

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#); (b) (6)  
**Subject:** Mouse LD50 and TTD determinations from 21 MAR 07 - Spores injected - Select Agent #188 (Vollum 1B) (UNCLASSIFIED)  
**Date:** Thursday, March 22, 2007 3:03:54 PM

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Classification: UNCLASSIFIED

Caveats: NONE

LD 50:

Spores injected - Target	Spores injected - Actual
A - 1000 spores	Not done - about 1600 spores
B - 300 spores	Not done - about 480 spores
C - 100 spores	165 spores
D - 30 spores	37 spores
E - 10 spores	16 spores

0.2 ml of spores injected IP

Plate counts:

A - not done

B - not done

C - 0.05 ml undiluted - 35, 36, 45, 45, 45  
Mean = 41.2                  Median = 45

D - 0.2 ml undiluted - 32, 37, 37, 40, 41  
Mean = 37.4                  Median = 37

E - 0.2 ml undiluted - 13, 14, 16, 17, 20  
Mean = 16                      Median = 16

\*\*\*\*\*

TTD determination:

1.3 X 10<sup>4</sup> spores injected

1.3 X 10<sup>5</sup> spores injected

Bruce Ivins

(b) (6)

(b) (6)

Classification: UNCLASSIFIED

Caveats: NONE

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Cc:** (b) (6)  
**Subject:** Mouse LD50 challenge - Vollum 1B spores - 21 MAR 07  
**Date:** Tuesday, March 20, 2007 11:45:55 AM

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We're going to do a mouse LD50 challenge on Wednesday, 21 March. The injections will be intraperitoneal, 0.2 ml.

SA# 188 (Vollum 1B) - 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

5 X 10<sup>6</sup>/ml in a tube

0.1 ml into 9.9 ml to give 5 X 10<sup>4</sup>/ml

1.0 ml into 9.0 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 E and D

Plate out 50 microliters of C

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#); (b) (6)  
**Subject:** mouse LD50 challenge on 28 FEB 07  
**Date:** Thursday, February 15, 2007 1:45:11 PM

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We're going to repeat the mouse LD50 challenge on Tuesday , 28 FEB 07. The injections will be intraperitoneal, 0.2 ml.  
- bruce

\*\*\*\*\*

For mouse challenge on Tuesday, 28 FEB 07

Select Agent# 1749 , 3.8 X 10e10 per ml

IP challenges, 10 mice per group

- A. 1000 spores in 0.2 ml - IP
- B. 300 spores in 0.2 ml - IP
- C. 100 spores in 0.2 ml - IP
- D. 30 spores in 0.2 ml - IP
- E. 10 spores in 0.2 ml - IP

ml	6.0 ml	0.1 ml	4.5 ml	0.1 ml	6.0 ml	0.1 ml	2.0 ml	4.5
C	D	E				A	B	

SA# 1749	9.9 ml	9.9 ml	9.9 ml	13.2 ml	10.5 ml	12 ml	
10.5 ml	12 ml						
3.8 X 10 <sup>10</sup>		3.8 X 10 <sup>8</sup>	3.8 X 10 <sup>6</sup>	3.8 X 10 <sup>4</sup>		1000	
300	100	30	10				
Per ml		per ml	per ml	per ml		per 0.2 ml	per
0.2 ml	per 0.2 ml	per 0.2 ml	per 0.2 ml				

Plate out 0.2 ml of D and E, 50 microliters of C, and 0.2 ml of a 1:10 dilution of B.

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#); (b) (6)  
**Subject:** Mouse LD50 from 28 FEB 07 - Spores injected - Select Agent 1749  
**Date:** Friday, March 02, 2007 10:09:23 AM

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Spores injected - Target	Spores injected - Actual
A - 1000 spores	Not done - about 1400 spores
B - 300 spores	414 spores
C - 100 spores	144 spores
D - 30 spores	45.2 spores
E - 10 spores	13.2 spores

0.2 ml of spores injected IP

Plate counts:

A - not done

B - 0.2 ml of a 1:10 dilution - 30, 35, 35, 38, 38  
Mean = 41.4      Median = 42

C - 0.05 ml undiluted - 21, 23, 23, 24, 34  
Mean = 36      Median = 35

D - 0.2 ml undiluted - 33, 33, 35, 40, 41  
Mean = 45.2      Median = 45

E - 0.2 ml undiluted - 9, 13, 15, 15, 16  
Mean = 13.2      Median = 12

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#); (b) (6)  
**Subject:** Mouse LD50 from 28 FEB 07 - Spores injected - Select Agent 1749  
**Date:** Friday, March 02, 2007 10:09:23 AM

---

Spores injected - Target	Spores injected - Actual
A - 1000 spores	Not done - about 1400 spores
B - 300 spores	414 spores
C - 100 spores	144 spores
D - 30 spores	45.2 spores
E - 10 spores	13.2 spores

0.2 ml of spores injected IP

Plate counts:

A - not done

B - 0.2 ml of a 1:10 dilution - 30, 35, 35, 38, 38  
Mean = 41.4      Median = 42

C - 0.05 ml undiluted - 21, 23, 23, 24, 34  
Mean = 36      Median = 35

D - 0.2 ml undiluted - 33, 33, 35, 40, 41  
Mean = 45.2      Median = 45

E - 0.2 ml undiluted - 9, 13, 15, 15, 16  
Mean = 13.2      Median = 12

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#); (b) (6)  
**Subject:** Mouse LD50 from 28 FEB 07 -Deaths as of Day 3  
**Date:** Saturday, March 03, 2007 10:03:07 PM

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Here are the death data as of Day 3 (Saturday night, 3 March) from the FEB 28 07 mouse LD50:

1 400 spores	7 dead
414 spores	4 dead
144 spores	6 dead
45.2 spores	2 dead
13.2 spores	1 dead

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#); (b) (6)  
**Subject:** Mouse LD50 from 28 FEB 07 -Deaths as of Day 3  
**Date:** Saturday, March 03, 2007 10:03:07 PM

---

Here are the death data as of Day 3 (Saturday night, 3 March) from the FEB 28 07 mouse LD50:

1 400 spores	7 dead
414 spores	4 dead
144 spores	6 dead
45.2 spores	2 dead
13.2 spores	1 dead

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** AGI data  
**Date:** Tuesday, March 06, 2007 11:14:21 AM

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(b) (6) was unable to do the calculations on the Feb 21 and Feb 22 AGIs, even though she had previously been shown. I showed her once again how to do the calculations correctly and she is to repeat the procedure. - 6 MAR 07

-bruce

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** AGI data  
**Date:** Tuesday, March 06, 2007 11:14:21 AM

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(b) (6) was unable to do the calculations on the Feb 21 and Feb 22 AGIs, even though she had previously been shown. I showed her once again how to do the calculations correctly and she is to repeat the procedure. - 6 MAR 07

-bruce

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** ALORES password change  
**Date:** Friday, March 02, 2007 10:21:34 AM

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BE8TBE8T

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.

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Cc:** (b) (6)  
**Subject:** Animal Protocol number  
**Date:** Wednesday, February 21, 2007 2:27:43 PM

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Hey, (b) (6) - what's the animal protocol number for the sprays we're doing for you today and tomorrow?  
Thanks.

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** Bugstoppers  
**Date:** Monday, March 19, 2007 8:27:07 AM

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On Friday, (b) inoculated flasks of L&D medium, but forgot to put in bugstoppers. I went into the suite later and did it.

-bruce

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** (b) (6)  
**Date:** Thursday, March 01, 2007 12:55:45 PM

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Today (b) (6) was supposed to be in (b) (2) to observe mice at 0930, and she was over 10 minutes late. She also this week didn't perform any cleaning duties in (b) (2) as listed on the door to (b) (2)

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6) [.le.](#)  
(b) (6)  
**Subject:** Endotoxin reader came in  
**Date:** Tuesday, February 13, 2007 1:53:42 PM

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(b) (6) called on Tuesday and said that the endotoxin reader has come in. I believe that the (b) (6) (b) (6) said that they'd come in and show us how it worked. (b) (6), was it you that talked to the rep? If so, could we set up a time for her to show all of us (including (b) (6) how it works? Thanks!

Bruce Ivins

(b) (6)

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

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

**Subject:** FW: Happy Monday Morning!!

**Date:** Monday, March 05, 2007 11:03:50 AM

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May you have a good day.

-bruce

< BR>

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**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Cc:** (b) (6)  
**Subject:** FW: REFERENCES  
**Date:** Tuesday, March 20, 2007 10:22:19 AM  
**Attachments:** [REDACTED]

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Hi, (b) (6)

Here are three references that may be helpful. You can see the data in our two papers that challenge in immunized non-human primates results in a noticeable boost in antibody titers. You may wish to contact (b) (6) with respect to the post-challenge response of immunized mice. My lab has worked primarily with guinea pigs, rabbits and some NHPs. She is an expert on the mouse model of anthrax. Her phone number here is (b) (6) and her email is (b) (6).

It was great to speak with you and I welcome you to Fort Detrick!

-bruce

Bruce Ivins

(b) (6)  
[REDACTED]

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Subject:** FW: Revised monthly report template, FY06 Anthrax  
**Date:** Tuesday, February 13, 2007 3:05:09 PM  
**Attachments:** [Redacted]

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Hi, (b) (6)

Based on the length of time required to do previous studies with the geographic isolates of B. anthracis, here is a reasonable timeline:

1) Guinea pig studies - Bring in guinea pigs as soon as possible, immunize them, one set per week (24 total animals). At the same time, begin making spores in broth. For non-aerosol studies, they don't need to be gradient-purified. You can challenge one group per week easily. If you want your guys to push it, they could do 2 groups per week max, remembering that the animals will stay in the animal room for 3 weeks. So, this would take a maximum of 28 weeks (about 7 months) from the time the first animals came in until the last animals died. It would take a minimum of about 22 weeks if you used the compressed time schedule.

2) Rabbit studies - You could use the same general timeline as above, except that the spores would have to be gradient-purified to enable them to be aerosolized. Did you want to do 18 strains, or just a certain number of the most highly virulent strains?

3) NHP studies - This would take a few to several months, depending upon the number of strains tested.

4) For sporulation differences, it should take approximately 1-3 weeks per strain, depending upon how many strains are tested at one time and how many total tests are run.

