

SGC UNICAMP

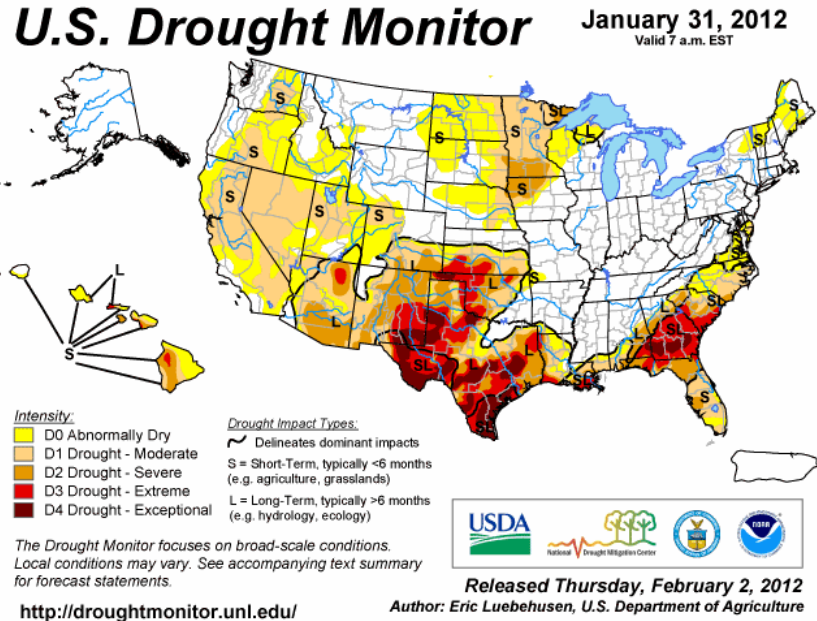
Cross talk between Biomedical Science and Plant Science
to boost plant kinase function discovery

