From: Scott Allen Jackson To: Melzer, Siegbert

Subject: Re: urgent call for an abstract

Date: Wednesday, August 20, 2014 8:24:13 AM

Abstract:

Genomic analysis of natural genetic and epigenetic variation in two legume crops: soybean and common bean.

Genetic variation is the lifeblood of any breeding program. However, the amount of variation within breeding pools is constrained by historical and recent genetic bottlenecks. For instance, in soybean it has been proposed that all North American breeding germplasm traces back to ~12 founder lines. This is superimposed on bottlenecks of domestication and adaptation. Using genomic tools we have measured genetic diversity in modern breeding lines, early domesticates and wild accessions for soybean and common bean. This is useful to understand the size of bottlenecks and subsequent admixture between genetic pools. The data can be used to make informed choices as to which genetic pools to use to begin to broaden the genetic base in breeding pools or to find useful genes to introgress. Even though the amount of genetic variation has been highly constrained in modern breeding pools, breeders have been able to continue to make significant gains in yield. It has been hypothesized that epigenetic and/or structural variation may play a role in these gains. We have been sequencing methylomes (methylated cytosines) for soybean and common bean as these methylated cytosines provide insights into epigenetic variation. We have found differences in epigenetic marks between soybean and common bean, due mostly to transposable element dynamics that distinguish the two genomes. Using structured populations and historical varieties, we are also finding epigenetic variation within breeding lines that may have played a role in their development. I will present data on the genetic history of soybean and common bean and variation in modern breeding pools.

scott

On Aug 18, 2014, at 4:18 PM, Melzer, Siegbert <s.melzer@plantbreeding.uni-kiel.de> wrote:

> Dear Scott,

> We will certainly pick you up at the airport on the 23rd. The return flight might be a bit early for us, but there are professional services to the airport. I will check it out tomorrow. However, you might have to leave Kiel early at 4:00 (latest). Let me know if this is fine for you!

- > What we need urgently from you now is an abstract for your talk. We are finalizing the program and the abstract book and have realized that we have got no abstract yet. Could you please send an abstract ASAP!
- > Thanks a lot and best regards

> Siegbert

- > Dr. Siegbert Melzer
- > Plant Breeding Institute
- > Christian-Albrechts-University Kiel
- > Ohlshausenstrasse 40
- > D-24098 Kiel

> Von: Scott Allen Jackson [sjackson@uga.edu]

- > Gesendet: Sonntag, 29. Juni 2014 14:46
- > An: Jung, Christian
- > Cc: Melzer, Siegbert
- > Betreff: Re: Invitation to speak in GPZ meeting in Kiel, Germany

