

From: [Ivins, Bruce E Dr USAMRIID](#)
To: [Ivins, Bruce E Dr USAMRIID](#); (b)(6)
Subject: Mouse TTD challenge on 11 JUL 07 - SA 12703 (Leighton and Doi medium, (b)(6) method) - CORRECTED INJECTION TIMES (UNCLASSIFIED)
Date: Tuesday, July 10, 2007 2:31:58 PM

Classification: UNCLASSIFIED

Caveats: NONE

Corrected injection times:

We're going to do a mouse TTD challenge on Wednesday, 11 July 07. The injections will be intraperitoneal, 0.2 ml.

SA# 12703 - Leighton & Doi medium, (b)(6) method - 10 mice per group

Group 1 - 1×10^5 spores in 0.2 ml - IP - inject between 1500 and 1600

Group 2 - 1×10^4 spores in 0.2 ml - IP - inject between 1100 and 1200

1.82×10^8 /ml in a tube (This is a 10^{-2} dilution of the original stock.)

0.1 ml into 36.3 ml to give 1×10^5 per 0.2 ml - - Group 1

1.0 ml into 9.0 ml to give 2×10^4 per 0.2 ml - - Group B

Then add 0.1 ml of Group B into 19.9 ml and plate out onto TSA for ~25 per plate

The mice receiving 10^5 spores should die the next day (Thursday) beginning about 8 am.

The mice receiving 10^4 spores should die the next day (Thursday) beginning about noon.

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)

To: (b)(6)

Subject: Aerosol spray cans in burnable trash (UNCLASSIFIED)

Date: Thursday, June 21, 2007 9:35:25 AM

Classification: UNCLASSIFIED

Caveats: NONE

This morning, during cleaning of the (b)(2) coldside men's changeroom, I found two aerosol cans of men's hairspray in the burnable trash. The cans were removed from the trash and taken to the safety office for proper disposal. We'll get some further guidance on what to do with aerosol cans from the safety office, but meanwhile, please remember that they shouldn't be put out in the burnable trash for the incinerator where they can explode.

Thanks.

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: (b)(6) accomplishments and narrative evaluation (UNCLASSIFIED)
Date: Thursday, June 14, 2007 4:17:05 PM
Attachments: [REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

(b)(6)

Enclosed are (b)(6) accomplishments (his version) and my evaluation narrative. I propose the following point totals for him for each category:

Technical competence - 28 points out of 30 possible
Working relationships - 14 points out of 15 possible
Communication - 8 points out of 10 possible
Resource management - 22 points out of 25 possible
Customer relationships - 15 points out of 120 possible

Total points = 87
Tentative grade = A

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: (b)(6) accomplishments, 2006 (UNCLASSIFIED)
Date: Monday, June 11, 2007 9:36:19 AM
Attachments: [REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

Here you are, (b)(6)

-bruce

Bruce Ivins

(b)(6)
[REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: Bruce Ivins Accomplishments - 2006-2007 (UNCLASSIFIED)
Date: Wednesday, June 13, 2007 8:23:09 AM
Attachments: [REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

Here you are, (b)(6) These are my accomplishments for 2007. I'll send you (b)(6) accomplishments and (b)(6) accomplishments by the end of the week.

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Cc: [Ivins, Bruce E Dr USAMRIID](#)
Subject: Data - 1.5 X NSM + 2X MNCI2 and CaCl2 (UNCLASSIFIED)
Date: Wednesday, June 20, 2007 3:27:59 PM
Attachments: (b)(6)

Classification: UNCLASSIFIED

Caveats: NONE

Enclosed are the data from the latest arm of the medium study. We've run numerous different media, and the best appears to be NSM + CaCl2 (normal "strength" or concentration for both). For that one, we had 8.8×10^8 /ml of refractile, heat-resistant spores in an extremely good prep. Increasing nutrient or salts concentration doesn't appear to increase the yield or the quality of the prep. I'm going to plan to do a side-by-side preparation of the NSM + CaCl2 and Leighton and Doi medium (formulation we have been using) and see how they stack up against each other in various properties, including virulence.

For nothing is secret that shall not be made manifest, nor anything hidden that shall not be made known and come to light.

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Cc: [Ivins, Bruce E Dr USAMRIID](#)
Subject: Data - 1.5 X NSM + 2X MNCI2 and CaCl2 (UNCLASSIFIED)
Date: Wednesday, June 20, 2007 3:27:59 PM
Attachments: (b)(6)

Classification: UNCLASSIFIED

Caveats: NONE

Enclosed are the data from the latest arm of the medium study. We've run numerous different media, and the best appears to be NSM + CaCl2 (normal "strength" or concentration for both). For that one, we had 8.8×10^8 /ml of refractile, heat-resistant spores in an extremely good prep. Increasing nutrient or salts concentration doesn't appear to increase the yield or the quality of the prep. I'm going to plan to do a side-by-side preparation of the NSM + CaCl2 and Leighton and Doi medium (formulation we have been using) and see how they stack up against each other in various properties, including virulence.

For nothing is secret that shall not be made manifest, nor anything hidden that shall not be made known and come to light.

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: (b)(6) - proposed narrative on accomplishments (UNCLASSIFIED)
Date: Thursday, June 21, 2007 3:30:38 PM
Attachments: [REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

Hi, (b)(6)
I've already sent you the proposed narrative for (b)(6) accomplishments. I'm sending you the proposed narrative here for (b)(6) accomplishments.

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: (b)(6) performance appraisal (UNCLASSIFIED)
Date: Tuesday, June 26, 2007 11:13:28 AM
Attachments: [REDACTED]

Classification: UNCLASSIFIED

Caveats: FOUO

(b)(6)
I talked to (b)(6) about her accomplishments this past year. I discussed her performance with (b)(6). I'm enclosing the narrative that (b)(6) and I agreed upon and the point awards that we both agreed upon.

I'm enclosing what she wrote as far as her accomplishments, and I'm including the narrative that (b)(6) and I composed.

Technical competence - 15 points out of 30 possible

Working relationships - 10 points out of 20 possible

Communication - 8 points out of 15 possible

Resource management - 10 points out of 20 possible

Customer relationships - 8 points out of 15 possible

Total points = 51

Grade = C

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED

Caveats: NONE

-bruce

Bruce Ivins

(b)(6)

Attachment Classification: UNCLASSIFIED

Attachment Caveats: NONE

Classification: UNCLASSIFIED

Caveats: FOUO

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: FW: (b)(6) accomplishments and narrative evaluation (UNCLASSIFIED)
Date: Tuesday, June 26, 2007 11:08:18 AM
Attachments: [REDACTED]

Classification: UNCLASSIFIED

Caveats: FOUO

Handling: The message content is UNCLASSIFIED when separated from attachment.

(b)(6)
I talked to (b)(6) about his accomplishments this past year. I discussed his performance with (b)(6). I'm enclosing the narrative that we both agreed upon and the point awards that we both agreed upon. I will recommend him for a time-off award of 40 hours.

Technical competence - 28 points out of 30 possible

Working relationships - 14 points out of 15 possible

Communication - 8 points out of 10 possible

Resource management - 22 points out of 25 possible

Customer relationships - 15 points out of 20 possible

Total points = 87

Grade = A

-bruce

Bruce Ivins

(b)(6)
[REDACTED]

Classification: UNCLASSIFIED

Caveats: FOUO

From: [Ivins, Bruce E Dr USAMRIID](#)
To: [Ivins, Bruce E Dr USAMRIID](#)
Subject: FW: (b)(6) Mtg 28 June, HQS CR 11:00 (UNCLASSIFIED)
Date: Thursday, June 28, 2007 1:00:28 PM

Classification: UNCLASSIFIED
Caveats: NONE

This was a mandatory division safety meeting that had been announced to everyone in the (b)(6) (b)(6) and I attended, but (b)(6) didn't attend. She said that she hadn't read the announcement.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)
Sent: Wednesday, June 27, 2007 5:04 PM
To: (b)(6)

Ivins, Bruce E Dr USAMRIID; (b)(6)

Subject: (b)(6) Mtg 28 June, HQS CR 11:00 (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Just a reminder of the mandatory (b)(6) Meeting Thursday, 11:00 a.m. in the Headquarters Conference Room.

Thank you.

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: FW: CCN# 71420001/6R1D/R1K (UNCLASSIFIED)
Date: Monday, June 25, 2007 8:49:31 AM

Classification: UNCLASSIFIED
Caveats: NONE

FYI

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)
Sent: Tuesday, June 12, 2007 4:22 PM
To: (b)(6) Ivins, Bruce E Dr USAMRIID
Cc: (b)(6)
Subject: CCN# 71420001/6R1D/R1K (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Your purchase request, CCN# 71420001/6R1D/R1K for the DISCOVER PROTEOMICS SYSTEM was forwarded to CAMBRIDGE SYSTEMS (ARMEC)

Delivery is expected within 28 days. You will be notified when the item is ready for picked up.

If you need to check status; please contact me via e-mail and reference our document number 7067-0100

(b)(6)

Tell us how we're doing
<https://riid-vision.detrick.army.mil/logistics/rgsurvey.cfm>

PBO Mission Statement

"We function with total awareness that we exist to support the research staff and the mission of USAMRIID, and to that end we will uphold the Army's' requirement for Property Accountability and perform our functions in a manner that provides the highest level of customer service. Our tasks will be completed in a timely manner, and with the highest level of accuracy, clarity, professionalism and documentation."

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: FW: (b)(6) Accomplishments for 2007 (UNCLASSIFIED)
Date: Thursday, June 14, 2007 4:13:08 PM
Attachments: [REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

(b)(6)
Enclosed are (b)(6) accomplishments (her version) and my evaluation comments. I propose the following point totals for her for each category:

Technical competence - 15 points out of 30 possible
Working relationships - 15 points out of 20 possible
Communication - 10 points out of 15 possible
Resource management - 15 points out of 20 possible
Customer relationships - 10 points out of 15 possible

Total points = 65
Tentative grade = C

-bruce

Bruce Ivins

(b)(6)
[REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: FW: Dugway Transfer (UNCLASSIFIED)
Date: Wednesday, June 27, 2007 9:35:05 AM
Attachments: [REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----

From: (b)(6)
Sent: Wednesday, June 27, 2007 9:02 AM
To: Ivins, Bruce E Dr USAMRIID
Cc: (b)(6)
Subject: Dugway Transfer (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Dr. Ivins,

Can you please review and sign the transfer request from Dugway? The CDC rejected the request on the previous paperwork because after a few faxes they couldn't read the fax. Please double check section 31 on Form 2 to ensure I entered the correct information (I couldn't read the info). I will have to hand write the total volume when I send it to Dugway.

Thank you,

(b)(6)
[REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: FW: Irradiation sterilization failure...again (UNCLASSIFIED)
Date: Wednesday, June 13, 2007 3:08:04 PM
Attachments: [REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

Please note the new spreadsheet. 4A-9C were tested on SBA. The numbers in red were still positive for B. anthracis growth. The numbers in blue were negative for B. anthracis. The negative samples were re-plated to make sure they are negative.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, June 13, 2007 11:35 AM
To: (b)(6)
Ivins, Bruce E Dr
USAMRIID; (b)(6)
Subject: Irradiation sterilization failure...again (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

The 27 samples (see file) were originally irradiated on 30 MAY 07, with 5 Megarads. The samples were still "hot," so on 11 JUN 07, they were re-irradiated with an additional 1 Million rads (1 Megarad). Eighteen of the 27 samples were tested by (b)(6), and 12 of the 18 are still "hot." They can't be released until they're sterile, so (b)(6) is going to give the samples that were hot (plus the ones that weren't checked) will be re-irradiated with an additional 2 Megarads. Hopefully this will work. Stay tuned....