Focus: Drought Stress

 **FAPESP**
Launch SGC - UNICAMP
Auditório FAPESP
10/03/2015



Why drought dtress



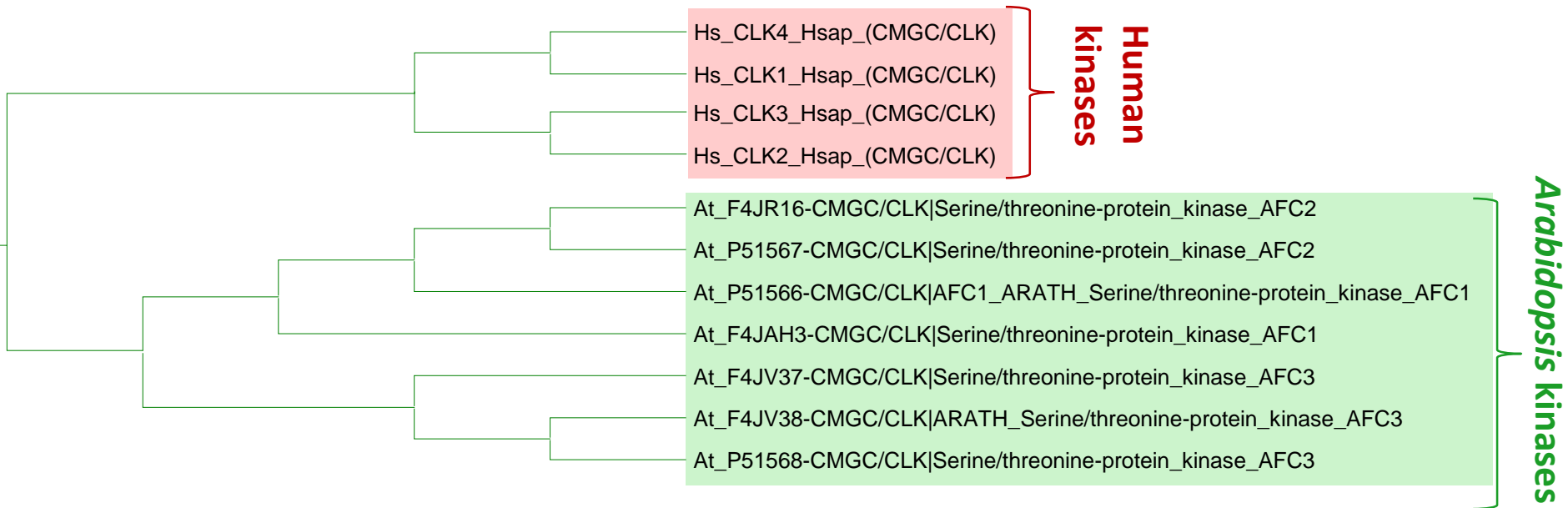
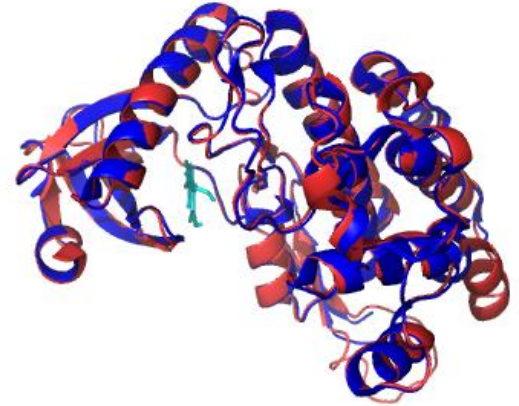
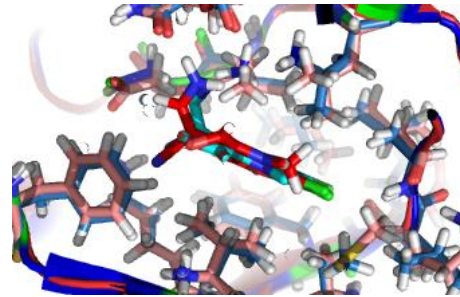
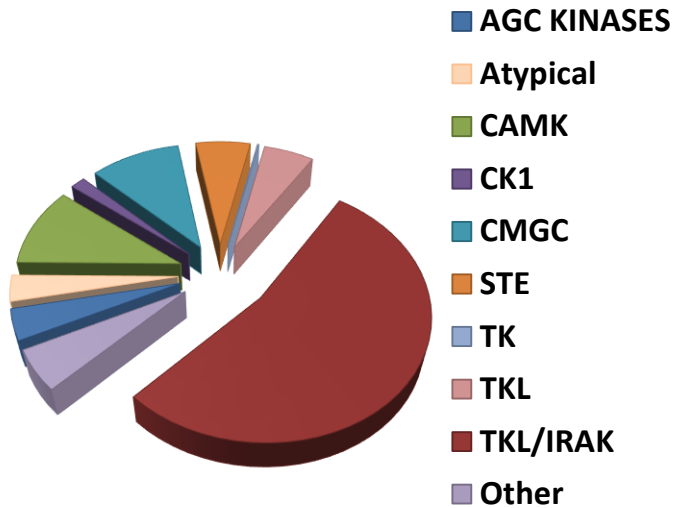
Impact of extreme climate event (drought and heat) on corn production in the 2012/13 season in USA:

- An reduction of 40 Mt, that is equivalent to the average total corn production in Brazil in 2005-2010 (49 Mt)

