

From: [Ivins, Bruce E Dr USAMRIID](#)
To: [Ivins, Bruce E Dr USAMRIID](#)
Subject: Ames spores to us from (b) (6)
Date: Friday, May 07, 2004 1:13:40 PM

Ames spore shipments to us from (b) (6)

24 April, 1997
25 June, 1997
10 July, 1997
24 July, 1997
7 August, 1997
4 September, 1997
25 September, 1997

This information should be in USAMRIID notebook 4010, which was received by (b) (6) of the (b) (6) on 12 December, 2003.

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: [Ivins, Bruce E Dr USAMRIID](#)
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Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: Ames strain 2433/7738
Date: Tuesday, April 06, 2004 1:34:56 PM

Hi, (b) (6)

Thanks for putting material onto TSA slants from the Bacillus anthracis Ames tube (USAMRIID Agent Registry Number= 2433; USAMRIID Agent Inventory number = 7738) for the (b) (6) repository. I am not sure of the parentage of the strain. Depending upon when the material was made and when it was brought over to (b) (2) it was probably RMR 1029 (b) (6) spores (USAMRIID Agent Registry Number= 2432; USAMRIID Agent Inventory number = 7737) made in 1997, (b) (6) (b) (6) spores (USAMRIID Agent Registry Number= 3502; USAMRIID Agent Inventory number = 7739a) made between 1997 and 1999, or (b) (6) (b) (6) spores (USAMRIID Agent Registry Number= 3502; USAMRIID Agent Inventory number = 7739b and 7739c) made between 1999 and 2001/2002.

Please let me know when the entire tube is transferred to the Repository and I'll take it off the two strain lists.

Thanks!

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: Ames strain 2433/7738
Date: Tuesday, April 06, 2004 1:34:56 PM

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Please let me know when the entire tube is transferred to the Repository and I'll take it off the two strain lists.

Thanks!

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: Ames strain information
Date: Friday, March 19, 2004 12:47:40 PM

(b) (6): This is the first email to you with information. I will be sending you more information today. I don't work on anything classified, so nothing from my lab (with respect to methodology for producing and purifying anthrax spores) has been classified.

- Bruce Ivins

Ames strain sent out:

> 1992 & 1997 - (b) (6) (b) (6) (b) (6) (b) (6) (b) (6)
The spore production/purification methodology was also sent to (b) (6) (b) (6)

> 1998 - (b) (6)

> 2001 - (b) (6) (b) (6) (b) (6)
The spore production/purification methodology was also given to (b) (6)

> 2001 - (b) (6)

> - Bruce

> -----Original Message-----

> From: (b) (6)
> Sent: Friday, October 12, 2001 10:29 PM
> To: (b) (6) Ivins, Bruce E Dr USAMRIID
> Cc: (b) (6)
> Subject: RE: Ames Strain

> (b) (6) (b) (6) I think you should indicate in the list to (b) (6) exactly what strain was sent to each of the individuals you identified. That is, who got Ames, delta Ames (pX01-, pX02+) etc. This more specific information should be put in the tasker.

> (b) (6)

> -----
> From: Ivins, Bruce E Dr USAMRIID
> Sent: Friday, October 12, 2001 9:02 AM
> To: (b) (6)

> Subject: FW: Ames Strain

> -----Original Message-----

> From: Ivins, Bruce E Dr USAMRIID
> Sent: Friday, October 12, 2001 1:00 PM
> To: (b) (6)
> Subject: RE: Ames Strain

> (b) (6)
> I can tell you to whom I have sent this so-called "Ames" strain. Please keep in mind that a) it is apparently 50 years old; b) that USAMRIID received this strain 20 years ago; c) that it is a USDA strain, not a USAMRIID strain, U. S. Army strain, or Department of Defense strain; d) the individuals primarily responsible for determining the location of the strain are located in Ames, Iowa, not in Frederick, Maryland; e) that of any U.S. labs having human pathogenic strains (including B. anthracis), none have higher security than USAMRIID; f) that if we are the only recipients of this "tasker," it is transparently evident that we are being harassed by our regular detractors simply because we are DOD researchers. It is not within the purview of USAMRIID researchers to ascertain where the USDA has sent its strains of Bacillus anthracis or any other organism.

> I, and people in my lab, have sent the so-called "Ames" strain (either original parent or subcultured derivative) of B. anthracis to the following. (By subcultured derivative, I am referring to strains such as Delta-Ames and ANR, which can be converted to full virulence using existing molecular biology methods, and which would be identified as the "Ames" strain.)

- > 1) 1985 - (b) (6)
- > 2) 1993 - (b) (6)
- > 3) 1992 - (b) (6) (b) (6) (b) (6)
- > 4) 1995 - (b) (6)
- > 5) 1998 - (b) (6)
- > 6) 1998 - (b) (6)
- > 7) 2000 - (b) (6)
- > 8) 2001 - (b) (6) (b) (6) (b) (6) (b) (6)
- > 9) 2001 - (b) (6)

> - Bruce Ivins

> -----Original Message-----

> From: (b) (6)
> Sent: Friday, October 12, 2001 8:26 AM
> To: Ivins, Bruce E Dr USAMRIID
> Cc: (b) (6) (b) (6)
> Subject: Ames Strain

> Bruce:

> We have a tasker to report to whom we may have sent the Ames strain in the past several years. Do you, or someone else in (b) (6) have any records relating to such information? If so, could you please provide me with that information?

> We are checking our MTA's as well, but I want to make sure we haven't overlooked anything.

> Thanks for your help!

> (b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: (b) (6) (b) (6) Spores and Friday's Conversation
Date: Sunday, March 21, 2004 10:39:49 PM

(b) (6) Here are some more thoughts on our conversation and (b) (6) proposal:

1) I get (in flask spore production) 3×10^{11} purified spores per liter of original culture. (b) (6) will get only 1/4 that amount. Why the difference?

2) If (b) (6) is supposed to come up with something that other laboratories and institutions can use as a guideline for production, harvest, purification and storage, why are they using a large fermentor. Most laboratories don't have the capability of dedicating a fermentor to the production of virulent anthrax spores. If the production and harvest procedures were worked out for flask liquid production, then many labs would be able to make spores on a variable amount scale (1 flask on up).

3) Just exactly what they mean by the Ames strain and Vollum strain should be made clear.

4) Where do they get all the different storage media ideas from? I didn't know of anyone that stored spores in alcohol. Perhaps (b) (6) could be asked how they stored spores decades ago.

- Bruce

From: [Ivins, Bruce E Dr USAMRIID](#)
To: [Ivins, Bruce E Dr USAMRIID](#); (b) (6); (b) (6); (b) (6)
Cc: (b) (6); (b) (6); (b) (6)
Subject: Cost of spores produced at USAMRIID
Date: Friday, April 23, 2004 9:48:26 AM

Here is a revised cost estimate for spore production.
- Bruce

Following our meeting yesterday, the following is what I calculate our direct costs to be for producing, harvesting and purifying a single run of Ames spores, total of 5×10^{11} spores:

(Direct Labor costs (no overhead costs [benefits, retirement, etc.] included): (b) (6)
contract technician - \$45.00 per hour; Bruce Ivins, principal investigator - \$ 60.00 per hour)

Preparation for run (ordering and preparing all media, glassware, centrifuge rotor and bottles, laboratory area, etc.) - 16 hours (b) (6) - \$ 720

Spore production (inoculation, harvest, wash, storage, counts) - 8 hours (b) (6) - \$360.00 ;
8 hours Bruce Ivins - \$ 480.00

Cleanup and decontamination of materials and area - 8 hours (b) (6) - \$ 360.00 ; 8 hours
Bruce Ivins - \$ 480.00

Purification of spores on Hypaque - 2 hours Bruce Ivins - \$ 120.00; 2 hours (b) (6) - \$90.00

Characterization of spores (% refractile, non-refractile, vegetative cells, debris, clumping, encapsulation, viability, heat resistance) - 4 hours (b) (6) - \$180.00 ; 4 hours Bruce Ivins - \$240.00.

Total labor = 3,030.00\$

Media and reagents, Hypaque-76, gloves, TSA and SBA plates, Water for Injection, pipets, micropipet tips, centrifuge bottles, bleach, shower and cleaning supplies, centrifuge and rotor depreciation - \$ 500.00

USAMRIID (b) (6) oversight - 4 hours at \$50.00 per hour - \$200.00

Grand Total Direct Costs for production, purification and characterization of 5×10^{11} Ames spores = \$3730.00

From: [Ivins, Bruce E Dr USAMRIID](#)
To: [Ivins, Bruce E Dr USAMRIID](#); (b) (6) (b) (6) (b) (6) (b) (6)
Cc: (b) (6) (b) (6) (b) (6)
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Grand Total Direct Costs for production, purification and characterization of 5×10^{11} Ames spores = \$3730.00

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: (b) (6) Ames spores
Date: Thursday, March 18, 2004 4:04:58 PM

(b) (6) did (b) (6) say anything to you about getting samples of Ames spores from the (b) (6) shipments and looking at them with respect to FA, phase microscopic pictures, gamma phage testing. The concentrations of the preps are about $1 - 3 \times 10^{10}$ per ml. How much would you like or need?

My apologies if you weren't told anything about this yet!

- Bruce

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

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

(b) (6)

Cc: (b) (6)

Subject: (b) (6) spores

Date: Tuesday, March 16, 2004 4:46:16 PM

With respect to our conversation on Monday, 15 March, on the (b) (6) spores (1.15×10^{13} total):

1) Since the (b) (6) is here checking the laboratories this week, I'll get to the lab part of things next week. Basically, our lab this week will be unused.

2) I can check the preps for capsule production, contamination, phase contrast microscopic examination, get data on guinea pig LD50s put together, and find out about the LPS determination.

3) (b) (6) I can give (b) (6) samples - is one ml of each OK - of the preps for gamma phage, FA, phase contrast pictures.

4) (b) (6) - what about PCR for capsule and toxin genes? How do we want to arrange for that to be done, and who will do it?

What about the MLVA analysis? Who knows whom to contact on that, if we still want to do it? (And...who wants to make contact?) If we have a MLVA done before we combine the batches, it might be a few weeks to a few months before we have the results.

- Bruce

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

To: (b) (6); (b) (6); (b) (6)

Subject: (b) (6) 2003 Ames spores

Date: Wednesday, April 28, 2004 10:03:43 AM

We've now purified the (b) (6) 2003 Ames spores. We have about 550 ml at about $2.0 - 2.4 \times 10^{10}$ per ml. Currently the spores are in a single polycarbonate flask, but I intend to aliquot them into smaller containers (125 or 250 ml polycarbonate flasks). I'll be checking several parameters in my lab, giving some to (b) (6) (b) (6) to examine, and - hopefully - sending some to (b) (6) to do an endotoxin (LAL) test on and a phenol concentration on. We'll have to coordinate with (b) (6) (or whoever) on doing the latter two tests. I'm not sure if we have anything currently in place that would allow us to send some irradiated spores to them to test.

(b) (6) I plan to get you the start of the SOPs and appendices before the end of Friday.

- Bruce

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: Endotoxin limits
Date: Friday, March 19, 2004 5:19:30 PM

Hi, (b) (6)

Here is some information on endotoxins and limits:

(b)(6)
[Redacted]
[Redacted]
[Redacted]
[Redacted]

- Bruce

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Cc: (b) (6)
Subject: F3793 - Refrigerated Centrifuge
Date: Friday, March 19, 2004 10:01:28 AM

(b) (6)
(c) Please transfer from (b) (6) (Hand receipt R7N) to Bruce Ivins (Hand receipt R1K) the refrigerated Sorvall centrifuge, MMCN F3793.

(b) (6) please forward your concurrence to (b) (6)

Thank you both.

Bruce Ivins
USAMRIID (b) (6)

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

From: [Ivins, Bruce E Dr USAMRIID](#)
To: [Ivins, Bruce E Dr USAMRIID](#); (b) (6)
(b) (6)
Subject: Fourth (b) (6) Spore Shipment
Date: Thursday, March 04, 2004 3:11:10 PM

All:

The shipment (# 4) of Ames spores from (b) (6) has been processed. There were two lots: 30 AUG 03 and 6 NOV 03. The 30 AUG 03 lot was reported to be contaminated and was of such poor quality (< 50% refractile spores) that it was discarded. The 6 NOV 03 lot contained about 50% vegetative cell material, but it was able to be purified. After purification, it consists of >95% unclumped, refractile spores, and less than 5% debris, vegetative cells, spore clumps and non-refractile spores. The total harvest of purified spores was 3.66×10^{12} spores. They have been set aside in 1% phenol in the refrigerator in (b)(2)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: [Ivins, Bruce E Dr USAMRIID](#); (b) (6)
Subject: Fourth (b) (6) Spore Shipment
Date: Thursday, March 04, 2004 3:11:10 PM

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From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: FW:
Date: Monday, March 29, 2004 12:10:33 PM

- Bruce

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Monday, March 29, 2004 11:10 AM
To: (b) (6)
Cc: (b) (6)
Subject:

(b) (6)

I would like to become the hand receipt holder for the following:

MMCN - F0317

Current hand receipt and holder - R7N, (b) (6)

Item - Hewlett Packard Deskjet Printer

Model - C6429A

Serial Number - MYORC11265

Stock Number - 702501Q161171

(b) (6) please send (b) (6) your concurrence. Thanks!

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: FW:
Date: Friday, March 05, 2004 1:01:55 PM
Attachments: [Redacted]

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

From: (b) (6)
Sent: Friday, March 05, 2004 11:13 AM
To: Ivins, Bruce E Dr USAMRIID
Subject:

Sorry, I forgot to attach the Anthrax documents.

(b) (6)

[Redacted]

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: FW:
Date: Thursday, April 22, 2004 4:33:04 PM

Hi, (b) (6)

Please check out the email below concerning (b) (6) spore-making. I'll respond (and send a copy to you), but it sounds as if they're having more substantial problems than we previously knew about. If necessary here at (b) (6) we can rev-up our spore production to cover (b) (6) and (b) (6) (as well as (b) (6) needs.

Talk to you later!

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Thursday, April 22, 2004 8:23 AM
To: Ivins, Bruce E Dr USAMRIID
Subject:

Bruce,

The hypaque procedure did not remove the vegetative cells from the spores. The only differences that I can see in the method we spoke about is that we used a fixed-angle rotor since we do not have a swinging bucket rotor for the containers that we currently use. Does this mean that the cells are stuck at an immature level of development? I am at a loss to figure out what the cause of this may be but we are going to repeat the growth procedure using both the fermenter and shake-flask methodologies. Any insight that you could give would be helpful. Thanks.

Regards,

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: FW: (b) (6)
Date: Monday, April 12, 2004 12:01:44 PM

Hi, (b) (6)

We have the approval to send spores to (b) (6). Could you please tell me (if you know) how much they need of the ready-to-spray spores. We'll also send them a couple of vials (0.5 ml each) of the Ames Primary Subculture (Ames PSC) (at a concentration of 1.5×10^9 per ml) for them to make a stock culture with.

Thanks again! Hope you had a fine Easter!

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Monday, April 12, 2004 11:50 AM
To: (b) (6); (b) (6)
Cc: (b) (6)
Subject: RE: (b) (6)

OK. Thanks, (b) (6)

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Monday, April 12, 2004 11:15 AM
To: Ivins, Bruce E Dr USAMRIID; (b) (6)
Cc: (b) (6)
Subject: RE: (b) (6)

You have permission to support (b) (6) request to supply the requested items to (b) (6). You can contact them directly to work out the specific requirements. (b) (6) is very appreciative of both your efforts. Thanks.

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Monday, April 12, 2004 11:08 AM

To: (b) (6) (b) (6)
Cc: (b) (6)
Subject: RE: (b) (6)

(b) (6)

(b) (6) of (b) (6) asked if we could provide some spores to (b) (6) to see if that would solve or help solve some of their problems (Control monkeys surviving an aerosol anthrax spore challenge). I told (b) (6) that they would have to get approval from above and that I couldn't commit either time or resources without approval. Providing some of the Ames Primary Subculture (Ames PSC) wouldn't be a problem, and I'd like to see what they need as far as the "ready to spray" spores for aerosol challenge.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

-----Original Message-----
From: (b) (6)
Sent: Monday, April 12, 2004 11:02 AM
To: (b) (6) Ivins, Bruce E Dr USAMRIID
Subject: (b) (6)

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

We've received a request from (b) (6) to provide Ames PSC, and some spores to (b) (6). Did this come up in your conversations with them. Just trying to make sure the request matches with any guidance or discussions you had with them. Thanks for your input.

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6); [Ivins, Bruce E Dr USAMRIID](#)
Subject: FW: Cost of spores produced at USAMRIID
Date: Friday, April 23, 2004 10:14:57 AM

(b) (6) and (b) (6) Here is a cost for producing purified spores here at USAMRIID. We have the price for 5×10^{11} spores, which should be sufficient (based on my calculations) for an aerosol challenge of 20 monkeys receiving approximately 100 LD50 each.

Thanks!

- Bruce

Bruce Ivins
USAMRIID (b) (6)
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(b) (6)

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(Direct Labor costs (no overhead costs [benefits, retirement, etc.] included): (b) (6)
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Grand Total Direct Costs for production, purification and characterization of 5×10^{11} Ames spores = \$3730.00

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Thanks!

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Characterization of spores (% refractile, non-refractile, vegetative cells, debris, clumping, encapsulation, viability, heat resistance) - 4 hours (b) (6) - \$180.00 ; 4 hours Bruce Ivins - \$240.00.

Total labor = 3,030.00\$

Media and reagents, Hypaque-76, gloves, TSA and SBA plates, Water for Injection, pipets, micropipet tips, centrifuge bottles, bleach, shower and cleaning supplies, centrifuge and rotor depreciation - \$ 500.00

USAMRIID (b) (6) oversight - 4 hours at \$50.00 per hour - \$200.00

Grand Total Direct Costs for production, purification and characterization of 5×10^{11} Ames spores = \$3730.00

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: FW: CpG in rabbits data
Date: Wednesday, May 05, 2004 3:28:33 PM
Attachments: [sig.jpg](#)

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Friday, February 20, 2004 10:43 AM
To: (b) (6) (b) (6) (b) (6)
Cc: (b) (6) (b) (6) (b) (6)
Subject: FW: CpG in rabbits data

Here are the data for the experiment testing CpG + rPA/Alhydrogel in New Zealand White rabbits.