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6) [Ivins, Bruce E Dr USAMRIID](#); (b)(6)
Subject: FW: Irradiation sterilization failure...again (UNCLASSIFIED)
Date: Wednesday, June 13, 2007 3:08:04 PM
Attachments: [REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

Please note the new spreadsheet. 4A-9C were tested on SBA. The numbers in red were still positive for B. anthracis growth. The numbers in blue were negative for B. anthracis. The negative samples were re-plated to make sure they are negative.

-bruce

Bruce Ivins
(b)(6)
[REDACTED]

-----Original Message-----
From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, June 13, 2007 11:35 AM
To: (b)(6)
[REDACTED] Ivins, Bruce E Dr
USAMRIID; (b)(6)
Subject: Irradiation sterilization failure...again (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

The 27 samples (see file) were originally irradiated on 30 MAY 07, with 5 Megarads. The samples were still "hot," so on 11 JUN 07, they were re-irradiated with an additional 1 Million rads (1 Megarad). Eighteen of the 27 samples were tested by (b)(6), and 12 of the 18 are still "hot." They can't be released until they're sterile, so (b)(6) is going to give the samples that were hot (plus the ones that weren't checked) will be re-irradiated with an additional 2 Megarads. Hopefully this will work. Stay tuned....

-bruce

Bruce Ivins
(b)(6)
[REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: FW: MiDRP Budget (UNCLASSIFIED)
Date: Friday, June 29, 2007 2:33:27 PM
Attachments: [REDACTED]

Classification: UNCLASSIFIED
Caveats: FOUO

(b)(6)

Did we commit to something specific for EMThrax? I know we talked to them, but I didn't know that we had formulated a specific plan to work with them. I thought that they would come back to us when they wanted to test a specific vaccine in a specific animal model. Please advise - I honestly don't remember more than discussing their work and making some suggestions.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)
Sent: Friday, June 29, 2007 1:39 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: (b)(6) Budget (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Dr. Ivins,

This is the budget in question.

Thanks

(b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

Attachment Classification: UNCLASSIFIED
Attachment Caveats: NONE
Classification: UNCLASSIFIED
Caveats: FOUO

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: FW: More bad irradiation news (UNCLASSIFIED)
Date: Thursday, June 28, 2007 10:52:55 AM
Attachments: [REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

(b)(6) just returned the remaining 25 samples after 2 megarads of irradiation. (b)(6) will test for growth.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID
Sent: Thursday, June 14, 2007 9:12 AM
To: (b)(6)

Ivins, Bruce E Dr USAMRIID
Subject: More bad irradiation news (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

After recheck of the 6 samples that appeared to pass sterility check after a total of 6 million rads, only two samples remained negative. The other four - 5C, 6B, 7B and 9B - came up hot. Only 7A and 9A don't need to be irradiated again.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, June 13, 2007 3:08 PM
To: (b)(6); Ivins, Bruce E Dr USAMRIID; (b)(6)

Subject: FW: Irradiation sterilization failure...again (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Please note the new spreadsheet. 4A-9C were tested on SBA. The numbers in red were still positive for B. anthracis growth. The numbers in blue were negative for B. anthracis. The negative samples were re-plated to make sure they are negative.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID

Sent: Wednesday, June 13, 2007 11:35 AM

To: (b)(6)

Ivins, Bruce E Dr

USAMRIID; (b)(6)

Subject: Irradiation sterilization failure...again (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

The 27 samples (see file) were originally irradiated on 30 MAY 07, with 5 Megarads. The samples were still "hot," so on 11 JUN 07, they were re-irradiated with an additional 1 Million rads (1 Megarad). Eighteen of the 27 samples were tested by (b)(6) and 12 of the 18 are still "hot." They can't be released until they're sterile, so (b)(6) is going to give the samples that were hot (plus the ones that weren't checked) will be re-irradiated with an additional 2 Megarads. Hopefully this will work. Stay tuned....

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: FW: More bad irradiation news (UNCLASSIFIED)
Date: Thursday, June 28, 2007 10:52:55 AM
Attachments: [REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

(b)(6) just returned the remaining 25 samples after 2 megarads of irradiation. (b)(6) will test for growth.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID
Sent: Thursday, June 14, 2007 9:12 AM
To: (b)(6)

Ivins, Bruce E Dr USAMRIID
Subject: More bad irradiation news (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

After recheck of the 6 samples that appeared to pass sterility check after a total of 6 million rads, only two samples remained negative. The other four - 5C, 6B, 7B and 9B - came up hot. Only 7A and 9A don't need to be irradiated again.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, June 13, 2007 3:08 PM
To: (b)(6); Ivins, Bruce E Dr USAMRIID; (b)(6)

Subject: FW: Irradiation sterilization failure...again (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Please note the new spreadsheet. 4A-9C were tested on SBA. The numbers in red were still positive for B. anthracis growth. The numbers in blue were negative for B. anthracis. The negative samples were re-plated to make sure they are negative.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID

Sent: Wednesday, June 13, 2007 11:35 AM

To: (b)(6)

Ivins, Bruce E Dr

USAMRIID; (b)(6)

Subject: Irradiation sterilization failure...again (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

The 27 samples (see file) were originally irradiated on 30 MAY 07, with 5 Megarads. The samples were still "hot," so on 11 JUN 07, they were re-irradiated with an additional 1 Million rads (1 Megarad). Eighteen of the 27 samples were tested by (b)(6) and 12 of the 18 are still "hot." They can't be released until they're sterile, so (b)(6) is going to give the samples that were hot (plus the ones that weren't checked) will be re-irradiated with an additional 2 Megarads. Hopefully this will work. Stay tuned....

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: FW: Spore Preps for Northrup-Grummam-2007.xls (UNCLASSIFIED)
Date: Monday, June 25, 2007 9:29:29 AM
Attachments: [REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

FYI

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)
Sent: Friday, June 22, 2007 2:05 PM
To: Ivins, Bruce E Dr USAMRIID; (b)(6)
Subject: Spore Preps for Northrup-Grummam-2007.xls (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: Here you are, (b)(6) (UNCLASSIFIED)
Date: Wednesday, June 13, 2007 11:18:24 AM
Attachments: [REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

Hi, (b)(6) Here are my accomplishments for 2007

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Cc: [Ivins, Bruce E Dr USAMRIID](#)
Subject: Irradiation of Select Agent 1749 and 793 (UNCLASSIFIED)
Date: Friday, June 15, 2007 9:55:59 AM

Classification: UNCLASSIFIED
Caveats: NONE

Select Agent 1749 and 793 were irradiated with 4 million Rads on 12 JUN 07. There are currently 9 ml in each. Yesterday (b)(6) plated out 0.1 ml on each of 10 plates (1 ml total plated out) for both SA 1749 and SA 793. Today the plates were examined and they are completely negative. They'll be incubated over the weekend, but it looks as if they'll be ready to work with next week.

We still don't have complete sterility on the other samples (the ones for (b)(6)). Hopefully they'll come back negative.

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Cc: [Ivins, Bruce E Dr USAMRIID](#)
Subject: Irradiation of Select Agent 1749 and 793 (UNCLASSIFIED)
Date: Friday, June 15, 2007 9:55:59 AM

Classification: UNCLASSIFIED
Caveats: NONE

Select Agent 1749 and 793 were irradiated with 4 million Rads on 12 JUN 07. There are currently 9 ml in each. Yesterday (b)(6) plated out 0.1 ml on each of 10 plates (1 ml total plated out) for both SA 1749 and SA 793. Today the plates were examined and they are completely negative. They'll be incubated over the weekend, but it looks as if they'll be ready to work with next week.

We still don't have complete sterility on the other samples (the ones for (b)(6)). Hopefully they'll come back negative.

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6) [Ivins, Bruce E Dr USAMRIID](#); (b)(6)
Subject: Irradiation sterilization failure...again (UNCLASSIFIED)
Date: Wednesday, June 13, 2007 11:34:56 AM
Attachments: [REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

The 27 samples (see file) were originally irradiated on 30 MAY 07, with 5 Megarads. The samples were still "hot," so on 11 JUN 07, they were re-irradiated with an additional 1 Million rads (1 Megarad). Eighteen of the 27 samples were tested by (b)(6) and 12 of the 18 are still "hot." They can't be released until they're sterile, so (b)(6) is going to give the samples that were hot (plus the ones that weren't checked) will be re-irradiated with an additional 2 Megarads. Hopefully this will work. Stay tuned....

-bruce

Bruce Ivins
(b)(6)
[REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6) [Ivins, Bruce E Dr USAMRIID](#); (b)(6)
Subject: Irradiation sterilization failure...again (UNCLASSIFIED)
Date: Wednesday, June 13, 2007 11:34:56 AM
Attachments: [REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

The 27 samples (see file) were originally irradiated on 30 MAY 07, with 5 Megarads. The samples were still "hot," so on 11 JUN 07, they were re-irradiated with an additional 1 Million rads (1 Megarad). Eighteen of the 27 samples were tested by (b)(6) and 12 of the 18 are still "hot." They can't be released until they're sterile, so (b)(6) is going to give the samples that were hot (plus the ones that weren't checked) will be re-irradiated with an additional 2 Megarads. Hopefully this will work. Stay tuned....

-bruce

Bruce Ivins
(b)(6)
[REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6) [Ivins, Bruce E Dr USAMRIID](#)
Subject: L&D medium (b)(6) method versus NSM + CaCl2 broth - characterization (UNCLASSIFIED)
Date: Tuesday, July 10, 2007 2:52:59 PM
Attachments: [Redacted]

Classification: UNCLASSIFIED
Caveats: NONE

Here are the microscopy and viability data for our side-by-side comparison of the best Leighton and Doi medium methodology ((b)(6) ' method) versus NSM (New Sporulation Medium) + CaCl2 broth.

-bruce

Bruce Ivins
(b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6) [Ivins, Bruce E Dr USAMRIID](#)
Subject: L&D medium (b)(6) method) versus NSM + CaCl2 broth - characterization (UNCLASSIFIED)
Date: Tuesday, July 10, 2007 2:52:59 PM
Attachments: [Redacted]

Classification: UNCLASSIFIED
Caveats: NONE

Here are the microscopy and viability data for our side-by-side comparison of the best Leighton and Doi medium methodology (b)(6) ' method) versus NSM (New Sporulation Medium) + CaCl2 broth.

-bruce

Bruce Ivins
(b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6) [Ivins, Bruce E Dr USAMRIID](#)
Subject: More bad irradiation news (UNCLASSIFIED)
Date: Thursday, June 14, 2007 9:12:14 AM

Classification: UNCLASSIFIED
Caveats: NONE

After recheck of the 6 samples that appeared to pass sterility check after a total of 6 million rads, only two samples remained negative. The other four - 5C, 6B, 7B and 9B - came up hot. Only 7A and 9A don't need to be irradiated again.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, June 13, 2007 3:08 PM
To: (b)(6) [Ivins, Bruce E Dr USAMRIID](#); (b)(6)

Subject: FW: Irradiation sterilization failure...again (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Please note the new spreadsheet. 4A-9C were tested on SBA. The numbers in red were still positive for B. anthracis growth. The numbers in blue were negative for B. anthracis. The negative samples were re-plated to make sure they are negative.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, June 13, 2007 11:35 AM
To: (b)(6) [Ivins, Bruce E Dr USAMRIID](#); (b)(6)

Subject: Irradiation sterilization failure...again (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

The 27 samples (see file) were originally irradiated on 30 MAY 07, with 5 Megarads. The samples were

still "hot," so on 11 JUN 07, they were re-irradiated with an additional 1 Million rads (1 Megarad). Eighteen of the 27 samples were tested by (b)(6), and 12 of the 18 are still "hot." They can't be released until they're sterile, so (b)(6) is going to give the samples that were hot (plus the ones that weren't checked) will be re-irradiated with an additional 2 Megarads. Hopefully this will work. Stay tuned....