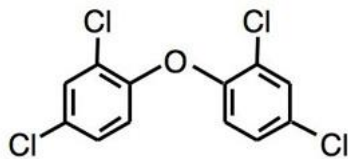
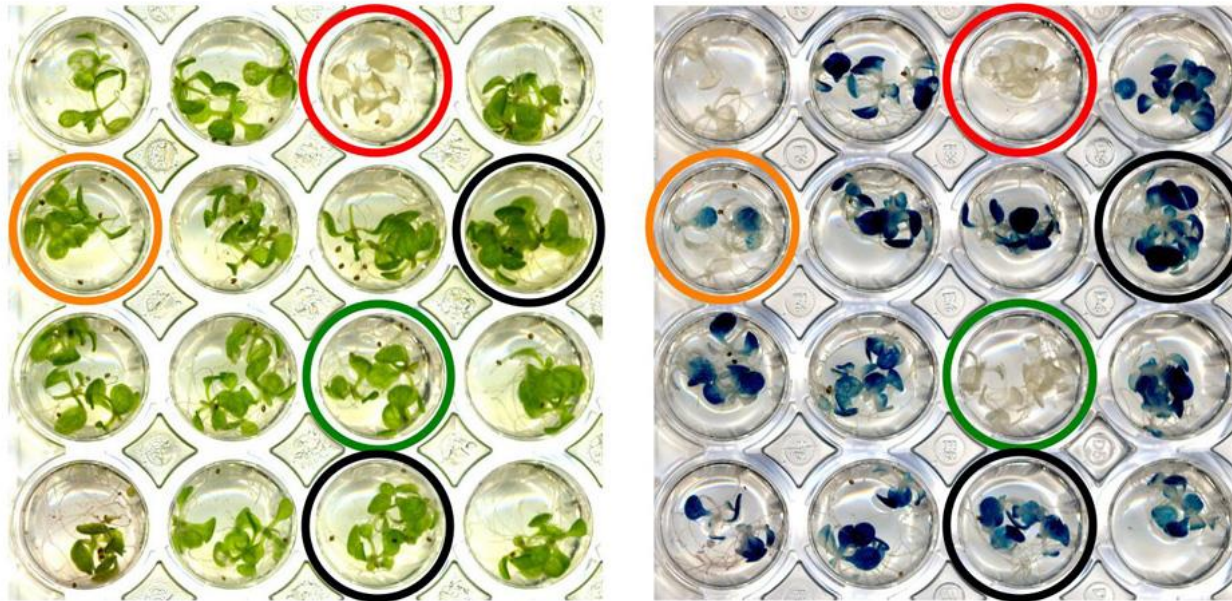
País	Área (Mha)			Produtividade (t/ha)			Produção (Mt)			Diferença de produção (2012/13 – 2011/12)	
	2011/12	Projeção 2012/13	Média 2005-2010	2011/12	Projeção 2012/13	Média 2005-2010	2011/12	Projeção 2012/13	Média 2005-2010	Mt	%
EUA	34,0	35,4	31,8	9,2	7,7	9,6	313,9	273,8	306,1	-40,1	-12,8
Brasil	15,2	15,5	13,1	4,8	4,6	3,7	73,0	71,0	49,1	-2,0	-2,7

Fontes: FAOSTAT; USDA Foreign Agricultural Service, Circular Series WAP 1-13

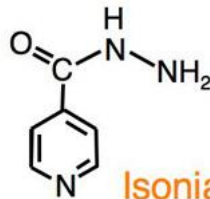
Homology studies can help identify conserved domains between human and plant kinases



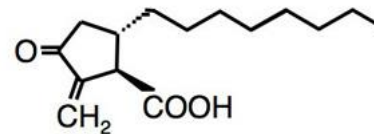
High-throughput screening of small-molecule libraries can help identify kinase inducers



