Tesfamichael H. Kebrom, Ph.D.

EDUCATION

Ph.D. Molecular & Environ. Plant Sciences — 2006
Texas A&M University — College Station, Texas

M.Phil. Crop Physiology — 1999
University of Reading — Reading, United Kingdom

B.Sc. (with distinction) Plant Sciences — 1996
University of Asmara — Asmara, Eritrea

RESEARCH EXPERIENCE

Prairie View A&M University — Prairie View, Texas
Research Scientist — April 2019- present
Plant System Biology
CRI Center for Computational Systems Biology/ Cooperative Agricultural Research Center

Prairie View A&M University — Prairie View, Texas
Program Coordinator — January 2019- April 2019
Office of Research, Innovation and Sponsored Programs

Prairie View A&M University — Prairie View, Texas
Postdoctoral researcher — June 2017- August 2018
Investigated sweet potato genomics and phytotoxicity of organic fertilizers and soil amendments

Texas A&M University — College Station, Texas
Assistant Research Scientist — 2012 – 2017
Investigated physiological, genetic & molecular mechanisms regulating shoot growth in sorghum

CSIRO (Australian National Lab) — Canberra, Australia
Postdoctoral Fellow — 2010 – 2012
Investigated physiological and molecular basis shoot branching (tillering) in the *tin* mutant wheat

Texas A&M University — College Station, Texas
Research Associate — 2009 – 2010
Investigated drought tolerance and root development in wheat and sorghum

Cornell University, Boyce Thompson Inst. — Ithaca, New York
Postdoctoral Research Associate, — 2006 – 2008
Investigated development of shoot branches (tillers) and C4 photosynthesis pathway in maize

Texas A&M University — College Station, Texas
Graduate Research Assistant — 2002 – 2006
Investigated regulation of shoot branching (tillering) in sorghum by shade signals of low red to far-red (R:FR) light – typical of high-density plant canopies

TEACHING EXPERIENCE

Texas A&M University College Station, Texas
Guest lecturer 2009

- **Plant Physiology (MEPS 601)** – light signalling, phytochromes and plant hormones

University of Asmara Asmara, Eritrea
Lecturer 1999 – 2002

Courses taught:

- **Plant Physiology** (PLSC 302, 4 credit hrs.)
- **Arid Land Eco-physiology** (PLSC 312, 4 credit hrs.)
- **Introduction to Plant Sciences** (PLSC 211, 2 credit hrs.)
- **Crop Improvement** (D-PLSC 262, 3 credit hrs.)

University of Asmara Asmara, Eritrea
Graduate assistant 1996 – 1997

Courses taught:

- **Eco-physiology for Arid Lands** (1 credit hr.), laboratory section for Eco-physiology
- **Plant Breeding** (1 credit), practical section for Plant Breeding (AZCP 408)

Mentored undergraduate students in plant sciences research at the **University of Asmara** (1999-2002), **Cornell University** (2006-2008), **Texas A&M University** (2012-2014) and **Prairie View A&M University** (2017-2018)

INVITED TALKS

- A Model Integrating Cytokinin into Regulation of Shoot Branching by Light Signals. *22nd International Conference on Plant Growth Substances, Toronto Canada.* June 24, 2016
- Grasses provide new insights into regulation of shoot branching. *Donald Danforth Plant Science Center*, *St. Louis, Missouri*. November 2, 2015
- The regulation of tillering in the grasses. School of Biological Sciences, *University of Queensland*, *Brisbane Australia*, September 3, 2011
- The regulation of tillering in the grasses. *Commonwealth Scientific and Industrial Research Organization* (*CSIRO*)*, Canberra Australia*. August 23, 2010
- The regulation of vegetative branch development in the grasses. *Department of Biology, University of Texas at Tyler*. April 3, 2010
- The regulation of tiller development in the grasses. *Plant Breeding Seminar, Department of Soil and Crop Science, Texas A&M University.* February 5, 2010
- The regulation of axillary shoot development by light signals. *Boyce Thompson Institute for Plant Science Research, Cornell Universit*y. May 10, 2006

ACADEMIC RELATED SERVICES

University of Asmara Asmara, Eritrea
Program Coordinator 2000 – 2002
General Agriculture Diploma (equivalent to Associate Degree)

- Planned courses to be offered every semester
- Evaluated performance of students and provided academic and professional advice
- Approved transfer of outstanding students from two-year General Agriculture program to four-year B.Sc. programs in Plant Sciences, Animal Science or Soil science
- Evaluated and improved curriculum of the program

University of Asmara Asmara, Eritrea
Member – Academic Commission 2000 – 2002
College of Agriculture and Aquatic Sciences

- Participated in planning short and long term goals of the College
- Approved semester course offerings and evaluated student performance
- Approved award of degrees and certificates
- Approved appointment of departmental faculty
- Evaluated and approved curriculum changes proposed by departments in the College

