Cottons and Straight Varieties for Indian Mill Industry**

**Srirangam Srinivasan Narayanan**,  
([narayananss@rediffmail.com](mailto:narayananss@rediffmail.com)), H.No. 33-63, Flat No. 102,  
Victory Apartments, RTC Colony, Trimalgherry, Secunderabad-500 015 AP, India.

**P9. Brazilian Cotton Cultivar Transformation by Pollen Tube Pathway Methodology for Insect Pest Resistance.**

**Osmundo Brilhante De Oliveira Neto**,  
([Osmundo@cenargen.embrapa.br](mailto:Osmundo@cenargen.embrapa.br)), Embrapa Recursos Genéticos e Biotecnologia, Brasília 70770-900, Brazil.  
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Maria Fátima Grossi de Sá, ([fatimasa@cenargen.embrapa.br](mailto:fatimasa@cenargen.embrapa.br)), Embrapa Recursos Genéticos e Biotecnologia, Brasília 70770-900, Brazil.

**P10. Agronomic and Fiber Properties of an Introgressed Recombinant Inbred Population of Cotton (*Gossypium hirsutum* L.).**

**Richard G. Percy**, ([RPercy@uswcl.ars.ag.gov](mailto:RPercy@uswcl.ars.ag.gov)), U.S.  
Arid-Land Agricultural Research Center, USDA-ARS,

Maricopa, AZ, USA.  
Roy G. Cantrell, ([RCantrell@cottoninc.com](mailto:RCantrell@cottoninc.com)), Cotton Incorporated, Cary, NC, USA.  
Jinfa Zhang, ([jinzhang@nmsu.edu](mailto:jinzhang@nmsu.edu)), Department of Agronomy and Horticulture, New Mexico State University, Las Cruces, NM, USA.

**P11. Detection of the New Particularities in Cotton Cytogenetic Lines of *G. Hirsutum***

**M. F. Sanamyan**, ([sanam\\_marina@yahoo.com](mailto:sanam_marina@yahoo.com)) National University of Uzbekistan, Uzbekistan.  
J. E. Petlyakova, ([pje@mail.ru](mailto:pje@mail.ru)), National University of Uzbekistan, Uzbekistan, Uzbekistan.  
E. M. Rakhmatullina, ([rakhm\\_em@mail.ru](mailto:rakhm_em@mail.ru)), National University of Uzbekistan, Uzbekistan.  
E. A. Sharipova, ([sharip\\_eln@mail.ru](mailto:sharip_eln@mail.ru)), National University of Uzbekistan, Uzbekistan.

**P12. The Evaluation of Cotton Varieties in Northern Communal of Namibia.**

**T. E. Alweendo**, [alweendot@mawrd.gov.na](mailto:alweendot@mawrd.gov.na), Ministry of Agriculture Water and Rural Development, Private Bag 13184, Windhoek, Namibia.

**P13. Genetic Basis of Evolution and Polymorphism of Cotton (*G. hirsutum* L.) Traits.**

**M. F. Abzalov**, [inst@gen.org.uz](mailto:inst@gen.org.uz), Institute of Genetics, Tashkent, Uzbekistan.

## FUNCTIONAL GENOMICS

### P1. Proteomic Analyses of Susceptible and Resistant Cotton Roots to *Meloidogyne incognita*

Paulo Henrique Alves da Costa, [costapha@yahoo.com.br](mailto:costapha@yahoo.com.br)  
Universidade de Brasilia (UnB), Brazil.

Raphael Garcia Souza, Evaristo, Faculdade da Terra de Brasilia (FTB), Brazil.

Jose Cesamildo Cruz Magalhães, Embrapa Recursos Genéticos e Biotecnologia, Brasília-DF, Brazil.

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Maria Fatima Grossi de Sa, [fatimasa@cenargen.embrapa.br](mailto:fatimasa@cenargen.embrapa.br), Embrapa Recursos Genéticos e Biotecnologia, Brasília-DF, Brazil.

### P2. Identification of Expansin Variants in Developing Cotton Fibers

Masooma Naseer Cheema, [masoomasajid@yahoo.com](mailto:masoomasajid@yahoo.com), Plant Genome Resource Lab, Plant Biotechnology Division, NIBGE, Jhang Road Faisalabad, Pakistan.