1) Grow up in broth (Leighton and Doi??) under the same conditions. Test for total viable counts before and after heat shock. Examine under phase-contrast microscopy for relative numbers of vegetative cells, clumps, non-refractile spores and refractile spores. Spin down, wash, and streak onto capsule agar, sheep blood agar, and note growth and capsule characteristics. As far as heat resistance goes, they could take spores and test their resistance at various high temperatures to see how long they last. Growth rate can be determined in a side-arm culture flask using a spectrophotometer that our lab has currently in (b) (6), but can be taken into the hotsuite. (You simply measure A540 over a period of a few hours to see how fast it takes for the organism to double. BHI or BHI + yeast extract is a good medium for this.) I can't help you much on how much exotoxin is being produced, but (b) (6) should be able to assay sterile supernatants. Let us know what help we can provide.

Bruce Ivins

(b) (6)  
[Redacted]

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**From:** (b) (6)  
**Sent:** Sunday, February 11, 2007 5:43 PM  
**To:** Ivins, Bruce E Dr USAMRIID  
**Subject:** RE: Revised monthly report template, FY06 Anthrax

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**From:** Ivins, Bruce E Dr USAMRIID  
**Sent:** Sunday, February 11, 2007 3:49 PM  
**To:** (b) (6)

Subject: RE: Revised monthly report template, FY06 Anthrax

(b) - Do you mean what we've done so far, or what we talked about doing in the future? If it's future work, could you please send me the proposal again? I can't find it in my files. Thanks!

Bruce Ivins

(b) (6)

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From: (b) (6)  
Sent: Friday, February 09, 2007 4:41 PM  
To: Ivins, Bruce E Dr USAMRIID  
Subject: FW: Revised monthly report template, FY06 Anthrax

Hi Bruce:

Would you please provide a rough timeline on the sporulation studies?

Thanks,

(b) (6)

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From: (b) (6)  
Sent: Friday, February 09, 2007 3:38 PM  
To: (b) (6)  
Cc: (b) (6)  
Subject: RE: Revised monthly report template, FY06 Anthrax

Thanks, (b) (6), I know we have some hoops to jump through here as yet. In the meantime, I'm going to file a no-cost schedule extension for you through 31 December 2007, so we can give you some flexibility on your timeline. Can you give me some idea of the timeline for the sporulation studies? It would be helpful to have at least a basic idea to plug into the template.

(b) (6)

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From: (b) (6)  
Sent: Friday, February 09, 2007 3:31 PM  
To: (b) (6)  
Subject: RE: Revised monthly report template, FY06 Anthrax

Hi (b) (6)

Looks fine with me. I immediately stopped work and spending on the project until I heard back from you guys whether it was approved.

Thanks,

(b)

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From: (b) (6)  
Sent: Wednesday, February 07, 2007 2:48 PM  
To: (b) (6)  
Cc: (b) (6)  
Subject: Revised monthly report template, FY06 Anthrax

Greetings, (b)

I've attached a revised copy of your monthly report template for the new anthrax effort, based on the IP you sent (b) last month. Could you do me a favor, please, and take a look at it to make sure I haven't missed anything? If there is technical status you want to report for the work you've done to date, that's fine, just enter it and send the file back to me. In particular, if there's been progress made on the tasks, please include an estimate of the percentage of completion. In addition, I'd appreciate you giving me the dates for the highlighted tasks- that section was left blank in the IP.

The way you reported your budget does not seem to add up to the amount originally funded. For the moment, I have evenly spread the total funded amount through the currently approved POP, that is, through June. When we get approval to extend you through September, we'll rebaseline that accordingly. Your actuals to date, based on the reports we get from USAMRIID Finance, have been recorded.

Thanks very much-

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)  
To: (b) (6)  
Subject: FW: TTD determinations  
Date: Friday, March 09, 2007 9:50:48 AM

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(b) (6) - here are the results of yesterday's Time-To-Death determination. It looks promising as a way to screen virulence of anthracis strains.

\* \*\*\*\*\*

Select Agent # 1749

11 mice injected with  $1.06 \times 10^4$  spores in 0.2 ml, IP

11 mice injected with  $1.06 \times 10^5$  spores in 0.2 ml, IP

\*\*\*\*\*

TTD -  $1.06 \times 10^4$

1. 19 hr
2. 19 hr
3. 21 hr
4. 22.5 hr
5. 23 hr
6. 23.5 hr
7. 24 hr
8. 24.5 hr
9. >28 hr
10. >28 hr

\*\*\*\*\*

TTD -  $1.06 \times 10^5$

1. 15 hr
2. 16 hr
3. 16 hr
4. 17 hr
5. 17.5 hr
6. 18 hr
7. 20 hr
8. 21 hr
9. 21 hr
10. 21 hr
11. >24 hr

\*\*\*\*\*

I don't know if we want to base our TTD determinations on median values (which would here have been 23.25 hr and 18 hours) or on the mean values of, say...the first five or six animals that died, since the "stragglers" really skew the TTD results.

-bruce

Bruce Ivins

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)  
To: (b) (6)  
Subject: FW: Update for EMThrax Vaccine vs AVA  
Date: Tuesday, March 20, 2007 3:45:37 PM

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Hi, (b) (6)

If this is the group you're talking about (EMThrax), we HAVE been collaborating with them. There was another individual recently who - out of the blue - emailed me and asked me about CpG adjuvants, and I mentioned you. A number of researchers have been testing various vaccines, and those with no PA have not been particularly impressive. I think that combining PA with other B. anthracis antigens will yield the best results with new adjuvants and adjuvant combinations.

-bruce

Bruce Ivins

(b) (6)  
(b) (6)

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From: (b) (6)  
Sent: Thursday, March 08, 2007 5:46 AM  
To: Ivins, Bruce E Dr USAMRIID  
Subject: RE: Update for EMThrax Vaccine vs AVA

Bruce,

Thanx for the good advise. The little one is doing well and (b) (6) and I are discussing when we should start training him to culture some bug for us. I think he is ready now, but (b) (6) hinks we should wait until he is at least 6 months. They say it is best to start them early!!!

At any rate I sent a message to (b) (6) at the email listed below, but it keeps getting bounced back, so just wanted to check and make sure that this is his correct email.

Thanx,

(b) (6)

"Ivins, Bruce E Dr USAMRIID" <bruce.ivins@us.army.mil> wrote:

Hi, (b) (6)

It's good to hear that things have been going well in the lab. I hope your new "little one" is also doing well! I talked with folks at Ribi/Corixa several weeks ago who told me that Sigma might be able to begin marketing the "Ribi" vaccine adjuvant with the year, but some manufacturing problems had to be worked out.

We've done some work in CpGs with (b) (6). He was very helpful and knowledgeable, and I'd suggest that you talk to him about some future work or collaboration. His contact information is:

(b) (6)

I was glad to hear of your success. I'm sure that AVA can be approved either by the addition of other or different adjuvants, as well as by the addition of other critical antigens. I think that some researchers have gone the wrong way in assuming that "DNA vaccines" are the way to go for every disease. I disagree. In the case of many diseases, we have a working vaccine which can be improved upon, but which is based upon valid science and technology. We all would like to have a vaccine that is less reactogenic (especially at the injection site!) and provided long-lasting immunity with a minimum number of administrations.

Anyway, thanks for the update, and I encourage you to contact (b) (6)

-bruce

Bruce Ivins

(b) (6)

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From: (b) (6)  
Sent: Tuesday, March 06, 2007 1:08 AM  
To: Ivins, Bruce E Dr USAMRIID  
Subject: Update for EMThrax Vaccine vs AVA

Hey Bruce,

Hope things are going well for you at Ft. Detrick. (b) (6) and I have been busy generating some animal data and we wanted to give you an update. Since we last spoke we completed our first mouse model and found that our vaccine is at least as good as the current AVA vaccine. Briefly, we started with 8 mice in each test group along with the animals in a control group. We vaccinated the animals at 0 and 14 days and challenged at day 28. We added 100 uL of AVA and 100 uL of our vaccine, which is approximately 20 uL of protein along with our own adjuvant. Originally we hoped to use RIBI adjuvant, but the only US supplier has sold the rights to Sigma, who is not releasing any product. Thus, we were hoping to use our vaccine with two adjuvants, but this is okay since RIBI will not be used for human vaccination. Thus we challenged with 100 ED50 at day 28 and all of our vaccinated animals and the AVA animals survived. The controls all died.

Additionally, we did a secondary challenge at day 35 and again all animals survived challenge. Thus, at this point we plan to repeat this experiment within two weeks and if the data is the same, then we are going to conduct the same experiments in guinea pigs. We will keep you informed of the results. We should be done with all of this work within the next 3 months.

Lastly, we are looking for a second adjuvant to test along with our vaccine. We noted that you have a few papers using CpG oligos with an improved efficacy and wondering if that adjuvant is commercially available or how we could obtain some. We noted that Coley Pharma is the company that utilizes this technology, but not sure if they would provide us with some, since they are collaborating with Emergent Biosolutions and many other private companies. If we need to synthesis these compounds, then there are a few companies that might be able to help us here, if we can find out the structures. Also, we should have our vaccine almost completely characterized within the next 30 days, which is also a good thing. And we have a company standing by to help with the ELISA assay, which will be done using a hand held digital read-out display.

Sincerely,

(b) (6)

"Ivins, Bruce E Dr USAMRIID" <bruce.ivins@us.army.mil> wrote:

(b) (6)  
The BioThrax/AVA human anthrax vaccine was sent out on Wednesday. FedEx tried to deliver yesterday, but couldn't reach you. They're trying to deliver again today to the address you gave for shipping.

I hope you're week has been going well.

Bruce Ivins

(b) (6)

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Don't pick lemons.  
See all the new 2007 cars  
<

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Looking for earth-friendly autos?  
Browse Top Cars by "Green Rating"  
<[http://autos.yahoo.com/green\\_center/?\\_ylc=X3oDMTE4MGw4Z2hlf9TAzk3MTA3MDc2BHNIYwNtYWlscGFncwRzbGsDZ3JlZW5jZW50ZXI-](http://autos.yahoo.com/green_center/?_ylc=X3oDMTE4MGw4Z2hlf9TAzk3MTA3MDc2BHNIYwNtYWlscGFncwRzbGsDZ3JlZW5jZW50ZXI-)  
> at Yahoo! Autos' Green Center.

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** Harvest  
**Date:** Monday, March 12, 2007 1:04:32 PM

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Today (b) (6) was supposed to harvest some Leighton and Doi cultures of Sterne strain. She used the purification SOP (rather than a production and harvest SOP) and centrifuged the pellets down at 5,000 rpm rather than 8,000 rpm.