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> Thanks Christian,
> I have yet to make my flight arrangements, but I probably will need to return home shortly after the meeting. I
have four kids with all sorts of activities....
> Thanks, Scott
> On Jun 26, 2014, at 5:14 AM, Jung, Christian <c.jung@plantbreeding.uni-
kiel.de<<u>mailto:c.jung@plantbreeding.uni-kiel.de</u>>> wrote:
> Dear Scott
> By the way, our main sponsor NPZ is a breeding company near Kiel which also breeds legumes. If you are
interested I can arrange contact to them. You may also attend the post congress tour to NPZ.
>
> Christian
>-----
> Prof. Dr. Christian Jung
> Plant Breeding Institute
> Christian-Albrechts-University of Kiel
> Olshausenstrasse 40
> D-24098 Kiel
> Tel.: (+)49(0)431 880 7364
> Mobile: (+)49(0)151 25233613
> http://www.plantbreeding.uni-kiel.de<http://www.plantbreeding.uni-kiel.de/>
> Von: Scott Allen Jackson [mailto:sjackson@uga.edu]
> Gesendet: Mittwoch, 25. Juni 2014 03:11
> An: Jung, Christian
> Cc: Melzer, Siegbert; Jakobeit, Antje; Nadine Dally (n.dally@plantbreeding.uni-
kiel.de<mailto:n.dally@plantbreeding.uni-kiel.de>)
> Betreff: Re: Invitation to speak in GPZ meeting in Kiel, Germany
> Dear Seigbert,
> I am planning to arrive the 23rd and leave the morning of the 26th.
> Thanks, Scott
> On Jun 24, 2014, at 5:36 AM, Jung, Christian <c.jung@plantbreeding.uni-
kiel.de<<u>mailto:c.jung@plantbreeding.uni-kiel.de</u>>> wrote:
>
> Dear Scott
> Perfect! Please mail your travelling dates to Siegbert ASAP and for how long we shall book a hotel room for you.
And thanks fro the suggestion for session 2 which we will definitely consider .
> All the best
> Christian
> Prof. Dr. Christian Jung
> Plant Breeding Institute
> Christian-Albrechts-University of Kiel
> Olshausenstrasse 40
> D-24098 Kiel
> Tel.: (+)49(0)431 880 7364
> Mobile: (+)49(0)151 25233613
> http://www.plantbreeding.uni-kiel.de<http://www.plantbreeding.uni-kiel.de/>
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> Von: Scott Allen Jackson [mailto:sjackson@uga.edu]
> Gesendet: Montag, 23. Juni 2014 20:56
> An: Jung, Christian
> Cc: rajeev varshney; Jackson, Scott (GCP); Bluemel, Martina; Nadine Dally (n.dally@plantbreeding.uni-
kiel.de<<u>mailto:n.dally@plantbreeding.uni-kiel.de</u>>); Melzer, Siegbert
> Betreff: Re: Invitation to speak in GPZ meeting in Kiel, Germany
> hi Prof Jung. I know your name very well but have not had the pleasure to meet you before.
> I think with flight schedules, a session on Wednesday would be best, just be be safe. I think my talk would fit
better into session 3 than session 2. If you are looking for people for session 2, you might consider Bob STupar at
the Univ of Minnesota who is working both on natural as well as induced variation (mutation and CRSPRs).
> Title: Genomic analysis of natural genetic and epigenetic variation in two legume crops: soybean and common
bean.
>
> Thanks, Scott
> On Jun 23, 2014, at 2:31 AM, Jung, Christian <c.jung@plantbreeding.uni-
kiel.de<<u>mailto:c.jung@plantbreeding.uni-kiel.de</u>>> wrote:
> Dear Dr. Jackson, dear Scott
> I thank you for accepting the invitation to give a keynote lecture on our meeting in Kiel. Rajeev, thanks for
arranging the contact with Scott!
> Let me briefly introduce myself. I am the president of the German breeders association GPZ and am organizing
our biennial international congress this year in Kiel which is in the very north of Germany. The preliminary
program is in the attachment and all instructions for registration can be found here:
> http://www.plantbreeding.uni-kiel.de/de/gpz-haupttagung-2014
> I will shift your talk from session 1 to session 3 which starts Wednesday, September 24, 2014. Will this be ok for
you?
> Or do you think your talk could also fit to session 2 (where there is only one keynote speaker)?
> If you agree, please send me the title of your talk which should be about legume breeding and genomics and the
use of genetic resources and please send me an abstract which should not exceed one page. Please register via our
web registration service. You will not have to pay the congress fee.
> Please contact Siegbert Melzer from my institute (s.melzer@plantbreeding.uni-
kiel.de<mailto:s.melzer@plantbreeding.uni-kiel.de>) from my institute who will book a hotel room for you and
assist you in making any travelling arrangements within Germany. Hotel and local travelling costs will be taken by
us. Your transport from the airport in Hamburg to Kiel will be also arranged by us. You will only have to book your
flight ticket to Hamburg international airport which will be paid by us (tourist class ticket up to 1500€) later during
your stay in Kiel.
> If you have any questions please do not hesitate to contract me or Siegbert.
> Kind regards
> Christian
> Prof. Dr. Christian Jung
> Plant Breeding Institute
> Christian-Albrechts-University of Kiel
> Olshausenstrasse 40
> D-24098 Kiel
> Tel.: (+)49(0)431 880 7364
> Mobile: (+)49(0)151 25233613
> http://www.plantbreeding.uni-kiel.de<http://www.plantbreeding.uni-kiel.de/>
> Von: Scott Allen Jackson [mailto:sjackson@uga.edu]
> Gesendet: Samstag, 21. Juni 2014 17:02
> An: rajeev varshney
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> Cc: Jackson, Scott (GCP); Jung, Christian

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> Betreff: Re: Invitation to speak in GPZ meeting in Kiel, Germany
> I think I can do this but I wouldn't be able to arrive until the morning of the 23rd as I'm hosting a seminar speaker
at UGA on the 22nd.
>
> scott
> On Jun 20, 2014, at 5:06 AM, Varshney, Rajeev (ICRISAT-IN)
<R.K.Varshney@CGIAR.ORG<mailto:R.K.Varshney@CGIAR.ORG>>> wrote:
>
> Dear Scott
> Hope that you are doing good. I am writing this mail on behalf of Prof Christian Jung of University of Kiel,
Germany. He is organizing a meeting entitled "Genetic variation in plant breeding". Details about this meeting are
available at
> http://www.plantbreeding.uni-kiel.de/de/gpz2014. For this meeting, we would like to invite you to speak on a
topic related to legume genomics, genetics and breeding. Hope that you should be able to accept this invitation.
> In fact, I was also planning to participate in this meeting. However as I will be in Governing Board meeting of
ICRISAT at the same time, I will not be able to participate in this exciting meeting. However I am very sure that
you will enjoy meeting very much and of course Kiel.
> We would appreciate to receive your response on above soon so that Christian can finalize the programme.
> Many thanks and kind regards
> Rajeev
>
> < preliminary program GPZ-congress 2013, 30.1.14.pdf>
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