From: Lau, Matthew matthewklau@fas.harvard.edu

Subject: Re: Broad Inquiry about Ant Whole Genome Sequencing

Date: September 3, 2015 at 5:50 PM

To: Sarah Young stowey@broadinstitute.org
Cc: Jim Bochicchio jboch@broadinstitute.org



Hi Sarah, thanks! Very nice to meet you and Jim, both.

My recollection is that you said Anopheles' genome is about 250Mb, so from my inexperienced perspective, ~80% of the genome doesn't seem too bad.

Thanks again, Matt

On Sep 3, 2015, at 1:46 PM, Sarah Young <a href="mailto:stowey@broadinstitute.org">stowey@broadinstitute.org</a> wrote:

Hi Matt,

It was a pleasure meeting you yesterday. I wanted to follow up with some stats that we got for the Anopheles genomes. While this is no guarantee that Ant will behave similarly, it does give you a sense for how some insects have behaved previously. Quality of assembly will depend on three things which I mentioned - bias in sequencing (not usually a problem unless extreme GC or amplified DNA), repeats in the genome, and polymorphism. For your genomes I suspect that polymorphisms will be the biggest factor in how well these come together. The anopheles genomes here a really some of the "worse" genomes we've seen as far as high levels of polymorphism.

In a sample of 15 genomes, on average we assembled 193Mb of the genome. We had approximately 6k scaffolds and 14k contigs. There is a very high standard deviation here though: the best samples gave us roughly 3k contigs, and the worst gave us 30k contigs. Scaffold n50s were on average over 4Mb though (indicating that a lot of the genome is contained in big pieces). Contig N50s (meaning stretches without any gaps) on average were 70kb.

Let me know if you have any other questions I can answer!

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~Sarah
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On Wed, Sep 2, 2015 at 12:51 PM, Jim Bochicchio <jboch@broadinstitute.org> wrote:

Hi Jenn

Ok, no problem.

Thanks Jim

On Wed, Sep 2, 2015 at 12:50 PM, Jennifer Wineski < <u>iwineski@broadinstitute.org</u>> wrote:

My apologies Jim- Matt and I had a separate email, and he confirmed for this afternoon. I will meet Matt in the lobby when he arrives and bring him up to the conference room.

Thank you,

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Again, we have and can get lots (tens or hundreds) of ants.

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If they are female, which is what we would like sequenced, they should be diploid.

Is the repeat content and/or structure known? The *Pogonomyrmex* genome is the best indication of the this.

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Subject: Re: Broad Inquiry about Ant Whole Genome Sequencing

Date: September 2, 2015 at 12:51 PM

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Cc: Lau, Matthew matthewklau@fas.harvard.edu, Sarah Young stowey@broadinstitute.org



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Date: September 2, 2015 at 12:49 PM

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Cc: Jennifer Wineski jwineski@broadinstitute.org, Sarah Young stowey@broadinstitute.org



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From: jwineski@broadinstitute.org

Subject: Re: Broad Inquiry about Ant Whole Genome Sequencing

Date: September 1, 2015 at 7:41 PM

To: Lau, Matthew matthewklau@fas.harvard.edu



Thanks so much for your message! I booked the kalahari room on the 8th floor of the 75 Ames street building. When you arrive, please ask for me and will be happy to meet you in the lobby.

Thank you!

Jenn

Sent from my iPhone

On Sep 1, 2015, at 7:26 PM, Lau, Matthew <a href="mailto:matthewklau@fas.harvard.edu">matthewklau@fas.harvard.edu</a> wrote:

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Email: jwineski@broadinstitute.org

Subject: Re: Broad Inquiry about Ant Whole Genome Sequencing

Date: August 31, 2015 at 11:53 AM

To: Lau, Matthew matthewklau@fas.harvard.edu



Great! Thank you very much. I will send an invitation shortly.

Thanks!

Jenn

On Mon, Aug 31, 2015 at 11:51 AM, Lau, Matthew <a href="matthewklau@fas.harvard.edu">matthewklau@fas.harvard.edu</a> wrote:

Hi Jenn, that would work for me!

Thanks, Matt

On Aug 31, 2015, at 11:19 AM, Jennifer Wineski <a href="mailto:jwineski@broadinstitute.org">jwineski@broadinstitute.org</a>> wrote:

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