-bruce

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#); (b) (6)  
**Subject:** LD50 determinations  
**Date:** Friday, March 09, 2007 9:56:05 AM

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Select Agent # 3660

10 mice in each group injected with spores in 0.2 ml, IP

Spores injected	Deaths as of Day 2	Deaths as of Day 3	Deaths as of Day 4	Deaths as of Day 5	Deaths as of Day 6
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1050 spores

315 spores

105 spores

32.4 spores

10.2 spores

-bruce

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6) [Ivins,](#)  
[Bruce E Dr USAMRIID](#)  
**Subject:** Mouse challenges  
**Date:** Monday, March 05, 2007 3:59:39 PM

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(b) (6)  
When is our next set of TTD and LD50 challenges, and what strains would you like used. Would you like SA 516, which is the strain being used by (b) (6) for his NHP challenges?

Thanks.

-bruce

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#); (b) (6)  
**Cc:** (b) (6)  
**Subject:** Mouse TTD challenge correction - Vollum 1B spores - 21 MAR 07  
**Date:** Tuesday, March 20, 2007 11:32:04 AM

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We're going to do a mouse TTD challenge on Wednesday, 21 March. The injections will be intraperitoneal, 0.2 ml.

SA# 188 (Vollum 1B) - 10 mice per group

Group 1 -  $1 \times 10^5$  spores in 0.2 ml - IP - inject between 1600 and 1700

Group 2 -  $1 \times 10^4$  spores in 0.2 ml - IP - inject between 1200 and 1300

$5 \times 10^6$ /ml in a tube

1.0 ml into 9.0 ml to give  $5 \times 10^5$ /ml - Group 1

1.0 ml into 9.0 ml to give  $5 \times 10^4$ /ml - Group 2

0.1 ml into 19.9 ml to give  $2.5 \times 10^2$ /ml - plate out

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 late morning.

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Subject:** My transport form for inter-division transfers  
**Date:** Thursday, February 15, 2007 12:57:55 PM  
**Attachments:** [Redacted]  
**Importance:** High

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All,  
Enclosed are the forms I've been using since 2002 for all transfers of select agents.  
- Bruce

Bruce Ivins

(b) (6)

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

**From:** (b) (6)  
**Sent:** Thursday, February 15, 2007 12:52 PM  
**To:** (b) (6)

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

**Subject:**  
**Importance:** High

Hey Gang-

One item that has come up during our inspection is consistency of our records for inter-divisional transfer of agents (i.e. to (b) (6) for irradiation, or aerobiology, etc.). Below is an excerpt from our BACT SOP. I have also attached two samples of forms that should accompany such transfers. Please have this paperwork approved prior to performing an inter-divisional transfer of agents.

Also, we need to have better record keeping of sterility checking procedures. Please document the sterility check procedures you used (i.e.. Volume plated, incubation time, and result of check (PASS OR FAIL)). If we can keep the transfer documentation and the sterility check documentation together in a notebook, that would be ideal.

Thanks for your help with this!

(b) (6)

(2) Inter-Divisional transfer.

(a) Authorization. A written request must be received and endorsed by the (b) (6) prior to the transfer of infectious material. A copy of this request will be provided to the responsible P.I., the original will be maintained in the Division office.

(b) The transfer of infectious material must be conducted properly IAW with this SOP and documented. The sender's cold side representative must visually confirm that a known recipient picks

up the material. The hot-side sender will then document the transfer via the air-lock log then follow-up with an e-mail to the receiver. Once the receiver acknowledges receipt the e-mail should be achieved. The log and e-mail should contain the following elements of information: Date, form and quantity of infectious material, Genus, species, strain, sender name, recipient's name, destination and purpose of transfer.

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6) [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** Production of spores in NSM broth  
**Date:** Monday, March 05, 2007 8:52:56 AM  
**Attachments:** [Redacted]

---

Data so far....

Bruce Ivins

(b) (6) [Redacted]

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6) [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** Production of spores in NSM broth  
**Date:** Monday, March 05, 2007 8:52:56 AM  
**Attachments:** [Redacted]

---

Data so far....

Bruce Ivins

(b) (6) [Redacted]

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#); (b) (6)  
**Cc:** (b) (6)  
**Subject:** RE: Mouse LD50 challenge - SA#793 (Old "VaxGen" spores) - 28 MAR 07 (UNCLASSIFIED)  
**Date:** Friday, March 23, 2007 1:34:23 PM

---

Classification: UNCLASSIFIED

Caveats: NONE

We're going to do a mouse LD50 challenge on Wednesday, 21 March. The injections will be intraperitoneal, 0.2 ml.

SA# 793 (Old "VaxGen" spores) - 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

5.3 X 10<sup>6</sup>/ml in a tube

0.1 ml into 10.5 ml to give 5 X 10<sup>4</sup>/ml

1.0 ml into 9.0 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 E and D - should get 10 and 30 colonies per plate

Plate out 50 microliters of C - should get 25 colonies per plate

-bruce

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 - SA#793 (Old "VaxGen" spores) - 28 MAR 07 - Correction (UNCLASSIFIED)  
**Date:** Friday, March 23, 2007 2:07:23 PM

---

Classification: UNCLASSIFIED

Caveats: NONE

-bruce

Bruce Ivins

(b) (6)

---

**From:** Ivins, Bruce E Dr USAMRIID  
**Sent:** Friday, March 23, 2007 1:34 PM  
**To:** Ivins, Bruce E Dr USAMRIID; (b) (6)  
**Cc:** (b) (6)  
**Subject:** RE: Mouse LD50 challenge - SA#793 (Old "VaxGen" spores) - 28 MAR 07 (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

We're going to do a mouse LD50 challenge on Wednesday, 28 March. The injections will be intraperitoneal, 0.2 ml.

SA# 793 (Old "VaxGen" spores) - 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

5.3 X 10<sup>6</sup>/ml in a tube

0.1 ml into 10.5 ml to give 5 X 10<sup>4</sup>/ml

1.0 ml into 9.0 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 E and D - should get 10 and 30 colonies per plate

Plate out 50 microliters of C - should get 25 colonies per plate

-bruce

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#); (b) (6)  
**Subject:** RE: mouse LD50 challenge on 27 FEB 07  
**Date:** Thursday, February 15, 2007 1:46:57 PM

---

We're going to repeat the mouse LD50 challenge on Tuesday , 27 FEB 07. The injections will be intraperitoneal, 0.2 ml.  
- bruce

\*\*\*\*\*

For mouse challenge on Tuesday, 28 FEB 07

Select Agent# 1749 , 3.8 X 10e10 per ml

IP challenges, 10 mice per group

- A. 1000 spores in 0.2 ml - IP
- B. 300 spores in 0.2 ml - IP
- C. 100 spores in 0.2 ml - IP
- D. 30 spores in 0.2 ml - IP
- E. 10 spores in 0.2 ml - IP

ml	6.0 ml	0.1 ml 4.5 ml	0.1 ml 6.0 ml	0.1 ml	2.0 ml	4.5
C	D	E		A	B	
SA# 1749 10.5 ml	12 ml	9.9 ml	9.9 ml	9.9 ml	13.2 ml	10.5 ml 12 ml
3.8 X 10e10		3.8 X 10e8	3.8 X 10e6	3.8 X 10e4		1000

300	100	30	10			
Per ml 0.2 ml	per 0.2 ml	per ml per 0.2 ml	per ml per 0.2 ml	per ml	per 0.2 ml	per

Plate out 0.2 ml of D and E, 50 microliters of C, and 0.2 ml of a 1:10 dilution of B.

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#); (b) (6)  
**Subject:** RE: Mouse LD50 from 28 FEB 07 -Deaths as of Day 4  
**Date:** Monday, March 05, 2007 8:04:04 AM

---

Here are the death data as of Day 3 (Sunday night, 3 March) from the FEB 28 07 mouse LD50:

1 400 spores      8 dead

414 spores      4 dead

144 spores      6 dead

45.2 spores      3 dead

13.2 spores      1 dead

This was with the SA 1749 spores prepared at RIID.

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#); (b) (6)  
**Subject:** RE: Mouse LD50 from 28 FEB 07 -Deaths as of Day 5  
**Date:** Monday, March 05, 2007 9:05:07 PM

---

Here are the death data as of Day 5 (Monday night, 5 March) from the FEB 28 07 mouse LD50:

1 400 spores      9 dead

414 spores      4 dead

144 spores      6 dead

45.2 spores      3 dead

13.2 spores      1 dead

This was with the SA 1749 spores prepared at RIID.

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#) (b) (6)  
**Subject:** RE: REPEAT - mouse LD50 challenge on 23 JAN 07  
**Date:** Tuesday, February 13, 2007 3:35:11 PM

---

We're going to repeat the mouse LD50 challenge on Tuesday , 28 FEB 07. The injections will be intraperitoneal, 0.2 ml.  
- bruce

\*\*\*\*\*

For mouse challenge on Tuesday, 28 FEB 07

Select Agent# 1749 , 3.8 X 10e10 per ml

IP challenges, 10 mice per group

- A. 1000 spores in 0.2 ml - IP
- B. 300 spores in 0.2 ml - IP
- C. 100 spores in 0.2 ml - IP
- D. 30 spores in 0.2 ml - IP
- E. 10 spores in 0.2 ml - IP

ml	6.0 ml	0.1 ml 4.5 ml	0.1 ml 6.0 ml	0.1 ml	2.0 ml	4.5
C	D	E		A	B	
SA# 1749 10.5 ml	9.9 ml 12 ml	9.9 ml	9.9 ml	13.2 ml	10.5 ml	12 ml

3.8 X 10 <sup>10</sup>		3.8 X 10 <sup>8</sup>	3.8 X 10 <sup>6</sup>	3.8 X 10 <sup>4</sup>	1000	
300	100	30	10			
Per ml		per ml	per ml	per ml	per 0.2 ml	per
0.2 ml	per 0.2 ml	per 0.2 ml	per 0.2 ml			

Plate out 0.2 ml of D and E, 50 microliters of C, and 0.2 ml of a 1:10 dilution of B.

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#); (b) (6)  
**Cc:** (b) (6)  
**Subject:** RE: REPEAT - Mouse TTD challenge - 27 FEB 07  
**Date:** Tuesday, February 13, 2007 3:30:43 PM

---

We're going to do a mouse TTD challenge on Tuesday, 27 FEB. The injections will be intraperitoneal, 0.2 ml.

SA# 1749 - 4 mice per group

Group 1 - 1 X 10<sup>5</sup> spores in 0.2 ml - IP - inject between 1600 and 1700

Group 2 - 1 X 10<sup>4</sup> spores in 0.2 ml - IP - inject between 1200 and 1300

ml	1.0 ml	0.1 ml		0.2 ml		1.0
			0.1 ml			
2					1	
9.9 ml		SA#1749	9.9 ml	15.0 ml	9.0 ml	9.0 ml
10 <sup>6</sup>	10 <sup>5</sup>		3.8 X 10 <sup>10</sup> 10 <sup>4</sup>	3.8 X 10 <sup>8</sup> 10 <sup>2</sup>		
0.2 ml	per 0.2 ml		per ml per 0.2 ml	per ml	per 0.2 ml	per

Plate out 0.05 ml of the final dilution to give 25 per plate.