Immunization Schedule: (We are using 8 micrograms rPA to deliberately get less than complete survival)

- A) - 4 animals, injected with saline + Alhydrogel at 0 weeks. (These are the control animals.)
- B) - 16 animals, injected with Alhydrogel + rPA (8 micrograms) at 0 weeks.
- C) - 16 animals, injected with CpG oligos + rPA(8 micrograms) + Alhydrogel at 0 weeks.

Bleeding Schedule:

On weeks 0, 2 and 4, the rabbits will be bled, and serum will be shipped back to USAMRIID.

Shipping:

Approximately week 5, the 36 rabbits will be shipped to USAMRIID for subcutaneous anthrax spore challenge (79 LD50) on week 6.

Animals will be individually identified by microchipping. Prior to immunization and bleeding, each rabbit will be identified by scanning the microchip to ensure that the correct animal is receiving the correct procedure, and that each animal's blood goes into the correct tube.

(Antibody titers are expressed as micrograms/ml of anti-PA antibody.)

DATA:

Group:	Pre-bleed Titer	2-week titer	4 week titer	Survived/Total	Mean Time to Death (days)
Control	0.05	0.05	0.05	0/4	(4.22)
Alhydrogel + rPA	0.11	11.36	11.45	6/15	(4.33)
CpG + Alhydrogel + rPA	0.05	25.52	22.21	6/16	(4.90)

The addition of CpG deoxyoligonucleotides to the rPA + Alhydrogel resulted in higher anti-rPA titers and an extended time to death in those animals that died from the challenge. There was no increase in survival with the single immunization dose.

Although these data are not as impressive as data from some of the other species, they still indicate that CpGs are capable of increasing innate and/or antigen-specific immunity to an anthrax spore challenge. The data are further evidence that the inclusion of certain CpG motifs in a human vaccine could a) shorten the length of time to specific immunity; b) increase the levels (and avidity) of anti-rPA antibody; c) increase the temporal length of immunity; and d) increase the antibody titer level following immunological boost.

- Bruce

(b)(6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: FW: Documents
Date: Friday, April 30, 2004 8:58:45 AM

(b) (6)
I put into (b) (6) box a copy of my Reference Material Receipt Record for the 1997 (b) (6) spores. This is the only record I have here that I can find that talks about giving Ames material to people here.
(b) (5)

I already gave the (b) (6) a copy of the above-mentioned record.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Tuesday, April 27, 2004 10:49 AM
To: (b) (6)
Subject: RE: Documents

I don't recall having informal or unofficial notes saying that I received Ames from somebody or gave it to somebody in the Institute. Usually we simply gave strains to fellow investigators working on B. anthracis. (b) (5) (b) (6)

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Monday, April 26, 2004 5:11 PM
To: (b) (6) (b) (6) Ivins, Bruce E Dr
USAMRIID; (b) (6) (b) (6)
Cc: (b) (6)
Subject: FW: Documents
Importance: High

All, please read (b) (6) request below. If you have any records or know of anyone else that may have records of intra-lab transfers of Ames spores prior to 31 DEC 01 please let me know ASAP. These records could include lab notes, e-mails or any other log/notes you may have kept. I know that other investigators/visiting scientists may have also transferred Ames in the past, if you can recall the

names of these individuals please forward them at your earliest convenience.

(

)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

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

From: (b) (6)

Sent: Wednesday, April 21, 2004 2:41 PM

To: (b) (6)

Cc: (b) (6)

Subject: FW: Documents

(b) (6)

(b) (5)

[Redacted]

[Redacted]

(b) (6)

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

From: (b) (6)

Sent: Thursday, April 15, 2004 8:38 AM

To: (b) (6)
Subject: RE: Documents

(b) (6)

(b) (5)

(b) (6)

-----Original Message-----
From: (b) (6)
Sent: Thursday, April 15, 2004 8:33 AM
To: (b) (6)
Subject: RE: Documents

(b) (6) I have no idea what "information" you are talking about. If you have a tasking that we need to address, please forward a copy.

(b) (6)

(b) (6)

-----Original Message-----
From: (b) (6)
Sent: Wednesday, April 14, 2004 2:31 PM
To: (b) (6)
Cc: Ivins, Bruce E Dr USAMRIID; (b) (6)
Subject: RE: Documents

(b) (6)

(b) (5) (b) (6)

(b)
(6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, April 14, 2004 2:13 PM
To: (b) (6)
Cc: (b) (6)
Subject: RE: Documents

(b) (6) - Please run the request through the (b) (6) (b)(6) (b)
(b) (6) Thanks! Also, Please know that there are many investigators here at USAMRIID that have the Ames strain and have transferred it to other RIID investigators, that (b) (6) was the original holder (at USAMRIID) and transferer of the strain, and that prior to 2002, it was NOT standard procedure to document every time a RIID investigator gave material to another RIID investigator.

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 12:07 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Documents

Okay, thanks Bruce. I'll let you know the dates as soon as I get them.

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, April 14, 2004 12:06 PM
To: (b) (6)
Subject: RE: Documents

OK. I can xerox what I have for 2002 to the present. Before that, I have nothing concerning transfer of the Ames strain within the Institute (b)(2) .

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 11:40 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Documents

Bruce,

The request did give any specific dates. I've asked for clarification. I will let you know as soon as I find out. Thanks

(b)
(6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, April 14, 2004 11:33 AM
To: (b) (6)
Subject: RE: Documents

What kind of dates? Prior to 2002 or 2001, I personally didn't keep any records of where the Ames strain went. It was in (b)(2) available to all the researchers, and it was over in (b)(2) accessible by an individual with access to the hot area. (This includes animal caretakers, military personnel, technicians, researchers, and not just (b) (6) personnel.)

If (b) (6) wants information from 2002 to the present, we have it. All that I can provide before that time is who I sent the Ames strain to outside of USAMRIID.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 10:47 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: FW: Documents

Bruce,

Please see below message. (b) (6) said you may have the info I need. Can you help? Thanks

(b)
(6)

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 8:57 AM
To: (b) (6)
Subject: Documents

(b)
(c)

I need any documents you may have relating to the internal transfer of the Ames strain of Bacillus Anthracis within USAMRIID (e.g. lab to lab). Do you have any of these documents? Thanks

(b)
(c)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: FW: FW: Strains sent to you in 1998
Date: Thursday, April 08, 2004 3:22:51 PM
Attachments: [REDACTED]

Hi, (b) (6) sent me these pictures of the Ames that we sent (b) (6). Do you recognize the handwriting on the tubes? It's not mine, but beyond that, I can't tell. Since the cryotube is the newer variety (as opposed to what we used in the 1980s) I'm wondering if we did grow up the strains and put material into cryovials.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Thursday, April 08, 2004 2:44 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: Re: FW: Strains sent to you in 1998

>Hi Bruce
I am sending a series of photos of vials.

(b) (6)
[REDACTED]

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: FW: FW: Strains sent to you in 1998
Date: Thursday, April 08, 2004 3:28:19 PM

Never mind!! I see you've sent the pictures to me!! Thanks much! I hope to see you at the International Anthrax meeting next year. I think it will be in the Southwestern US.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Thursday, April 08, 2004 3:25 PM
To: (b) (6)
Subject: RE: FW: Strains sent to you in 1998

(b) (6) were all of the vials similar with respect to 1) the type of cryovial; and 2) the handwriting? Sorry to bother you, but I'm just trying to identify the particular parentage of the material we sent you. I don't need pictures, but if someone could just look at some of the other vials, it would be very helpful. Thanks again!!!

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Thursday, April 08, 2004 2:44 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: Re: FW: Strains sent to you in 1998

>Hi Bruce
I am sending a series of photos of vials.
(b) (6)

(b) (6)

A large black rectangular redaction covers the majority of the page's content, starting below the '(b) (6)' label and extending across the top and down the left side.

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: FW: Ivins04-06MFR.doc
Date: Thursday, March 25, 2004 4:28:15 PM
Attachments: [REDACTED]

Hi, (b) (6)

Here is my revised animal protocol. I hope it's satisfactory. If not, I'll work on it some more.

Thanks

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Friday, March 05, 2004 11:07 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: Ivins04-06MFR.doc

Here are your revisions from yesterdays meeting. Also attached is the Anthrax documents.
If you have any questions, please call.

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: FW: Keycard information
Date: Monday, March 15, 2004 11:13:01 PM

(b) (6): Could you please help me with the following? Thanks very much.

- Bruce Ivins

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Monday, March 15, 2004 10:12 PM
To: (b) (6)
Subject: Keycard information

Hi, (b) (6)

Would it be possible for me to get a printout of my keycard entry and exit for both all of September 2001 and October 2001, for the following:

- a) Into and out of (b) (2)
- b) Into and out of (b) (2)
- c) Into and out of (b) (2)
- d) Into and out of (b) (2)

I'm meeting with someone on Thursday morning and I'd like to provide them with that information. Thanks!!!

- Bruce

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: FW: memo (b) (6) spore production nix 0428 2004
Date: Thursday, April 29, 2004 9:39:25 PM

Did you see this, (b) (6) you should be made aware of it, if you haven't already.

- Bruce

Bruce Ivins
USAMRIID (b) (6)

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

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

From: (b) (6)
Sent: Thursday, April 29, 2004 12:49 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: FW: memo (b) (6) spore production nix 0428 2004

FYi

(b) (6)

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

From: (b) (6)
Sent: Thursday, April 29, 2004 11:41 AM
To: (b) (6)
Cc: (b) (6) (b) (6)
Subject: FW: memo (b) (6) spore production nix 0428 2004

(b) (6)

Could you talk to (b) (6) about the fermenter process and have (b) (6) map it out? It sounds like its enclosed, but there may be some interim processes that may be higher risk during the transition phase to use of the fermenter.

Thx,

(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 28, 2004 11:54 AM
To: (b) (6)
Cc: (b) (6)
Subject: memo (b) (6) (b)(2) spore production nix 0428 2004

(b) (6)

would like to discuss this draft memo with you before i submit to (b) (6)

v/r

(b) (6)

(b) (6)

4/28/2004 11:15 AM

MEMORANDUM FOR (b)(6)

SUBJECT: Safety Recommendation for Not Conducting Large Scale Spore Preparation at USAMRIID

1. Reference memorandum, MPMC-UIB, 20 April 2004, subj: GLP/GMP Production of Anthrax Spores for Multi-Agency Research Projects.
2. Environmental monitoring for spore preparation indicates that we should expect some contamination of BA spores throughout the suite. Production of large quantities will result in larger quantities being found during environmental sampling.
3. Safety nonconcurrs with this request for spore production in our facilities for the following reasons:
 - a. USAMRIID does not currently have an effective emergency response plan that would mitigate the effects of a large spill from this process.
 - b. The status of the laboratory sewer system underneath Bldg. (b)(2) is unknown. If there were a release of a large quantity that resulted in a release to the laboratory sewer system, it might be impossible to decontaminate and could result in a release to other areas of (b)(2) as the decontamination areas dried out.
 - c. The ventilation system for the (b)(2) has not been pressure tested, and relies on negative pressure to prevent a release of agent to the penthouse. A release of a large concentrated quantity could result in contamination of the penthouse and a very difficult and costly cleanup scenario.
 - d. Approximately six months ago, there was water leakage into the suite from the penthouse. This leak occurred because of the age of our pipes; another leak could occur at any time. Although the leak was extensive, it was caught early and resulted in little or no water flowing out of the suite. If a leak occurred into the spore production area during operations, it might be possible for water to carry moderate levels of spores outside the laboratory room into the suite or even into the hallway.

4. POC is the undersigned (b) (6).

(b) (6)

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: FW: Missing computer
Date: Monday, March 29, 2004 4:12:54 PM
Importance: High

(b) (6)

I have been unable to find this computer. Do you have the Life Expectancy Value that I can put on the Report of Survey that I am going to fill out? I put out notices on both the (b) (6) Bulletin Board as well as on Distribution A, and nothing has turned up.

Thanks!

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Tuesday, February 10, 2004 9:38 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Missing computer
Importance: High

Dr. Ivins,

I can give you the acquisition price which is \$2225.00. Are you planning on initiating a Report of Survey or a Statement of Charges? Probably the best course of action is a Report of Survey. Please advise. Thanks

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Friday, February 06, 2004 10:00 AM
To: (b) (6)
Cc: Ivins, Bruce E Dr USAMRIID
Subject: RE: Missing computer

(b) (6) - I sent this around to people in our division. I'm wondering if the computer was lost or misplaced during the decontamination of my office, when everything in it had to be removed and deconned, either autoclaved, pulled out and bleached off, or shipped down to (b) (6) for gamma irradiation sterilization. If I am unable to find it, is there a way to find out what it is worth at present? Thanks for all of your help. As I told you, this is the only hand receipt item that still remains missing. Everything else has been accounted for. Thanks.

- Bruce

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

From: Ivins, Bruce E Dr USAMRIID
Posted At: Friday, February 06, 2004 9:50 AM
Posted To: (b) (6)

Conversation: Missing computer
Subject: Missing computer

All:

If you have an Apple Computer, MMCN D8694, please let me know. (It may be a Powerbook laptop.) It is on my hand receipt, and I am unable to locate it.

Information on it:

MMCN - D8964
Model Number - M5409
Serial Number - FC30317R465

Thanks.

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: FW: (b) Request for Supportq
Date: Monday, March 29, 2004 3:51:00 PM

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

From: (b) (6)
Sent: Monday, March 29, 2004 12:35 PM
To: (b) (6)
Cc: (b) (6); Ivins, Bruce E Dr USAMRIID; (b) (6)
(b) (6); (b) (6); (b) (6)
Subject: (b) (6) Request for Supportq

(b) (6)

(b) (6) has concurred with (b) (6) request for (b) (6) and Dr. Ivins to attend a meeting this Thursday at (b) (6) in order to assist them with troubleshooting their anthrax spore challenge model.

The Commander has authorized use of institute funds to facilitate the travel, but we would prefer to be reimbursed for our employee's travel expenses, if possible.

Please let me know if there's any additional assistance that you may need.

Regards,

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: FW: patent application fact sheets for RIID 94-10 and 94-10A
Date: Thursday, March 11, 2004 4:46:44 PM
Attachments: [REDACTED]

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, March 27, 2002 3:13 PM
To: (b) (6)
Subject: RE: patent application fact sheets for RIID 94-10 and 94-10A

(b) (6)

I am enclosing my revisions on the two presentation slides. Any new text I added has been made in bold.

The Patent Slide #2 is the vaccine patent, whereas the Patent Slide is the asporogenic expression system patent.

- Bruce

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

From: (b) (6)
Sent: Monday, March 25, 2002 2:52 PM
To: 'bruce.ivins@det.amedd.army.mil'
Cc: (b) (6)
Subject: patent application fact sheets for RIID 94-10 and 94-10A

Dear Dr. Ivins,

Attached please find two Powerpoint files that contain draft fact sheets for RIID 94-10 Asporogenic B. anthracis Expression System, and RIID 94-10A A Vaccine Against B. anthracis patent applications. Please review the fact sheets for content and accuracy. The fact sheets were prepared using the patent applications 08/346,238 and 09/520,215. The applications, although numbered and titled differently, contained identical text. Attempts were made to prepare fact sheets that reflected the titles, but as they draw from the same text, they are somewhat duplicative.

(b) (6) has asked for each principal investigator to include 3 to 5 key words in addition to their comments on the fact sheets.

Please email your comments and key words to (b) (6). You may also mark up the fact sheet and fax your comments to:

(b) (6)

[REDACTED]

[REDACTED]

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: FW: patent application fact sheets for RIID 94-10 and 94-10A
Date: Tuesday, April 20, 2004 9:20:46 AM
Attachments: [REDACTED]

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, March 27, 2002 3:13 PM
To: (b) (6)
Subject: RE: patent application fact sheets for RIID 94-10 and 94-10A

(b) (6)

I am enclosing my revisions on the two presentation slides. Any new text I added has been made in bold.

The Patent Slide #2 is the vaccine patent, whereas the Patent Slide is the asporogenic expression system patent.

- Bruce

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

From: (b) (6)
Sent: Monday, March 25, 2002 2:52 PM
To: 'bruce.ivins@det.amedd.army.mil'
Cc: (b) (6)
Subject: patent application fact sheets for RIID 94-10 and 94-10A

Dear Dr. Ivins,

Attached please find two Powerpoint files that contain draft fact sheets for RIID 94-10 Asporogenic B. anthracis Expression System, and RIID 94-10A A Vaccine Against B. anthracis patent applications. Please review the fact sheets for content and accuracy. The fact sheets were prepared using the patent applications 08/346,238 and 09/520,215. The applications, although numbered and titled differently, contained identical text. Attempts were made to prepare fact sheets that reflected the titles, but as they draw from the same text, they are somewhat duplicative.

(b) (6) has asked for each principal investigator to include 3 to 5 key words in addition to their comments on the fact sheets.

Please email your comments and key words to (b) (6). You may also mark up the fact sheet and fax your comments to:

(b) (6)

[REDACTED]

(b) (6)



From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: FW: SPore shipment
Date: Wednesday, April 28, 2004 3:27:03 PM

(b) (6)
The shipment of B. anthracis spores was received at (b) (6) in (b) (6) (b) (6) this morning. Thank you for all of your help.

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 28, 2004 3:22 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: SPore shipment

Bruce,

I have received the package and all is well. Thanks for the help and the contacts as it makes the process that much better. I will be in contact so let me know if there is anything you need from me/us and I will be happy to help.

Regards,

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

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

From: Ivins, Bruce E Dr USAMRIID (b) (6)
Sent: Wednesday, April 28, 2004 1:36 PM
To: (b) (6)
Subject: RE: SPore shipment

(b) (6)

It's 47 75 1688 26 03

According to their records, it was delivered this morning to the (b) (6) in (b) (6) at 9:29 am.