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6) [Ivins, Bruce E Dr USAMRIID](#)
Subject: More bad irradiation news (UNCLASSIFIED)
Date: Thursday, June 14, 2007 9:12:14 AM
Attachments: [REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

After recheck of the 6 samples that appeared to pass sterility check after a total of 6 million rads, only two samples remained negative. The other four - 5C, 6B, 7B and 9B - came up hot. Only 7A and 9A don't need to be irradiated again.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, June 13, 2007 3:08 PM
To: (b)(6) Ivins, Bruce E Dr USAMRIID; (b)(6)

Subject: FW: Irradiation sterilization failure...again (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Please note the new spreadsheet. 4A-9C were tested on SBA. The numbers in red were still positive for B. anthracis growth. The numbers in blue were negative for B. anthracis. The negative samples were re-plated to make sure they are negative.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, June 13, 2007 11:35 AM
To: (b)(6) Ivins, Bruce E Dr

USAMRIID; (b)(6)
Subject: Irradiation sterilization failure...again (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

The 27 samples (see file) were originally irradiated on 30 MAY 07, with 5 Megarads. The samples were

still "hot," so on 11 JUN 07, they were re-irradiated with an additional 1 Million rads (1 Megarad). Eighteen of the 27 samples were tested by (b)(6), and 12 of the 18 are still "hot." They can't be released until they're sterile, so (b)(6) is going to give the samples that were hot (plus the ones that weren't checked) will be re-irradiated with an additional 2 Megarads. Hopefully this will work. Stay tuned....

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: [Ivins, Bruce E Dr USAMRIID](#); (b)(6)
Subject: Mouse LD50 challenge on 9 JUL 07 - SA 12703 (L&D spores from 2 JUL 07) (UNCLASSIFIED)
Date: Monday, July 09, 2007 10:31:53 AM

Classification: UNCLASSIFIED

Caveats: NONE

We're going to do a mouse LD50 challenge on Monday , 9 July 07 . The injections will be intraperitoneal, 0.2 ml.

SA# 12 703 - Leighton and Doi spores via Pat Fellows method - 10 mice per group

Group A - 1000 spores in 0.2 ml - IP

Group B - 300 spores in 0.2 ml - IP

Group C - 100 spores in 0.2 ml - IP

Group D - 30 spores in 0.2 ml - IP

Group E - 10 spores in 0.2 ml - IP

1.82 X 10e8 /ml in a tube (This is a 10⁻² dilution of the original stock.)

0.1 ml into 36.3 ml to give 5 X 10e5 /ml

0.1 ml into 9.9 ml to give 1,000 per 0.2 ml - - Group A

4.5 ml into 10.5 ml to give 300 per 0.2 ml - - Group B

6.0 ml into 12.0 ml to give 100 per 0.2 ml - - Group C

4.5 ml into 10.5 ml to give 30 per 0.2 ml - - Group D

6.0 ml into 12.0 ml to give 10 per 0.2 ml - - Group E

Plate out 0.2 ml of C, D, and E - should get 100, 30 and 10 colonies per plate , respectively.

-bruce

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: Need a password for oracle (UNCLASSIFIED)
Date: Thursday, June 14, 2007 3:07:12 PM

Classification: UNCLASSIFIED

Caveats: NONE

(b)(6)

I need a password for oracle. The one I set up doesn't work. Thanks.

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: NSM + added CaCl2 - broth (UNCLASSIFIED)
Date: Friday, July 13, 2007 2:30:08 PM

Classification: UNCLASSIFIED

Caveats: NONE

Over the past year we've looked at several different media, adjusting nutrient and salt components, and the medium below appears to be the best, even better than the Leighton and Doi medium formulation that (b)(6) used. The medium below is easier to make than Leighton and Doi medium, gives at least 5×10^8 per ml spores, and yields very clean preparations. When it's time for your lab to make spores, we'll be happy to help you with the medium and the process.
-bruce

in (b)(2) in NSM (+ CaCl2) broth

1. Streak out Ames spores on SBA for isolated colonies – incubate at 37oC overnight.
2. Put 3 colonies into 10 ml of PBS and mix, then inoculate 0.1 ml onto each of 2 flasks of NSM broth containing 0.1 g/liter (or 0.025 g per 250 ml in a 2-liter flask) of CaCl2. (This is 1/3 the amount contained in Leighton and Doi medium. To each flask, add 1 ml of a filter-sterilized solution of 2.5 g of CaCl2 in 100 ml WFI.)
3. Incubate 3 days at 32oC with shaking at 140 rpm.

NSM Broth + added CaCl2

	Amount per liter
1. BactoTryptone	3 grams
2. Bacto Yeast extract	3 grams
3. Bacto Peptone	5 grams
4. Lab-Lemco powder (not agar)	3 grams
5 . MnCl2-4H2O (1% solution)	1 ml
6 . Deionized water	1000 ml

Add 250 ml to each Two-liter flask and autoclave for 15 minutes.

After cooling, add 1 ml of a sterile CaCl2 solution (2.5 g of anhydrous CaCl2 in 100 ml WFI, then filter sterilized). This can be added at the time of inoculation if desired.

-bruce

Bruce Ivins

(b)(6)

A large black rectangular redaction box covers the majority of the text in this section, starting from the "(b)(6)" label and extending to the right and downwards.

Classification: UNCLASSIFIED

Caveats: FOUO

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: Quality Assurance Vacancy Announcement (UNCLASSIFIED)
Date: Monday, June 11, 2007 1:07:00 PM

Classification: UNCLASSIFIED

Caveats: NONE

(b)(6)

Could you please give me a call at (b)(6) when you can? (b)(6) is interested in applying for the position. She has the qualifications required, according to the announcement. Thanks!!

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: RE: (UNCLASSIFIED)
Date: Tuesday, June 12, 2007 4:30:34 PM

Classification: UNCLASSIFIED
Caveats: NONE

(b)(6) is going to give us some tomorrow at approximately 1×10^8 /ml, which should be fine to count.
Thanks, (b)(6)

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)
Sent: Tuesday, June 12, 2007 3:54 PM
To: (b)(6); Ivins, Bruce E Dr USAMRIID
Cc: (b)(6)
Subject: (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

(b)(6)

I spoke to Bruce, and they should be able to help you guys get counts of you fixed spores.

Thanks

(b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: [Ivins, Bruce E Dr USAMRIID](#); (b)(6)
Cc: (b)(6)
Subject: RE: Mouse LD50 challenge on 31 MAY 07 - SA 12484 (L&D spores from 3 OCT 07) - Death data (UNCLASSIFIED)
Date: Monday, June 11, 2007 3:33:13 PM

Classification: UNCLASSIFIED

Caveats: NONE

Thanks to (b)(6) for doing the PM checks. - bruce

We're going to do a mouse LD50 challenge on Thursday, 31 MAY 07 . The injections will be intraperitoneal, 0.2 ml.

SA# 12484 (L&D spores from 3 OCT 07) - 10 mice per group

		Cumulative Deaths						
Group	Dose	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8
Day 9	Day 10	Day 11						
A	1000	5	7	9	9	9	9	9
9	9	10	10					
B	300	2	4	5	5	5	5	5
5	5	5	5					
C	103	0	3	3	4	4	4	4
4	4	4	4					
D	27	0	1	1	1	1	1	1
1	1	1	1					
E	9.6	0	0	0	0	0	0	0
0	0	0	0					

Day 2 = Saturday, 2 June

Day 3 = Sunday, 3 June

Day 4 = Monday, 4 June

Day 5 = Tuesday, 5 June

Day 6, Wednesday, 6 June

Day 7, Thursday, 7 June

Day 8, Friday, 8 June

Day 9, Saturday, 9 June

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: [Ivins, Bruce E Dr USAMRIID](#); (b)(6)
Subject: RE: Mouse TTD challenge on 11 JUL 07 - SA 12704 (NSM + CaCl₂ spores from 2 JUL 07) - CORRECTED INJECTION TIMES (UNCLASSIFIED)
Date: Tuesday, July 10, 2007 2:33:33 PM

Classification: UNCLASSIFIED

Caveats: NONE

We're going to do a mouse TTD challenge on Wednesday, 11 July 07. The injections will be intraperitoneal, 0.2 ml.

SA# 12704 - NSM + CaCl₂ - 10 mice per group

Group 1 - 1 X 10⁵ spores in 0.2 ml - IP - inject between 1500 and 1600

Group 2 - 1 X 10⁴ spores in 0.2 ml - IP - inject between 1100 to 1200

2.28 X 10⁸ /ml in a tube (This is a 10⁻² dilution of the original stock.)

0.1 ml into 45.5 ml to give 1 X 10⁵ per 0.2 ml - - Group 1

1.0 ml into 9.0 ml to give 2 X 10⁴ per 0.2 ml - - Group B

Then add 0.1 ml of Group B into 19.9 ml and plate out onto TSA for ~25 per plate

The mice receiving 10⁵ spores should die the next day (Thursday) beginning about 8 am.

The mice receiving 10⁴ spores should die the next day (Thursday) beginning about noon.

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: RE: Business discussion for tomorrow's meeting (UNCLASSIFIED)
Date: Friday, June 15, 2007 3:05:00 PM
Sensitivity: Confidential

Classification: UNCLASSIFIED
Caveats: NONE

Hi, (b)(6),

Will the fact that this information is being treated as "confidential" make it appear that we are trying to cover up problems with respect to our animal handling? Should (b)(6) be notified and asked to prepare a public response?

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)
Sent: Wednesday, June 13, 2007 1:43 PM
To: (b)(6)

[Redacted]

Ivins, Bruce E Dr

USAMRIID;(b)(6)

[Redacted]

Subject: Business discussion for tomorrow's meeting (UNCLASSIFIED)
Importance: High
Sensitivity: Confidential

Classification: UNCLASSIFIED
Caveats: NONE

HI all,

I am attaching two confidential documents for discussion at tomorrow's meeting. Please do not forward or distribute copies of these documents to

noncommittee members. The discussion tomorrow will center around our investigation into high temperatures in several animal rooms in (b)(2) and the loss of animals. (b)(6), as a consultant to the LACUC, and (b)(6) investigated the incident.

Since the incident involved facility issues I have asked (b)(6) to attend the meeting. First I will ask (b)(6) to provide an oral summary of the investigation findings. Then I will ask (b)(6) and (b)(6) if they has anything to add. Finally, after all three men have provided their input I will open the floor to questions. Following the questions we will ask (b)(6) to leave and the LACUC will review recommendations and determine actions to be taken. Also, (b)(6) has asked for an assurance plan regarding the incident and how we might "assure" procedures we put into place will be adhered to in the future. (b)(6) notified MRMC ACURO and OLAW regarding the incident. I believe he was going to notify AAALACi as well.

Following our business meeting we will review (b)(6) protocol.

Please keep this email confidential.

Thanks, (b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: [Ivins, Bruce E Dr USAMRIID](#)
RE: Electronic Proposal ERMS No.07052002 UID: 000106557 (UNCLASSIFIED)
Date: Tuesday, June 19, 2007 11:07:42 AM
Attachments: [REDACTED]

Classification: UNCLASSIFIED
Caveats: FOUO

I'm enclosing my review of the proposal. I believe that the work described is premature and should not be funded until more definitive efficacy studies have been conducted.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)
Sent: Tuesday, June 12, 2007 12:39 PM
To: (b)(6); Ivins, Bruce E Dr USAMRIID
Cc: (b)(6)

Subject: FW: Electronic Proposal ERMS No.07052002 UID: 000106557 (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

(b)(6) and Dr. Ivins:

Attached for your review is the full proposal submission from IOMAI Corporation for the FY07 Army RDT&E congressional add entitled: "Anthrax Skin Patch Vaccine." The FY07 appropriation amount was \$1.0M and the total amount available for award is: \$932,000.