The mice receiving 10<sup>5</sup> spores should die the next day (Wednesday) beginning about 8 am.

The mice receiving 10<sup>4</sup> spores should die the next day (Wednesday) beginning late morning.

Bruce Ivins

(b) (6)

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#); (b) (6)  
**Cc:** (b) (6)  
**Subject:** RE: REPEAT - Mouse TTD challenge - 27 FEB 07  
**Date:** Tuesday, March 20, 2007 11:29:55 AM

---

We're going to do a mouse TTD challenge on Wednesday, 21 March. The injections will be intraperitoneal, 0.2 ml.

SA# 188 (Vollum 1B) - 10 mice per group

Group 1 - 1 X 10<sup>5</sup> spores in 0.2 ml - IP - inject between 1600 and 1700

Group 2 - 1 X 10<sup>4</sup> spores in 0.2 ml - IP - inject between 1200 and 1300

5 X 10<sup>6</sup>/ml in a tube

1.0 ml into 9.0 ml to give 5 X 10<sup>5</sup>/ml - Group 1

1.0 ml into 9.0 ml to give 5 X 10<sup>4</sup>/ml - Group 2

0.1 ml into 19.9 ml to give 2.5 X 10<sup>2</sup>/ml - plate out

The mice receiving 10<sup>5</sup> spores should die the next day ( Thursday ) beginning about 8 am.

The mice receiving 10<sup>4</sup> spores should die the next day ( Thursday ) beginning late morning.

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Cc:** (b) (6); [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** RE: AGI counts  
**Date:** Tuesday, February 27, 2007 3:31:06 PM

---

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

**From:** (b) (6)  
**Sent:** Tuesday, February 27, 2007 2:45 PM  
**To:** Ivins, Bruce E Dr USAMRIID  
**Cc:** (b) (6)  
**Subject:** AGI counts

Bruce,  
If you have not done it already, could you send your AGI counts to (b) (6) so he can calculate the LD50's  
Thanks (b) (6)  
\*\*\*\*\*

February 21

Concentration of spores pre-spray - 1.11 X 10<sup>9</sup> per ml

AGIs

Run	(X 10 <sup>6</sup> /ml)
1 -	2.97
2 -	2.0
3 -	3.97
4 -	2.53
5 -	0.7
6 -	4.03
7 -	5.43
8 -	4.53
9 -	5.03
10 -	1.97
11 -	3.8

February 22

Concentration of spores pre-spray - 1.03 X 10<sup>9</sup> per ml

AGIs

Run	(X 10 <sup>6</sup> /ml)
1 -	1.87
2 -	1.8
3 -	3.9
4 -	2.0
5 -	3.0
6 -	1.8
7 -	1.07
8 -	1.93
9 -	5.13
10 -	1.0

Bruce Ivins

(b) (6)

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**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Subject:** RE: AGI counts  
**Date:** Tuesday, February 27, 2007 2:59:09 PM

---

OK, (b) (6) We'll get them to him tomorrow. I've been really busy today.

Bruce Ivins

(b) (6)

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

**From:** (b) (6)  
**Sent:** Tuesday, February 27, 2007 2:45 PM  
**To:** Ivins, Bruce E Dr USAMRIID  
**Cc:** (b) (6)  
**Subject:** AGI counts

Bruce,

If you have not done it already, could you send your AGI counts to (b) (6) so he can calculate the LD50's  
Thanks (b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Cc:** (b) (6); [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** RE: AGI counts  
**Date:** Tuesday, February 27, 2007 3:31:06 PM

---

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

**From:** (b) (6)  
**Sent:** Tuesday, February 27, 2007 2:45 PM  
**To:** [Ivins, Bruce E Dr USAMRIID](#)  
**Cc:** (b) (6)  
**Subject:** AGI counts

Bruce,  
If you have not done it already, could you send your AGI counts to (b) (6) so he can calculate the LD50's  
Thanks (b) (6)  
\*\*\*\*\*

February 21

Concentration of spores pre-spray - 1.11 X 10<sup>9</sup> per ml

AGIs

Run	(X 10 <sup>6</sup> /ml)
1 -	2.97
2 -	2.0
3 -	3.97
4 -	2.53
5 -	0.7
6 -	4.03
7 -	5.43
8 -	4.53
9 -	5.03
10 -	1.97
11 -	3.8

February 22

Concentration of spores pre-spray - 1.03 X 10<sup>9</sup> per ml

AGIs

Run	(X 10 <sup>6</sup> /ml)
1 -	1.87
2 -	1.8
3 -	3.9
4 -	2.0
5 -	3.0
6 -	1.8
7 -	1.07
8 -	1.93
9 -	5.13
10 -	1.0

Bruce Ivins

(b) (6)

A large black rectangular redaction box covers the majority of the text on the page, starting from the right side of the '(b) (6)' label and extending to the right edge of the page.

From: [Ivins, Bruce E Dr USAMRIID](#)  
To: (b) (6)  
Subject: RE: Bruce Ivins (UNCLASSIFIED)  
Date: Wednesday, March 21, 2007 12:06:04 PM

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Classification: UNCLASSIFIED

Caveats: NONE

Thanks, (b) (6)

-bruce

Bruce Ivins

(b) (6)

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From: (b) (6)  
Sent: Wednesday, March 21, 2007 9:34 AM  
To: (b) (6)  
Cc: Ivins, Bruce E Dr USAMRIID; (b) (6)  
Subject: Bruce Ivins (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Custodian Name	ECN	Equipment Nomenclature	Manufacturer Name	Mftr Serial No	Common
Model	Equipment Location	Correct Location	Date Last Serviced	CVC Expired	
BRUCE IVINS	000775	SHAKER, LABORATORY	NEW BRUNSWICK SCIENTIFIC CO INC		
600817628	EXCELLA E24	(b)(2)	9/26/2006	sept. '07	
BRUCE IVINS	0D6270	ULTRASOUND CLEANING SYSTEM	BRANSON	E15-952514-0	
5200	(b)(2)	6/20/2006	n/a		
BRUCE IVINS	0F2970	ROTOR sorvall	10253112	hs4	(b)(2)
	n/a				
BRUCE IVINS	0C0025	SPECTROPHOTOMETER, ULTRAVIOLET/VISIBLE	BAUSH & LOMB		
1201183	SPECTRONIC 21	(b)(2)	2/12/2007	aug '06	
BRUCE IVINS	0D6802	BALANCE, ELECTRONIC	Sartorius	40030106	b310s (b)(2)
		8/16/2006	aug '06		
BRUCE IVINS	0D7923	CENTRIFUGE, TABLETOP	EPPENDORF SCIENTIFIC INC	39133	
5415C	(b)(2)	2/1/2007	aug '06		
BRUCE IVINS	0D8736	PUMP, LABORATORY	GAST	1192 746A	(b)(2)
	8/16/2006	n/a			
BRUCE IVINS	0D9933	MOTOR STIRRING	YAMATO 211055	CR41D	(b)(2)
	2/22/2007	n/a			
BRUCE IVINS	0E1575	CENTRIFUGE, TABLETOP	DIAGGER	006514	DW-41 (b)(2)
	2/1/2007	n/a			
BRUCE IVINS	0F2334	BALANCE, ELECTRONIC	METTLER	1120353635	PG503S (b)(2)
	8/8/2006	aug '06			

BRUCE IVINS 0F5982 BATH, WATER, LABORATORY PRECISION 603111470 260  
 (b)(2) 2/26/2007 feb '07  
 BRUCE IVINS 0F5994 WATER PURIFICATION SYSTEM aqua solution 042121AU 2001au  
 (b)(2) 2/26/2007 n/a  
 BRUCE IVINS 0F6807 CENTRIFUGE, FLOOR, HIGH-SPEED THERMO ELECTRON CORPORATION  
 S270155859TO RC5BPLUS (b)(2) 12/21/2006 n/a  
 BRUCE IVINS 0F6900 CENTRIFUGE, FLOOR, HIGH-SPEED THERMO ELECTRON CORPORATION  
 T290156020TO RC5BPLUS (b)(2) 2/26/2007 feb '08  
 BRUCE IVINS 0F6913 BALANCE, ELECTRONIC METTLER 1125232824 PB153S (b)(2)  
 2/28/2007 feb '08  
 BRUCE IVINS 0F7386 WASHER, LABWARE labconco 040926406 4420410 (b)(2)  
 2/26/2007 n/a

BRUCE IVINS 0C0926 CAMERA, MICROSCOPE OLYMPUS 212581 BHS-F (b)(2)  
 9/29/2006 n/a  
 BRUCE IVINS 0S0192 CAMERA, MICROSCOPE OLYMPUS NONE BHS-F (b)(2)  
 2/26/2007 n/a

Lines 19 & 20 are one system

BRUCE IVINS 0E0796 FREEZER, LABORATORY virtis 205867 12xl (b)(2)  
 6/16/2006 june '07  
 BRUCE IVINS 0E0797 LYOPHILIZER 3 SHELF virtis 205877 hl600 (b)(2)  
 12/21/2006 june '07  
 BRUCE IVINS 0E0635 VACUUM PUMP leybold L931201924 d8b (b)(2)  
 6/16/2006 june '07

Lines 23, 24 & 25 are one system

BRUCE IVINS 0F3694 SHAKER, LABORATORY NEW BRUNSWICK SCIENTIFIC CO INC  
 200836850 (b)(2) 10/27/2006  
 This item belongs to (b) (6) R5N

\*\*\*\*\* Note N/A = No CVC Sticker

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Subject:** RE: CpG in rabbits data  
**Date:** Friday, March 16, 2007 4:21:27 PM

---

I certainly will, (b) (6) Welcome to the campus!

-bruce

Bruce Ivins

(b) (6)

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**From:** (b) (6)  
**Sent:** Friday, March 16, 2007 4:12 PM  
**To:** Ivins, Bruce E Dr USAMRIID  
**Subject:** RE: CpG in rabbits data

Dear Bruce,

Could you please give me a call when you have a chance?

Many thanks,

(b) (6)

---

**From:** Ivins, Bruce E Dr USAMRIID [<mailto:Bruce.Ivins@DET.AMEDD.ARMY.MIL>]  
**Sent:** Friday, August 06, 2004 9:34 AM  
**To:** (b) (6)  
**Subject:** RE: CpG in rabbits data

Hi, (b) (6)! Here is the requested information, and I wish you the very best in this!