Please let me know when you confirm its receipt, so that the word can be passed onto (b) (6)

Thanks.

- Bruce

Bruce Ivins
USAMRIID (b) (6)

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

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

From: (b) (6)
Sent: Wednesday, April 28, 2004 11:04 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: SPore shipment

Bruce,

Could you please send me a Fedex tracking number for the shipment as soon as you possibly can.
Thanks.

Regards,

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID (b) (6)
Sent: Wednesday, April 28, 2004 9:50 AM
To: (b) (6)
Cc: (b) (6) (b) (6) (b) (6) (b) (6) (b) (6) (b) (6)

Subject: SPore shipment

(b) (6)

Please let me know when the spores arrive. They should be there today or tomorrow at the latest.

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6); (b) (6); (b) (6)
Subject: FW: SPore shipment
Date: Wednesday, April 28, 2004 3:28:23 PM

The spores have arrived at (b) (6)

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 28, 2004 3:22 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: SPore shipment

Bruce,

I have received the package and all is well. Thanks for the help and the contacts as it makes the process that much better. I will be in contact so let me know if there is anything you need from me/us and I will be happy to help.

Regards,

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID (b) (6)
Sent: Wednesday, April 28, 2004 1:36 PM
To: (b) (6)
Subject: RE: SPore shipment

(b) (6)

It's 47 75 1688 26 03

According to their records, it was delivered this morning to the (b) (6) in (b) (6) at 9:29

am.

Please let me know when you confirm its receipt, so that the word can be passed onto (b) (6)

Thanks.

- Bruce

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

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

From: (b) (6)

Sent: Wednesday, April 28, 2004 11:04 AM

To: Ivins, Bruce E Dr USAMRIID

Subject: RE: SPore shipment

Bruce,

Could you please send me a Fedex tracking number for the shipment as soon as you possibly can.
Thanks.

Regards,

(b) (6)

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

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

Sent: Wednesday, April 28, 2004 9:50 AM

To: (b) (6)

Cc: (b) (6)

(b) (6)

(b) (6)

(b) (6)

(b) (6)

(b) (6)

Subject: SPore shipment

(b) (6)

Please let me know when the spores arrive. They should be there today or tomorrow at the latest.

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: FW: Strains sent to you in 1998
Date: Thursday, April 08, 2004 10:40:32 AM

Hi, (b) (6)

I hope you're doing well and I'm sorry to bother you, but I just wanted to ask you about the B. anthracis strains we sent you in 1998 - Ames, Buffalo, NH, Vollum, Vollum 1B, VH, 17T5, SK31, ACB, SK61, SK162. I believe I sent them to you frozen, in 1-ml cryovials. Did I by any chance say how they were prepared before shipment? I was interested to know any information I gave you on them. I don't know if they were already frozen stocks that I sent to you, or if we streaked them on sheep blood agar and made spores from them, then resuspended the spores in glycerol/broth, glycerol/PBS or glycerol/water (or whatever), froze them and sent them to you. If you have any information on that, I'd appreciate your letting me know.

Have a great spring!

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: FW: U.S. Patent PDF
Date: Tuesday, April 20, 2004 9:19:36 AM
Attachments: [REDACTED]

- Bruce

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

> -----Original Message-----

> From: (b) (6)

> Sent: Thursday, January 17, 2002 8:49 AM

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

> Subject: FW: U.S. Patent PDF

>

>

>

>

> -----Original Message-----

> From: (b) (6)

> Sent: Wednesday, January 16, 2002 2:26 PM

> To: (b) (6)

> Subject: U.S. Patent PDF

>

>

>

>

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>

(b) (6)

>

>

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: IAA Appendix
Date: Monday, April 26, 2004 12:22:18 PM
Attachments: [REDACTED]

Hi, (b) (6)

Here are some comments and suggestions for an appendix. I don't know if we should budget for one or two trips to working group meetings as well. Maybe you could ask (b) (6). They may want to schedule a progress meeting for a few months from now, perhaps one for the end of the FY.

See you a few minutes after 3 pm, after the terrorists have been subdued!

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: IAA Work Plan Appendix
Date: Monday, April 26, 2004 10:17:13 AM

(b) (6)

Do you have an electronic copy of the actual work plan that you can send me? I have the example that (b) (6) sent me, but I don't have the actual work plan that we're supposed to be writing the appendix for. Thanks.

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: Information needed
Date: Monday, March 15, 2004 11:23:30 PM

Hi, (b) (6)

On Thursday, I need to provide someone with information (entries) from my Outlook Calendar for the months of September, 2001 and October, 2001. Unfortunately, the information has either been deleted or (hopefully) archived. Is it possible to get this information, if it hasn't been destroyed? It's really important. Thanks!!!

- Bruce

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: Keycard information
Date: Monday, March 15, 2004 11:11:43 PM

Hi, (b) (6)

Would it be possible for me to get a printout of my keycard entry and exit for both all of September 2001 and October 2001, for the following:

- a) Into and out of (b) (2)
- b) Into and out of (b) (2)
- c) Into and out of (b) (2)
- d) Into and out of (b) (2)

I'm meeting with someone on Thursday morning and I'd like to provide them with that information. Thanks!!!

- Bruce

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Date: Wednesday, April 21, 2004 9:36:41 AM

Hi, (b) (6)

We are planning to send to you Tuesday the following:

- 1) 7.5 ml of the Ames spores ("ready to spray") at 1.5×10^{10} per ml - You can dilute this as appropriate into water for injection for your spray.
- 2) For future seed stocks, Ames Primary Subculture (Ames PSC), 2 vials, 0.5 ml per vial, at 1.5×10^9 per ml.

The material will be shipped to you with gel ice. You should keep it in the refrigerator once it gets there.

- Bruce

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6) (b) (6)
Cc: (b) (6)
Date: Monday, April 19, 2004 2:31:17 PM

(b) (6) and (b) (6) (b) (6) of (b) (6) contacted me by telephone last week. (b) (6) (b) (6) is studying the Bacillus globigii spore powder made (about 1966) in (b) (6) (b) (6) by a company called (b) (6) (b) (6) would like to speak to (b) (6), who formerly worked on making the Bacillus globigii spore powder at (b) (6). However, (b) (6) has encountered a problem - (b) (6) signed a secrecy agreement with the U.S. Army at Fort Detrick. (b) (6) would like to know if a release can be granted for (b) (6) to talk to (b) (6) (b) (6) (b) (6) also said that (b) (6) doesn't know if the information (b) (6) (b) (6) has is either classified, restricted or proprietary. (b) (6) telephone number is (b) (6)

Please provide guidance as to whom (b) (6) could contact (b) (6) about talking to (b) (6). Thank you.

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6); [Ivins, Bruce E Dr USAMRIID](#)
Cc: (b) (6)
Date: Monday, April 19, 2004 8:41:42 AM

(b) (6) Here is the individual (b) (6) at (b) (6) that we'll be sending our spores to.

- Bruce
Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Monday, April 19, 2004 7:25 AM
To: Ivins, Bruce E Dr USAMRIID
Cc: (b) (6); (b) (6)
Subject: RE:

Bruce,

You can ship the spores to me, (b) (6) at the following address:

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

(b) (6)

Thanks again for everything. Hope to talk to you again soon.

Regards,
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6); [Ivins, Bruce E Dr USAMRIID](#)
Cc: (b) (6)
Date: Monday, April 19, 2004 8:41:42 AM

(b) (6) Here is the individual (b) (6) at (b) (6) that we'll be sending our spores to.

- Bruce
Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Monday, April 19, 2004 7:25 AM
To: Ivins, Bruce E Dr USAMRIID
Cc: (b) (6)
Subject: RE:

Bruce,

You can ship the spores to me, (b) (6) at the following address:

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

Thanks again for everything. Hope to talk to you again soon.

Regards,
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Cc: (b) (6)
Date: Monday, March 29, 2004 12:10:13 PM

(b) (6),

I would like to become the hand receipt holder for the following:

MMCN - F0317

Current hand receipt and holder - R7N (b) (6)

Item - Hewlett Packard Deskjet Printer

Model - C6429A

Serial Number - MYORC11265

Stock Number - 702501Q161171

(b) (6) please send (b) (6) your concurrence. Thanks!

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Cc: (b) (6)
Date: Wednesday, April 28, 2004 9:40:09 AM

(b) (6)

I have purified (b) (6) 2003 Ames spores. The concentration is 2.2×10^{10} per ml. I think (b) (6) was interested in phase microscopy, gamma phage, some pictures, etc. The spores look pretty good. Maybe you'd like to check with (b) (6) specifically on what (b) (6) wants. Let me know when you'd like the spores and how many you'd like. (I have a total of 550 ml of them.)

Bruce Ivins
USAMRIID (b) (6)

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

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6) [Ivins, Bruce E Dr USAMRIID](#)
Subject: Matrix 3 death data
Date: Wednesday, May 05, 2004 3:43:46 PM

Here are the death data

Alhydrogel + rPA - 3 of 4 dead
Matrix III + rPA + Alhydrogel - 16/16 dead
Saline + Matrix III - 4/4 dead
Matrix II + rPA (no Alhydrogel) - 16/16 dead

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6) [Ivins, Bruce E Dr USAMRIID](#)
Subject: Matrix 3 death data
Date: Wednesday, May 05, 2004 3:43:46 PM

Here are the death data

Alhydrogel + rPA - 3 of 4 dead
Matrix III + rPA + Alhydrogel - 16/16 dead
Saline + Matrix III - 4/4 dead
Matrix II + rPA (no Alhydrogel) - 16/16 dead

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: [Ivins, Bruce E Dr USAMRIID](#); (b) (6) (b) (6) (b) (6)
Subject: Phenol
Date: Wednesday, April 07, 2004 2:42:27 PM

The new phenol has now come in. It will be diluted and used for the recent batches of spores from (b) (6)

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: Question
Date: Saturday, April 03, 2004 11:52:50 AM

Hi, (b) (6)

I have a question concerning strains we had in (b)(2). Did we ever keep anthracis (especially Ames) in the (b)(2) second floor coldroom? We were registered for some strains in that room, according to (b) (6) and, also according to (b) (6) our Friends want to know where they are or what happened to them. The room supposedly contains Ames but can't be found now. I thought we kept everything on the first floor, especially in 115 and 118. I remember putting AGI tubes into the first floor coldroom after aerosols, but I don't remember storing anything at all upstairs. Supposedly, Ames strain "2433" is/was registered to me and in the second floor coldroom. I think we gave some strains to (b) (6) but what the story is on this strain draws a big blank with me. Any information you can provide on this would be very helpful!

Also...did you ever hear of anyone at RIID with the nickname of (b) (6) That's also of interest to our Friends. Have no idea why....

Have a good weekend!!!!

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Cc: (b) (6)
Bcc: (b) (6)
Subject: RE:
Date: Monday, April 26, 2004 9:36:13 AM

(b) (6)
We're scheduled to ship both the Ames Primary Subculture spores (for your seed stock) as well as the "ready-to-spray" spores to you tomorrow. We're coordinating with our shipping and (b) (6) personnel.

- Bruce
Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Monday, April 19, 2004 7:25 AM
To: Ivins, Bruce E Dr USAMRIID
Cc: (b) (6)
Subject: RE:

Bruce,

You can ship the spores to me, (b) (6) at the following address:

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

(b) (6)

Thanks again for everything. Hope to talk to you again soon.

Regards,

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

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

From: Ivins, Bruce E Dr USAMRIID (b) (6)
Sent: Friday, April 16, 2004 2:55 PM
To: (b) (6)
Subject:

Hi, (b) (6)

It was good to talk to you today. When I find out specifically what I am to ship and when, I'll fill out the shipping form. I'll need from you (or (b) (6))

- 1) To whom the spores will be shipped
- 2) Exact, complete address
- 3) Phone, FAX and 24-hour phone number

Thanks! Have a great weekend!

- Bruce

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Bcc: (b) (6)
Subject: RE:
Date: Friday, April 23, 2004 2:25:22 PM

(b) (6)

I'm not sure why the 60% Hypaque-76 gradient didn't purify the spores. We do use a swinging bucket rotor, a Sorvall HS-4 which holds 4 250-ml bottles. We spin for at least an hour at 7,000 rpm, but if it goes longer, it's not a problem. The refractile spores should pellet, but the non-refractile spores and vegetative cells should be kept at the interface, and shouldn't enter the 60% Hypaque-76. A purified spore prep, when spun down, should not have "multiple layers" of pellet, but should have a single, creamy-white layer of refractile spores. If you have multiple layers, spore clumps will be at the bottom, and vegetative cells and non-refractile spores will be at the top. The time of incubation for the culture is critical. If you harvest too soon, you will get a lot of endospores and vegetative cells. If you harvest too late, you'll get clumped spores, which are virtually impossible to deal with.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Thursday, April 22, 2004 8:23 AM
To: Ivins, Bruce E Dr USAMRIID
Subject:

Bruce,

The hypaque procedure did not remove the vegetative cells from the spores. The only differences that I can see in the method we spoke about is that we used a fixed-angle rotor since we do not have a swinging bucket rotor for the containers that we currently use. Does this mean that the cells are stuck at an immature level of development? I am at a loss to figure out what the cause of this may be but we are going to repeat the growth procedure using both the fermenter and shake-flask methodologies. Any insight that you could give would be helpful. Thanks.

Regards,

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE:
Date: Tuesday, April 20, 2004 2:06:30 PM

Thanks for the update, (b) (6). If you're working in coordination with either the (b) (6) (b) (6) or other (b) (6) you might mention that. Or...someone from that Agency could contact the appropriate person in the Army.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Tuesday, April 20, 2004 1:14 PM
To: (b) (6) Ivins, Bruce E Dr USAMRIID; (b) (6)
Subject: RE:

At 04:15 PM 4/19/2004, (b) (6) wrote:

Beats me. We'd have to see the agreement. If the signatory represented the "Army" then it has to go to the SECARMY.

REcommend that they make their request through military diplomatic channels and address to the Secretary of the Army.

(b) (6)

I've made some other inquiries about getting a release for this person to speak to me about the BG spore production carried out for Ft. Detrick back in the 1960s (probably 1966). No one seems to know how to go about doing this since it was so long ago under a disbanded US program.

The material in question was used in the anthrax letter study we provided to USAMRIID in Oct 2001 and has also been used in a 2 year follow-up study just being completed. I feel that the question of how this spore preparation was made and whether it was "weaponized" in any way is an important one since it has worked so effectively in our risk assessment studies. The (b) (6) I would like to speak to was the Plant Manager back in the 1960's and is now probably in (b) (6) 70's or even 80's. I am concerned that getting permission to speak with (b) (6) personally may be long and involved and it is possible (b) (6) could pass away before I would ever get to speak to (b) (6).

Since this persons secrecy agreement was signed with the US Army would it not be possible to have someone from USAMRIID debrief this person on the BG spore production, or arrange for a debriefing from appropriate army personnel in (b) (6). I don't think having the US Army debrief (b) (6) would be any breach of (b) (6) secrecy agreement. The information gathered could be passed on to me as part of the information exchange under the trilateral MOU on CB Defence. We could also carry out an assessment of whether the information should be classified in today's context or whether all or part of it

could be declassified.

(b) (6) [REDACTED]

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE:
Date: Monday, March 29, 2004 2:22:57 PM

Thanks, (b) (6)

- Bruce

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

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

From: (b) (6)
Sent: Monday, March 29, 2004 1:11 PM
To: (b) (6)
Cc: (b) (6)
Subject: RE:

MMCN F0317 has been transferred from R7N to R1K. Thanks

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

From: (b) (6)
Sent: Monday, March 29, 2004 11:13 AM
To: (b) (6)
Cc: (b) (6); Ivins, Bruce E Dr USAMRIID
Subject: RE:

(b) (6) HRT approved.

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Monday, March 29, 2004 11:10 AM
To: (b) (6)
Cc: (b) (6)
Subject:

(b) (6),

I would like to become the hand receipt holder for the following:

MMCN - F0317

Current hand receipt and holder - R7N, (b) (6)

Item - Hewlett Packard Deskjet Printer

Model - C6429A

Serial Number - MYORC11265

Stock Number - 702501Q161171

(b) (6) please send (b) (6) your concurrence. Thanks!

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6); (b) (6); (b) (6); (b) (6)
Cc: (b) (6)
Subject: RE:
Date: Wednesday, March 10, 2004 4:01:54 PM

I can make it.

- Bruce

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

From: (b) (6)
Sent: Wednesday, March 10, 2004 12:08 PM
To: (b) (6); Ivins, Bruce E Dr USAMRIID; (b) (6);
(b) (6); (b) (6); (b) (6)
Cc: (b) (6)
Subject: RE:

I just found out that (b) (6) and (b) (6) are gone through the 11th, so let's meet on next Monday, March 15th at 1300h in the (b) (6) conference room....I'll reserve it for the entire afternoon it that's what it takes to resolve this. Please bring information concerning requirements for spores. Also, we need to establish what are the acceptance criteria for spores. I'll try to contact (b) (6) and (b) (6) to determine what their situation is at (b) (6)

(b) (6)

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

From: (b) (6)
Sent: Wednesday, March 10, 2004 12:02 PM
To: Ivins, Bruce E Dr USAMRIID; (b) (6); (b) (6);
(b) (6); (b) (6); (b) (6)
Cc: (b) (6)
Subject: RE:

We need to meet to resolve the anthrax spore issue
I can get the (b) (6) conference room on March 11 from 0900h to 1030h or anytime after 1300h
Or we can shoot for next Monday after 1300h

So how many can make it at 1430 h on Thursday (March 11th)?

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Saturday, February 28, 2004 12:50 PM
To: (b) (6); (b) (6); (b) (6);
(b) (6); (b) (6); (b) (6)
Subject: RE:

I agree, (b) (6) that a solution is needed. There are a number of questions which must be considered before undertaking any large scale production of virulent anthrax spores here at USAMRIID:

1) First of all, is it scientifically feasible to produce the spores in (b)(2) The answer is yes...there is sufficient space and equipment to make the spores. Training on the Braun fermentor would be required, however.