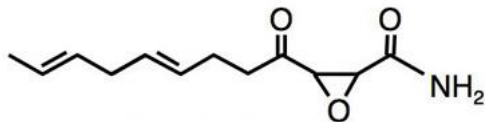
Triclosan



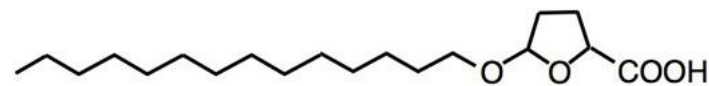
Isoniazid



C75

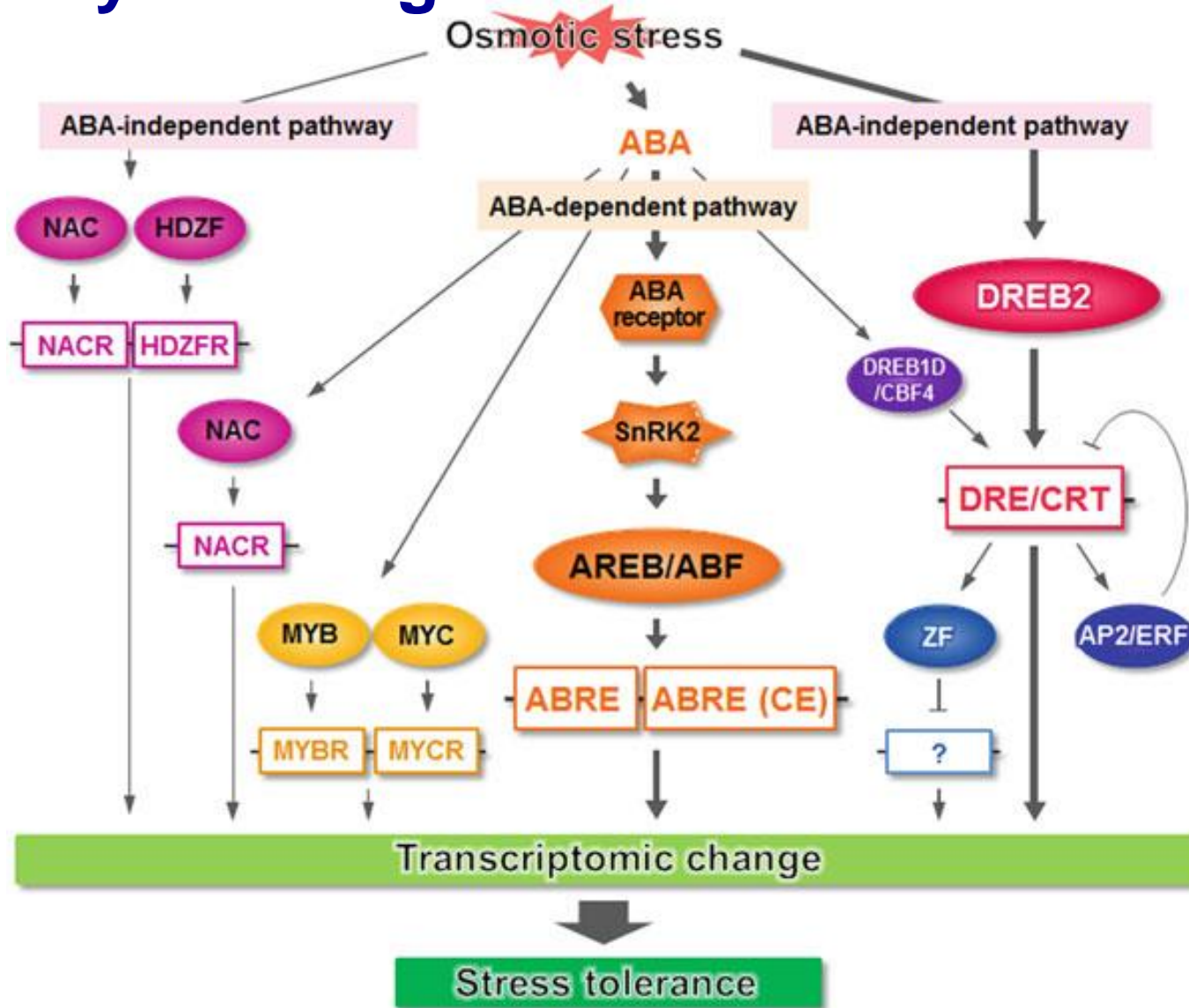


Cerulenin



TOFA

Kinase inducers can boost stress response pathways leading to stress tolerance



Thanks FAPESP, UNICAMP and SGC
for helping establishing a visionary
model of science without barriers

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