(b) (6)

(b) (6)

[REDACTED]

[REDACTED]

I don't know if I told you that I lost the funding for my vaccine research, so for the past 1 - 2 years, I have been very restricted with respect to what I do in the lab. I have been able to produce spores for other researchers in the Institute and provide advice on certain matters, serve on some committees, but that's about all. The work with the CpG was enormously productive and promising, and I regret that current funding (via DTRA) puts such work at a low priority. The inclusion of immunostimulatory deoxynucleotides in human vaccines should represent, in my opinion, a substantial effort in immunoprophylaxis research. Ahhh...but I don't control pursestrings.

I hope you and your family are having a wonderful summer!

- Bruce

Bruce Ivins

(b) (6)  
[REDACTED]

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

From: (b) (6) ]  
Sent: Friday, August 06, 2004 9:04 AM  
To: 'Ivins, Bruce E Dr USAMRIID'  
Subject: RE: CpG in rabbits data

Dear Bruce,

I'd like to apply for the "Science Director" position at USAMRIID. I understand the applications need to be sent to (b) (6). Can you provide me with his E mail address, as I can send all the documentation most easily in electronic form.

Many thanks,

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID [<mailto:Bruce.Ivins@DET.AMEDD.ARMY.MIL>]  
Sent: Sunday, February 22, 2004 9:45 PM  
To: (b) (6)  
Subject: FW: CpG in rabbits data

(b) (6): I am forwarding to you an email thread concerning CpG + anthrax vaccine (AVA and

possibly rPA/Alhydrogel) in non-human primates and people. This work, I believe, utilizes Coley (sp?) CpG oligos. I don't know more than that. If CpG are already in humans (as well as NHP) in conjunction with anthrax vaccine, how worthwhile do you think it would be to do another rabbit experiment? We could generate data, but as far as using the data to proceed on to NHP...people are already there. Perhaps you're familiar with the NHP data(?) and are involved in the work(?) I had been asked for all sorts of information from (b) (6) months and months ago. It looks as if he picked my brain with respect to our challenge studies with CpG, then set to work to get the oligos into NHP and humans. As is the usual case, I've been left completely in the dark with respect to the work.

- Bruce

-----  
From: (b) (6)  
Sent: Friday, February 20, 2004 12:10 PM  
To: (b) (6)  
Subject: RE: CpG in rabbits data

(b)

I do. It works in NHP and it works better in people. The details are, of course, proprietary.

(b)(

-----Original Message-----  
From: (b) (6)  
Sent: Friday, February 20, 2004 11:48 AM  
To: (b) (6)  
Subject: RE: CpG in rabbits data

(b)

Do you know the status of NHP CpG experiments?

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Cc:** (b) (6)  
**Subject:** RE: GBR task order 66 support to spore production/characterization  
**Date:** Tuesday, February 13, 2007 10:54:11 AM

---

I believe that the NIAID studies are APC 6R1D.  
The Spore Production Facility APC is QHD5, Project number 24759.

Bruce Ivins

(b) (6)

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

**From:** (b) (6)  
**Sent:** Tuesday, February 13, 2007 10:46 AM  
**To:** (b) (6)  
**Cc:** (b) (6); Ivins, Bruce E Dr USAMRIID  
**Subject:** GBR task order 66 support to spore production/characterization  
**Importance:** High

(b) (6)

I need to touch base with you regarding GBR task order 66 (b) (6). Currently for FY07 DSD had (b) (6) time budgeted at 8% for project # 201445 (Evaluation and Characterization of Spore Production Parameters; PI Dr. Bruce Ivins) and at 20% for project #247459 (Bacteriology Spore Production; PI (b) (6)). Two questions for you:

1) I want to go ahead and put in a PR for 28% of (b) (6) time for FY07 (\$26,000)--which BACTI APC's should I use, and what is the corresponding hand receipt? I can then go ahead and have (b) (6) (b) (6) put in the HRs.

2) For FY08, do you still want to use (b) (6) or these same 2 projects, and if so, for the same amount of time? Please let me know by end of this week at latest, we are budgeting for the next fiscal year and I want to make sure we are not caught short. Thanks!

V/R

(b) (6)

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#); (b) (6)  
**Subject:** RE: LD50 determinations  
**Date:** Monday, March 12, 2007 4:20:06 PM

---

There was no determination on Day 4 because my CAC card (needed to operate the computer) expired over the weekend. I had it renewed today.

Select Agent # 3660

10 mice in each group injected with spores in 0.2 ml, IP

Spores injected	Deaths as of Day 2	Deaths as of Day 3	Deaths as of Day 4	Deaths as of Day 5	Deaths as of Day 6
1050 spores	3	5	?	6	
315 spores	2	2	?	5	
105 spores	0	1	?	1	
32.4 spores	0	0	?	1	
10.2 spores	0	0	?	0	

-bruce

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#); Little (b) (6)  
**Subject:** RE: LD50 determinations  
**Date:** Monday, March 12, 2007 10:05:38 AM

---

Select Agent # 3660

10 mice in each group injected with spores in 0.2 ml, IP

Spores injected	Deaths as of Day 2	Deaths as of Day 3	Deaths as of Day 4	Deaths as of Day 5	Deaths as of Day 6
1050 spores	3	5			
315 spores	2	2			
105 spores	0	1			
32.4 spores	0	0			
10.2 spores	0	0			

-bruce

Bruce Ivins  
(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#); (b) (6)  
**Subject:** RE: LD50 determinations  
**Date:** Friday, March 09, 2007 11:22:13 PM

---

Select Agent # 3660

10 mice in each group injected with spores in 0.2 ml, IP

Spores injected	Deaths as of Day 2	Deaths as of Day 3	Deaths as of Day 4	Deaths as of Day 5	Deaths as of Day 6
1050 spores	3				
315 spores	2				
105 spores	0				
32.4 spores	0				
10.2 spores	0				

-bruce

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#); (b) (6)  
**Subject:** RE: LD50 determinations  
**Date:** Thursday, March 15, 2007 4:01:54 PM

---

-bruce

Bruce Ivins

(b) (6)

[REDACTED]

From: Ivins, Bruce E Dr USAMRIID  
Sent: Monday, March 12, 2007 4:20 PM  
To: Ivins, Bruce E Dr USAMRIID; (b) (6)  
Subject: RE: LD50 determinations

There was no determination on Day 4 because my CAC card (needed to operate the computer) expired over the weekend. I had it renewed today.

Select Agent # 3660

10 mice in each group injected with spores in 0.2 ml, IP

Spores injected	Deaths as of Day 2	Deaths as of Day 3	Deaths as of Day 4	Deaths as of Day 5	Deaths as of Day 6
1050 spores	3	5	5		
6	6				
315 spores	2	2	3		
5	5				
105 spores	0	1	1		
1	1				
32.4 spores	0	0	1		
1	1				

10.2 spores	0	0
0	1	

Spores injected Day 10	Deaths as of Day 7 Deaths as of Day 11	Deaths as of Day 8	Deaths as of Day 9	Deaths as of
---------------------------	---	--------------------	--------------------	--------------

1050 spores	6	7
-------------	---	---

315 spores	5	5
------------	---	---

105 spores	1	2
------------	---	---

32.4 spores	1	1
-------------	---	---

10.2 spores	1	2
-------------	---	---

-bruce

Bruce Ivins

(b) (6)



**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Subject:** RE: May 4 definite meeting date  
**Date:** Monday, March 05, 2007 2:05:18 PM

---

Dear (b) (6),

I won't be able to accept any honorarium for this. I'll just drive down to the site. Hopefully I can get free parking, or a parking pass of some kind. I think I already returned my conflict of interest package.

Thank you.

-bruce

Bruce Ivins

(b) (6)

---

**From:** (b) (6)  
**Sent:** Monday, March 05, 2007 1:39 PM  
**To:** (b) (6); Ivins, Bruce E Dr USAMRIID (b) (6)  
**Cc:** (b) (6)  
**Subject:** May 4 definite meeting date  
**Importance:** High

Dear All,

May 4 is now definitely the meeting date for the review of the two clinical trials.

Please do not make any plane reservations until I send you our travel service information. You must use this service in order for us to pay for your flight. They are very good to work with as far as getting what flight you want and if there are special issues, we can deal with them. It is just not possible to deal with problems after you have flown on another flight.

I should be posting more meeting and application materials near the middle of March. As I mentioned, I will be sending hard copies of the applications and a CD with all of the applications and documents on it.

We also will have a 1 hour orientation/questions teleconference around the end of March. You are paid the \$200 honorarium for this. I will be sending a calendar to you for that in the near future.

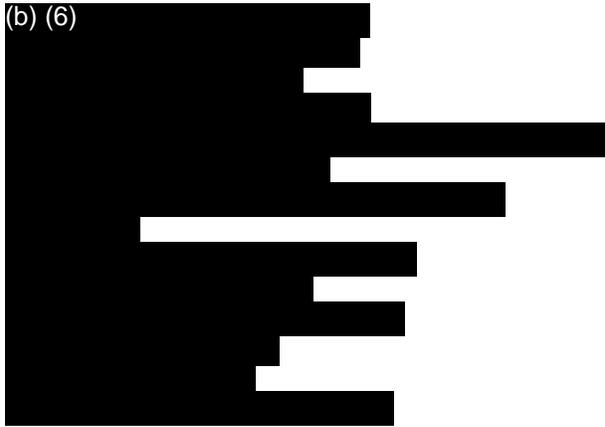
If you have not yet returned your Conflict of Interest package, please do that at your earliest convenience.

Thank you. I am looking forward to working with you.

Regards,

(b) (6)

(b) (6)



Important Notice: Are you ready for electronic submission and NIH's new grant application forms? PAPER NO MORE, USE 424! Go to <http://era.nih.gov/ElectronicReceipt> to find out. Information for registering for electronic submission is available at <http://grants.nih.gov/grants/guide/notice-files/NOT-OD-05-067.html>.

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**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Subject:** RE: May 4 for Clinical Trial Review?  
**Date:** Wednesday, February 28, 2007 2:27:31 PM

---

I can make the May 4 meeting, (b) (6)

Bruce Ivins

(b) (6)

---

**From:** (b) (6)  
**Sent:** Wednesday, February 28, 2007 1:21 PM  
**To:** (b) (6); Ivins, Bruce E Dr USAMRIID; (b) (6)  
**Cc:** (b) (6)  
**Subject:** May 4 for Clinical Trial Review?  
**Importance:** High

Dear Reviewer,

Thank you all again for agreeing to participate in this important review. Before I make the date final, I want to check that May 4, 2007 is still a good date for you to come to the Washington DC area.