2) Second, would the spores meet GLP/GMP standards? If only (b)(2) are involved, it is highly questionable. There is no incubator (other than the floor shaker) in the room, and there is no refrigerator or walk-in cold area. Also, media, chemicals and reagents used in the production, harvest, purification and storage should be in their own areas, not used by anyone else, and should be signed

for whenever used. There is not currently enough space in (b)(2) for this.

3) Third, is there a replacement area for (b)(2) where other growth and fermentation procedures can be undertaken? Once (b)(2) are used for making virulent anthrax spores, the room isn't going to be used for anything else.

4) Fourth, are there overriding safety or local political concerns? (b)(6) and (b)(6) anthrax spore production facilities are located far away from populated areas. USAMRIID, on the other hand, is located in a populated area. A catastrophic accident (explosion, airplane crash into the facility, accidental release due to a breach in containment) wouldn't present nearly the problem in an isolated area that it would here at USAMRIID. (There are "bubbles" which could be installed in (b)(2) which would improve biocontainment/safety within the room and (b)(2) suite.)

5) Based on question number 4, would it be wiser not to produce high quantities (10, 20 or more liters in a single container) of virulent spores in a fermentor, but to produce them in a large number of 2-liter flasks instead? A single accident with a flask would involve 250 ml of media + spores. A failure in a fermentor would mean have to deal with 100 times that amount. The down side is that you would have many individual growth containers that would have to be contained.

I would have to say that based on the above concerns, the best solution might be also very expensive: Construct a single (relatively small) facility specifically for the purpose of making these spores, and don't have this facility in the middle of, or right next to, an urban area. After production, harvest and purification, they could be moved to USAMRIID for tightly controlled access. The questions here are 1) where will the money come from? 2) where would it be built? and 3) how long would it take before it could be used?

In the interim, our lab will continue making high-quality spores in flasks to supply the needs of USAMRIID researchers.

- Bruce

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

From: (b)(6)
Sent: Thursday, February 26, 2004 5:29 PM
To: (b)(6); (b)(6); (b)(6) Ivins, Bruce E Dr

USAMRIID; (b)(6); (b)(6); (b)(6)

Cc: (b)(6)
Subject: RE:

We need to have a meeting and bring closure to this once and for all so that we can move forward. I don't want to hash this out via e-mail. (b)(6) has failed and I have tried to put that Humpty Dumpty back together again without success. Like pushing a wet noodle. (b)(6) is expensive, has other customers, and there are those in the building that are adamant about not going to them as a long term solution. There are others who are proponents of numerous small cultures from Bruce and do I dare say (b)(6) ((b)(6) did express an interest) but then there are those who are opposed. Then there are those who would like for USAMRIID to invest in a fermentation facility... I just threw B409/410 out there as a possibility. But if not there, then where? Can everyone mull this over and let's have a big meeting. I'll be back from AZ on Friday Mar 5th. I just want closure on this.

(b)(6)

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

From: (b)(6)
Sent: Thursday, February 26, 2004 5:06 PM
To: (b)(6); (b)(6) Ivins, Bruce E Dr

USAMRIID; (b)(6)

Cc: (b)(6)
Subject: RE:

All, I want to add to (b)(6) comments to clarify some issues on the option for performing this work in-house. The first is that the issue of fermenting B. anthracis in-house in large batches needs to be vetted by the (b)(6) and the (b)(6). The second issue is that (b)(6)

does not support this concept, in fact (contrary to (b) (6) statement) (b) (6) is opposed. I have several concerns myself. One caveat I have is that any in-house capability to ferment spores effectively "dedicates" that lab and equipment to spore production only. Therefore, as I stated to (b) (6) before, my support for this is predicated on the establishment of a like capability for recombinant protein production in (b)(2) (this is what (b)(2) was designed for). This means that a lab and or equivalent equipment would be procured and established somewhere else in the Institute. Also, with regard to (b) (6) money, those funds are for spore production to support the SNS project supported by (b) (6). I'm not opposed to leveraging these funds as start up costs but there has to be an understanding that the first priority is (b) (6) followed by DoD. It should also be understood that unless the spore production business becomes self-sustaining the Institute will need to provide sustainment costs (from overhead-similar to the old cell culture operation) or we will have to charge in-house customers for their spore requirements (similar to the current activity based costing for cell culture, ABCs are for everyone!).

(b) (6)

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

From: (b) (6)

Sent: Thursday, February 26, 2004 3:50 PM

To: (b) (6)

(b) (6)

Ivins, Bruce E Dr

USAMRIID; (b) (6)

Cc: (b) (6)

Subject:

After exploring various options, numerous conversations and flip flopping on issues more that (b) (6) my proposal for spore production is attached. I shall be traveling over the coming months and I need to leave something on the table before departing.

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE:
Date: Monday, March 01, 2004 8:54:33 AM

I totally agree. What I wrote below was not a commitment, but a list of what I think must be considered before undertaking any such project. A whole list of people, you, headquarters, general, (b) (6) - :) - and so on need to say "Yes" before anything is done. Otherwise, we will continue here as we have, and seek out other sources of any large quantities of spores.

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

From: (b) (6)
Sent: Monday, March 01, 2004 8:49 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE:

Bruce, don't volunteer us to make anything for anybody without my approval. While I understand we've been doing this up to this point I have a sense that this is going to expand. We cannot afford to commit to this without proper resourcing.

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Saturday, February 28, 2004 12:50 PM
To: (b) (6), (b) (6), (b) (6)

(b) (6), (b) (6), (b) (6)
Subject: RE:

I agree, (b) (6) that a solution is needed. There are a number of questions which must be considered before undertaking any large scale production of virulent anthrax spores here at USAMRIID:

1) First of all, is it scientifically feasible to produce the spores in (b) (2) The answer is yes...there is sufficient space and equipment to make the spores. Training on the Braun fermentor would be required, however.

2) Second, would the spores meet GLP/GMP standards? If only (b) (2) are involved, it is highly questionable. There is no incubator (other than the floor shaker) in the room, and there is no

refrigerator or walk-in cold area. Also, media, chemicals and reagents used in the production, harvest, purification and storage should be in their own areas, not used by anyone else, and should be signed for whenever used. There is not currently enough space in (b)(2) for this.

3) Third, is there a replacement area for (b)(2) where other growth and fermentation procedures can be undertaken? Once (b)(2) are used for making virulent anthrax spores, the room isn't going to be used for anything else.

4) Fourth, are there overriding safety or local political concerns? (b)(6) and (b)(6) anthrax spore production facilities are located far away from populated areas. USAMRIID, on the other hand, is located in a populated area. A catastrophic accident (explosion, airplane crash into the facility, accidental release due to a breach in containment) wouldn't present nearly the problem in an isolated area that it would here at USAMRIID. (There are "bubbles" which could be installed in (b)(2) which would improve biocontainment/safety within the room and (b)(2) suite.)

5) Based on question number 4, would it be wiser not to produce high quantities (10, 20 or more liters in a single container) of virulent spores in a fermentor, but to produce them in a large number of 2-liter flasks instead? A single accident with a flask would involve 250 ml of media + spores. A failure in a fermentor would mean have to deal with 100 times that amount. The down side is that you would have many individual growth containers that would have to be contained.

I would have to say that based on the above concerns, the best solution might be also very expensive: Construct a single (relatively small) facility specifically for the purpose of making these spores, and don't have this facility in the middle of, or right next to, an urban area. After production, harvest and purification, they could be moved to USAMRIID for tightly controlled access. The questions here are 1) where will the money come from? 2) where would it be built? and 3) how long would it take before it could be used?

In the interim, our lab will continue making high-quality spores in flasks to supply the needs of USAMRIID researchers.

- Bruce

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

From: (b)(6)

Sent: Thursday, February 26, 2004 5:29 PM

To: (b)(6)

USAMRIID; (b)(6)

; (b)(6)

(b)(6)

Ivins, Bruce E Dr

(b)(6)

(b)(6)

Cc: (b)(6)

Subject: RE:

We need to have a meeting and bring closure to this once and for all so that we can move forward. I don't want to hash this out via e-mail. (b)(6) has failed and I have tried to put that Humpty Dumpty back together again without success. Like pushing a wet noodle. (b)(6) is expensive, has other customers, and there are those in the building that are adamant about not going to them as a long term solution. There are others who are proponents of numerous small cultures from Bruce and do I dare say (b)(6) (b)(6) did express an interest) but then there are those who are opposed.

Then there are those who would like for USAMRIID to invest in a fermentation facility... I just threw (b)(2) out there as a possibility. But if not there, then where? Can everyone mull this over and let's have a big meeting. I'll be back from AZ on Friday Mar 5th. I just want closure on this.

(b)(6)

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

From: (b)(6)
Sent: Thursday, February 26, 2004 5:06 PM
To: (b)(6) (b)(6)

Ivins, Bruce E Dr

USAMRIID; (b)(6)

Cc: (b)(6)

Subject: RE:

All, I want to add to (b)(6) comments to clarify some issues on the option for performing this work in-house. The first is that the issue of fermenting B. anthracis in-house in large batches needs to be vetted by the (b)(6) and the (b)(6). The second issue is that (b)(6) does not support this concept, in fact (contrary to (b)(6) statement) (b)(6) is opposed. I have several concerns myself. One caveat I have is that any in-house capability to ferment spores effectively "dedicates" that lab and equipment to spore production only. Therefore, as I stated to (b)(6) before, my support for this is predicated on the establishment of a like capability for recombinant protein production in (b)(2) (this is what (b)(2) was designed for). This means that a lab and or equivalent equipment would be procured and established somewhere else in the Institute. Also, with regard to (b)(6) money, those funds are for spore production to support the SNS project supported by (b)(6). I'm not opposed to leveraging these funds as start up costs but there has to be an understanding that the first priority is (b)(6) followed by DoD. It should also be understood that unless the spore production business becomes self-sustaining the Institute will need to provide sustainment costs (from overhead-similar to the old cell culture operation) or we will have to charge in-house customers for their spore requirements (similar to the current activity based costing for cell culture, ABCs are for everyone!).

(b)(6)

(b)(6)

(b)(6)

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

From: (b)(6)
Sent: Thursday, February 26, 2004 3:50 PM
To: (b)(6) (b)(6)

Ivins, Bruce E Dr

USAMRIID; (b)(6)

Cc: (b)(6)

Subject:

(b) (6) [REDACTED] After exploring various options, numerous conversations and flip flopping on issues more that my proposal for spore production is attached. I shall be traveling over the coming months and I need to leave something on the table before departing.

(b)
(c) [REDACTED]

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE:
Date: Wednesday, April 28, 2004 10:26:02 AM

Thanks, (b) (6) Just tell me when and how much.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 28, 2004 10:14 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE:

ok

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, April 28, 2004 9:40 AM
To: (b) (6)
Cc: (b) (6)
Subject:

(b) (6)

I have purified (b) (6) 2003 Ames spores. The concentration is 2.2×10^{10} per ml. I think (b) (6) was interested in phase microscopy, gamma phage, some pictures, etc. The spores look pretty good. Maybe you'd like to check with (b) (6) specifically on what (b) (6) wants. Let me know when you'd like the spores and how many you'd like. (I have a total of 550 ml of them.)

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6); (b) (6); [Ivins, Bruce E Dr USAMRIID](#); (b) (6)
Cc: (b) (6); (b) (6)
Subject: RE: anthrax appendix info & documents
Date: Monday, April 19, 2004 1:41:00 PM

(b) (6) and (b) (6)
Here is the information for the (b) (6) hotel in (b) (6). It is very close to the (b) (6) that we stayed at.

(b) (6)

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6); (b) (6); [Ivins, Bruce E Dr USAMRIID](#); (b) (6)
Cc: (b) (6); (b) (6)
Subject: RE: anthrax appendix info & documents
Date: Monday, April 19, 2004 1:41:01 PM

(b) (6) and (b) (6)
Here is the information for the (b) (6) hotel in (b) (6). It is very close to the (b) (6) that we stayed at.

(b) (6)

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6) (b) (6) (b) (6) [Ivins, Bruce E Dr USAMRIID](#)
Cc: (b) (6) (b) (6)
Subject: RE: anthrax appendix
Date: Thursday, April 15, 2004 10:16:49 PM

Thanks, (b) (6)

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6) (b) (6) (b) (6)
Sent: Wednesday, April 14, 2004 4:01 PM
To: (b) (6)
Cc: (b) (6) (b) (6)
Subject: anthrax appendix

- > (b) (6) (b) (6)
- > Monday, 4/19 at 10:00 am seems to be good for a phone call to discuss
- > what the anthrax appendix to the Interagency Agreement should look
- > like (we'll give you a call if you let us know what number you'll be
- > at). Here are the items we've come up with that should/could be
- > included, for your consideration. Since we might pursue some of these
- > activities elsewhere if you are not interested, we are keen to get a
- > handle on what you would like to do.
- >
- > * Ames strain
- > * spores for challenge at (b) (6) (20 & 200 LD50)
- > * time/travel for Bruce & (b) (6) to visit (b) (6) to consult on
- > procedures
- > * time for RIID support of (b) (6) visits to RIID
- > * SOP's
- > * challenges and other characterization studies to be carried out at
- > USAMRIID with (b) (6) spores
- > * ask for older monkeys that have been vaccinated/challenged to test
- > for memory response??
- > * lung spore kinetics (deposition, retention, distribution,
- > germination, etc)
- > * memory assay development including IgM assay, feasibility, etc.
- > Certainly USAMRIID will have to come up with the budget, and we can
- > discuss who should write the appendix. Certainly some of the stuff I
- > wrote for the request memo last week can form the basis. The key
- > thing will be to decide what you are interested in doing. Thanks,
- > (b) (6)
- >

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Cc: (b) (6)
Subject: RE: Anthrax Spores for Aerosol Exposure
Date: Wednesday, March 24, 2004 2:04:31 PM

Hi, (b) (6)

We can certainly provide spores for your spray. I'll get the paperwork for the spore transfer down. Shall I put down (b) (6) or you as the recipient? For 10 LD50s, we should give you spores at $\sim 2 \times 10^8$ per ml, although there is a bit of variation from animal to animal and spray to spray. How many rabbits are to be aerosolized each day? I'll make up the amount needed, and (b) (6) can put 10 ml (after heat shock) into the appropriate number of tubes.

- Bruce

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

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

From: (b) (6)
Sent: Monday, March 22, 2004 4:17 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: Anthrax Spores for Aerosol Exposure

Dr. Ivins,

(b) (6) provided me your name as a source for Anthrax spores to use in aerosol challenges. I will have 45 rabbits that need 10 LD50s per rabbit of *B. anthracis*, Ames strain for the protocol (F02-07) that I am working to complete. Right now we have a spray date of 20 and 21 April, pending arrival of the rabbits.

As this will be my first experience with an Anthrax spray, what is the normal procedure for requesting and obtaining spores? Any assistance you can provide will be greatly appreciated.

Thank for the help.

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Anthrax strain information
Date: Thursday, March 18, 2004 4:14:16 PM

I will get back to you on this, (b) (6). Initially I can tell you that "Sterne" is B. anthracis 34F2, isolated in the late 1930s by Max Sterne, South Africa. "New Hampshire" (sometimes called NH) came from a mill in New Hampshire. Vollum 1B was a strain of Vollum that had been animal passaged. Pasteur (B. anthracis 6602) came from the ATCC. It possesses the capsule plasmid but not the toxin plasmid. Ames came from Texas, and was misnamed because it was sent back with a mailing label with the Ames, Iowa USDA return address.

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

From: (b) (6)
Sent: Thursday, March 18, 2004 12:27 PM
To: 'Bruce.Ivins@DET.AMEDD.ARMY.MIL'
Cc: (b) (6)
Subject: Anthrax strain information

Dr. Ivins,

(b) (6) provided us with your contact information. (b) (6) and I are currently working on a paper comparing different strains of anthrax. We were wondering if you might have any information or can direct us to resources (personnel or otherwise) regarding the origin of various anthrax strains such as Sterne, Vollum, V1B, Ames, Pasteur, New Hampshire, etc as well as their attenuated counterparts. Please let us know if you need any more information. Your help in this matter is greatly appreciated.

Thanks,

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Anthrax strain information
Date: Monday, March 22, 2004 11:05:20 AM

Still more information for you, (b) (6)

1) The Sterne vaccine strain (34F2), a rough variant from a virulent strain, was isolated by Max Sterne, South Africa, on 12 August, 1936, by culturing the virulent B. anthracis strain XXXIV in 50% horse serum + 30% carbon dioxide. The reference is: Sterne, M. (1937) The effects of different carbon dioxide concentrations on the growth of virulent anthrax strains. Onderstepoort Journal of Veterinary Science and Animal Industry, 9:49-68. The actual isolation and derivation of the "Sterne strain" is described in this paper. We now know that this strain has lost the capsule plasmid pXO2, yet retains the toxin plasmid, pXO1.

2) The New Hampshire (or "NH") strain was isolated from a 1957 case of fatal inhalation anthrax in an unimmunized New Hampshire worker in a goat hair processing mill. See P. S. Brachman, et al. (1962) Field evaluation of a human anthrax vaccine, 52:632-645.

3) The Ames strain came from an infected cow, May 1981, on a Texas ranch near the Mexican border. The case report was written up by Dr. Michael L. Vickers, a veterinarian in Falfurrias, Texas. Dr. Vickers sent specimens to the Texas Veterinary Medical Diagnostics Laboratory. These specimens were then sent to USAMRIID.

4) The Pasteur strains (ATCC 6602 and ATCC 4229) were derived by culture at 43C for several days. Although the original Pasteur strains were mixed cultures, these strains were pXO1-negative and pXO2-positive. See: Turnbull, P. C. B. (1991) Anthrax vaccines: past, present and future. 9:533-539. Also see (b) (6) et al. (1985). The genetic basis of Pasteur's attenuation of Bacillus anthracis cultures. In World's Debt to Pasteur, pages 107-116.