Note: To open the attached zipped file, please change the file extension from .snd to .zip. For your convenience, the zip files have been consolidated into the attached pdf document (07052002_Grant00283283) for ease of viewing and handling the proposal documents.

For Dr. Ivins: I've attached a copy of the in-house proposal review template to this email. As the COR for this proposal, could you please complete the in-house proposal review template and provide it back to me at your earliest convenience, so that I can include it in the proposal processing package? Thanks.

For (b)(6): Request your approval to initiate an AIBS review for this proposal (Title: Development of Anthrax Vaccine Skin-Patch Technology (Anthrax Vaccine Patch); PI: (b)(6) to provide an external peer review as required by USAMRAA for all extramural proposals. FYI -- attached is a copy of the MEDCOM approval form for AIBS peer reviews of multiple FY07 extramural/CSI proposals.

If you have any questions, please let me know. Thanks.

v/r,
(b)(6)

[Redacted]

-----Original Message-----

From: (b)(6)

Sent: Tuesday, June 12, 2007 10:58 AM

To: (b)(6)

Subject: Electronic Proposal ERMS No.07052002 UID: 000106557

Hello,

To open the attached zipped file, please change the file extension from .snd to .zip. If you have any problems with this process or accessing the files, please let me know.

(b)(6)

EMAIL FOR: (b)(6)

Review of Electronic Proposal ERMS No.07052002 UID: 000106557.

An electronic copy of the subject proposal:

Proposal ERMS No.07052002 UID: 000106557 (AIBS#:070473)

PI: (b)(6)

ORG: { 10316} Iomai Corporation

TITLE: Development of Anthrax Vaccine Skin-Patch Technology (Anthrax Vaccine Patch)

is appended as an attachment to this message.

Please complete and return the proposal evaluation form below via email to (b)(6) by the suspense date of 07/03/2007.

(b)(6)

USAMRMC ELECTRONIC REVIEW REQUEST OF PROPOSAL DATE OF REVIEW: _____

USAMRMC REVIEWER'S NAME, OFFICE SYMBOL, EMAIL ADDRESS AND NAME OF ACTIVITY:

UID: 000106557 ERMS LOG NUMBER: 07052002 PRINCIPAL INVESTIGATOR: (b)(6)

NAME OF ORGANIZATION: { 10316} Iomai Corporation

TITLE: Development of Anthrax Vaccine Skin-Patch Technology (Anthrax Vaccine Patch)

PLEASE COMPLETE THE FOLLOWING, SELECT THE APPROPRIATE LINE(S) BELOW AND ADD YOUR

COMMENTS.

- The proposal is relevant to the Command research mission, funds are expected to be available and a full proposal In-house review is desired.
- The proposal is relevant to the Command research mission, funds are expected to be available and a full proposal mail review is desired.
- No interest, does not apply to my Research Directorate.
- No interest, has no military relevance.
- Transfer to RAD (s) ___;___;___; for interest and review.
- Send to RAD (s) ___;___;___; for partial funding interest.

The Surgeon General's Office (TSG) Consultant Review desired:
 Yes; WHO: _____

- Send a Turn-down letter.
- Send a Turn-down letter (Attach explanatory paragraph (s)).
- Send a Turn-down letter (Recommend another agency)_____.
- Request a more detailed proposal_____.

Comments: _____.

 NOTE: YOUR COMMENTS ON THE ABOVE PROPOSAL DOES NOT REQUIRE A SIGNATURE AND SHOULD BE EMAILED TO AIBS AT (b)(6) American Institute of Biological Sciences Phone No. (b)(6)
 --

(b)(6)

This communication, along with any documents, files or attachments, is intended only for the use of the addressee and may contain legally privileged and confidential information. Information provided for evaluation purposes only shall not be duplicated, used, or disclosed for any other purpose. If you are not the intended recipient, you are hereby notified that any dissemination, distribution or copying of any information contained in or attached to this communication is strictly prohibited. If you have received this message in error, please notify the sender immediately and destroy the original communication and its attachments without reading, printing or saving in any manner. This communication does not form any contractual obligation on behalf of the sender, the sender's employer, or the employer's parent company, affiliates or subsidiaries.

Classification: UNCLASSIFIED
 Caveats: NONE

Attachment Classification: UNCLASSIFIED
 Attachment Caveats: NONE
 Classification: UNCLASSIFIED
 Caveats: FOUO

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: RE: Electronic Proposal ERMS No.07052002 UID: 000106557 (UNCLASSIFIED)
Date: Tuesday, June 19, 2007 11:07:42 AM
Attachments: [REDACTED]

Classification: UNCLASSIFIED
Caveats: FOUO

I'm enclosing my review of the proposal. I believe that the work described is premature and should not be funded until more definitive efficacy studies have been conducted.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)
Sent: Tuesday, June 12, 2007 12:39 PM
To: (b)(6); Ivins, Bruce E Dr USAMRIID
Cc: (b)(6)

Subject: FW: Electronic Proposal ERMS No.07052002 UID: 000106557 (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

(b)(6) and Dr. Ivins:

Attached for your review is the full proposal submission from IOMAI Corporation for the FY07 Army RDT&E congressional add entitled: "Anthrax Skin Patch Vaccine." The FY07 appropriation amount was \$1.0M and the total amount available for award is: \$932,000.

Note: To open the attached zipped file, please change the file extension from .snd to .zip. For your convenience, the zip files have been consolidated into the attached pdf document (07052002_Grant00283283) for ease of viewing and handling the proposal documents.

For Dr. Ivins: I've attached a copy of the in-house proposal review template to this email. As the COR for this proposal, could you please complete the in-house proposal review template and provide it back to me at your earliest convenience, so that I can include it in the proposal processing package? Thanks.

For (b)(6): Request your approval to initiate an AIBS review for this proposal (Title: Development of Anthrax Vaccine Skin-Patch Technology (Anthrax Vaccine Patch); PI: (b)(6) to provide an external peer review as required by USAMRAA for all extramural proposals. FYI -- attached is a copy of the MEDCOM approval form for AIBS peer reviews of multiple FY07 extramural/CSI proposals.

If you have any questions, please let me know. Thanks.

v/r,
(b)(6)

[Redacted]

-----Original Message-----

From: (b)(6)

Sent: Tuesday, June 12, 2007 10:58 AM

To: (b)(6)

Subject: Electronic Proposal ERMS No.07052002 UID: 000106557

Hello,

To open the attached zipped file, please change the file extension from .snd to .zip. If you have any problems with this process or accessing the files, please let me know.

(b)(6)

EMAIL FOR (b)(6)

Review of Electronic Proposal ERMS No.07052002 UID: 000106557.

An electronic copy of the subject proposal:

Proposal ERMS No.07052002 UID: 000106557 (AIBS#:070473)

PI: (b)(6)

ORG: { 10316} Iomai Corporation

TITLE: Development of Anthrax Vaccine Skin-Patch Technology (Anthrax Vaccine Patch)

is appended as an attachment to this message.

Please complete and return the proposal evaluation form below via email to (b)(6) by the suspense date of 07/03/2007.

(b)(6)

USAMRMC ELECTRONIC REVIEW REQUEST OF PROPOSAL DATE OF REVIEW: _____

USAMRMC REVIEWER'S NAME, OFFICE SYMBOL, EMAIL ADDRESS AND NAME OF ACTIVITY:

UID: 000106557 ERMS LOG NUMBER: 07052002 PRINCIPAL INVESTIGATOR: (b)(6)

NAME OF ORGANIZATION: { 10316} Iomai Corporation

TITLE: Development of Anthrax Vaccine Skin-Patch Technology (Anthrax Vaccine Patch)

PLEASE COMPLETE THE FOLLOWING, SELECT THE APPROPRIATE LINE(S) BELOW AND ADD YOUR

COMMENTS.

- The proposal is relevant to the Command research mission, funds are expected to be available and a full proposal In-house review is desired.
- The proposal is relevant to the Command research mission, funds are expected to be available and a full proposal mail review is desired.
- No interest, does not apply to my Research Directorate.
- No interest, has no military relevance.
- Transfer to RAD (s) ___;___;___; for interest and review.
- Send to RAD (s) ___;___;___; for partial funding interest.

The Surgeon General's Office (TSG) Consultant Review desired:
 Yes; WHO: _____

- Send a Turn-down letter.
- Send a Turn-down letter (Attach explanatory paragraph (s)).
- Send a Turn-down letter (Recommend another agency)_____.
- Request a more detailed proposal_____.

Comments: _____.

 NOTE: YOUR COMMENTS ON THE ABOVE PROPOSAL DOES NOT REQUIRE A SIGNATURE AND SHOULD BE EMAILED TO AIBS AT (b)(6) American Institute of Biological Sciences Phone No. (b)(6)
 --

(b)(6)

This communication, along with any documents, files or attachments, is intended only for the use of the addressee and may contain legally privileged and confidential information. Information provided for evaluation purposes only shall not be duplicated, used, or disclosed for any other purpose. If you are not the intended recipient, you are hereby notified that any dissemination, distribution or copying of any information contained in or attached to this communication is strictly prohibited. If you have received this message in error, please notify the sender immediately and destroy the original communication and its attachments without reading, printing or saving in any manner. This communication does not form any contractual obligation on behalf of the sender, the sender's employer, or the employer's parent company, affiliates or subsidiaries.

Classification: UNCLASSIFIED
 Caveats: NONE

 Attachment Classification: UNCLASSIFIED
 Attachment Caveats: NONE
 Classification: UNCLASSIFIED
 Caveats: FOUO

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: RE: Electronic Proposal ERMS No.07052002 UID: 000106557 (UNCLASSIFIED)
Date: Wednesday, June 20, 2007 8:52:17 AM

Classification: UNCLASSIFIED
Caveats: FOUO

Thanks, (b)(6) If they had put the horse before the cart, so to speak, it would have been a much better proposal.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)
Sent: Tuesday, June 19, 2007 4:10 PM
To: Ivins, Bruce E Dr USAMRIID; (b)(6)

Subject: RE: Electronic Proposal ERMS No.07052002 UID: 000106557 (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Thanks Bruce. The key thing to understand here is that the project is a congressional special interest and will get funded no matter what we think. Ideally, we (really the COR) should help the company refocus their proposal such that it will produce something of use to the military. Under these conditions, it helps to hear from the experts specific guidance about how the proposal could be improved. Suggestions for collaborations to look at providing the efficacy data you mention are the types of things that should be captured in these reviews.

Thanks again for the help.

(b)(6)

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID
Sent: Tuesday, June 19, 2007 11:08 AM
To: (b)(6)

Subject: RE: Electronic Proposal ERMS No.07052002 UID: 000106557 (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

I'm enclosing my review of the proposal. I believe that the work described is premature and should not be funded until more definitive efficacy studies have been conducted.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Tuesday, June 12, 2007 12:39 PM

To: (b)(6)

Ivins, Bruce E Dr USAMRIID

Cc: (b)(6)

Subject: FW: Electronic Proposal ERMS No.07052002 UID: 000106557 (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

(b)(6) and Dr. Ivins:

Attached for your review is the full proposal submission from IOMAI Corporation for the FY07 Army RDT&E congressional add entitled: "Anthrax Skin Patch Vaccine." The FY07 appropriation amount was \$1.0M and the total amount available for award is: \$932,000.

Note: To open the attached zipped file, please change the file extension from .snd to .zip. For your convenience, the zip files have been consolidated into the attached pdf document (07052002_Grant00283283) for ease of viewing and handling the proposal documents.

For Dr. Ivins: I've attached a copy of the in-house proposal review template to this email. As the COR for this proposal, could you please complete the in-house proposal review template and provide it back to me at your earliest convenience, so that I can include it in the proposal processing package? Thanks.