Please let me know by return email.

Best Regards,

(b) (6)

(b) (6)

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**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Subject:** RE: May 4 for Clinical Trial Review?  
**Date:** Wednesday, February 28, 2007 2:42:24 PM

---

Please send information about parking, what building, etc. Thanks, (b) (6)  
-bruce

Bruce Ivins

(b) (6)

---

**From:** (b) (6)  
**Sent:** Wednesday, February 28, 2007 2:29 PM  
**To:** Ivins, Bruce E Dr USAMRIID  
**Subject:** RE: May 4 for Clinical Trial Review?

Great. Thank you.

(b) (6)

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From: Ivins, Bruce E Dr USAMRIID [<mailto:bruce.ivins@us.army.mil>]  
Sent: Wednesday, February 28, 2007 2:28 PM  
To: (b) (6)  
Subject: RE: May 4 for Clinical Trial Review?

I can make the May 4 meeting, (b) (6).

Bruce Ivins

(b) (6)

---

From: (b) (6) ]  
Sent: Wednesday, February 28, 2007 1:21 PM  
To: (b) (6) Ivins, Bruce E Dr USAMRIID; (b) (6)

(b) (6)

Subject: May 4 for Clinical Trial Review?  
Importance: High

Dear Reviewer,

Thank you all again for agreeing to participate in this important review. Before I make the date final, I want to check that May 4, 2007 is still a good date for you to come to the Washington DC area.

Please let me know by return email.

Best Regards,

(b) (6)

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**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Cc:** (b) (6)  
**Subject:** RE: Mouse arrival  
**Date:** Tuesday, February 13, 2007 1:57:34 PM

---

We'll be busy with a spray for (b) (6) on Tuesday, Wednesday and Thursday. (Set-up on Tuesday, spray on Wednesday and Thursday, count plates on Friday). Maybe we could do it the following week(?)

Bruce Ivins

(b) (6)

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

**From:** (b) (6)  
**Sent:** Tuesday, February 13, 2007 1:54 PM  
**To:** Ivins, Bruce E Dr USAMRIID  
**Cc:** (b) (6)  
**Subject:** FW: Mouse arrival

Bruce,

Can we schedule to do a mouse LD50 and ST50 next week?

For the LD50, how about SA #954? Same concentrations; 1000, 300, 100, 30, & 10 spores IP Use SA #1749 for the survival time- $10^5$  and  $10^4$  IP?

(b) (6)

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

**From:** (b) (6)  
**Sent:** Tuesday, February 13, 2007 1:27 PM  
**To:** (b) (6)  
**Subject:** Mouse arrival

Hi (b) (6)

Your 58 CD1 mice have arrived and they are in AR214 for you.

Have a great day,

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Cc:** (b) (6); [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** RE: Mouse challenges  
**Date:** Monday, March 05, 2007 9:10:03 PM

---

We'll do the TTD with SA 1749, 10 mice each at 10e4 and 10e5, IP in 0.2 ml.

We'l do the LD50 with SA3660, 50 mice, at 1000, 300, 100, 30, 10.

-bruce

Bruce Ivins

(b) (6)

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

**From:** (b) (6)  
**Sent:** Monday, March 05, 2007 4:16 PM  
**To:** Ivins, Bruce E Dr USAMRIID  
**Subject:** RE: Mouse challenges

This week Wednesday???

SA #954 for the LD50 as usual for 50 mice. The spore group was not involved in purification of SA #516.

SA #1749 for ST50 as before (10<sup>5</sup> & 10<sup>4</sup>) except 10 mice each group.  
The mice are in AR214.

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

**From:** Ivins, Bruce E Dr USAMRIID  
**Sent:** Monday, March 05, 2007 4:00 PM  
**To:** (b) (6)  
**Ivins, Bruce E Dr USAMRIID**  
**Subject:** Mouse challenges

(b) (6)

When is our next set of TTD and LD50 challenges, and what strains would you like used. Would you like SA 516, which is the strain being used by (b) (6) for his NHP challenges?

Thanks.

-bruce

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#) (b) (6)  
**Cc:** (b) (6)  
**Subject:** RE: Mouse challenges  
**Date:** Tuesday, March 06, 2007 10:10:02 AM

---

OK, Here's the plan. This week for the TTD (Select Agent # 1749) and the LD50 (Select Agent # 3660):  
Injections will be done on Wednesday, 7 MAR 07

TTD:

10 mice will get 0.2 ml IP of 10e4 spores at 1200 - 1300  
10 mice will get 0.2 ml IP of 10e5 spores at 1600 - 1700

LD50

10 mice will get 0.2 ml IP of 1000 spores  
10 mice will get 0.2 ml IP of 300 spores  
10 mice will get 0.2 ml IP of 100 spores  
10 mice will get 0.2 ml IP of 30 spores  
10 mice will get 0.2 ml IP of 10 spores

On Tuesday, I'll plate out SA# 1749 and SA# 3660 and (b) (6) will read them tomorrow (Wednesday) morning. I'll get the calculations and dilute them so that (b) (6) can inject. On Thursday morning we'll start observing them for TTD.

-bruce

Bruce Ivins

(b) (6)

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

**From:** Ivins, Bruce E Dr USAMRIID  
**Sent:** Monday, March 05, 2007 9:10 PM  
**To:** (b) (6)  
**Cc:** (b) (6); Ivins, Bruce E Dr USAMRIID  
**Subject:** RE: Mouse challenges

We'll do the TTD with SA 1749, 10 mice each at 10e4 and 10e5, IP in 0.2 ml.

We'l do the LD50 with SA3660, 50 mice, at 1000, 300, 100, 30, 10.

-bruce

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#); (b) (6)  
**Cc:** (b) (6)  
**Subject:** RE: Mouse TTD challenge correction - SA# 793 (Old "VaxGen" spores) - 28 MAR 07 (UNCLASSIFIED)  
**Date:** Friday, March 23, 2007 10:54:26 AM

---

Classification: UNCLASSIFIED

Caveats: NONE

We're going to do a mouse TTD challenge on Wednesday, 28 March. The injections will be intraperitoneal, 0.2 ml.

SA# 793 (Old "VaxGen" spores) - 10 mice per group

Group 1 - 1 X 10<sup>4</sup> spores in 0.2 ml - IP - inject between 1200 and 1300

Group 2 - 1 X 10<sup>5</sup> spores in 0.2 ml - IP - inject between 1600 and 1700

5.3 X 10<sup>6</sup>/ml in a tube

1.0 ml into 9.6 ml to give 5 X 10<sup>5</sup>/ml - Group 1

1.0 ml into 9.0 ml to give 5 X 10<sup>4</sup>/ml - Group 2

0.1 ml into 19.9 ml to give 2.5 X 10<sup>2</sup>/ml - plate out

(Should be about 25 colonies per plate)

The mice receiving 10<sup>5</sup> spores should die the next day ( Thursday ) beginning about 8 am.

The mice receiving 10<sup>4</sup> spores should die the next day ( Thursday ) beginning late morning.

-bruce

Classification: UNCLASSIFIED

Caveats: NONE

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Subject:** RE: Phone call  
**Date:** Friday, March 02, 2007 8:00:08 AM  
**Sensitivity:** Confidential

---

Whoa! (b) (6) I'm referring to the following recent guidance with respect to the Amerithrax investigation:

- > "when RIID federal employees are discussing matters with an agent and
- > volunteer that there is a document readily available and handy to the
- > employee which illustrates what is being explained that the document
- > can be provided and that a copy of the same document should be
- > provided to (b) (6) and JAG-MRMC for documentation purposes.

Please let me know how I'm supposed to get this information to you. Thanks.

Bruce Ivins

(b) (6)

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

**From:** (b) (6)  
**Sent:** Thursday, March 01, 2007 6:23 PM  
**To:** Ivins, Bruce E Dr USAMRIID  
**Cc:** (b) (6)  
**Subject:** Phone call  
**Sensitivity:** Confidential

CLASSIFICATION: UNCLASSIFIED  
CAVEATS: NONE

Sir,

Received your call. You may place your OGE Form 450 in a sealed envelope and give it to (b) (6) (b) (6) who will ensure that we obtain it after your supervisor signs it. She is collecting a few more forms in addition to your own.

v/r

(b) (6)

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**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Cc:** (b) (6)  
**Subject:** RE: Respiratory Worksite Specific Procedures  
**Date:** Monday, February 12, 2007 2:20:09 PM

---

Our laboratory doesn't believe that respiratory protection is needed during work with B. anthracis in a BSC. The glass and the airflow barrier provide sufficient protection for the operations conducted within the BSC. Furthermore, it should be pointed out that in the event of an accident (spill, breakage, etc.) of relatively large scale (more than a few ml of material), we are protected by both the current anthrax vaccine (AVA-Biothrax) as well as by common antibiotics such as ciprofloxacin and doxycycline. If respirators become required for all such work in the anthrax laboratory, then they should also be required for all other work where there is a possibility of a spill, such as when taking material out of the hood, out of an incubator (where a plate or flask could be dropped), during transport of contaminated material from the laboratory to the hall autoclave, during transport of infected bedding from animal rooms to the autoclaves (anyone in the hallway during this transfer should also be required to wear respiratory protection in order to protect from aerosols from the contaminated bedding being moved) and so forth.

Bruce Ivins

(b) (6)

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

**From:** (b) (6)  
**Sent:** Monday, February 12, 2007 9:57 AM  
**To:** (b) (6); Ivins, Bruce E Dr USAMRIID; (b) (6)  
**Cc:** (b) (6)  
(b) (6) (b)  
**Subject:** Respiratory Worksite Specific Procedures

ALCON,

After further review, it was found that there are some inconsistencies involving of the worksite specific procedures for operations involving respirators in (b) (2) and (b) (2). More specifically, the inconsistencies concern the use of negative pressure half face respirators during B. anthracis spore preparation. Some researchers say they are wearing respirators while working in the BSC--others only when they open shakers or centrifuges.

Please review the attached documents and provide me with your revisions. The documents are all identical except for sections 1 and 2.

Thank you,

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Subject:** RE: Revised monthly report template, FY06 Anthrax  
**Date:** Sunday, February 11, 2007 3:49:29 PM

---

(b) - Do you mean what we've done so far, or what we talked about doing in the future? If it's future work, could you please send me the proposal again? I can't find it in my files. Thanks!

Bruce Ivins

(b) (6)

---

**From:** (b) (6)  
**Sent:** Friday, February 09, 2007 4:41 PM  
**To:** Ivins, Bruce E Dr USAMRIID  
**Subject:** FW: Revised monthly report template, FY06 Anthrax

Hi Bruce:

Would you please provide a rough timeline on the sporulation studies?