5) The Vollum strain came from Dr. R. L. Vollum of the Sir William Dunn Institute of Pathology, Oxford, England. G. P. Gladstone of the Microbiological Research Department (Ministry of Supply), Experimental Station, Porton, Wiltshire, obtained the Vollum strain Dr. Vollum. In the 1940s, researchers at Ft. Detrick obtained the Vollum strain from Porton. Researchers at Ft. Detrick passaged the Vollum strain in rabbits to increase virulence and gave the passaged strain the designation "Vollum 1B." See the following:

- a) Auerbach, S. and G. Wright, J. Immunol. (1955) 75:129-133
- b) Hanby, W. E. and H. N. Rydon Biochem. J. (1946) 40:297-307
- c) Gladstone, G. P. Brit. J. Exptl. Pathol. (1946) 27:394-418
- d) Sawyer, W. D. et al., Proc. Soc. Exptl. Biol. Med. (1965) 118:105-108

6) Information on heat curing of pXO1 from anthrax strains: Mikesell, P. et al. (1983) Evidence for plasmid-mediated toxin production in Bacillus anthracis. Infect. Immun. 39:317-376.

7) Information on novobiocin curing of pXO2 from anthrax strains: Green, B. et al. (1985) Demonstration of a capsule plasmid in Bacillus anthracis. (1985) Infect. Immun. 49:291-297.

I hope this has been helpful. If you need information on other specific strains, please let me know.

- Bruce

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Thursday, March 18, 2004 3:14 PM
To: (b) (6)

Subject: RE: Anthrax strain information

I will get back to you on this, (b) (6). Initially I can tell you that "Sterne" is B. anthracis 34F2, isolated in the late 1930s by Max Sterne, South Africa. "New Hampshire" (sometimes called NH) came from a mill in New Hampshire. Vollum 1B was a strain of Vollum that had been animal passaged. Pasteur (B. anthracis 6602) came from the ATCC. It possesses the capsule plasmid but not the toxin plasmid. Ames came from Texas, and was misnamed because it was sent back with a mailing label with the Ames, Iowa USADA return address.

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

From: (b) (6)

Sent: Thursday, March 18, 2004 12:27 PM

To: 'Bruce.Ivins@DET.AMEDD.ARMY.MIL'

Cc: (b) (6)

Subject: Anthrax strain information

Dr. Ivins,

(b) (6) provided us with your contact information. (b) (6) and I are currently working on a paper comparing different strains of anthrax. We were wondering if you might have any information or can direct us to resources (personnel or otherwise) regarding the origin of various anthrax strains such as Sterne, Vollum, V1B, Ames, Pasteur, New Hampshire, etc as well as their attenuated counterparts. Please let us know if you need any more information. Your help in this matter is greatly appreciated.

Thanks,

(b) (6)

(b) (6)

> -----Original Message-----

> From: (b) (6)
> Sent: Tuesday, March 09, 2004 5:14 PM
> To: (b) (6); (b) (6)
> Subject: RE: APRVD_RP8102__0400-2004-1301-04000Z03080__APP

> (b) (6)

> -----Original Message-----

> From: (b) (6)
> Sent: Tuesday, March 09, 2004 4:36 PM
> To: (b) (6)
> Subject: FW: APRVD_RP8102__0400-2004-1301-04000Z03080__APP
> Importance: High

> FYI

> -----Original Message-----

> From: (b) (6)
> Sent: Tuesday, March 09, 2004 11:04 AM
> To: (b) (6)
> Cc: (b) (6)
> Subject: FW: APRVD_RP8102__0400-2004-1301-04000Z03080__APP
> Importance: High

> (b) (6)

> We got a FAD from DARPA with an increase of \$278,584. Do you know who this
> belongs to? I have tried calling (b) (6) who is out of town until 26 March and (b) (6) backup
> (b) (6) who is also out on travel.

> Please advise as they want us to set up an APC.

> Thanks

> (b) (6)

> -----Original Message-----

> From: (b) (6)
> Sent: Friday, March 05, 2004 3:35 PM
> To: (b) (6)
> Subject: FW: APRVD_RP8102__0400-2004-1301-04000Z03080__APP

> (b) (6)

> -----Original Message-----

> From: (b) (6)
> Sent: Friday, March 05, 2004 12:37 PM
> To: (b) (6)
> Subject: APRVD_RP8102__0400-2004-1301-04000Z03080__APP

> << File: TIP\$.PDF >>

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: (b) (6) Study
Date: Wednesday, April 14, 2004 2:14:23 PM

(b) (6) - How about it if I send you 5 ml at 1.5×10^{10} per ml? Then you can dilute it. When you let me know when you'd like shipment, I'll start our shipping form preparation. Thanks!

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6) (b) (6) (b) (6)
Sent: Wednesday, April 14, 2004 7:45 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: (b) (6) Study

Bruce,

See message I just sent (but diluted ready to spray is fine).

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID (b) (6)
Sent: Wednesday, April 14, 2004 7:43 AM
To: (b) (6)
Subject: RE: (b) (6) Study

(b) (6) We'll send you 50 ml at 9×10^8 per ml, if it's OK. That way, it should be ready to spray, with, at most, a little dilution. (You may not even need to dilute it.) Would that be OK?

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6) (b) (6) (b) (6)
April 14, 2004 7:33 AM
To: (b) (6) Ivins, Bruce E Dr USAMRIID
Cc: (b) (6) (b) (6) (b) (6)

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

Subject: (b) (6) Study

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

To conduct the 20 LD50 portion only of the study, it would require 50 mL at 8 x 10E8 "ready to spray" (1 mL at 4 x 10E10 to dilute it to spray).

Thanks,

(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 6:48 AM
To: (b) (6)
Cc: (b) (6) (b) (6) (b) (6)

(b) (6) 'Ivins, Bruce E Dr
USAMRIID'; (b) (6) (b) (6)
Subject: RE: (b) (6)

(b) (6)

Would you work up the numbers and send to Bruce so (b) (6) can get the transfer arranged?

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID

(b) (6)
Sent: Monday, April 12, 2004 2:39 PM
To: (b) (6) (b) (6) (b) (6)
Cc: (b) (6) (b) (6) Ivins, Bruce E Dr USAMRIID; (b) (6)
(b) (6)
Subject: RE: (b) (6)

Thanks, (b) (6)

We'll need a numerical estimate for the "ready to spray" spores. We can send them at the same time we send the Ames Primary Subculture (Ames PSC) spores for (b) (6) spore stock. Then, (b) (6) or (b) (6) we'll need to get set (with EA101s, USDA approval) as far as a date to send. On this end, our (b) (6) (b) (6) or (b) (6) will need to be closely involved with the official transfer of material.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6) (b) (6) (b) (6)
Sent: Monday, April 12, 2004 2:10 PM
To: (b) (6)
Cc: (b) (6) (b) (6) Ivins, Bruce E Dr USAMRIID; (b) (6)
Subject: FW: (b) (6)

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

Here's the official okay to send the subculture and spores to you, we just need you to tell us how much you need to conduct the 20 LD50, 5 monkey challenge study. USAMRIID prefers that they send only that amount now, because if it works, the 200 LD50 study would not be needed (permission is granted either way). Also, an estimate of when you would be in a position to conduct the study will be useful. We can turn around comments on an animal protocol quickly if you give us a heads up when it might be coming.

Thanks,

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID

(b) (6)

Sent: Monday, April 12, 2004 11:02 AM

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

Subject: FW: (b) (6)

Hi, (b) (6)

We have the approval to send spores to (b) (6). Could you please tell me (if you know) how much they need of the ready-to-spray spores. We'll also send them a couple of vials (0.5 ml each) of the Ames Primary Subculture (Ames PSC) (at a concentration of 1.5×10^9 per ml) for them to make a stock culture with.

Thanks again! Hope you had a fine Easter!

- Bruce

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID

Sent: Monday, April 12, 2004 11:50 AM

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

Cc: (b) (6)

Subject: RE: (b) (6)

OK. Thanks, (b) (6)

- Bruce

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

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

From: (b) (6)

Sent: Monday, April 12, 2004 11:15 AM

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

Cc: (b) (6)
Subject: RE: (b) (6)

You have permission to support (b) (6) request to supply the requested items to (b) (6). You can contact them directly to work out the specific requirements. (b) (6) is very appreciative of both your efforts. Thanks.

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Monday, April 12, 2004 11:08 AM
To: (b) (6) (b) (6)

Cc: (b) (6)
Subject: RE: (b) (6)

(b) (6)

(b) (6) of (b) (6) asked if we could provide some spores to (b) (6) to see if that would solve or help solve some of their problems (Control monkeys surviving an aerosol anthrax spore challenge). I told (b) (6) that they would have to get approval from above and that I couldn't commit either time or resources without approval. Providing some of the Ames Primary Subculture (Ames PSC) wouldn't be a problem, and I'd like to see what they need as far as the "ready to spray" spores for aerosol challenge.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Monday, April 12, 2004 11:02 AM
To: (b) (6) Ivins, Bruce E Dr

USAMRIID

Subject: (b) (6)

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

We've received a request from (b) (6) to provide Ames PSC, and some spores to (b) (6). Did this come up in your conversations with them. Just trying to make sure the request matches with any guidance or discussions you had with them. Thanks for your input.

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6); (b) (6); [Ivins, Bruce E Dr USAMRIID](#); (b) (6); (b) (6)
Cc: (b) (6); (b) (6); (b) (6); (b) (6)
Subject: RE: (b) (6) Study
Date: Wednesday, April 14, 2004 12:46:20 PM

The problem lies in a limited number of spores in the "ready-to-spray" lot. We still need some here. Providing for a 200 LD50 challenge from this particular lot might take more than we have. If the lower LD50 doesn't work at (b) (6) (but kills primates at RIID), then we can up the dose. I can make more spores in the meanwhile.

(b) (6) I checked what we have as far as the spores. How about my sending you 5 ml at 1.5×10^{10} per ml? That will give you 7.5×10^{10} spores, more than enough for your 20LD50 challenge. (You could probably even squeeze 30 LD50 out of it.) You can write the EA101 for that. Also get the USDA satisfied (VS Form 16-3) as far as your receiving them. It will be easier to ship the smaller, more concentrated amount.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6); (b) (6); (b) (6)
Sent: Wednesday, April 14, 2004 12:07 PM
To: 'Ivins, Bruce E Dr USAMRIID'; (b) (6); (b) (6)
Cc: (b) (6); (b) (6); (b) (6)
Subject: RE: (b) (6) Study

Have the statistician(s) reviewed what is being planned? That is, we want to get the most "bang for the buck" so to speak. If we do 5 monkeys at 20LD50 and one or more survives, what can we say? If all 5 die, what is the degree of confidence that this is a definitive answer to the problem? Should we consider any at 200 LD50?

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

From: Ivins, Bruce E Dr USAMRIID (b) (6)
Sent: Wednesday, April 14, 2004 7:38 AM
To: (b) (6); (b) (6); Ivins, Bruce E Dr USAMRIID
Cc: (b) (6); (b) (6); (b) (6); Ivins, Bruce E Dr USAMRIID; (b) (6)
Subject: RE: (b) (6) Study

We can send that. The documents need to be gotten in order. I'll talk to our (b) (6) people.

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USAMRIID (b) (6)

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

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Sent: Wednesday, April 14, 2004 7:33 AM
To: (b) (6) Ivins, Bruce E Dr USAMRIID
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(b) (6) (b) (6) Ivins, Bruce E Dr USAMRIID;
(b) (6)
Subject: (b) (6) Study

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

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Thanks,

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Sent: Wednesday, April 14, 2004 6:48 AM
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USAMRIID'; (b) (6) (b) (6)

Subject: RE: (b) (6)

(b) (6)

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(b) (6)

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From: Ivins, Bruce E Dr USAMRIID
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Sent: Monday, April 12, 2004 2:39 PM
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Cc: (b) (6) (b) (6) Ivins, Bruce E Dr USAMRIID; (b) (6)
(b) (6)
Subject: RE: (b) (6)

Thanks, (b) (6)

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Bruce Ivins
USAMRIID (b) (6)
(b) (6)
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From: (b) (6) (b) (6) (b) (6)
Sent: Monday, April 12, 2004 2:10 PM
To: (b) (6)
Cc: (b) (6) (b) (6) Ivins, Bruce E Dr USAMRIID; (b) (6)
Subject: FW: (b) (6)

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Thanks,
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Thanks again! Hope you had a fine Easter!

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Monday, April 12, 2004 11:50 AM
To: (b) (6) (b) (6)
Cc: (b) (6)
Subject: RE: (b) (6)

OK. Thanks, (b) (6)

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

-----Original Message-----
From: (b) (6)
Sent: Monday, April 12, 2004 11:15 AM
To: Ivins, Bruce E Dr USAMRIID; (b) (6)
Cc: (b) (6)
Subject: RE: (b) (6)

You have permission to support (b) (6) request to supply the requested items to (b) (6). You can contact them directly to work out the specific requirements. (b) (6) is very appreciative of both your efforts. Thanks.

(b) (6)

-----Original Message-----
From: Ivins, Bruce E Dr USAMRIID
Sent: Monday, April 12, 2004 11:08 AM
To: (b) (6) (b) (6)
Cc: (b) (6)
Subject: RE: (b) (6)

(b) (6)

(b) (6)

(b) (6) of (b) (6) asked if we could provide some spores to (b) (6) to see if that would solve or help solve some of their problems (Control monkeys surviving an aerosol anthrax spore challenge). I told (b) (6) that they would have to get approval from above and that I couldn't commit either time or resources without approval. Providing some of the Ames Primary Subculture (Ames PSC) wouldn't be a problem, and I'd like to see what they need as far as the "ready to spray" spores for aerosol challenge.

- Bruce

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USAMRIID (b) (6)
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Subject: (b) (6)

USAMRIID

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(b)
(c)

From: [Ivins, Bruce E Dr USAMRIID](#)
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Cc: (b) (6); (b) (6); (b) (6); (b) (6)
Subject: RE: (b) (6) Study
Date: Wednesday, April 14, 2004 12:46:20 PM

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

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

Subject: (b) (6) Study

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

To conduct the 20 LD50 portion only of the study, it would require 50 mL at 8 x 10E8 "ready to spray" (1 mL at 4 x 10E10 to dilute it to spray).

Thanks,

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From: (b) (6)

Sent: Wednesday, April 14, 2004 6:48 AM

To: (b) (6)

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

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

Subject: RE: (b) (6)

(b) (6)

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From: Ivins, Bruce E Dr USAMRIID

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Sent: Monday, April 12, 2004 2:39 PM

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

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

(b) (6)

Subject: RE: (b) (6)

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To: (b) (6) (b) (6)
Cc: (b) (6)
Subject: RE: (b) (6)

OK. Thanks, (b) (6)

- Bruce

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To: (b) (6); (b) (6); [Ivins, Bruce E Dr USAMRIID](#)
Cc: (b) (6); (b) (6); (b) (6); (b) (6); (b) (6)
Subject: RE: (b) (6) Study
Date: Wednesday, April 14, 2004 7:37:47 AM

We can send that. The documents need to be gotten in order. I'll talk to our (b) (6) people.

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Bruce Ivins

USAMRIID (b) (6)

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(b) (6)

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To: (b) (6); (b) (6)
Cc: (b) (6)
Subject: RE: (b) (6)

OK. Thanks, (b) (6)

- Bruce

Bruce Ivins
USAMRIID (b) (6)
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(b)
(6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Cc: (b) (6)
Subject: RE: (b) (6) Study
Date: Thursday, April 15, 2004 10:30:49 PM

Sure, (b) (6) Just include them. Also, the EA101 should go to (b) (6) USAMRIID (b) (6) phone = (b) (6)

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6) (b) (6) (b) (6)
Sent: Thursday, April 15, 2004 4:19 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: (b) (6) Study

Bruce,

(b) (6) has initiated the EA101. Besides the spores you will send for the spore bank, can you just add the spores (7.5 mL at 1.5×10^{10}) the that EA101?

Thanks,

(b) (6)

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

From: (b) (6)
Sent: Thursday, April 15, 2004 12:07 PM
To: 'Ivins, Bruce E Dr USAMRIID'
Subject: RE: (b) (6) Study

Bruce

I'll get the EA101 underway. Can you send 7.5 mL so that I can do some characterization (SF etc.) with the material before challenge.

Thanks,

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID (b) (6)
Sent: Wednesday, April 14, 2004 2:14 PM
To: (b) (6)
Subject: RE: (b) (6) Study

(b) (6) - How about it if I send you 5 ml at 1.5×10^{10} per ml? Then you can dilute it. When you let me know when you'd like shipment, I'll start our shipping form preparation. Thanks!

- Bruce

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

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

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

Sent: Wednesday, April 14, 2004 7:45 AM

To: Ivins, Bruce E Dr USAMRIID

Subject: RE: (b) (6) Study

Bruce,

See message I just sent (but diluted ready to spray is fine).

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID

(b) (6)

Sent: Wednesday, April 14, 2004 7:43 AM

To: (b) (6)

Subject: RE: (b) (6) Study

(b) (6) We'll send you 50 ml at 9×10^8 per ml, if it's OK. That way, it should be ready to spray, with, at most, a little dilution. (You may not even need to dilute it.) Would that be OK?

- Bruce

Bruce Ivins

USAMRIID (b) (6)

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

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

Sent: Wednesday, April 14, 2004 7:33 AM

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

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

(b) (6)
USAMRIID; (b) (6)

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

Subject: (b) (6) Study

(b) (6) and Bruce,

To conduct the 20 LD50 portion only of the study, it would require 50

mL at 8 x 10E8 "ready to spray" (1 mL at 4 x 10E10 to dilute it to spray).

Thanks,

(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 6:48 AM
To: (b) (6)
Cc: (b) (6) (b) (6) (b) (6)

(b) (6) (b) (6) (b) (6) (b) (6) (b) (6)
'Ivins, Bruce E Dr USAMRIID'; (b) (6) (b) (6)
Subject: RE: (b) (6)

(b) (6)

Would you work up the numbers and send to Bruce so (b) (6) can get the transfer arranged?