Aftab Bashir, [aftabbashir@nibge.org](mailto:aftabbashir@nibge.org), Plant Genome Resource Lab, Plant Biotechnology Division, NIBGE, Jhang Road Faisalabad, Pakistan.

Yusuf Zafar, NIBGE, Jhang Road, Faisalabad, Pakistan

Kausar A., Food and Agriculture, Planning Commission, Islamabad, Pakistan.

### P3. A Single-Cell-Based Genetic Transformation System in Cotton

Kedong Da, Department of Crop and Soil Sciences, University of Georgia, Tifton Campus, Tifton, GA 31794, USA.

Peggy Ozias-Akins, Department of Horticulture, University of Georgia, Tifton Campus, Tifton, GA 31794, USA.

Peng Chee, [pwchee@uga.edu](mailto:pwchee@uga.edu), Department of Crop and Soil Sciences, University of Georgia, Tifton Campus, Tifton, GA 31794, USA.

### P4. Proteomic analysis of growing- and sporulating- *Bacillus thuringiensis* (S811) and activity towards *Anthonomus grandis* (Coleoptera: Curculionidae) Larvae

Érico Augusto Rosas de Vasconcelos, [Ericoarv@gmail.com](mailto:Ericoarv@gmail.com), Embrapa Recursos Genéticos e Biotecnologia, Parque Estação Biológica, Av. W5 Norte (final), Postal Box 02372, Brasília, DF 70770-900, Brasil.

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### P5. Construction and Analysis of Two ESTs Libraries of Cotton (*Gossypium hirsutum*) Roots from Resistant and Susceptible Varieties to the Root-Knot Nematode (*Meloidogyne incognita*)

Norma Santos Paes, [norma@cenargen.embrapa.br](mailto:norma@cenargen.embrapa.br), Embrapa Recursos Genéticos e Biotecnologia, Parque Estação Biológica, Av. W5 Norte (final), Postal Box 02372, Brasília, DF 70770-900, Brasil.

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## STRUCTURAL GENOMICS

### P1. Molecular Marker Study of Fiber-related Traits in Upland Cotton (*Gossypium hirsutum* L.)

Shufang Wang, Cotton Research Institute, CAAS; Key  
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Aiying Liu, Cotton Research Institute, CAAS; Key Laboratory of  
Cotton Genetic Improvement, Ministry of Agriculture, Anyang,  
Henan 455004, P R China.

### P2. Development of Gene-based Markers and their Chromosomal Localization in Cotton (*Gossypium* spp)

**Ramesh Kantety**, [ramesh.kantety@email.aamu.edu](mailto:ramesh.kantety@email.aamu.edu),  
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Govind Sharma, Department of Plant & Soil Science, Alabama  
A&M University, P.O. Box 1927, Normal, AL 35762, USA

### P3. Construction of Molecular Marker Genetic Linkage Map and Localization of QTLs for Economic Traits of Allotetraploid Cotton

Xianlong Zhang, [xlzhang@mail.hzau.edu.cn](mailto:xlzhang@mail.hzau.edu.cn), National Key  
Laboratory for Genetic Improvement of Crops, Huazhong  
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Zhongxu Lin, National Key Laboratory for Genetic  
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University, Wuhan, Hubei, China.

Xiaoping Guo, National Key Laboratory for Genetic  
Improvement of Crops, Huazhong Agricultural  
University, Wuhan, Hubei, China.

### P4. Molecular Tagging of Fiber Quality Traits (QTLs) in Cotton

**Jagannathan Amudha**, [ilakkiya97@rediffmail.com](mailto:ilakkiya97@rediffmail.com),  
Biotechnology Division, Central Institute for Cotton Research,  
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## EVOLUTIONARY AND COMPARATIVE GENOMICS AND BIOINFORMATICS

### P1. Engineered Cry8H Toxins Activity to the Cotton Boll Weevil, *Anthonomus grandis*, (Coleoptera: Curculionidae)

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### P2. Insecticidal Effects of Cry8H Mutants Generated by DNA Shuffling and Phage Display Techniques Against Fall Armyworm (*Spodoptera frugiperda*)

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### P3. Sequence Heterogeneity of Envelope-Containing Retrotransposons in Cultivated Diploid and Allotetraploid *Gossypium* species

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