Thanks,

(b)

---

**From:** (b) (6) ]  
**Sent:** Friday, February 09, 2007 3:38 PM  
**To:** (b) (6)  
**Cc:** (b) (6)  
**Subject:** RE: Revised monthly report template, FY06 Anthrax

Thanks, (b) , I know we have some hoops to jump through here as yet. In the meantime, I'm going to file a no-cost schedule extension for you through 31 December 2007, so we can give you some flexibility on your timeline. Can you give me some idea of the timeline for the sporulation studies? It would be helpful to have at least a basic idea to plug into the template.

(b) (6)

---

**From:** (b) (6)  
**Sent:** Friday, February 09, 2007 3:31 PM  
**To:** (b) (6) (b) (6)  
**Subject:** RE: Revised monthly report template, FY06 Anthrax

Hi (b) (6)

Looks fine with me. I immediately stopped work and spending on the project until I heard back from you guys whether it was approved.

Thanks,

(b)

---

From: (b b) (6)  
Sent: Wednesday, February 07, 2007 2:48 PM  
To: (b) (6)  
Cc: (b) (6)  
Subject: Revised monthly report template, FY06 Anthrax

Greetings, (b)

I've attached a revised copy of your monthly report template for the new anthrax effort, based on the IP you sent (b) last month. Could you do me a favor, please, and take a look at it to make sure I haven't missed anything? If there is technical status you want to report for the work you've done to date, that's fine, just enter it and send the file back to me. In particular, if there's been progress made on the tasks, please include an estimate of the percentage of completion. In addition, I'd appreciate you giving me the dates for the highlighted tasks- that section was left blank in the IP.

The way you reported your budget does not seem to add up to the amount originally funded. For the moment, I have evenly spread the total funded amount through the currently approved POP, that is, through June. When we get approval to extend you through September, we'll rebaseline that accordingly. Your actuals to date, based on the reports we get from USAMRIID Finance, have been recorded.

Thanks very much-

(b) (6)

[Redacted]

[Redacted]

[Redacted]

(b) (6)

(b) (6) [REDACTED]

[REDACTED]

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Subject:** RE: Revised monthly report template, FY06 Anthrax  
**Date:** Monday, February 12, 2007 8:59:53 AM

---

Thanks!!!! I'll get to work on it.

Bruce Ivins

(b) (6)

---

**From:** (b) (6)  
**Sent:** Sunday, February 11, 2007 5:43 PM  
**To:** Ivins, Bruce E Dr USAMRIID  
**Subject:** RE: Revised monthly report template, FY06 Anthrax

---

**From:** Ivins, Bruce E Dr USAMRIID  
**Sent:** Sunday, February 11, 2007 3:49 PM  
**To:** (b) (6)  
**Subject:** RE: Revised monthly report template, FY06 Anthrax

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Bruce Ivins

(b) (6)

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**Subject:** FW: Revised monthly report template, FY06 Anthrax

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(b)

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Cc: (b) (6)  
Subject: RE: Revised monthly report template, FY06 Anthrax

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(b) (6)

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To: (b) (6)  
Subject: RE: Revised monthly report template, FY06 Anthrax

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(b) (6)

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From: (b) (6)  
Sent: Wednesday, February 07, 2007 2:48 PM  
To: (b) (6)  
Cc: (b) (6)  
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I've attached a revised copy of your monthly report template for the new anthrax effort, based on the IP you sent (b) (6) last month. Could you do me a favor, please, and take a look at it to make sure I

haven't missed anything? If there is technical status you want to report for the work you've done to date, that's fine, just enter it and send the file back to me. In particular, if there's been progress made on the tasks, please include an estimate of the percentage of completion. In addition, I'd appreciate you giving me the dates for the highlighted tasks- that section was left blank in the IP.

The way you reported your budget does not seem to add up to the amount originally funded. For the moment, I have evenly spread the total funded amount through the currently approved POP, that is, through June. When we get approval to extend you through September, we'll rebaseline that accordingly. Your actuals to date, based on the reports we get from USAMRIID Finance, have been recorded.

Thanks very much-

(b) (6)

[Redacted]

[Redacted]

[Redacted]

(b) (6)

[Redacted]

[Redacted]

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Subject:** RE: Sprays on 21 and 22 FEB  
**Date:** Tuesday, February 13, 2007 9:30:32 AM

---

(b) (6) - Did you tell (b) (6) what you wanted as far as LD50s? When he gives you the answer, please pass it on, and we'll get the dose right for the sprays.

Bruce Ivins

(b) (6)

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

**From:** (b) (6)  
**Sent:** Tuesday, February 13, 2007 9:23 AM  
**To:** (b) (6)  
**Cc:** Ivins, Bruce E Dr USAMRIID  
**Subject:** FW: Sprays on 21 and 22 FEB

(b) (6)

Attached are the weights.

Thanks

(b) (6)

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

**From:** (b) (6)  
**Sent:** Tuesday, February 13, 2007 7:41 AM  
**To:** (b) (6)  
**Subject:** RE: Sprays on 21 and 22 FEB

Here you go.

(b) (6)

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

**From:** (b) (6)  
**Sent:** Monday, February 12, 2007 5:07 PM  
**To:** (b) (6)  
**Cc:** (b) (6); Ivins, Bruce E Dr USAMRIID  
**Subject:** FW: Sprays on 21 and 22 FEB

(b) (6),

Could you please send the current weights for the 22 Merck study animals on next weeks spray.

Thanks

(b) (6)

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

**From:** (b) (6)  
**Sent:** Monday, February 12, 2007 3:49 PM  
**To:** (b) (6)  
**Subject:** RE: Sprays on 21 and 22 FEB

(b) (6),

I have the SHAM data, but need the most current weights for the NHPs in order to finish the starting concentration calculations. Also, how many cfu/LD50 (55,000?) are you using in planning your target

dose? Thanks.

(b)

[REDACTED]

Please let us know how we were doing by completing the aerosol support survey at the following link:  
<https://riid-vision.detrick.army.mil/aerobiology/rgsurvey.cfm>

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

From: (b) (6)  
Sent: Monday, February 12, 2007 10:27 AM  
To: (b) (6)  
Cc: Ivins, Bruce E Dr USAMRIID  
Subject: FW: Sprays on 21 and 22 FEB  
Importance: High

(b)

Bruce needs to see the data from the Sham spray ASAP to get the correct concentration for the upcoming sprays next week Thanks (b)

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

From: Ivins, Bruce E Dr USAMRIID  
Sent: Wednesday, February 07, 2007 9:11 AM  
To: (b) (6)  
Cc: (b) (6)  
Subject: Sprays on 21 and 22 FEB

(b) did you ever get the information about what concentration you need for your sprays on 21 FEB and 22 FEB?

Bruce Ivins

(b) (6)

(b) (6)

[REDACTED]

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** RE: Test of NSM broth and Nutrient broth/dextrose + MnCl2  
**Date:** Monday, February 12, 2007 1:58:52 PM

---

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From: Ivins, Bruce E Dr USAMRIID  
Sent: Friday, February 09, 2007 4:37 PM  
To: Ivins, Bruce E Dr USAMRIID  
Subject: Test of NSM broth and Nutrient broth/dextrose + MnCl2

One liter of NSM broth (no agar) was made and sterilized by autoclaving:  
Amount per liter

- |                                |         |
|--------------------------------|---------|
| 1. Tryptone                    | 3 grams |
| 2. Yeast extract               | 3 grams |
| 3. Peptone                     | 5 grams |
| 4. Lab-Lemco powder (not agar) | 3 grams |
| 5. MnCl2-4H2O (1% solution)    | 1 ml    |
| 6. Deionized water             | 1000 ml |

250 ml was dispensed into each of 4 2-liter flasks.

450 ml of broth was made containing: 4 grams nutrient broth and 0.5 ml of MnCl2-4H2O (1% solution). 225 ml was put into 2 flasks and autoclaved. Then, to each flask, I added 25 ml of filter sterilized glucose solution (0.9 grams per 100 ml of WFI).

On Sunday afternoon, 11 FEB 07, I inoculated SBA plates with Ames PSC and incubated overnight at 37C in 5% CO2. Next morning I put 3 colonies into 10 ml of PBS and added 0.1 ml of the suspension to the two nutrient broth flasks. The flasks were incubated with shaking at 32C, 140 rpm in B313.

Bruce Ivins

(b) (6)



From: [Ivins, Bruce E Dr USAMRIID](#)  
To: (b) (6) -  
Subject: RE: Update for EMThrax Vaccine vs AVA  
Date: Tuesday, March 06, 2007 9:00:05 AM

---

Hi, (b) (6)

It's good to hear that things have been going well in the lab. I hope your new "little one" is also doing well! I talked with folks at Ribicor/Corixa several weeks ago who told me that Sigma might be able to begin marketing the "Ribi" vaccine adjuvant with the year, but some manufacturing problems had to be worked out.

We've done some work in CpGs with (b) (6). He was very helpful and knowledgeable, and I'd suggest that you talk to him about some future work or collaboration. His contact information is:

(b) (6)

(b) (6)

(b) (6)

I was glad to hear of your success. I'm sure that AVA can be approved either by the addition of other or different adjuvants, as well as by the addition of other critical antigens. I think that some researchers have gone the wrong way in assuming that "DNA vaccines" are the way to go for every disease. I disagree. In the case of many diseases, we have a working vaccine which can be improved upon, but which is based upon valid science and technology. We all would like to have a vaccine that is less reactogenic (especially at the injection site!) and provided long-lasting immunity with a minimum number of administrations.

Anyway, thanks for the update, and I encourage you to contact (b) (6)

-bruce

Bruce Ivins

(b) (6)

---

From: (b) (6) ]  
Sent: Tuesday, March 06, 2007 1:08 AM  
To: Ivins, Bruce E Dr USAMRIID  
Subject: Update for EMThrax Vaccine vs AVA

Hey Bruce,

Hope things are going well for you at Ft. Detrick. (b) (6) and I have been busy generating some animal data and we wanted to give you an update. Since we last spoke we completed our first mouse model and found that our vaccine is at least as good as the current AVA vaccine. Briefly, we started with 8 mice in each test group along with the animals in a control group. We vaccinated the animals at 0 and 14 days and challenged at day 28. We added 100 uL of AVA and 100 uL of our vaccine, which is approximately 20 uL of protein along with our own adjuvant. Originally we hoped to use RIBI adjuvant, but the only US supplier has sold the rights to Sigma, who is not releasing any product. Thus, we were hoping to use our vaccine with two adjuvants, but this is okay since RIBI will not be used for human vaccination. Thus we challenged with 100 ED50 at day 28 and all of our vaccinated animals and the AVA animals survived. The controls all died.