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID

(b) (6)
Sent: Monday, April 12, 2004 2:39 PM
To: (b) (6) (b) (6) (b) (6) (b) (6)

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

Thanks, (b) (6)

We'll need a numerical estimate for the "ready to spray" spores. We can send them at the same time we send the Ames Primary Subculture (Ames PSC) spores for (b) (6) spore stock. Then, (b) (6) or (b) (6) we'll need to get set (with EA101s, USDA approval) as far as a date to send. On this end, our (b) (6) (b) (6) or (b) (6) will need to be closely involved with the official transfer of material.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6) (b) (6)
Sent: Monday, April 12, 2004 2:10 PM
To: (b) (6) (b) (6)
Cc: (b) (6) (b) (6) Ivins, Bruce E Dr

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

USAMRIID; (b) (6)

Subject: FW: (b) (6)

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

Here's the official okay to send the subculture and spores to you, we just need you to tell us how much you need to conduct the 20 LD50, 5 monkey challenge study. USAMRIID prefers that they send only that amount now, because if it works, the 200 LD50 study would not be needed (permission is granted either way). Also, an estimate of when you would be in a position to conduct the study will be useful. We can turn around comments on an animal protocol quickly if you give us a heads up when it might be coming.

Thanks,

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID

(b) (6)

Sent: Monday, April 12, 2004 11:02 AM

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

Subject: FW: (b) (6)

Hi, (b) (6)

We have the approval to send spores to (b) (6). Could you please tell me (if you know) how much they need of the ready-to-spray spores. We'll also send them a couple of vials (0.5 ml each) of the Ames Primary Subculture (Ames PSC) (at a concentration of 1.5×10^9 per ml) for them to make a stock culture with.

Thanks again! Hope you had a fine Easter!

- Bruce

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID

Sent: Monday, April 12, 2004 11:50 AM

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

Cc: (b) (6)

Subject: RE: (b) (6)

OK. Thanks, (b) (6)

- Bruce

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

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

From: (b) (6)

Sent: Monday, April 12, 2004 11:15 AM

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

USAMRIID

Cc: (b) (6)
Subject: RE: (b) (6)

You have permission to support (b) (6) request to supply the requested items to (b) (6). You can contact them directly to work out the specific requirements. (b) (6) is very appreciative of both your efforts. Thanks.

(b) (6)

-----Original Message-----
From: Ivins, Bruce E Dr USAMRIID
Sent: Monday, April 12, 2004 11:08 AM
To: (b) (6)

(b) (6)

Cc: (b) (6)
Subject: RE: (b) (6)

(b) (6)

(b) (6) of (b) (6) asked if we could provide some spores to (b) (6) to see if that would solve or help solve some of their problems (Control monkeys surviving an aerosol anthrax spore challenge). I told (b) (6) that they would have to get approval from above and that I couldn't commit either time or resources without approval. Providing some of the Ames Primary Subculture (Ames PSC) wouldn't be a problem, and I'd like to see what they need as far as the "ready to spray" spores for aerosol challenge.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

(b) (6)

AM

Bruce E Dr USAMRIID

-----Original Message-----
From: (b) (6)
Sent: Monday, April 12, 2004 11:02
To: (b) (6) Ivins,
Subject: (b) (6)

(b) (6) and Bruce,
We've received a request from (b) (6) to provide Ames PSC, and some spores to (b) (6). Did this come up in your conversations with them. Just trying to make sure the request matches with any guidance or discussions you had with them. Thanks for your input.

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6) (b) (6) (b) (6) (b) (6)
Cc: (b) (6) (b) (6) [Ivins, Bruce E Dr USAMRIID](#); (b) (6) (b) (6)
Subject: RE: (b) (6)
Date: Monday, April 12, 2004 2:39:02 PM

Thanks, (b) (6)

We'll need a numerical estimate for the "ready to spray" spores. We can send them at the same time we send the Ames Primary Subculture (Ames PSC) spores for (b) (6) spore stock. Then, (b) (6) or (b) (6) we'll need to get set (with EA101s, USDA approval) as far as a date to send. On this end, our (b) (6) (b) (6) or (b) (6) will need to be closely involved with the official transfer of material.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

-----Original Message-----
From: (b) (6) (b) (6) (b) (6) (b) (6)
Sent: Monday, April 12, 2004 2:10 PM
To: (b) (6) (b) (6)
Cc: (b) (6) (b) (6) Ivins, Bruce E Dr USAMRIID; (b) (6)
Subject: FW: (b) (6)

(b) (6) (b) (6)
Here's the official okay to send the subculture and spores to you, we just need you to tell us how much you need to conduct the 20 LD50, 5 monkey challenge study. USAMRIID prefers that they send only that amount now, because if it works, the 200 LD50 study would not be needed (permission is granted either way). Also, an estimate of when you would be in a position to conduct the study will be useful. We can turn around comments on an animal protocol quickly if you give us a heads up when it might be coming.

Thanks,
(b) (6)

-----Original Message-----
From: Ivins, Bruce E Dr USAMRIID (b) (6)
Sent: Monday, April 12, 2004 11:02 AM
To: (b) (6) (b) (6)
Subject: FW: (b) (6)

Hi, (b) (6)
We have the approval to send spores to (b) (6). Could you please tell me (if you know) how much they need of the ready-to-spray spores. We'll also send them a couple of vials (0.5 ml each) of the Ames Primary Subculture (Ames PSC) (at a concentration of 1.5×10^9 per ml) for them to make a stock culture with.

Thanks again! Hope you had a fine Easter!

- Bruce

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID

Sent: Monday, April 12, 2004 11:50 AM

To: (b) (6)

(b) (6)

Cc: (b) (6)

Subject: RE: (b) (6)

OK. Thanks, (b) (6)

- Bruce

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

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

From: (b) (6)

Sent: Monday, April 12, 2004 11:15 AM

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

Cc: (b) (6)

Subject: RE: (b) (6)

You have permission to support (b) (6) request to supply the requested items to (b) (6). You can contact them directly to work out the specific requirements. (b) (6) is very appreciative of both your efforts. Thanks.

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID

Sent: Monday, April 12, 2004 11:08 AM

To: (b) (6)

(b) (6)

Cc: (b) (6)

Subject: RE: (b) (6)

(b) (6)

(b) (6) of (b) (6) asked if we could provide some spores to (b) (6) to see if that would solve or help solve some of their problems (Control monkeys surviving an aerosol anthrax spore challenge). I told (b) (6) that they would have to get approval from above and that I couldn't commit either time or resources without approval. Providing some of the Ames Primary Subculture (Ames PSC) wouldn't be a problem, and I'd like to see what they need as far as the "ready to spray" spores for aerosol challenge.

- Bruce

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

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

From: (b) (6)

Sent: Monday, April 12, 2004 11:02 AM

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

Subject: (b) (6)

(b) (6) and Bruce,

We've received a request from (b) (6) to provide Ames PSC, and some spores to (b) (6). Did this come up in your conversations with them. Just trying to make sure the request matches with any guidance or discussions you had with them. Thanks for your input.

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6) (b) (6)
Cc: (b) (6)
Subject: RE: (b) (6)
Date: Monday, April 12, 2004 11:07:44 AM

(b) (6)

(b) (6) of (b) (6) asked if we could provide some spores to (b) (6) to see if that would solve or help solve some of their problems (Control monkeys surviving an aerosol anthrax spore challenge). I told (b) (6) that they would have to get approval from above and that I couldn't commit either time or resources without approval. Providing some of the Ames Primary Subculture (Ames PSC) wouldn't be a problem, and I'd like to see what they need as far as the "ready to spray" spores for aerosol challenge.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Monday, April 12, 2004 11:02 AM
To: (b) (6) Ivins, Bruce E Dr USAMRIID
Subject: (b) (6)

(b) (6) and Bruce,

We've received a request from (b) (6) to provide Ames PSC, and some spores to (b) (6). Did this come up in your conversations with them. Just trying to make sure the request matches with any guidance or discussions you had with them. Thanks for your input.

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6) (b) (6) (b) (6) (b) (6)
Cc: (b) (6) (b) (6) [Ivins, Bruce E Dr USAMRIID](#); (b) (6) (b) (6)
Subject: RE: (b) (6)
Date: Monday, April 12, 2004 2:39:02 PM

Thanks, (b) (6)

We'll need a numerical estimate for the "ready to spray" spores. We can send them at the same time we send the Ames Primary Subculture (Ames PSC) spores for (b) (6) spore stock. Then, (b) (6) or (b) (6) we'll need to get set (with EA101s, USDA approval) as far as a date to send. On this end, our (b) (6) (b) (6) or (b) (6) will need to be closely involved with the official transfer of material.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

-----Original Message-----
From: (b) (6) (b) (6) (b) (6) (b) (6)
Sent: Monday, April 12, 2004 2:10 PM
To: (b) (6) (b) (6)
Cc: (b) (6) (b) (6) Ivins, Bruce E Dr USAMRIID; (b) (6)
Subject: FW: (b) (6)

(b) (6) (b) (6)
Here's the official okay to send the subculture and spores to you, we just need you to tell us how much you need to conduct the 20 LD50, 5 monkey challenge study. USAMRIID prefers that they send only that amount now, because if it works, the 200 LD50 study would not be needed (permission is granted either way). Also, an estimate of when you would be in a position to conduct the study will be useful. We can turn around comments on an animal protocol quickly if you give us a heads up when it might be coming.

Thanks,
(b) (6)

-----Original Message-----
From: Ivins, Bruce E Dr USAMRIID (b) (6)
Sent: Monday, April 12, 2004 11:02 AM
To: (b) (6) (b) (6)
Subject: FW: (b) (6)

Hi, (b) (6)
We have the approval to send spores to (b) (6). Could you please tell me (if you know) how much they need of the ready-to-spray spores. We'll also send them a couple of vials (0.5 ml each) of the Ames Primary Subculture (Ames PSC) (at a concentration of 1.5×10^9 per ml) for them to make a stock culture with.

Thanks again! Hope you had a fine Easter!

- Bruce

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID

Sent: Monday, April 12, 2004 11:50 AM

To: (b) (6)

(b) (6)

Cc: (b) (6)

Subject: RE: (b) (6)

OK. Thanks, (b) (6)

- Bruce

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

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

From: (b) (6)

Sent: Monday, April 12, 2004 11:15 AM

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

Cc: (b) (6)

Subject: RE: (b) (6)

You have permission to support (b) (6) request to supply the requested items to (b) (6). You can contact them directly to work out the specific requirements. (b) (6) is very appreciative of both your efforts. Thanks.

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID

Sent: Monday, April 12, 2004 11:08 AM

To: (b) (6)

(b) (6)

Cc: (b) (6)

Subject: RE: (b) (6)

(b) (6)

(b) (6) of (b) (6) asked if we could provide some spores to (b) (6) to see if that would solve or help solve some of their problems (Control monkeys surviving an aerosol anthrax spore challenge). I told (b) (6) that they would have to get approval from above and that I couldn't commit either time or resources without approval. Providing some of the Ames Primary Subculture (Ames PSC) wouldn't be a problem, and I'd like to see what they need as far as the "ready to spray" spores for aerosol challenge.

- Bruce

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

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

From: (b) (6)

Sent: Monday, April 12, 2004 11:02 AM

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

Subject: (b) (6)

(b) (6) and Bruce,

We've received a request from (b) (6) to provide Ames PSC, and some spores to (b) (6). Did this come up in your conversations with them. Just trying to make sure the request matches with any guidance or discussions you had with them. Thanks for your input.

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6) (b) (6)
Subject: RE: contact info for sending Ames strain to ATCC
Date: Tuesday, May 04, 2004 9:53:31 AM

Thanks, (b) (6) I'm interested to see how the 20 LD50 challenge goes. I presume that (b) (6) will be there for that. My specific address here would be:

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

I haven't heard any more from (b) (6) about problems concerning spore production and purification

- Bruce

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

From: (b) (6) (b) (6) (b) (6) (b) (6)
Sent: Tuesday, May 04, 2004 8:23 AM
To: USAMRIID Ivins (E-mail)
Cc: (b) (6) (b) (6)
Subject: contact info for sending Ames strain to ATCC

Hi Bruce,

We have been asked to provide ATCC with contact info for the folks who are submitting their Ames strain to ATCC for comparative in vitro testing. I assume the USAMRIID contact will be you, and I have your email & phone info, and I could piece together your address unless it requires a room number. Let me know if the contact will be you or another person.

Also, (b) (6) sent us their protocol for the 20 LD50 challenge. We are to review it for this Friday's conference call of the animal working group. (b) (6) has that info if you are at all interested. (b) (6) said they will be making a spore prep from your PSC this week or whenever the media arrives. Thanks!

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Documents
Date: Monday, April 26, 2004 8:38:54 PM

(b) (6)

I can look through my notebooks, but...the (b) (6) subpoenaed and has 15 of them, including those of (b) (6) (b) (6) (b) (6), (b) (6) (b) (6) (b) (6) and myself. Everybody in (b) (2) who worked with Anthrax had the Ames strain, or had access to it. In 1412, the strain was taken for aerosol and held in rooms (b) (2). TSA plates from AGIs were taken down to the trash area in the basement to be autoclaved out by animal caretakers. AGI dilution tubes - for space reasons - were held in the first floor coldroom until the AGI plates were counted, then the dilution tubes were autoclaved with the rest of the contaminated glassware (spreaders, beakers, pipets, pipet tips).

I have some records which I can supply, and I'll start getting them together on Tuesday.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Monday, April 26, 2004 5:11 PM
To: (b) (6) (b) (6) Ivins, Bruce E Dr
USAMRIID; (b) (6) (b) (6)
Cc: (b) (6)
Subject: FW: Documents
Importance: High

All, please read (b) (6) request below. If you have any records or know of anyone else that may have records of intra-lab transfers of Ames spores prior to 31 DEC 01 please let me know ASAP. These records could include lab notes, e-mails or any other log/notes you may have kept. I know that other investigators/visiting scientists may have also transferred Ames in the past, if you can recall the names of these individuals please forward them at your earliest convenience.

(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 21, 2004 2:41 PM
To: (b) (6)
Cc: (b) (6)
Subject: FW: Documents

(b)
(6)

(b) (5)

(b)
(6)

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

From: (b) (6)
Sent: Thursday, April 15, 2004 8:38 AM
To: (b) (6)
Subject: RE: Documents

(b)
(6)

(b) (5)

(b)
(6)

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

From: (b) (6)

Sent: Thursday, April 15, 2004 8:33 AM
To: (b) (6)
Subject: RE: Documents

(b) (6) I have no idea what "information" you are talking about. If you have a tasking that we need to address, please forward a copy.

(b) (6)

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

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 2:31 PM
To: (b) (6)
Cc: Ivins, Bruce E Dr USAMRIID; (b) (6)
Subject: RE: Documents

(b) (6)

(b) (5) (b) (6)

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, April 14, 2004 2:13 PM
To: (b) (6)
Cc: (b) (6)
Subject: RE: Documents

(b) (6) Please run the request through the (b) (6), (b) (6), (b) (6).
(b) (6) Thanks! Also, Please know that there are many investigators here at USAMRIID that have the Ames strain and have transferred it to other RIID investigators, that (b) (6) was the original holder (at USAMRIID) and transferrer of the strain, and that prior to 2002, it was NOT standard procedure to document every time a RIID investigator gave material to another RIID investigator.

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 12:07 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Documents

Okay, thanks Bruce. I'll let you know the dates as soon as I get them.

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, April 14, 2004 12:06 PM
To: (b) (6)
Subject: RE: Documents

OK. I can xerox what I have for 2002 to the present. Before that, I have nothing concerning transfer of the Ames strain within the Institute (b)(2).

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 11:40 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Documents

Bruce,

The request did give any specific dates. I've asked for clarification. I will let you know as soon as I find out. Thanks

(b)
(6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, April 14, 2004 11:33 AM
To: (b) (6)
Subject: RE: Documents

What kind of dates? Prior to 2002 or 2001, I personally didn't keep any records of where the Ames strain went. It was in (b)(2) available to all the researchers, and it was over in (b)(2), accessible by an individual with access to the hot area. (This

includes animal caretakers, military personnel, technicians, researchers, and not just (b) (6) personnel.)

If (b) (6) wants information from 2002 to the present, we have it. All that I can provide before that time is who I sent the Ames strain to outside of USAMRIID.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 10:47 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: FW: Documents

Bruce,

Please see below message. (b) (6) said you may have the info I need. Can you help? Thanks

(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 8:57 AM
To: (b) (6)
Subject: Documents

(b) (6)

I need any documents you may have relating to the internal transfer of the Ames strain of Bacillus Anthracis within USAMRIID (e.g. lab to lab). Do you have any of these documents? Thanks

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Cc: (b) (6)
Subject: RE: Documents
Date: Wednesday, April 14, 2004 2:12:53 PM

(b) (6) - Please run the request through the (b) (6) (b)(6), (b) (6) Thanks! Also, Please know that there are many investigators here at USAMRIID that have the Ames strain and have transferred it to other RIID investigators, that (b) (6) was the original holder (at USAMRIID) and transferrer of the strain, and that prior to 2002, it was NOT standard procedure to document every time a RIID investigator gave material to another RIID investigator.

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 12:07 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Documents

Okay, thanks Bruce. I'll let you know the dates as soon as I get them.

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, April 14, 2004 12:06 PM
To: (b) (6)
Subject: RE: Documents

OK. I can xerox what I have for 2002 to the present. Before that, I have nothing concerning transfer of the Ames strain within the Institute (b)(2).

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 11:40 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Documents

Bruce,

The request did give any specific dates. I've asked for clarification. I will let you know as soon as I find out. Thanks

(b)
(6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, April 14, 2004 11:33 AM
To: (b) (6)
Subject: RE: Documents

What kind of dates? Prior to 2002 or 2001, I personally didn't keep any records of where the Ames strain went. It was in (b)(2) available to all the researchers, and it was over in (b)(2) accessible by an individual with access to the hot area. (This includes animal caretakers, military personnel, technicians, researchers, and not just (b) (6) personnel.)