For (b)(6): Request your approval to initiate an AIBS review for this proposal (Title: Development of Anthrax Vaccine Skin-Patch Technology (Anthrax Vaccine Patch); PI: (b)(6) to provide an external peer review as required by USAMRAA for all extramural proposals. FYI -- attached is a copy of the MEDCOM approval form for AIBS peer reviews of multiple FY07 extramural/CSI proposals.

If you have any questions, please let me know. Thanks.

v/r,

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Tuesday, June 12, 2007 10:58 AM

To: (b)(6)

Subject: Electronic Proposal ERMS No.07052002 UID: 000106557

Hello,

To open the attached zipped file, please change the file extension from .snd to .zip. If you have any problems with this process or accessing the files, please let me know.

(b)(6)

EMAIL FOR: (b)(6)

Review of Electronic Proposal ERMS No.07052002 UID: 000106557.

An electronic copy of the subject proposal:

Proposal ERMS No.07052002 UID: 000106557 (AIBS#:070473)

PI: (b)(6)

ORG: { 10316} Iomai Corporation

TITLE: Development of Anthrax Vaccine Skin-Patch Technology (Anthrax Vaccine Patch)

is appended as an attachment to this message.

Please complete and return the proposal evaluation form below via email to (b)(6) by the suspense date of 07/03/2007.

(b)(6)

USAMRMC ELECTRONIC REVIEW REQUEST OF PROPOSAL DATE OF REVIEW: _____

USAMRMC REVIEWER'S NAME, OFFICE SYMBOL, EMAIL ADDRESS AND NAME OF ACTIVITY:

UID: 000106557 ERMS LOG NUMBER: 07052002 PRINCIPAL INVESTIGATOR: (b)(6)

NAME OF ORGANIZATION: { 10316} Iomai Corporation

TITLE: Development of Anthrax Vaccine Skin-Patch Technology (Anthrax Vaccine Patch)

PLEASE COMPLETE THE FOLLOWING, SELECT THE APPROPRIATE LINE(S) BELOW AND ADD YOUR COMMENTS.

The proposal is relevant to the Command research mission, funds are expected to be available and a full proposal In-house review is desired.

The proposal is relevant to the Command research mission, funds are expected to be available and a full proposal mail review is desired.

No interest, does not apply to my Research Directorate.

No interest, has no military relevance.

Transfer to RAD (s) ___;___;___; for interest and review.

Send to RAD (s) ___;___;___; for partial funding interest.

The Surgeon General's Office (TSG) Consultant Review desired:

Yes; WHO: _____

Send a Turn-down letter.

- ___ Send a Turn-down letter (Attach explanatory paragraph (s).
- ___ Send a Turn-down letter (Recommend another agency)_____.
- ___ Request a more detailed proposal_____.

Comments: _____.

NOTE: YOUR COMMENTS ON THE ABOVE PROPOSAL DOES NOT REQUIRE A SIGNATURE AND SHOULD BE EMAILED TO AIBS AT (b)(6) American Institute of Biological Sciences Phone No. (b)(6)
--

(b)(6)

This communication, along with any documents, files or attachments, is intended only for the use of the addressee and may contain legally privileged and confidential information. Information provided for evaluation purposes only shall not be duplicated, used, or disclosed for any other purpose. If you are not the intended recipient, you are hereby notified that any dissemination, distribution or copying of any information contained in or attached to this communication is strictly prohibited. If you have received this message in error, please notify the sender immediately and destroy the original communication and its attachments without reading, printing or saving in any manner. This communication does not form any contractual obligation on behalf of the sender, the sender's employer, or the employer's parent company, affiliates or subsidiaries.

Classification: UNCLASSIFIED
Caveats: NONE

Attachment Classification: UNCLASSIFIED
Attachment Caveats: NONE
Classification: UNCLASSIFIED
Caveats: FOUO

Classification: UNCLASSIFIED
Caveats: FOUO

Classification: UNCLASSIFIED
Caveats: FOUO

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: RE: International meeting in Oslo on B. cereus, thuringiensis and anthracis (UNCLASSIFIED)
Date: Wednesday, June 27, 2007 9:29:52 AM

Classification: UNCLASSIFIED

Caveats: NONE

I look forward to meeting you when you come to talk to the people at DVC, (b)(6) There appeared to be some good posters and presentations on anthrax vaccines at the Oslo meetings.

-bruce

Bruce Ivins

(b)(6)

From: (b)(6)
Sent: Wednesday, June 27, 2007 8:47 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: International meeting in Oslo on B. cereus, thuringiensis and anthracis (UNCLASSIFIED)

Bruce,

Thanx for the information. (b)(6) and I are working hard to complete our working with Campylobacter jejuni at the moment, so that we can get back to the Anthrax work. We hope to begin our new model within the next few weeks. We are focusing on C. jejuni lately to meet our obligations with the State of Georgia and some funding that we have. We are looking forward to working with Anthrax again. I have been growing and spinning large cultures the last few weeks, so you know what fun that we are having. Lastly, we heard back from US Army Medical Research group regarding our two white papers for Anthrax and C. jejuni, unfortunately there is no money to support this work, even though there was interest. Hopefully, DARPA will be interested in what we got. I know that NIAID is interested, but their process at NIH is very very slow. Such is life!!!

(b)(6) is coming to town for a few weeks to help us out with (b)(6). It seems that we will have a good Summer with him, although he is already crawling very quickly and finding trouble. Hopefully things with you are going well. Lastly, we are talking with DynPort Vaccine Company regarding our technology and it looks like we might be traveling to Ft. Detrick in the next few months to talk with them, so we should get a chance to catch-up then.

Take Care,

(b)(6)

----- Original Message -----

Subject: International meeting in Oslo on B. cereus, thuringiensis and

anthracis (UNCLASSIFIED)
From: "Ivins, Bruce E Dr USAMRIID" <bruce.ivins@us.army.mil>
Date: Tue, June 26, 2007 4:04 pm
To: (b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

(b)(6)

Although I didn't go to the meeting in Oslo, I was given a copy of the program of talks and posters, which I am forwarding to you.

I hope you have a fine summer with your young son.

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: RE: Irradiation sterilization failure...again (UNCLASSIFIED)
Date: Wednesday, June 13, 2007 1:17:44 PM

Classification: UNCLASSIFIED
Caveats: NONE

I'm concerned also, (b)(6). We may need to do another kill curve for spores.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)
Sent: Wednesday, June 13, 2007 11:38 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Irradiation sterilization failure...again (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Is something wrong with the irradiator? The initial 5 Megarads should have worked. We have used that for all samples in the past with no failures. That makes me wonder about the machine itself.

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, June 13, 2007 11:35 AM
To: (b)(6)
Ivins, Bruce E Dr
USAMRIID; (b)(6)
Subject: Irradiation sterilization failure...again (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

The 27 samples (see file) were originally irradiated on 30 MAY 07, with 5 Megarads. The samples were still "hot," so on 11 JUN 07, they were re-irradiated with an additional 1 Million rads (1 Megarad). Eighteen of the 27 samples were tested by (b)(6), and 12 of the 18 are still "hot." They can't be released until they're sterile, so (b)(6) is going to give the samples that were hot (plus the ones that weren't checked) will be re-irradiated with an additional 2 Megarads. Hopefully this will work. Stay tuned....

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: RE: Irradiation sterilization failure...again (UNCLASSIFIED)
Date: Wednesday, June 13, 2007 1:16:23 PM

Classification: UNCLASSIFIED
Caveats: NONE

Five megarads should have been more than enough to kill everything, but the samples were hot...and still hot after an additional 1 million rads. I don't want the spores to be fried either, and the total of 6 megarads not killing is amazing. In the past, 4 megarads would do the job. This is 2 million rads over that, and still no sterility. Maybe we need to do a sterility curve with spores to see what the die-off is with increasing doses(?)

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)
Sent: Wednesday, June 13, 2007 11:38 AM
To: Ivins, Bruce E Dr USAMRIID
Cc: (b)(6)
Subject: RE: Irradiation sterilization failure...again (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

What is going on with the irradiator? Is it not working properly? These things are going to be fried to a crisp!

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, June 13, 2007 11:35 AM
To: (b)(6)
Ivins, Bruce E Dr
USAMRIID; (b)(6)
Subject: Irradiation sterilization failure...again (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

The 27 samples (see file) were originally irradiated on 30 MAY 07, with 5 Megarads. The samples were still "hot," so on 11 JUN 07, they were re-irradiated with an additional 1 Million rads (1 Megarad). Eighteen of the 27 samples were tested by (b)(6), and 12 of the 18 are still "hot." They can't be released until they're sterile, so (b)(6) is going to give the samples that were hot (plus the ones that weren't checked) will be re-irradiated with an additional 2 Megarads. Hopefully this will work. Stay tuned....

-bruce

Bruce Ivins

(b)(6)

A large black rectangular redaction box covers the majority of the text in this section, starting from the '(b)(6)' label and extending to the right and downwards.

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: RE: Irradiation sterilization failure...again (UNCLASSIFIED)
Date: Wednesday, June 13, 2007 1:20:23 PM

Classification: UNCLASSIFIED
Caveats: NONE

And what's not right is all that's left.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)
Sent: Wednesday, June 13, 2007 1:20 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Irradiation sterilization failure...again (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Some thing is not right.

(b)(6)

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, June 13, 2007 1:16 PM
To: (b)(6)
Subject: RE: Irradiation sterilization failure...again (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Five megarads should have been more than enough to kill everything, but the samples were hot...and still hot after an additional 1 million rads. I don't want the spores to be fried either, and the total of 6 megarads not killing is amazing. In the past, 4 megarads would do the job. This is 2 million rads over that, and still no sterility. Maybe we need to do a sterility curve with spores to see what the die-off is with increasing doses(?)

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Wednesday, June 13, 2007 11:38 AM

To: Ivins, Bruce E Dr USAMRIID

Cc: (b)(6)

Subject: RE: Irradiation sterilization failure...again (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

What is going on with the irradiator? Is it not working properly? These things are going to be fried to a crisp!

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID

Sent: Wednesday, June 13, 2007 11:35 AM

To: (b)(6)

Ivins, Bruce E Dr

USAMRIID; (b)(6)

Subject: Irradiation sterilization failure...again (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

The 27 samples (see file) were originally irradiated on 30 MAY 07, with 5 Megarads. The samples were still "hot," so on 11 JUN 07, they were re-irradiated with an additional 1 Million rads (1 Megarad). Eighteen of the 27 samples were tested by (b)(6) and 12 of the 18 are still "hot." They can't be released until they're sterile, so (b)(6) is going to give the samples that were hot (plus the ones that weren't checked) will be re-irradiated with an additional 2 Megarads. Hopefully this will work. Stay tuned....

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: [Ivins, Bruce E Dr USAMRIID](#) (b)(6) [REDACTED]
Subject: RE: Mouse LD50 challenge on 9 JUL 07 - SA 12704 (NSM + CaCl₂ spores from 2 JUL 07) -corrected (UNCLASSIFIED)
Date: Monday, July 09, 2007 1:29:10 PM

Classification: UNCLASSIFIED

Caveats: NONE

We're going to do a mouse LD50 challenge on Monday , 9 July 07 . The injections will be intraperitoneal, 0.2 ml.

