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Skills/ Instrumentation/Software

Plant tissue culture & transformation	Gene cloning	Benchling
Plant physiology	Gene codon optimization	MS Office
Plant genetics	PCR	Vector NTI
DNA & cDNA library preparation	RTPCR	MATLAB
Hot Fusion plasmid assembly	Plasmid minipreps	R
Golden Gate plasmid assembly	ELISA	Python
Bacteria culture and transformation	Southern blotting	LI-6800
CRISPR/Cas9 genome editing	Northern blotting	CCM300
DNA & protein sequence analysis	Leaf paint Assay	DA 7250 NIR Analyzer
Confocal microscopy	Promote analysis	USB400 Spectrometer
Fluorescent microscopy	Vapour pressure osmometer	

Relevant Publications

- Changa T.**, Mazis A., Das Choudhury S., Okalebo A.J., Hiller J., Greg P., Walia H., Awada T. 'High Throughput Assessment of Highly Responsive Physiological Traits in Cotton under Drought Stress' (in preparation)
- Changa T.**, Immethun C.M., Long D.S., Saha R. 'Engineering synthetic (CRISPRi) gene regulation in non-model bacterial *Rhodopseudomonas palustris* CGA009' (in preparation)
- Immethun C.M., **Changa T.**, Long D.S., Saha R. 'Creating a Synthetic Biology Toolbox for the Metabolically Versatile *Rhodopseudomonas palustris* CGA009' (in preparation).
- Long D., **Changa T.**, Immethun C.M., Saha R 'Synthetic gene modulation and metabolic engineering in *Actinobacillus succinogenes*' (in preparation).
- Changa T.**, Okalebo J.A., Wang S., Wienhold B., Dribjer R., Jeske E. and Awada T. (2019) 'Spatial Dynamics of Soil Microbial Communities in *Bromus inermis* pastures in Eastern Nebraska' (*Submitted: Journal of Applied and environmental soil science*).
- Zamani E., Chatterjee S., Johnson T., **Changa T.**, Cheryl I., Anandakumar S., Saha R., Dishari S.K., (2019) 'Alterations of Biophysical and Mechanical Properties of Wild-type and Antibiotic-Resistant Bacteria upon Interactions with Cationic Conjugated Oligo- and Polyelectrolytes' (*Submitted: Scientific reports*)
- Vogel PA, Bayon de Noyer S, Park H, Nguyen H, Hou L, **Changa T**, Khang HL, Ciftci ON, Wang T, Cahoon EB, Clemente TE (2018) Expression of the Arabidopsis WRINKLED 1 transcription factor leads to higher accumulation of palmitate in soybean seed. *Plant biotechnology journal*. doi:<https://doi.org/10.1111/pbi.13061>
- Peña P.A., Quach T., Sato S., Ge Z., Nersesian N., **Changa T.**, Dweikat I., Soundararajan M., Clemente T.E. (2017) Expression of the maize Dof1 transcription factor in wheat and sorghum. *Frontiers in Plant Science* 8:434.

Invited Talk

Taity Changa ‘High Throughput Assessment of the Highly Responsive Physiological Traits in Cotton Under Drought Stress.’ 2019 ASA, CSS-SSA International Annual Meeting. November 10-13 San Antonio, Texas.

Poster Presentation

Taity Changa, Cheryl Immethun and Rajib Saha ‘Transforming the Photosynthetic Bacterium *Rhodospseudomonas palustris* CGA009 into a Biotechnology Chassis, Plant synthetic biology conference August 7-9 2019. San Jose, CA.

Taity Changa, Khang Hoang, Hanh Nguyen, Shirley Sato, and Tom Clemente. Enhancing carbon capture and flux in soybean.” 16th Biennial conference of molecular and cellular Biology of the soybean. August 7-10, 2016 Columbus, Ohio.

Taity Changa, Khang Hoang, Hanh Nguyen, Natalya Nersesian, Zhengxiang Ge, Aleel K. Grennan, Donald Ort, Stephan P. Moose, Stephen Long, and Thomas Clemente. “Approaches to enhance photosynthetic capacity in crops.” 2016 Water for food Global Conference. April 24-26, 2016 Lincoln, Nebraska.

Taity Changa, Khang Hoang, Hanh Nguyen, Natalya Nersesian, Zhengxiang Ge, Aleel K. Grennan, Donald Ort, Stephan P. Moose, Stephen Long, and Thomas Clemente. “Approaches to enhance photosynthetic capacity in crops.” Plant and Animal Genome Conference. January 8-13, 2016 San Diego, California

Taity Changa, Khang Hoang, Hanh Nguyen, Natalya Nersesian, Zhengxiang Ge, Aleel K. Grennan, Donald Ort, Stephan P. Moose, Stephen Long, and Thomas Clemente. “Approaches to enhance photosynthetic capacity in crops.” Plant Biology Conference 2015. July, 26-30 Minneapolis, Minnesota.

Taity Changa, Saadia Bihmidine, Donald Weeks, Tala Awada and Thomas Clemente. “Approaches to enhance photosynthetic capacity of soybean.” 14th Biennial conference of molecular and cellular Biology of the soybean. 2012 Des Moines, Iowa,