If (b) (6) wants information from 2002 to the present, we have it. All that I can provide before that time is who I sent the Ames strain to outside of USAMRIID.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 10:47 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: FW: Documents

Bruce,

Please see below message. (b) (6) said you may have the info I need.

Can you help? Thanks

(b)
(6)

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 8:57 AM
To: (b) (6)
Subject: Documents

(b)
(6)

I need any documents you may have relating to the internal transfer of the Ames strain of Bacillus Anthracis within USAMRIID (e.g. lab to lab). Do you have any of these documents? Thanks

(b)
(6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Documents
Date: Wednesday, April 14, 2004 12:05:37 PM

OK. I can xerox what I have for 2002 to the present. Before that, I have nothing concerning transfer of the Ames strain within the Institute (b)(2).

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 11:40 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Documents

Bruce,

The request did give any specific dates. I've asked for clarification. I will let you know as soon as I find out. Thanks

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, April 14, 2004 11:33 AM
To: (b) (6)
Subject: RE: Documents

What kind of dates? Prior to 2002 or 2001, I personally didn't keep any records of where the Ames strain went. It was in (b)(2) available to all the researchers, and it was over in (b)(2) accessible by an individual with access to the hot area. (This includes animal caretakers, military personnel, technicians, researchers, and not just (b) (6) personnel.)

If (b) (6) wants information from 2002 to the present, we have it. All that I can provide before that time is who I sent the Ames strain to outside of USAMRIID.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 10:47 AM

To: Ivins, Bruce E Dr USAMRIID
Subject: FW: Documents

Bruce,

help? Thanks
Please see below message. (b) (6) said you may have the info I need. Can you

(b)
(6)

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 8:57 AM
To: (b) (6)
Subject: Documents

(b)
(6)

I need any documents you may have relating to the internal transfer of the Ames strain of Bacillus Anthracis within USAMRIID (e.g. lab to lab). Do you have any of these documents? Thanks

(b)
(6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Documents
Date: Wednesday, April 14, 2004 11:33:04 AM

What kind of dates? Prior to 2002 or 2001, I personally didn't keep any records of where the Ames strain went. It was in (b)(2) available to all the researchers, and it was over in (b)(2) accessible by an individual with access to the hot area. (This includes animal caretakers, military personnel, technicians, researchers, and not just (b) (6) personnel.)

If (b) (6) wants information from 2002 to the present, we have it. All that I can provide before that time is who I sent the Ames strain to outside of USAMRIID.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 10:47 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: FW: Documents

Bruce,

Please see below message. (b) (6) said you may have the info I need. Can you help?
Thanks

(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 8:57 AM
To: (b) (6)
Subject: Documents

(b) (6)

I need any documents you may have relating to the internal transfer of the Ames strain of Bacillus Anthracis within USAMRIID (e.g. lab to lab). Do you have any of these documents? Thanks

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Documents
Date: Tuesday, April 27, 2004 10:48:46 AM

I don't recall having informal or unofficial notes saying that I received Ames from somebody or gave it to somebody in the Institute. Usually we simply gave strains to fellow investigators working on B. anthracis. (b) (5) (b) (6)

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Monday, April 26, 2004 5:11 PM
To: (b) (6); (b) (6); Ivins, Bruce E Dr
USAMRIID; (b) (6); (b) (6)
Cc: (b) (6)
Subject: FW: Documents
Importance: High

All, please read (b) (6) request below. If you have any records or know of anyone else that may have records of intra-lab transfers of Ames spores prior to 31 DEC 01 please let me know ASAP. These records could include lab notes, e-mails or any other log/notes you may have kept. I know that other investigators/visiting scientists may have also transferred Ames in the past, if you can recall the names of these individuals please forward them at your earliest convenience.

(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 21, 2004 2:41 PM
To: (b) (6)

Cc: (b) (5) [redacted]
Subject: FW: Documents

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

(b) [redacted]

[redacted]

(b) [redacted]

[redacted]

(b) (6) [redacted]

(

)
[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 2:31 PM
To: (b) (6)
Cc: Ivins, Bruce E Dr USAMRIID; (b) (6)
Subject: RE: Documents

(b) (6)

(b) (5) [Redacted] (b) (6) [Redacted]
[Redacted]

(b) (6)

-----Original Message-----
From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, April 14, 2004 2:13 PM
To: (b) (6)
Cc: (b) (6)
Subject: RE: Documents

(b) (6) - Please run the request through the (b) (6) (b) (5) [Redacted]
[Redacted] Thanks! Also, Please know that there are many investigators here at USAMRIID that have the Ames strain and have transferred it to other RIID investigators, that (b) (6) [Redacted] was the original holder (at USAMRIID) and transferrer of the strain, and that prior to 2002, it was NOT standard procedure to document every time a RIID investigator gave material to another RIID investigator.

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 14, 2004 12:07 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Documents

Okay, thanks Bruce. I'll let you know the dates as soon as I get them.

-----Original Message-----
From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, April 14, 2004 12:06 PM
To: (b) (6)
Subject: RE: Documents

OK. I can xerox what I have for 2002 to the present. Before that, I have nothing concerning transfer of the Ames strain within the Institute (b)(2).

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

-----Original Message-----
From: (b) (6)
Sent: Wednesday, April 14, 2004 11:40 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Documents

Bruce,

The request did give any specific dates. I've asked for clarification. I will let you know as soon as I find out. Thanks

(b)
(6)

-----Original Message-----
From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, April 14, 2004 11:33 AM
To: (b) (6)
Subject: RE: Documents

What kind of dates? Prior to 2002 or 2001, I personally didn't keep any records of where the Ames strain went. It was in (b)(2) available to all the researchers, and it was over in (b)(2), accessible by an individual with access to the hot area. (This includes animal caretakers, military personnel, technicians, researchers, and not just (b) (6) personnel.)

If (b) (6) wants information from 2002 to the present, we have it. All that I can provide before that time is who I sent the Ames strain to outside of USAMRIID.

- Bruce

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

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

From: (b) (6)

Sent: Wednesday, April 14, 2004 10:47 AM

To: Ivins, Bruce E Dr USAMRIID

Subject: FW: Documents

Bruce,

Please see below message. (b) (6) said you may have the info I need. Can you help? Thanks

(b)

(6)

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

From: (b) (6)

Sent: Wednesday, April 14, 2004 8:57 AM

To: (b) (6)

Subject: Documents

(b)

(6)

I need any documents you may have relating to the internal transfer of the Ames strain of Bacillus Anthracis within USAMRIID (e.g. lab to lab). Do you have any of these documents? Thanks

(b)

(6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6) (b) (6) (b) (6)
Cc: (b) (6)
Subject: RE: (b) (6) spores
Date: Tuesday, March 16, 2004 5:06:25 PM

Getting it there (where?) and getting it done (how backed up are they?) are my concern.

> -----Original Message-----
> From: (b) (6)
> Sent: Tuesday, March 16, 2004 4:05 PM
> To: (b) (6) (b) (6) (b) (6)
> Ivins, Bruce E Dr USAMRIID
> Cc: (b) (6)
> Subject: RE: (b) (6) spores

> my guess is that the MLVA on the five lots could all be done on one day

> -----
> From: Ivins, Bruce E Dr USAMRIID
> Sent: Tuesday, March 16, 2004 3:46 PM
> To: (b) (6) (b) (6)
> (b) (6)
> Cc: (b) (6)
> Subject: (b) (6) spores

> With respect to our conversation on Monday, 15 March, on the (b) (6) spores (1.15 X 10¹³ total):

- > 1) Since the (b) (6) is here checking the laboratories this week, I'll get to the lab part of things next week. Basically, our lab this week will be unused.
- > 2) I can check the preps for capsule production, contamination, phase contrast microscopic examination, get data on guinea pig LD50s put together, and find out about the LPS determination.
- > 3) (b) (6) I can give (b) (6) samples - is one ml of each OK - of the preps for gamma phage, FA, phase contrast pictures.
- > 4) (b) (6) - what about PCR for capsule and toxin genes? How do we want to arrange for that to be done, and who will do it?

> What about the MLVA analysis? Who knows whom to contact on that, if we still want to do it? (And...who wants to make contact?) If we have a MLVA done before we combine the batches, it might be a few weeks to a few months before we have the results.

> - Bruce

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: (b) (6) 2003 Ames spores
Date: Wednesday, April 28, 2004 11:50:18 AM

They meet our criteria of ">95% refractile spores."

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

> -----Original Message-----

> From: (b) (6)
> Sent: Wednesday, April 28, 2004 11:39 AM
> To: Ivins, Bruce E Dr USAMRIID
> Subject: RE: (b) (6) 2003 Ames spores

>
> How do they look?

>
> -----
> From: Ivins, Bruce E Dr USAMRIID
> Sent: Wednesday, April 28, 2004 10:03 AM
> To: (b) (6)

(b) (6)
> Subject: (b) (6) 2003 Ames spores

>
> We've now purified the (b) (6) 2003 Ames spores. We have about 550 ml at about 2.0 - 2.4 X 10¹⁰ per ml. Currently the spores are in a single polycarbonate flask, but I intend to aliquot them into smaller containers (125 or 250 ml polycarbonate flasks). I'll be checking several paramters in my lab, giving some to (b) (6) (b) (6) to examine, and - hopefully - sending some to (b) (6) to do an endotoxin (LAL) test on and a phenol concentration on. We'll have to coordinate with (b) (6) (or whoever) on doing the latter two tests. I'm not sure if we have anything currently in place that would allow us to send some irradiated spores to them to test.

>
> (b) (6) I plan to get you the start of the SOPs and appendices before the end of Friday.

>
> - Bruce

>
>
> Bruce Ivins
> USAMRIID (b) (6)
> (b) (6)
> (b) (6)

>
>
>

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: EA101 for obtaining anthrax (Ames) spores from (b) (6)
Date: Wednesday, April 21, 2004 9:38:11 AM

(b) (6)

I just heard from (b) (6) at (b) (6) (b) (6).

(b) (6) asked that the EA101 form be sent to (b) (6) at the following (b) (6).

Thanks.

- Bruce

Bruce Ivins
USAMRIID (b) (6)

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

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, April 21, 2004 9:28 AM
To: (b) (6)
Subject: EA101 for obtaining anthrax (Ames) spores from (b) (6)

(b) (6)

I received a call yesterday from (b) (6) at (b) (6) (b) (6) asked if the EA101 had been prepared and FAXed to them yet. I called (b) (6) this morning to make sure we have the FAX number that we should send it to. Thank you.

Bruce Ivins
USAMRIID (b) (6)

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

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: EA101
Date: Thursday, May 06, 2004 9:51:14 AM

Hi, (b) (6) Here is the information:

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)
(b) (6)
(b) (6)

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Wednesday, May 05, 2004 6:11 PM
To: 'bruce.ivins@amedd.army.mil'
Subject: EA101
Importance: High

Bruce,
I recieved approval from the (b) (6) to ship the anthracis from (b) (6). We will be sending this out on Monday the 10th. I need you mailing address and phone number before I can send this. Please let me know.

Thanks,

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Final Message
Date: Thursday, April 08, 2004 3:28:49 PM

I got them, (b) (6) Thanks very much! This should help a lot.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Thursday, April 08, 2004 2:52 PM
To: ivins, Bruce E Dr USAMRIID
Cc: (b) (6)
Subject: Final Message

Hi Bruce

I've just sent a whole series of messages with photos of all the vials you sent us back in 1998.
Please let me know if you got them. I am leaving the office now so call on my cell phone (b) (6) and/or reply to my home e-mail address (see header)

(b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: [Ivins, Bruce E Dr USAMRIID](#)
Subject: RE: FW: Strains sent to you in 1998
Date: Thursday, April 08, 2004 3:26:37 PM

Never mind!! I see you've sent the pictures to me!! Thanks much! I hope to see you at the International Anthrax meeting next year. I think it will be in the Southwestern US.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Thursday, April 08, 2004 3:25 PM
To: (b) (6)
Subject: RE: FW: Strains sent to you in 1998

(b) (6) were all of the vials similar with respect to 1) the type of cryovial; and 2) the handwriting? Sorry to bother you, but I'm just trying to identify the particular parentage of the material we sent you. I don't need pictures, but if someone could just look at some of the other vials, it would be very helpful. Thanks again!!!

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Thursday, April 08, 2004 2:44 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: Re: FW: Strains sent to you in 1998

>Hi Bruce
I am sending a series of photos of vials.
(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: [Ivins, Bruce E Dr USAMRIID](#)
Subject: RE: FW: Strains sent to you in 1998
Date: Thursday, April 08, 2004 3:26:37 PM

Never mind!! I see you've sent the pictures to me!! Thanks much! I hope to see you at the International Anthrax meeting next year. I think it will be in the Southwestern US.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Thursday, April 08, 2004 3:25 PM
To: (b) (6)
Subject: RE: FW: Strains sent to you in 1998

(b) (6) were all of the vials similar with respect to 1) the type of cryovial; and 2) the handwriting? Sorry to bother you, but I'm just trying to identify the particular parentage of the material we sent you. I don't need pictures, but if someone could just look at some of the other vials, it would be very helpful. Thanks again!!!

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Thursday, April 08, 2004 2:44 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: Re: FW: Strains sent to you in 1998

>Hi Bruce
I am sending a series of photos of vials.
(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: FW: Strains sent to you in 1998
Date: Thursday, April 08, 2004 3:25:13 PM

(b) (6) were all of the vials similar with respect to 1) the type of cryovial; and 2) the handwriting? Sorry to bother you, but I'm just trying to identify the particular parentage of the material we sent you. I don't need pictures, but if someone could just look at some of the other vials, it would be very helpful. Thanks again!!!

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Thursday, April 08, 2004 2:44 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: Re: FW: Strains sent to you in 1998

>Hi Bruce
I am sending a series of photos of vials.
(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: FW: Strains sent to you in 1998
Date: Thursday, April 08, 2004 3:18:16 PM

Thanks, (b) (6)

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Thursday, April 08, 2004 2:44 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: Re: FW: Strains sent to you in 1998

>Hi Bruce
>I am sending a series of photos of vials.

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: FW: Strains sent to you in 1998
Date: Thursday, April 08, 2004 3:39:13 PM

That's actually very helpful, and I think you're probably right. It's just hard to remember after 6 years! I don't have the notebooks back yet, and you're right there as well. After we got the (b) (6) spores, we used them for a lot, and we may well have streaked them out on plates for (b) (6)

I got a call from (b) (6) today, and we have to lock MORE strains up tomorrow.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Thursday, April 08, 2004 3:30 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: FW: Strains sent to you in 1998

Bruce,

I can only see handwriting on one of the vials and it looks like mine. Beyond that I can't tell you anything. I would tend to agree that we grew them up and then put the stuff in vials. Would this information be in your notebooks? Do you even have them back?

Sorry I can't be of more help!

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID (b) (6)
Sent: Thursday, April 08, 2004 3:23 PM
To: (b) (6)
Subject: FW: FW: Strains sent to you in 1998

Hi, (b) (6) sent me these pictures of the Ames that we sent (b) (6) Do you recognize the handwriting on the tubes? It's not mine, but beyond that, I can't tell. Since the cryotube is the newer variety (as opposed to what we used in the 1980s) I'm wondering If we did grow up the strains and put material into cryovials.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)

Sent: Thursday, April 08, 2004 2:44 PM

To: Ivins, Bruce E Dr USAMRIID

Subject: Re: FW: Strains sent to you in 1998

>Hi Bruce

I am sending a series of photos of vials.

(b) (6)



From: [Ivins, Bruce E Dr USAMRIID](#)
To: [Ivins, Bruce E Dr USAMRIID](#)
Subject: RE: Info regarding (b) (6) royalty checks
Date: Thursday, March 25, 2004 12:59:35 PM

(b) (6) - new telephone number (25 MAR 04) - (b) (6)

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

> -----Original Message-----

> From: Ivins, Bruce E Dr USAMRIID

> Sent: Tuesday, November 25, 2003 1:03 PM

> To: (b) (6) (b) (6) (b) (6)

> Subject: RE: Info regarding (b) (6) royalty checks

> (b) (6)

> Hope this is helpful - Bruce

> -----Original Message-----

> From: (b) (6)

> Sent: Tuesday, November 25, 2003 12:57 PM

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

> Subject: FW: Info regarding (b) (6) royalty checks

> in response to the message at the bottom..... (b) (6)

> -----

> From: (b) (6)

> Sent: Tuesday, November 25, 2003 12:00 PM

> To: (b) (6)

> Subject: RE: Info regarding (b) (6) royalty checks

> I don't have (b) (6) address.

> -----Original Message-----

> From: (b) (6)

> Sent: Tuesday, November 25, 2003 11:46 AM

> To: (b) (6)

> Subject: FW: Info regarding (b) (6) royalty checks

> (b) (6)

> Do you know the forwarding address info for (b) (6)

> -----

> From: (b) (6)

> Sent: Tuesday, November 25, 2003 10:53 AM

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

(b) (6)

(b) (6)

>

Cc: (b) (6)

>

Subject: Info regarding (b) (6) royalty checks

>

> Good morning,

> I am writing to obtain inventor contact information for (b) (6). We are going to be receiving royalty checks from (b) (6) soon. In order to distribute them, we need your home addresses and social security numbers. Also, if anybody knows (b) (6) new contact information, please let me know so that we can get (b) (6) information as well.

>

Thank you,

>

>

(b) (6)

>

>

>

>

>

>

From: [Ivins, Bruce E Dr USAMRIID](#)
To: [Ivins, Bruce E Dr USAMRIID](#)
Subject: RE: Info regarding (b) (6) royalty checks
Date: Thursday, March 25, 2004 12:59:35 PM

(b) (6) - new telephone number (25 MAR 04) - (b) (6)

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

> -----Original Message-----

> From: Ivins, Bruce E Dr USAMRIID

> Sent: Tuesday, November 25, 2003 1:03 PM

> To: (b) (6) (b) (6) (b) (6)

> Subject: RE: Info regarding (b) (6) royalty checks

> (b) (6)

> Hope this is helpful - Bruce

> -----Original Message-----

> From: (b) (6)

> Sent: Tuesday, November 25, 2003 12:57 PM

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

> Subject: FW: Info regarding (b) (6) royalty checks

> in response to the message at the bottom..... (b) (6)

> -----
> From: (b) (6)

> Sent: Tuesday, November 25, 2003 12:00 PM

> To: (b) (6)

> Subject: RE: Info regarding (b) (6) royalty checks

> I don't have (b) (6) address.