SA# 12 704 - NSM + CaCl₂ - 10 mice per group

Group A - 1000 spores in 0.2 ml - IP

Group B - 300 spores in 0.2 ml - IP

Group C - 100 spores in 0.2 ml - IP

Group D - 30 spores in 0.2 ml - IP

Group E - 10 spores in 0.2 ml - IP

2.28 X 10⁸ /ml in a tube (This is a 10⁻² dilution of the original stock.)

0.1 ml into 45.5 ml to give 5 X 10⁵ /ml

0.1 ml into 9.9 ml to give 1,000 per 0.2 ml - - Group A

4.5 ml into 10.5 ml to give 300 per 0.2 ml - - Group B

6.0 ml into 12.0 ml to give 100 per 0.2 ml - - Group C

4.5 ml into 10.5 ml to give 30 per 0.2 ml - - Group D

6.0 ml into 12.0 ml to give 10 per 0.2 ml - - Group E

Plate out 0.2 ml of C, D, and E - should get 100, 30 and 10 colonies per plate , respectively.

-bruce

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: RE: Samples for Bruce (UNCLASSIFIED)
Date: Thursday, June 14, 2007 4:00:41 PM

Classification: UNCLASSIFIED

Caveats: NONE

Didn't you see the results I sent? We examined 28 grid squares from each sample under the microscope. We then got an average number for each grid, for each parameter, and calculated the concentration per ml by multiplying by 2×10^7 .

Yes we did all three. The concentration per ml for refractile spores, non-refractile spores, vegetative cells and debris chunks is reported below for each of the three samples.

-bruce

Bruce Ivins

(b)(6)

From: (b)(6)
Sent: Thursday, June 14, 2007 1:38 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Samples for Bruce (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Thank you. Did you make measurements on samples 2 and 3?

From: Ivins, Bruce E Dr USAMRIID
Sent: Thursday, June 14, 2007 11:41 AM
To: (b)(6)
Subject: RE: Samples for Bruce (UNCLASSIFIED) Ivins, Bruce E Dr USAMRIID

Classification: UNCLASSIFIED

Caveats: NONE

See below for what we found after phase contrast mikcsoscopy. The data are in red.

Overall, the quality of the preps was poor. Most of the material consisted of chunks of debris (not visibly either cellular or spore in origin). There were a lot of vegetative cells and non-refractile spores. Number one was the best of the three preps, with about 30% refractile spores, 18% non-refractile spores, 17% vegetative cells, and 34% debris chunks.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Wednesday, June 13, 2007 8:53 AM

To: Ivins, Bruce E Dr USAMRIID; (b)(6)

Subject: Samples for Bruce (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Bruce,

Samples are ready for pick up or delivery, please call (b)(6) at (b)(6) or stop by my lab (b)(2). They are in my chemical fume hood in a Styrofoam rack fragment labeled "For Bruce". Sample info as follows:

Sample (b)(6) = 10 ul original sample from (b)(6), 2 x 10exp8/ml formalin killed (3 weeks 4% formalin with weekly change then plated to confirm sterility)

Refractile spores = 2.0 X 10e7 per ml

Non-refractile spores = 1.2 X 10e7 per ml

Vegetative cells = 1.1 X 10e7 per ml

Visible chunks of debris = 2.3 X 10e7/ml per ml

Sample (b)(6) = 20 ul from microtiter plate heat/L-Ala induction experiment #070612, well B09, concentration guesstimate is 5 x 10exp7.

Refractile spores = 1.4 X 10e6 per ml

Non-refractile spores = 7.2 X 10e5 per ml

Vegetative cells = 5.0 X 10e6 per ml

Visible chunks of debris = 5.7 X 10e6 per ml

Sample (b)(6) = 20 ul same as above except taken from well B10, same concentration.

Refractile spores = 0 per ml

Non-refractile spores = 0 per ml

Vegetative cells = 7.2×10^5 per ml

Visible chunks of debris = 3.6×10^6 per ml

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID

Sent: Tuesday, June 12, 2007 4:31 PM

To: (b)(6)

Subject: RE: (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

(b)(6) is going to give us some tomorrow at approximately 1×10^8 /ml, which should be fine to count.
Thanks, (b)(6)

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Tuesday, June 12, 2007 3:54 PM

To: (b)(6) Ivins, Bruce E Dr USAMRIID

Cc: (b)(6)

Subject: (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

(b)(6)

I spoke to Bruce, and they should be able to help you guys get counts of you fixed spores.

Thanks

(b)(6)

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: RE: Samples for Bruce (UNCLASSIFIED)
Date: Thursday, June 14, 2007 3:01:57 PM

Classification: UNCLASSIFIED

Caveats: NONE

How did you make the spores, (b)(6)? Did you use the standard (b)(6) Leighton and Doi method? Even the 2001 spores appear to be clumped.

-bruce

Bruce Ivins

(b)(6)

From: (b)(6)
Sent: Thursday, June 14, 2007 1:59 PM
To: Ivins, Bruce E Dr USAMRIID; (b)(6)
Subject: RE: Samples for Bruce (UNCLASSIFIED)

(b)(6)

Yes, somehow that spore prep went bad. I just looked at it (pre-formaldehyde), and it is a mess. I am not sure why, as it was stored in 1% phenol. Attached is a picture I just took of it (Ames.2001) and another spore prep (Ames.2007). I will formaldehyde-kill spores from the Ames.2007 stock. I will be gone next week, so I won't be able to get it out of the suite until about June 26.

(b)(6)

From: Ivins, Bruce E Dr USAMRIID
Sent: Thursday, June 14, 2007 11:41 AM
To: (b)(6)
Subject: RE: Samples for Bruce (UNCLASSIFIED)

Ivins, Bruce E Dr USAMRIID

Classification: UNCLASSIFIED

Caveats: NONE

See below for what we found after phase contrast mikcsoscopy. The data are in red.

Overall, the quality of the preps was poor. Most of the material consisted of chunks of debris (not visibly either cellular or spore in origin). There were a lot of vegetative cells and non-refractile spores. Number one was the best of the three preps, with about 30% refractile spores, 18% non-refractile spores, 17% vegetative cells, and 34% debris chunks.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Wednesday, June 13, 2007 8:53 AM

To: Ivins, Bruce E Dr USAMRIID; (b)(6)

Subject: Samples for Bruce (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Bruce,

Samples are ready for pick up or delivery, please call (b)(6) at (b)(6) or stop by my lab (b)(2). They are in my chemical fume hood in a Styrofoam rack fragment labeled "For Bruce". Sample info as follows:

Sample (b)(6) = 10 ul original sample from (b)(6), 2 x 10exp8/ml formalin killed (3 weeks 4% formalin with weekly change then plated to confirm sterility)

Refractile spores = 2.0 X 10e7 per ml

Non-refractile spores = 1.2 X 10e7 per ml

Vegetative cells = 1.1 X 10e7 per ml

Visible chunks of debris = 2.3 X 10e7/ml per ml

Sample (b)(6) = 20 ul from microtiter plate heat/L-Ala induction experiment #070612, well B09, concentration guesstimate is 5 x 10exp7.

Refractile spores = 1.4 X 10e6 per ml

Non-refractile spores = 7.2 X 10e5 per ml

Vegetative cells = 5.0 X 10e6 per ml

Visible chunks of debris = 5.7 X 10e6 per ml

Sample (b)(6) = 20 ul same as above except taken from well B10, same concentration.

Refractile spores = 0 per ml

Non-refractile spores = 0 per ml

Vegetative cells = 7.2×10^5 per ml

Visible chunks of debris = 3.6×10^6 per ml

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID

Sent: Tuesday, June 12, 2007 4:31 PM

To: (b)(6)

Subject: RE: (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

(b)(6) is going to give us some tomorrow at approximately 1×10^8 /ml, which should be fine to count.

Thanks (b)(6)

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Tuesday, June 12, 2007 3:54 PM

To: (b)(6)

Subject: (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

(b)(6)

I spoke to Bruce, and they should be able to help you guys get counts of you fixed spores.

Thanks

(b)(6)

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: RE: Samples for Bruce (UNCLASSIFIED)
Date: Thursday, June 14, 2007 11:40:33 AM

Classification: UNCLASSIFIED

Caveats: NONE

See below for what we found after phase contrast mikcsoscopy. The data are in red.

Overall, the quality of the preps was poor. Most of the material consisted of chunks of debris (not visibly either cellular or spore in origin). There were a lot of vegetative cells and non-refractile spores. Number one was the best of the three preps, with about 30% refractile spores, 18% non-refractile spores, 17% vegetative cells, and 34% debris chunks.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)
Sent: Wednesday, June 13, 2007 8:53 AM
To: Ivins, Bruce E Dr USAMRIID; (b)(6)
Subject: Samples for Bruce (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Bruce,

Samples are ready for pick up or delivery, please call (b)(6) at (b)(6) or stop by my lab (b)(2). They are in my chemical fume hood in a Styrofoam rack fragment labeled "For Bruce". Sample info as follows:

Sample (b)(6) = 10 ul original sample from (b)(6), 2 x 10exp8/ml formalin killed (3 weeks 4% formalin with weekly change then plated to confirm sterility)

Refractile spores = 2.0 X 10e7 per ml

Non-refractile spores = 1.2 X 10e7 per ml

Vegetative cells = 1.1 X 10e7 per ml

Visible chunks of debris = 2.3 X 10e7/ml per ml

Sample (b)(6) = 20 ul from microtiter plate heat/L-Ala induction experiment #070612, well B09, concentration gestimate is 5 x 10exp7.

Refractile spores = 1.4 X 10e6 per ml

Non-refractile spores = 7.2 X 10e5 per ml

Vegetative cells = 5.0×10^6 per ml

Visible chunks of debris = 5.7×10^6 per ml

Sample (b)(6) = 20 ul same as above except taken from well B10, same concentration.

Refractile spores = 0 per ml

Non-refractile spores = 0 per ml

Vegetative cells = 7.2×10^5 per ml

Visible chunks of debris = 3.6×10^6 per ml

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID

Sent: Tuesday, June 12, 2007 4:31 PM

To: (b)(6)

Subject: RE: (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

(b)(6) is going to give us some tomorrow at approximately 1×10^8 /ml, which should be fine to count.

Thanks, (b)(6)

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Tuesday, June 12, 2007 3:54 PM

To: (b)(6) Ivins, Bruce E Dr USAMRIID

Cc: (b)(6)

Subject: (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

(b)(6)-

I spoke to Bruce, and they should be able to help you guys get counts of you fixed spores.

Thanks

(b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: RE: Samples for Bruce (UNCLASSIFIED)
Date: Thursday, June 14, 2007 11:40:33 AM

Classification: UNCLASSIFIED

Caveats: NONE

See below for what we found after phase contrast mikcsoscopy. The data are in red.

Overall, the quality of the preps was poor. Most of the material consisted of chunks of debris (not visibly either cellular or spore in origin). There were a lot of vegetative cells and non-refractile spores. Number one was the best of the three preps, with about 30% refractile spores, 18% non-refractile spores, 17% vegetative cells, and 34% debris chunks.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)
Sent: Wednesday, June 13, 2007 8:53 AM
To: Ivins, Bruce E Dr USAMRIID; (b)(6)

Caveats: NONE

Bruce,

Samples are ready for pick up or delivery, please call (b)(6) at (b)(6) or stop by my lab (b)(2). They are in my chemical fume hood in a Styrofoam rack fragment labeled "For Bruce". Sample info as follows:

Sample (b)(6) = 10 ul original sample from (b)(6), 2 x 10exp8/ml formalin killed (3 weeks 4% formalin with weekly change then plated to confirm sterility)

Refractile spores = 2.0 X 10e7 per ml

Non-refractile spores = 1.2 X 10e7 per ml

Vegetative cells = 1.1 X 10e7 per ml

Visible chunks of debris = 2.3 X 10e7/ml per ml

Sample (b)(6) = 20 ul from microtiter plate heat/L-Ala induction experiment #070612, well B09, concentration gestimate is 5 x 10exp7.

Refractile spores = 1.4 X 10e6 per ml

Non-refractile spores = 7.2 X 10e5 per ml

Vegetative cells = 5.0×10^6 per ml

Visible chunks of debris = 5.7×10^6 per ml

Sample (b)(6) = 20 ul same as above except taken from well B10, same concentration.