Additionally, we did a secondary challenge at day 35 and again all animals survived challenge. Thus, at this point we plan to repeat this experiment within two weeks and if the data is the same, then we are going to conduct the same experiments in guinea pigs. We will keep you informed of the results. We should be done with all of this work within the next 3 months.

Lastly, we are looking for a second adjuvant to test along with our vaccine. We noted that you have a few papers using CpG oligos with an improved efficacy and wondering if that adjuvant is commercially available or how we could obtain some. We noted that Coley Pharma is the company that utilizes this technology, but not sure if they would provide us with some, since they are collaborating with Emergent Biosolutions and many other private companies. If we need to synthesize these compounds, then there are a few companies that might be able to help us here, if we can find out the structures. Also, we should have our vaccine almost completely characterized within the next 30 days, which is also a good thing. And we have a company standing by to help with the ELISA assay, which will be done using a hand held digital read-out display.

Sincerely,

(b) (6)

"Ivins, Bruce E Dr USAMRIID" <bruce.ivins@us.army.mil> wrote:

(b) (6)

The BioThrax/AVA human anthrax vaccine was sent out on Wednesday. FedEx tried to deliver yesterday, but couldn't reach you. They're trying to deliver again today to the address you gave for shipping.

I hope you're week has been going well.

Bruce Ivins

(b) (6)

---

Don't pick lemons.  
See all the new 2007 cars

<

[http://autos.yahoo.com/new\\_cars.html?\\_ylc=X3oDMTE0OGRsc3F2BF9TAzk3MTA3MDc2BHNIYwNtYWlscGFncwRzbGsDbmV3Y2Fycw-](http://autos.yahoo.com/new_cars.html?_ylc=X3oDMTE0OGRsc3F2BF9TAzk3MTA3MDc2BHNIYwNtYWlscGFncwRzbGsDbmV3Y2Fycw-)

=> at Yahoo! Autos.

<

[http://autos.yahoo.com/new\\_cars.html?\\_ylc=X3oDMTE0OGRsc3F2BF9TAzk3MTA3MDc2BHNIYwNtYWlscGFncwRzbGsDbmV3Y2Fycw-](http://autos.yahoo.com/new_cars.html?_ylc=X3oDMTE0OGRsc3F2BF9TAzk3MTA3MDc2BHNIYwNtYWlscGFncwRzbGsDbmV3Y2Fycw-)

=>

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Cc:** [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** RE: W81XWH-06-C-0006 Vital Probes, Inc. Invoice and Report  
**Date:** Thursday, March 01, 2007 12:08:01 PM

---

I'll approve, (b) (6) Thanks.

-bruce

Bruce Ivins

(b) (6)

>  
> From: (b) (6)  
> Sent: Friday, February 23, 2007 11:26 AM  
> To: Ivins, Bruce E Dr USAMRIID  
> Subject: W81XWH-06-C-0006 Vital Probes, Inc. Invoice and Report  
> Importance: High

>  
>  
> << File: invoice.pdf >>

>  
>  
> Good Morning Dr. Ivins,

>  
> I just wanted to check on the status of the attached invoice and report for your review/approval. If everything meets your approval please let me know so I can submit for payment.

>  
>  
> Thank you,

> (b) (6)

>  
> (b) (6)

>  
>  
> Tell us how we are doing by going to the Customer Comment Form at  
> [http://www.usamraa.army.mil/pages/survey/comment\\_form.cfm](http://www.usamraa.army.mil/pages/survey/comment_form.cfm)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Subject:** RE: W81XWH-06-C-0006 Vital Probes Invoice and Report (UNCLASSIFIED)  
**Date:** Thursday, March 22, 2007 4:21:52 PM

---

Classification: UNCLASSIFIED

Caveats: NONE

Thanks (b) (6)! I'll approve payment. They seem to have encountered some problems recently, but hopefully the problems will be worked out in the very near future.

-bruce

Bruce Ivins

(b) (6)

>  
> From: (b) (6)  
> Sent: Monday, March 19, 2007 1:56 PM  
> To: Ivins, Bruce E Dr USAMRIID  
> Subject: W81XWH-06-C-0006 Vital Probes Invoice and Report  
> Importance: High

>  
> << File: report.pdf >> << File: invoice.pdf >>

> Good Afternoon Dr. Ivins,

>  
> Please see attached report and invoice for your review and approval. If everything meets your requirements and approval please let me know so that I can forward for payment.

>  
> Thank you,

> (b) (6)

>

>

>

>

>

>

> Classification: UNCLASSIFIED

> Caveats: NONE

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** Spore harvest (UNCLASSIFIED)  
**Date:** Thursday, March 22, 2007 4:05:59 PM

---

Classification: UNCLASSIFIED

Caveats: NONE

During spore harvest on Monday, (b) (6) pipetted up contaminated supernatant into the pipetter. She also tried to work at the Biosafety cabinet while standing up, and I had to tell her to do work in the BSC while seated, so that the elbows aren't high above the front curtain.

-bruce

Bruce Ivins

(b) (6)

A large black rectangular redaction box covers the signature and any text below it. The redaction is composed of several overlapping horizontal bars of varying lengths, creating a solid black area.

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6); [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** Spore studies - Nutrient broth + Glucose + MnCl2  
**Date:** Tuesday, February 20, 2007 9:19:50 AM  
**Attachments:** [Redacted]

---

Enclosed are the results from the latest experiment.

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Cc:** [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** Sterne Spores  
**Date:** Thursday, February 22, 2007 2:54:06 PM

---

(b)

I just wanted to send you an email confirmation that I gave to you today 5 ml of purified Sterne spores at  $2 \times 10^{10}$  per ml. The spores were produced in December, 2006, in Leighton and Doi medium, and purified on Tuesday, 20 FEB 2007.

Bruce Ivins

(b) (6)

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6)  
**Cc:** [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** Sterne Spores  
**Date:** Thursday, February 22, 2007 2:54:06 PM

---

(b)

I just wanted to send you an email confirmation that I gave to you today 5 ml of purified Sterne spores at  $2 \times 10^{10}$  per ml. The spores were produced in December, 2006, in Leighton and Doi medium, and purified on Tuesday, 20 FEB 2007.

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6); [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** Time to Death determinations in mice - Injected 28 FEB 07  
**Date:** Friday, March 02, 2007 9:51:47 AM

---

Group	Death Time	Death Time	Death Time	Death Time
1.56 X 10e4	19 hr	23 hr	23.5 hr	>28 hr
1.56 X 10e5	14.5 hr	17 hr	18.5 hr	>24.5 hr

0.2 ml injected IP - Select Agent 1749

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6); [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** Time to Death determinations in mice - Injected 28 FEB 07  
**Date:** Friday, March 02, 2007 9:51:47 AM

---

Group	Death Time	Death Time	Death Time	Death Time
1.56 X 10e4	19 hr	23 hr	23.5 hr	>28 hr
1.56 X 10e5	14.5 hr	17 hr	18.5 hr	>24.5 hr

0.2 ml injected IP - Select Agent 1749

Bruce Ivins

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)  
To: (b) (6); [Ivins, Bruce E Dr USAMRIID](#)  
Subject: TTD determinations  
Date: Friday, March 09, 2007 9:47:03 AM

---

Select Agent # 1749

11 mice injected with  $1.06 \times 10^4$  spores in 0.2 ml, IP

11 mice injected with  $1.06 \times 10^5$  spores in 0.2 ml, IP

\*\*\*\*\*

TTD -  $1.06 \times 10^4$

1. 19 hr
2. 19 hr
3. 21 hr
4. 22.5 hr
5. 23 hr
6. 23.5 hr
7. 24 hr
8. 24.5 hr
9. >28 hr
10. >28 hr

\*\*\*\*\*

TTD -  $1.06 \times 10^5$

1. 15 hr
2. 16 hr
3. 16 hr
4. 17 hr
5. 17.5 hr
6. 18 hr
7. 20 hr
8. 21 hr
9. 21 hr
10. 21 hr
11. >24 hr

\*\*\*\*\*

I don't know if we want to base our TTD determinations on median values (which would here have been 23.25 hr and 18 hours) or on the mean values of, say...the first five or six animals that died, since the "stragglers" really skew the TTD results.

-bruce

Bruce Ivins

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)  
To: (b) (6); [Ivins, Bruce E Dr USAMRIID](#)  
Subject: TTD determinations  
Date: Friday, March 09, 2007 9:47:03 AM

---

Select Agent # 1749

11 mice injected with  $1.06 \times 10^4$  spores in 0.2 ml, IP

11 mice injected with  $1.06 \times 10^5$  spores in 0.2 ml, IP

\*\*\*\*\*

TTD -  $1.06 \times 10^4$

1. 19 hr
2. 19 hr
3. 21 hr
4. 22.5 hr
5. 23 hr
6. 23.5 hr
7. 24 hr
8. 24.5 hr
9. >28 hr
10. >28 hr

\*\*\*\*\*

TTD -  $1.06 \times 10^5$

1. 15 hr
2. 16 hr
3. 16 hr
4. 17 hr
5. 17.5 hr
6. 18 hr
7. 20 hr
8. 21 hr
9. 21 hr
10. 21 hr
11. >24 hr

\*\*\*\*\*

I don't know if we want to base our TTD determinations on median values (which would here have been 23.25 hr and 18 hours) or on the mean values of, say...the first five or six animals that died, since the "stragglers" really skew the TTD results.

-bruce

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6); [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** Upcoming mouse LD50 and TTD experiments on 27 FEB  
**Date:** Thursday, February 15, 2007 2:46:51 PM

---

Please note that since we are down to the archive on SA954, we'll be using SA 1749 for both experiments.

Bruce Ivins

(b) (6)

**From:** [Ivins, Bruce E Dr USAMRIID](#)  
**To:** (b) (6); [Ivins, Bruce E Dr USAMRIID](#)  
**Subject:** Vollum 1B spores (SA# 188) - TTD (UNCLASSIFIED)  
**Date:** Friday, March 23, 2007 1:53:00 PM

---

Classification: UNCLASSIFIED

Caveats: NONE

Here are the TTD for the Vollum 1B spores (SA# 188) :

1.3 X 10e4 injected:

1 - 22.5 hr

1 - 25 hr

All 8 others greater than 26 hr

\*\*\*\*\*

1.3 X 10e5 injected:

1 - 21 hr

All 9 others greater than 23 hours

-bruce

Bruce Ivins

(b) (6)

Classification: UNCLASSIFIED

Caveats: NONE