Invited Peer-Reviewer for plant science journals: *New Phytologist*, *Journal of Experimental Botany*, *Molecular Genetics and Genomics***,** *The Plant Cell*, *Functional Plant Biology*, *Plant Cell & Environment*, *Plant Physiology*, *Gene, Agronomy Research*

AWARDS AND HONORS

Office of the Chief Executive (OCE) Postdoctoral Fellowship
Commonwealth Scientific and Industrial Research Organization (CSIRO), Australia

Fellow, Graduate Teaching Academy
Texas A&M University

Norwegian University of Life Sciences (NORAGRIC) Scholarship
Two-year full scholarship to study Master of Philosophy (M.Phil.) in crop physiology

Outstanding Student Award
Medal award for graduating with highest GPA, College of Agriculture & Aquatic Sciences, University of Asmara, Eritrea

PROFESSIONAL AFFILIATIONS

- American Society of Plant Biologists
- American Society of Agronomy
- Crop Science Society of America
- Soil Science Society of America

PUBLICATIONS

Kebrom TH, Woldesenbet S, Bayabil HK, Garcia M, Gao M, Ampim P, Awal R, Fares A (2018) Evaluation of phytotoxicity of three organic amendments to collard greens using the seed germination bioassay. *Environmental Science & Pollution Research* **26**:5454–5462

Kebrom TH (2017) A growing stem inhibits bud outgrowth – the overlooked theory of apical dominance. *Frontiers in Plant Science* **8**:1874.

Kebrom TH, McKinley B, Mullet JE (2017) Dynamics of gene expression during development and expansion of vegetative stem internodes of bioenergy sorghum. *Biotechnology for Biofuels* **10**:159

Kebrom TH, Mullet JE (2016) Transcriptome profiling of tiller buds provides new insights into phyB regulation of tillering and indeterminate growth in sorghum. *Plant Physiology* **170**: 2232 - 2250

Kebrom TH, Brutnell TP (2015) Tillering in the *sugary1* sweet corn inbred is maintained by overriding the teosinte branched1 repressive signal. *Plant Signaling & Behavior* 10 (12): e1078954

Kebrom TH, Mullet JE (2015) Photosynthetic leaf area modulates tiller bud outgrowth in sorghum. *Plant, Cell & Environment* **38**: 1471-1478

Kebrom TH, Richards RA (2013) Physiological perspectives of reduced tillering and stunting in the tiller inhibition (*tin*) mutant wheat. *Functional Plant Biology* **40**: 977-985

Kebrom TH, Spielmeyer W, Finnegan EJ (2013) Grasses provide new insights into regulation of shoot branching. *Trends in Plant Science* **18**: 41-48

Kebrom TH, Chandler PM, Swain SM, King RW, Richards RA, Spielmeyer W (2012) Inhibition of tiller bud outgrowth in the *tin* mutant of wheat is associated with precocious internode development. *Plant Physiology* **160**: 308-318

Whipple CJ, **Kebrom TH**, Weber AL, Yang F, Hall DH, Meeley RB, Schmidt RJ, Doebley J, Brutnell TP, Jackson DP (2011) *grassy tillers1* promotes apical dominance in maize and responds to shade signals in the grasses. *Proceedings of the National Academy of Science* **108**: E506-E512

Kebrom TH, Brutnell TP, Hays DB, Finalyson SA (2010) Vegetative axillary bud dormancy induced by shade and defoliation signals in the grasses. *Plant Signaling & Behavior* **5**: 317-319

Pinghua Li, Ponnala L, Gandotra N, Wang L, Si Y, Tausta SL, **Kebrom TH**, Provart N, Patel R, Myers CR, Reidel EJ, Turgeon R, Liu P, Sun Q, Nelson T, Brutnell TP (2010) The developmental dynamics of the maize leaf transcriptome. *Nature Genetics* **42**: 1060-1067

Kebrom TH, Brutnell TP, Finlayson SA (2010) Suppression of sorghum axillary bud outgrowth by shade, phyB and defoliation signaling pathways. *Plant, Cell & Environment* **33**: 48-58

Finlayson SA, Krishnareddy SR, **Kebrom TH**, Casal JJ (2010) Phytochrome regulation of branching in Arabidopsis. *Plant Physiology* **152**: 1914-1927

Kebrom TH, Brutnell TP (2007) The molecular analysis of the shade avoidance syndrome in the grasses has begun. *Journal of Experimental Botany* **58**: 3079-3089

Kebrom TH, Burson BL, Finlayson SA (2006) Phytochrome B represses *Teosinte branched1* expression and induces sorghum axillary bud outgrowth in response to light signals. *Plant Physiology* **140**: 1109-1117

Tarpley L, Duran AL, **Kebrom TH,** Sumner LW (2005) Biomarker metabolites capturing the metabolite variance present in a rice plant developmental period. *BMC Plant Biology* **5**:8