Refractile spores = 0 per ml

Non-refractile spores = 0 per ml

Vegetative cells = 7.2×10^5 per ml

Visible chunks of debris = 3.6×10^6 per ml

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID

Sent: Tuesday, June 12, 2007 4:31 PM

To: (b)(6)

Subject: RE: (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

(b)(6) is going to give us some tomorrow at approximately 1×10^8 /ml, which should be fine to count.

Thanks, (b)(6)

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Tuesday, June 12, 2007 3:54 PM

To: (b)(6) Ivins, Bruce E Dr USAMRIID

Cc: (b)(6)

Subject: (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

(b)(6)-

I spoke to Bruce, and they should be able to help you guys get counts of you fixed spores.

Thanks

(b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: RE: Samples for Bruce (UNCLASSIFIED)
Date: Friday, June 15, 2007 8:33:03 AM

Classification: UNCLASSIFIED

Caveats: NONE

(b)(6) when we had strains that didn't sporulate well, we had to grow them on sheep blood agar. Blood is the natural medium for the organism in the environment, and it contains all the nutrients and salts needed for growth, sporulation and germination. Another good medium is NSM agar. (b)(6) found that good-sporulating strains - such as the Ames strain and most other virulent strains - do best with her Leighton and Doi method. She used half the amount of nutrient broth that places like Battelle and Dugway Proving Ground use, and we have just performed some investigations that showed that her method results in MUCH better spore preps than the method that DPG and Battelle use. Apparently, increasing the level of nutrient broth from 8 g/liter (what she used) to 16 grams per liter (what they used) gives higher counts, but the counts are mostly vegetative cells, with lots of debris and clumps.

In the future, I'd suggest that if you have a good sporulating strain, try (b)(6) L&D medium procedure. We also found that agar-produced spores are less virulent than broth -produced spores, are "dirtier," and are far more labor-intensive when it comes to harvesting and purifying.

-bruce

Bruce Ivins

(b)(6)

From: (b)(6)
Sent: Thursday, June 14, 2007 4:14 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Samples for Bruce (UNCLASSIFIED)

Bruce,

I guess I wasn't clear - the spores you got from (b)(6) were from my 2001 lot. I have never had a spore prep go bad before. Maybe it was always bad, and somehow I never noticed it or I forgot, as I have never used that lot for anything important. It is certainly distressing, and I thank you for bringing it to my attention. I usually look at my spores by phase before using them, so I am surprised that got by me.

Like lots of others, I do not use the Leighton Doi method. The main reason is that (b)(6) did not. As I continued his work, I tried to his methods (b)(6), 1999, I&I). I assume he chose to grow spores on plates because some strains, such as Delta Ames, do not sporulate well in Leighton Doi.

(b)(6)

P.S. Please don't Cc this to others. } . ;

From: Ivins, Bruce E Dr USAMRIID

Sent: Thursday, June 14, 2007 3:02 PM

To: (b)(6)

Subject: RE: Samples for Bruce (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

How did you make the spores, (b)(6)? Did you use the standard (b)(6) Leighton and Doi method? Even the 2001 spores appear to be clumped.

-bruce

Bruce Ivins

(b)(6)

From: (b)(6)

Sent: Thursday, June 14, 2007 1:59 PM

To: Ivins, Bruce E Dr USAMRIID; (b)(6)

Subject: RE: Samples for Bruce (UNCLASSIFIED)

(b)(6)

Yes, somehow that spore prep went bad. I just looked at it (pre-formaldehyde), and it is a mess. I am not sure why, as it was stored in 1% phenol. Attached is a picture I just took of it (Ames.2001) and another spore prep (Ames.2007). I will formaldehyde-kill spores from the Ames.2007 stock. I will be gone next week, so I won't be able to get it out of the suite until about June 26.

(b)(6)

From: Ivins, Bruce E Dr USAMRIID

Sent: Thursday, June 14, 2007 11:41 AM

To: (b)(6)

Ivins, Bruce E Dr USAMRIID

Subject: RE: Samples for Bruce (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

See below for what we found after phase contrast mikcsoscopy. The data are in red.

Overall, the quality of the preps was poor. Most of the material consisted of chunks of debris (not visibly either cellular or spore in origin). There were a lot of vegetative cells and non-refractile spores. Number one was the best of the three preps, with about 30% refractile spores, 18% non-refractile spores, 17% vegetative cells, and 34% debris chunks.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Wednesday, June 13, 2007 8:53 AM

To: Ivins, Bruce E Dr USAMRIID; (b)(6)

Subject: Samples for Bruce (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Bruce,

Samples are ready for pick up or delivery, please call (b)(6) at (b)(6) or stop by my lab (b)(2). They are in my chemical fume hood in a Styrofoam rack fragment labeled "For Bruce". Sample info as follows:

Sample (b)(6) = 10 ul original sample from (b)(6), 2 x 10exp8/ml formalin killed (3 weeks 4% formalin with weekly change then plated to confirm sterility)

Refractile spores = 2.0 X 10e7 per ml

Non-refractile spores = 1.2 X 10e7 per ml

Vegetative cells = 1.1 X 10e7 per ml

Visible chunks of debris = 2.3 X 10e7/ml per ml

Sample (b)(6) = 20 ul from microtiter plate heat/L-Ala induction experiment #070612, well B09, concentration guesstimate is 5 x 10exp7.

Refractile spores = 1.4 X 10e6 per ml

Non-refractile spores = 7.2 X 10e5 per ml

Vegetative cells = 5.0 X 10e6 per ml

Visible chunks of debris = 5.7 X 10e6 per ml

Sample (b)(6) = 20 ul same as above except taken from well B10, same concentration.

Refractile spores = 0 per ml

Non-refractile spores = 0 per ml

Vegetative cells = 7.2×10^5 per ml

Visible chunks of debris = 3.6×10^6 per ml

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID

Sent: Tuesday, June 12, 2007 4:31 PM

To: (b)(6)

Subject: RE: (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

(b)(6) is going to give us some tomorrow at approximately 1×10^8 /ml, which should be fine to count.
Thanks, (b)(6)

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Tuesday, June 12, 2007 3:54 PM

To: (b)(6) Ivins, Bruce E Dr USAMRIID

Cc: (b)(6)

Subject: (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

(b)(6)-

I spoke to Bruce, and they should be able to help you guys get counts of you fixed spores.

Thanks

(b)(6)

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: RE: Spore Samples (UNCLASSIFIED)
Date: Friday, July 13, 2007 9:53:15 AM

Classification: UNCLASSIFIED
Caveats: NONE

What time?

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)
Sent: Friday, July 13, 2007 9:47 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Spore Samples (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Thanks Bruce, I can pick them today.

(b)(6)

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID
Sent: Friday, July 13, 2007 9:33 AM
To: Ivins, Bruce E Dr USAMRIID; (b)(6)
Subject: RE: Spore Samples (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

(b)(6) I have two preps of highly purified spores at 10e9 per ml. Also, I have some other preps. (See enclosure.) Let me know if you'd like some to start, and when you'd like them.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID
Sent: Tuesday, July 10, 2007 4:12 PM
To: (b)(6)
Cc: Ivins, Bruce E Dr USAMRIID; (b)(6)
Subject: RE: Spore Samples (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

I'll look and see what I have, (b)(6). We have spores made different ways and purified differently. I could give you some this week or next.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)

Sent: Monday, July 09, 2007 2:18 PM

To: Ivins, Bruce E Dr USAMRIID

Cc: (b)(6)

Subject: Spore Samples (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Dear Bruce,

Thank you for your suggestions. As I mentioned, we are testing a new acoustic biosensor for biodefense applications. I am developing a Bacillus anthracis spore detection assay on this platform. I would appreciate if you can give us samples of killed Bacillus anthracis spores, Ames strain and spores from Bacillus anthracis vaccine strain Sterne. I would like to compare these spore samples with other batches we have.

Thank you very much.

(b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: [Ivins, Bruce E Dr USAMRIID](#); (b)(6)
Subject: RE: Spore Samples (UNCLASSIFIED)
Date: Friday, July 13, 2007 9:33:20 AM
Attachments: [REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

(b)(6) I have two preps of highly purified spores at 10e9 per ml. Also, I have some other preps. (See enclosure.) Let me know if you'd like some to start, and when you'd like them.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID
Sent: Tuesday, July 10, 2007 4:12 PM
To: (b)(6)
Cc: Ivins, Bruce E Dr USAMRIID; (b)(6)
Subject: RE: Spore Samples (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

I'll look and see what I have, (b)(6). We have spores made different ways and purified differently. I could give you some this week or next.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)
Sent: Monday, July 09, 2007 2:18 PM
To: Ivins, Bruce E Dr USAMRIID
Cc: (b)(6)
Subject: Spore Samples (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

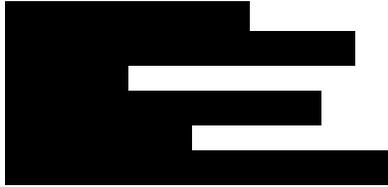
Dear Bruce,

Thank you for your suggestions. As I mentioned, we are testing a new acoustic biosensor for biodefense applications. I am developing a Bacillus anthracis spore detection assay on this platform. I would appreciate if you can give us samples of killed Bacillus anthracis spores, Ames strain and spores from Bacillus anthracis vaccine strain Sterne. I would like to compare these spore samples with other batches

we have.

Thank you very much.

(b)(6)



Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: [Ivins, Bruce E Dr USAMRIID](#); (b)(6)
Subject: RE: Spore Samples (UNCLASSIFIED)
Date: Friday, July 13, 2007 9:33:20 AM
Attachments: [REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

(b)(6) I have two preps of highly purified spores at 10e9 per ml. Also, I have some other preps. (See enclosure.) Let me know if you'd like some to start, and when you'd like them.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID
Sent: Tuesday, July 10, 2007 4:12 PM
To: (b)(6)
Cc: Ivins, Bruce E Dr USAMRIID; (b)(6)
Subject: RE: Spore Samples (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

I'll look and see what I have, (b)(6). We have spores made different ways and purified differently. I could give you some this week or next.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)
Sent: Monday, July 09, 2007 2:18 PM
To: Ivins, Bruce E Dr USAMRIID
Cc: (b)(6)
Subject: Spore Samples (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Dear Bruce,

Thank you for your suggestions. As I mentioned, we are testing a new acoustic biosensor for biodefense applications. I am developing a Bacillus anthracis spore detection assay on this platform. I would appreciate if you can give us samples of killed Bacillus anthracis spores, Ames strain and spores from Bacillus anthracis vaccine strain Sterne. I would like to compare these spore samples with other batches

we have.

Thank you very much.

(b)(6)



Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Cc: [Ivins, Bruce E Dr USAMRIID](#); (b)(6)
Subject: RE: Spore Samples (UNCLASSIFIED)
Date: Tuesday, July 10, 2007 4:12:25 PM

Classification: UNCLASSIFIED
Caveats: NONE

I'll look and see what I have, (b)(6). We have spores made different ways and purified differently. I could give you some this week or next.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)
Sent: Monday, July 09, 2007 2:18 PM
To: Ivins, Bruce E Dr USAMRIID
Cc: (b)(6)
Subject: Spore Samples (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Dear Bruce,

Thank you for your suggestions. As I mentioned, we are testing a new acoustic biosensor for biodefense applications. I am developing a Bacillus anthracis spore detection assay on this platform. I would appreciate if you can give us samples of killed Bacillus anthracis spores, Ames strain and spores from Bacillus anthracis vaccine strain Sterne. I would like to compare these spore samples with other batches we have.

Thank you very much.

