

# Avi Karn, Ph.D.

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## EDUCATION

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- Doctor of Philosophy (Ph.D.),** Plant Breeding, Genetics and Genomics  
The University of Missouri, Columbia, MO, USA May, 2017
- Bachelor of Science (B.Sc.),** Agricultural Science and Biology  
Truman State University, Kirksville, Mo, USA May, 2012

## RESEARCH & WORK EXPERIENCE

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- Carl R. Woese Institute for Genomic Biology, University of Illinois, UC**  
Position: *Postdoctoral research associate* (May 2017 – present)  
Supervisor: **Dr. Andrew Leakey**  
Project: An integrated phenomics approach to identifying the genetics basis for maize root structure and control of plant nutrient relations.
- The University of Missouri, Div. of Plant Sciences, Columbia, MO**  
Position: *Graduate Research Assistant* (Jun 2012 – May 2017)  
Supervisor: **Dr. Sherry A. Flint-Garcia**  
Dissertation project: Evaluation of Teosinte Genetic Diversity for various Agronomic and Domestication Traits in Maize.
- Truman State University, Dept. of Agricultural Science, Kirksville, MO**  
Position: *Undergraduate Research Assistant* (Jan 2009 – May 2012)  
Supervisor: **Dr. Mark R. Campbell**  
Responsibility: Conducted molecular genetic analysis to exploit the biodiversity of exotic inbred lines from Central and South America to develop high amylose corn
- USDA-ARS, Germplasm Enhancement of Maize program, Kirksville, MO**  
Position: *Research Co-operator* (Jun 2009 - May 2012)  
Supervisor: **Dr. Mark R. Campbell**  
Responsibility: Assisted in preparing summer maize nursery with a tractor plowing, planting, cross pollinating, and harvesting
- Truman Maize Annotation Team (TMAT), Kirksville, MO**  
Position: *Research Student* (Aug 2011 – Jan 2012)  
Supervisor: **Dr. Brent Buckner**  
Project: Studied chromosome 6 of maize and the syntenic regions to investigate copy number and presence/absence variations utilizing statistical and bioinformatics tools
- TruScholars (NSF) Undergraduate Research Program, Kirksville, MO**  
Position: *Research Student* (Summer 2009)  
Supervisor: **Dr. Mark R. Campbell**  
Project: Designed gene specific marker for a novel allele involved in high amylose starch in maize and discovered a splicing mutation site within the exon-intron boundary of *SBE-Ia* allele from GEMS-0067 maize inbred line

## PUBLICATIONS

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**Karn, Avinash, Gillman, J. D., & Flint-Garcia, S. A. (2017).** *Genetic Analysis of Teosinte Alleles for Kernel Composition Traits in Maize*. *G3: Genes, Genomes, Genetics*, 7(4), 1157-1164.

**Karn, Avinash, Heim, C., Flint-Garcia, S., Bilyeu, K., & Gillman, J. (2016).** *Development of Rigorous Fatty Acid Near-Infrared Spectroscopy Quantitation Methods in Support of Soybean Oil Improvement*. *Journal of the American Oil Chemists' Society*, 1-8.

**Karn, Avinash, Brent Buckner, Diane Janick-Buckner, Mark Campbell, Michael Blanco, Marvin Scott, and Adrienne Moran Lauter.**  
"Breeding Specialty Starch Maize Using Exotic Genetic Resources for Gene Discovery of Novel Alleles and Modifiers with Materials Generated from the USDA-ARS GEM Project." *Maize Genetics Conference Abstracts*, p. P204 (2011).

**Karn, Avinash, Alex Lipka, Kathryn Guill, Christopher Bottoms, Justine Gerke, and Sherry A. Flint-Garcia**  
"Epistasis Analysis of Plant Development and Ear Morphology Traits in Teosinte Synthetic Population"  
– In preparation

**Karn, Avinash and Sherry A. Flint-Garcia**  
"Genome Wide Association and Epistasis Analysis for Kernel Composition Traits in the Teosinte Synthetic population"  
– In preparation

## REFERENCES

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**Dr. Sherry A. Flint-Garcia**  
Professor of Agriculture,  
Research Geneticist  
USDA ARS PGRU, Columbia, MO 65211

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**Dr. Mark R. Campbell**  
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