(b)(6)

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Subject: RE: Spore Samples (UNCLASSIFIED)
Date: Friday, July 13, 2007 10:11:30 AM

Classification: UNCLASSIFIED
Caveats: NONE

OK.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)
Sent: Friday, July 13, 2007 9:58 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Spore Samples (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

I can come down whenever you have them. How about 10.30 am.?

(b)(6)

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID
Sent: Friday, July 13, 2007 9:53 AM
To: (b)(6)
Subject: RE: Spore Samples (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

What time?

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: (b)(6)
Sent: Friday, July 13, 2007 9:47 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Spore Samples (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Thanks Bruce, I can pick them today.

(b)(6)

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID

Sent: Friday, July 13, 2007 9:33 AM

To: Ivins, Bruce E Dr USAMRIID; **(b)(6)**

Subject: RE: Spore Samples (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

(b)(6) I have two preps of highly purified spores at 10e9 per ml. Also, I have some other preps. (See enclosure.) Let me know if you'd like some to start, and when you'd like them.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: Ivins, Bruce E Dr USAMRIID

Sent: Tuesday, July 10, 2007 4:12 PM

To: **(b)(6)**

Cc: Ivins, Bruce E Dr USAMRIID; **(b)(6)**

Subject: RE: Spore Samples (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

I'll look and see what I have, **(b)(6)**. We have spores made different ways and purified differently. I could give you some this week or next.

-bruce

Bruce Ivins

(b)(6)

-----Original Message-----

From: **(b)(6)**

Sent: Monday, July 09, 2007 2:18 PM

To: Ivins, Bruce E Dr USAMRIID

Cc: **(b)(6)**

Subject: Spore Samples (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

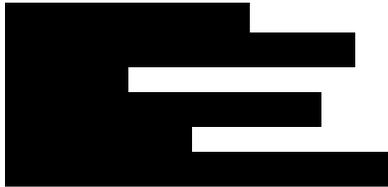
Dear Bruce,

Thank you for your suggestions. As I mentioned, we are testing a new acoustic biosensor for biodefense

applications. I am developing a Bacillus anthracis spore detection assay on this platform. I would appreciate if you can give us samples of killed Bacillus anthracis spores, Ames strain and spores from Bacillus anthracis vaccine strain Sterne. I would like to compare these spore samples with other batches we have.

Thank you very much.

(b)(6)



Classification: UNCLASSIFIED
Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6) [redacted] [Ivins, Bruce E Dr USAMRIID](#); (b)(6) [redacted]
Subject: RE: spray on Tued (UNCLASSIFIED)
Date: Thursday, June 28, 2007 3:12:55 PM

Classification: UNCLASSIFIED

Caveats: NONE

Monday morning is a harvest. Could we meet Monday afternoon sometime around 1400 or 1600?

-bruce

Bruce Ivins

(b)(6) [redacted]
[redacted]

From: (b)(6) [redacted]
Sent: Thursday, June 28, 2007 2:22 PM
To: (b)(6) [redacted] Ivins, Bruce E Dr USAMRIID
Subject: spray on Tued (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Bruce,
What time do you want to start (we have 16 monkeys) on Tuesday (8 am)?

Also could we meet some time with (b)(6) on Monday to go over last minute details?

Thanks

(b)(6) [redacted]

<http://us.rd.yahoo.com/evt=49937/*http://tools.search.yahoo.com/toolbar/features/mail/>

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6) [Ivins, Bruce E Dr USAMRIID](#)
Subject: Spores injected for LD50s on 9 JUL 07 (NSM + CaCl2 versus L&D) (UNCLASSIFIED)
Date: Tuesday, July 10, 2007 1:38:20 PM

Classification: UNCLASSIFIED

Caveats: NONE

9 JUL 07 LD50 comparison

LD50 for SA# 12703 (Leighton and Doi medium (b)(6) method)

Spore Target Dose	Spore Actual Dose Injected
-------------------	----------------------------

1000	~808
300	~242
100	80.8
30	22.4
10	9.8

LD50 for SA# 12704 (NSM broth + CaCl2)

Spore Target Dose	Spore Actual Dose Injected
-------------------	----------------------------

1000	~968
300	~290
100	96.8
30	30.4
10	9.4

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6) : [Ivins, Bruce E Dr USAMRIID](#)
Subject: Spores injected for LD50s on 9 JUL 07 (NSM + CaCl2 versus L&D) (UNCLASSIFIED)
Date: Tuesday, July 10, 2007 1:38:20 PM

Classification: UNCLASSIFIED

Caveats: NONE

9 JUL 07 LD50 comparison

LD50 for SA# 12703 (Leighton and Doi medium, (b)(6) method)

Spore Target Dose	Spore Actual Dose Injected
-------------------	----------------------------

1000	~808
300	~242
100	80.8
30	22.4
10	9.8

LD50 for SA# 12704 (NSM broth + CaCl2)

Spore Target Dose	Spore Actual Dose Injected
-------------------	----------------------------

1000	~968
300	~290
100	96.8
30	30.4
10	9.4

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6) [Ivins.](#)
[Bruce E Dr USAMRIID](#)
Subject: Times to death for mice - Leighton and Doi medium versus NSM + CaCl2 (UNCLASSIFIED)
Date: Friday, July 13, 2007 11:33:17 AM

Classification: UNCLASSIFIED

Caveats: NONE

Leighton and Doi (b)(6) method)
1.048 X 10e5 injected
TTD in hours - # mice
19.75 - 1
20.25 - 1
20.50 - 1
22.25 - 5
34.50 - 2

Mean TTD of first five mice = 21.00 hr

Leighton and Doi (b)(6) method)
1.048 X 10e4 injected
TTD in hours - # mice
23.50 - 1
26.00 - 1
29.00 - 1
44.25 - 2

Mean TTD of first five mice = 33.40 hr

NSM + CaCl2
1.264 X 10e5 injected
TTD in hours - # mice
18.00 - 1
19.50 - 1
19.75 - 1
20.00 - 1
22.00 - 1
25.00 - 2
34.25 - 3

Mean TTD of first five mice = 19.85 hr

NSM + CaCl2
1.264 X 10e4 injected
TTD in hours - # mice
25.25 - 1
25.75 - 1
28.75 - 3
44.00 - 3

Mean TTD of first five mice = 27.45 hr

It appears that the spores produced in the NSM + CaCl₂ broth are at least as virulent in this model as those produced in Leighton and Doi medium by the optimum (b)(6) " method.

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6) [Ivins.](#)
[Bruce E Dr USAMRIID](#)
Subject: Times to death for mice - Leighton and Doi medium versus NSM + CaCl2 (UNCLASSIFIED)
Date: Friday, July 13, 2007 11:33:17 AM

Classification: UNCLASSIFIED

Caveats: NONE

Leighton and Doi (b)(6) method)
1.048 X 10e5 injected
TTD in hours - # mice
19.75 - 1
20.25 - 1
20.50 - 1
22.25 - 5
34.50 - 2

Mean TTD of first five mice = 21.00 hr

Leighton and Doi (b)(6) method)
1.048 X 10e4 injected
TTD in hours - # mice
23.50 - 1
26.00 - 1
29.00 - 1
44.25 - 2

Mean TTD of first five mice = 33.40 hr

NSM + CaCl2
1.264 X 10e5 injected
TTD in hours - # mice
18.00 - 1
19.50 - 1
19.75 - 1
20.00 - 1
22.00 - 1
25.00 - 2
34.25 - 3

Mean TTD of first five mice = 19.85 hr

NSM + CaCl2
1.264 X 10e4 injected
TTD in hours - # mice
25.25 - 1
25.75 - 1
28.75 - 3
44.00 - 3

Mean TTD of first five mice = 27.45 hr

It appears that the spores produced in the NSM + CaCl₂ broth are at least as virulent in this model as those produced in Leighton and Doi medium by the optimum "(b)(6)" method.

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Cc: [Ivins, Bruce E Dr USAMRIID](#); (b)(6)
Subject: Upcoming spray for (b)(6) (UNCLASSIFIED)
Date: Monday, June 25, 2007 10:51:10 AM

Classification: UNCLASSIFIED

Caveats: NONE

On Tuesday, July 3, there will be a 16-monkey spray for (b)(6) in (b)(6) lab in (b)(2). On Monday, July 2, we'll need to get his lab set up for the AGI processing.

What we'll need in the lab on July 2:

- 1) Turn on 60C waterbath
- 2) 40 9.9-ml waterblanks
- 3) 30 9.0-ml waterblanks
- 4) 120 TSA plates - let sit out and dry on the benchtop. Label in triplicate as follows:

1 -4
1 -5
2 -4
2 -5

...all the way to 16 -4, and 16 -5.

We'll also need 9 plates marked post-D, 10-7.

- 5) 5 sets of spreaders
- 6) 2 1-liter beakers for spreaders

(b)(6) please get the supplies ready and over to (b)(2) and check with (b)(6) about which hood we can use.

On the morning of July 3, I'll come in early and do the heat shock of the spores, get the spores into the tubes, and plate out the post-D plates. Then I'll go back to (b)(2) and purify the Leighton & Doi medium and NSM + CaCl₂ on Hypaque gradients. (b)(6) I'd like you to go over and do the processing of the 16 AGIs. At the end of the day, please clean up and put the plates into the incubator. I'll come in on July 4th and put the plates into the cold. Then on July 5th, the plates can be counted in (b)(2), and counts can be made in (b)(2) on the L&D and NSM/CaCl₂ preps. Please FAX out the data from (b)(2). On Friday, we'll count the plates in (b)(2) and get ready for injecting mice on Monday, 9 July. We'll inject just the LD50 mice (100 total, 50 for each group) on Monday, and then on Wednesday we can inject the TTD mice for both groups (40 total, 20 for each group). On Thursday, we'll need to monitor the mice all day.

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED

Caveats: NONE

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b)(6)
Cc: [Ivins, Bruce E Dr USAMRIID](#); (b)(6)
Subject: Upcoming spray for (b)(6) (UNCLASSIFIED)
Date: Monday, June 25, 2007 10:51:10 AM

Classification: UNCLASSIFIED

Caveats: NONE

On Tuesday, July 3, there will be a 16-monkey spray for (b)(6) in (b)(6) lab in (b)(2). On Monday, July 2, we'll need to get his lab set up for the AGI processing.

What we'll need in the lab on July 2:

- 1) Turn on 60C waterbath
- 2) 40 9.9-ml waterblanks
- 3) 30 9.0-ml waterblanks
- 4) 120 TSA plates - let sit out and dry on the benchtop. Label in triplicate as follows:

1 -4
1 -5
2 -4
2 -5

...all the way to 16 -4, and 16 -5.

We'll also need 9 plates marked post-D, 10-7.

- 5) 5 sets of spreaders
- 6) 2 1-liter beakers for spreaders

(b)(6) please get the supplies ready and over to (b)(2) and check with (b)(6) about which hood we can use.

On the morning of July 3, I'll come in early and do the heat shock of the spores, get the spores into the tubes, and plate out the post-D plates. Then I'll go back to (b)(2) and purify the Leighton & Doi medium and NSM + CaCl₂ on Hypaque gradients. (b)(6) I'd like you to go over and do the processing of the 16 AGIs. At the end of the day, please clean up and put the plates into the incubator. I'll come in on July 4th and put the plates into the cold. Then on July 5th, the plates can be counted in (b)(2), and counts can be made in (b)(2) on the L&D and NSM/CaCl₂ preps. Please FAX out the data from (b)(2). On Friday, we'll count the plates in (b)(2) and get ready for injecting mice on Monday, 9 July. We'll inject just the LD50 mice (100 total, 50 for each group) on Monday, and then on Wednesday we can inject the TTD mice for both groups (40 total, 20 for each group). On Thursday, we'll need to monitor the mice all day.

-bruce

Bruce Ivins

(b)(6)

Classification: UNCLASSIFIED

Caveats: NONE