> -----Original Message-----

> From: (b) (6)

> Sent: Tuesday, November 25, 2003 11:46 AM

> To: Baker, Marcia F Ms USAMRIID

> Subject: FW: Info regarding (b) (6) royalty checks

> (b) (6)

> Do you know the forwarding address info for (b) (6)

> (b) (6)

> -----
> From: (b) (6)

> Sent: Tuesday, November 25, 2003 10:53 AM

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

(b) (6)

(b) (6)

>

Cc: (b) (6)

>

Subject: Info regarding (b) (6) royalty checks

>

>

Good morning,

>

I am writing to obtain inventor contact information for (b) (6). We are going to be receiving royalty checks from (b) (6) soon. In order to distribute them, we need your home addresses and social security numbers. Also, if anybody knows (b) (6) new contact information, please let me know so that we can get (b) (6) information as well.

>

Thank you,

>

>

(b) (6)

>

>

>

>

>

>

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Information needed
Date: Tuesday, March 16, 2004 12:27:25 PM

Thanks VERY MUCH for looking into this, (b) (6)

- Bruce

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Monday, March 15, 2004 10:24 PM
To: (b) (6)
Subject: Information needed

Hi, (b) (6)

On Thursday, I need to provide someone with information (entries) from my Outlook Calendar for the months of September, 2001 and October, 2001. Unfortunately, the information has either been deleted or (hopefully) archived. Is it possible to get this information, if it hasn't been destroyed? It's really important. Thanks!!!

- Bruce

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Intra-lab transfer of Ames strain
Date: Tuesday, April 27, 2004 7:31:31 AM

Thanks.

- Bruce

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

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

From: (b) (6)
Sent: Tuesday, April 27, 2004 7:26 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Intra-lab transfer of Ames strain

I don't recall giving it to anyone within RIID.

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

From: Ivins, Bruce E Dr USAMRIID (b) (6)
Sent: Monday, April 26, 2004 9:32 PM
To: (b) (6)
Subject: Intra-lab transfer of Ames strain

(b) (6)

Do you have or know of any records, formal or informal, that you made of intra-lab (inside USAMRIID) transfer of the Ames strain? Several of us in the division have to answer a Department of Justice subpoena.

Thanks.

- Bruce

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Personal Information
Date: Tuesday, March 16, 2004 12:29:56 PM

Thank you very, Very Much for all of this information, (b) (6) I'll deliver it to the people who wanted it.

- Bruce

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

From: (b) (6)
Sent: Tuesday, March 16, 2004 9:13 AM
To: 'Ivins, Bruce E Dr USAMRIID'
Subject: RE: Personal Information

Bruce,
Courses: September 22, 2001 - Introduction to Disaster Services
November 17, 2001 - Mass Care Overview

The cot cleaning was Saturday, November 12, 2001. I do not have a roster from that event.

Prior to 2002 some of our record keeping has been very spotty, and particularly around 9-11 we were overwhelmed.

However, on Saturday, October 27th we had a training on Shelter Kits. I'm trying to determine if you were present for that training.....Yeah I found a sign in sheet....

On Saturday, October 27, 2001 you participated in a training for Shelter Kits.

Yes, you attended the 10/15/01 Emergency Services Meeting.

I'm a wealth of information this a.m....anything else I can help you with????

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID (b) (6)
Sent: Monday, March 15, 2004 10:20 PM
To: (b) (6)
Subject: RE: Personal Information

Also...do you have information as to whether I attended the October, 2001 Emergency Services Meeting? Thanks again!!

- Bruce

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Monday, March 15, 2004 10:19 PM
To: (b) (6)
Subject: Personal Information

Hi, (b) (6)

Could you please give me any information you have with respect to courses I took in September or October of 2001? Also, the first activity for the Red Cross that I participated was cot cleaning, which I think (but I'm not sure) took place on a Saturday morning in the fall of 2001. Would you have the date for that? I need to provide the information to someone Thursday morning. Thanks very much!!!

- Bruce

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: (b) (6) (GET)
Date: Monday, March 01, 2004 7:58:04 AM

As far as aerosol studies, we plan to use only 200 guinea pigs for aerosol challenge for FY05. All other guinea pigs will be for IM challenge. The sham studies (200 total runs) will be undertaken without any animals, to test the ability of spores produced, harvested and purified using different conditions to be aerosolized. (Spore preparations that clump or foam during aerosolization will be thus identified.) The reason that "guinea pigs" was listed for the sham runs is simply that the spreadsheet doesn't allow entry of aerosol runs without entry of an animal species.

If the number of runs per day is a problem, then we can increase the number of days (and decrease the runs per day). I don't know how many collisions can be used in a day, or how many sham (aerosol efficiency test) runs can be run. I estimated 10 sham runs per day, but that figure can be adjusted according to Aerobiology capabilities.

Each sham run will be the same "strain," but a differently prepared batch of spores.

- Bruce

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

From: (b) (6)
Sent: Monday, March 01, 2004 7:25 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: FW: (b) (6) (GET)

(b) (6)
[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]

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

From: (b) (6)
Sent: Friday, February 27, 2004 9:53 AM
To: (b) (6)

Cc: (b) (6)
Subject: FW: (b) (6) (GET)

Please could you address / clarify the following issues and resubmit

If you wish to discuss with someone in (b) (6) please do so

Thanks,.

(b) (6)

There is a considerable amount of 'sham' aerosols scheduled (I'm assuming w/o animals, although the resource sheet notates GP) to assess the aerosol characteristics of different strains of anthracis. Although running the shams would not be a problem, the potential for inter-strain cross contamination between aerosol runs exists. That is, if a particular strain of anthracis is run through the system, then a different strain is run subsequent to the prior, the wall loss intrinsic (and potential reaerosolization of the former strain) into the latter strain's integrated AGI sample may present a contamination risk to the analysis of the latter strain.

The difficulty in this is scheduling 'per day' aerosols – The number of particular strains/day needs to be determined for the purposes of planning.

(b) (6) has experience with this issue – and it has been a concern with same-agent – multi strain runs performed on the same day.

(b) (6) has requested these sham aerosols over 18 days (10 runs/day), maybe the plan is one strain/day? It needs to be clarified to ensure that potential cross-contamination doesn't screw up (b) (6) study.

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

From: (b) (6)
Sent: Wednesday, February 25, 2004 6:19 PM
To: (b) (6)
Cc: (b) (6)
Subject: (b) (6) (GET)

TAM review complete.

(b) (6)

(b) (6)

[REDACTED]

[REDACTED]

[REDACTED]

(b) (6) [REDACTED]

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Recent (2003) (b) (6) spores
Date: Friday, April 16, 2004 3:06:56 PM

Whenever I'm sitting high and dry, I go down to the Ye Olde Spirits Shoppe, and in less than an hour, I'm not dry, and I'm feeling MUCH better!

I get the feeling you're right about the (b) (6) spores, however. It blows my mind how they could make such good spores in 1997, and in 2004 they have nothing but problems.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Friday, April 16, 2004 2:18 PM
To: Ivins, Bruce E Dr USAMRIID; (b) (6) (b) (6)
(b) (6)
Cc: (b) (6)
Subject: RE: Recent (2003) (b) (6) spores

I am getting really concerned that we are going to be sitting high and dry with respect to spores.

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, April 14, 2004 7:53 AM
To: (b) (6)
(b) (6)
Subject: Recent (2003) (b) (6) spores

Two of the 2003 shipments of (b) (6) spores need to be repurified. We'll then check them again to make sure that they meet the criteria (>95% refractile spores; <5% of everything else) and get them to (b) (6). We're doing that now and hope to get them to (b) (6) next week if possible.

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: reference number (b)(6)
Date: Thursday, April 29, 2004 1:19:06 PM

Thank you!! Have a fine weekend!

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Thursday, April 29, 2004 1:13 PM
To: Bruce.Ivins@DET.AMEDD.ARMY.MIL
Cc: (b) (6)
Subject: FW: reference number (b)(6)

Dear Dr. Ivins,

Thank you for sending the signed copy of the assignment!

For your convenience, my contact information (including my e-mail address) is listed below. I look forward to working with you on this application.

Best Regards,

(b) (6)

[Redacted signature block]

The attached message is intended solely for the designated recipient, and may contain confidential, proprietary and privileged information. If you have received this e-mail by mistake, please let the sender know immediately.

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

From: (b) (6)
Sent: Thursday, April 29, 2004 9:08 AM
To: (b) (6)
Subject: FW: reference number (b)(6)

This looks like its for you.

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

From: Ivins, Bruce E Dr USAMRIID (b) (6)
Sent: Thursday, April 29, 2004 6:37 AM
To: (b) (6)
Subject: reference number (b) (6)

Dear (b) (6)

I am sending you today the signed assignment for the patent application by Klinman et al., Method of Preventing Infections from Bioterrorism Agents with Immunostimulatory CPG Oligonucleotides.

If there is anything else needed, please don't hesitate in contacting me. Thank you very much.

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Report of Survey
Date: Monday, April 12, 2004 4:12:07 PM

OK, (b) (6) Thanks. I'll bring it up Tuesday morning.

- Bruce

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

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

From: (b) (6)
Sent: Monday, April 12, 2004 4:07 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Report of Survey

Hi,

Yes, you can bring it to me. You can bring it up to the PBO office in the morning, if you like?
Thanks again.

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Monday, April 12, 2004 4:06 PM
To: (b) (6)
Subject: Report of Survey

Hi, (b) (6)

I've done a Report of Survey for the Apple Computer that is on my hand receipt (R1K), and that I am unable to locate. Should I bring it to you? When?

Thanks for your help!!!

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: SELECT AGENT REGISTRATION
Date: Monday, May 03, 2004 12:53:56 PM

(b) (6)

I am giving you a hard copy of my strains (highlighted in yellow) which need to be listed in both (b)(2) instead of "(b)(2) coldroom," (b)(2) refrigerator," and other (b)(2) locations. As you know, (b)(2) and (b)(2) are connected suites. The change simply allows the strain to be present in the (b)(2) part of the connected (b)(2) hot area.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Monday, May 03, 2004 11:34 AM
To: Ivins, Bruce E Dr USAMRIID; (b) (6)
Cc: (b) (6)

Subject: SELECT AGENT REGISTRATION
Importance: High

(b) (6) is in possession of the (b) (6) registration changes. Clarification was needed so I spoke with (b) (6) today and here is the ruling:

1. When an agent is registered as (b)(2) Coldroom or (b)(2) Hallway, the (b) (6) will change the location to (b)(2) without a Form 91-R.
2. (b) (6) must submit a Form 91-R for each agent that you want registered in (b)(2) even though it is already registered in (b)(2). Please complete the form and forward to the (b) (6)

Thanks,

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Shaving in the Containment Suites
Date: Monday, March 22, 2004 4:37:54 PM

Thanks for the guidance on this. It was actually the COLD side changeroom that an individual was observed shaving in. Several years ago (about 20) shaving was prohibited in the hot (b)(2) changerooms, but allowed on the cold side changerooms. Then, in the late 1980s, our division chief, (b) (6) banned shaving in the (b) (6) suites (b)(2) even on the Clean side of the changerooms. Since that has been 15 years, I wanted to know what the current policy was, especially since the (b) (6) was coming through on inspection. If it was still banned on the clean-side changerooms, I didn't want them to come through and see somebody shaving, or see shaving material.

Again, thanks for clearing things up. Please pass on to (b) (6) that the individual who was shaving was on the COLD side, but that the researcher just wanted a clarification of the rule.

Bruce Ivins
USAMRIID (b) (6)

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

> -----Original Message-----

> From: (b) (6)
> Sent: Thursday, March 18, 2004 8:24 AM
> To: (b) (6)
> Subject: Shaving in the Containment Suites

>
> (b) (6)

>
> A researcher has informed us that one of the caretakers is shaving in the internal change rooms of a containment suite. (b) (6) did not wish to name the individual specifically, so could you please remind all of the caretakers that this practice is prohibited. Shaving IS permitted in the external change room only. Reference is USAMRIID Regulation 385-69, 3.c.5.

>
> Thank you for your support

>
> (b) (6)

>

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Shipment from (b) (6)
Date: Tuesday, May 04, 2004 3:12:41 PM

(b) (6)

Thank you!

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Tuesday, May 04, 2004 2:09 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: Shipment from (b) (6)

Dr Ivins:

Your shipment of B.anthraxis from (b) (6) was authorized, reference number CEA 000404.

Remember to notified the (b) (6) at the shipment arrival.

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Spore amounts needed
Date: Friday, April 16, 2004 3:05:03 PM

Thanks, (b) (6)

My figure is an estimate based on maximum spore usage for aerosols. I heard from (b) (6) that they had a problem with their last run of spores and wanted to put it into Tide to clean it up before sending it. I told (b) (6) I'd prefer not! If we wind up doing spore production here, we can instantly ramp up to shaker flasks, or we can play around with trying to get a fermentor procedure up and running. Scientifically, there's no problem with the latter, but I can just see the Frederick mayor (and others) less than elated to know we're growing up 10+ liter amounts of anthrax spores. Dropping a flask containing 250 ml is an accident. Losing 10 or more liters of spores (blown gasket or something else) would be a disaster. Major Pucker factor!

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Friday, April 16, 2004 2:13 PM
To: Ivins, Bruce E Dr USAMRIID; (b) (6); (b) (6)
Subject: RE: Spore amounts needed

Bruce,

I thought you originally said 1×10^{13}

How do we stand on the getting the spores ready for analysis? We need to know more precisely where we stand.

I am now dealing with (b) (6) and (b) (6) at (b) (6) at the (b) (6). We need to put together a white paper describing the parameters of our program. They will help us flesh out a 2 page white paper to go up to OSD. We want to keep the details about the quantities somewhat general... the more exact - the better.. but at the same time we don't want to paint ourselves into corner if we under estimate. Right now they do not want a memo.

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Wednesday, April 07, 2004 2:22 PM
To: (b) (6); (b) (6)
Subject: Spore amounts needed

I calculate that the number of anthrax spores needed in one year's time is approximately 2×10^{13} total. The basis of the calculation is as follows:

1) $40 \text{ rabbits per month} \times 12 \text{ months} \times 3 \times 10^9 \text{ CFU/ml (100 LD50s)} \times 10 \text{ ml per run} = 1.4 \times 10^{13} \text{ spores}$

2) $10 \text{ monkeys per month} \times 12 \text{ months} \times 5 \times 10^9 \text{ per ml (500 - 1,000 LD50)} \times 10 \text{ ml per run} = 0.6 \times 10^{13} \text{ spores}$

If we double that amount to allow for extra use, it comes to 4×10^{13} spores per year for a maximum spore requirement.

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Spore meeting with (b) (6)
Date: Friday, April 30, 2004 10:15:22 PM

(b) (6) - I think that (b) (6) of the (b) (6) should be invited, if we're still considering fermentor quantities of spores.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Friday, April 30, 2004 6:57 PM
To: (b) (6)

(b) (6) Ivins, Bruce E Dr USAMRIID; (b) (6) (b) (6)
(b) (6); (b) (6) (b) (6)
Subject: Spore meeting with (b) (6)

We need to have another anthrax spore meeting on Tuesday at 1330 in the HQ Conference Room. Hopefully we can be out in an hour. I'll try to send out an agenda and some read ahead material before the meeting.

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: SPore shipment
Date: Wednesday, April 28, 2004 11:10:26 AM

I'll try to get an answer on this as soon as I can, (b) (6). It goes to packers here at USAMRIID, who then send it on to post shipping in another building, where it's picked up by FedEx.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Wednesday, April 28, 2004 11:04 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: SPore shipment

Bruce,

Could you please send me a Fedex tracking number for the shipment as soon as you possibly can. Thanks.

Regards,

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID (b) (6)
Sent: Wednesday, April 28, 2004 9:50 AM
To: (b) (6)
Cc: (b) (6)

Subject: SPore shipment

(b) (6)

Please let me know when the spores arrive. They should be there today or tomorrow at the

latest.

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: SPore shipment
Date: Wednesday, April 28, 2004 1:36:23 PM

(b) (6)
(c) It's 47 75 1688 26 03

According to their records, it was delivered this morning to the (b) (6) in (b) (6) at 9:29 am.

Please let me know when you confirm its receipt, so that the word can be passed onto (b) (6)

Thanks.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6) (b) (6)
Sent: Wednesday, April 28, 2004 11:04 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: SPore shipment

Bruce,

Could you please send me a Fedex tracking number for the shipment as soon as you possibly can.
Thanks.

Regards,

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

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

From: Ivins, Bruce E Dr USAMRIID (b) (6)
Sent: Wednesday, April 28, 2004 9:50 AM
To: (b) (6)
Cc: (b) (6) (b) (6) (b) (6) (b) (6) (b) (6) (b) (6)
Subject: SPore shipment

(b) (6)

Please let me know when the spores arrive. They should be there today or tomorrow at the latest.

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Spore-making at USAMRIID
Date: Tuesday, May 04, 2004 4:45:48 PM

(b) (6)

If we get approval, that's a very good idea! (b) (6) just stopped by and suggested the possibility of a "bio-bubble" on the centrifuge in the room to prevent any aerosol contamination that might arise from centrifugation.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Tuesday, May 04, 2004 4:44 PM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Spore-making at USAMRIID

Bruce,

Also, I'd recommend going forward with safety's recommendation of drain/containment in the floor. In fact, it would great to have safety do a walk through and get their in-pur now. We can then better plan what should be done short-term and long-term in there. I can set that up if you'd like.

(b) (6)

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

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Tuesday, May 04, 2004 3:57 PM

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

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

Subject: Spore-making at USAMRIID

Pending approval, here is what is planned for the B4 laboratory.

Following removal of current contents, addition of the following:

- 1) Innova shaking incubator
- 2) 6-foot biosafety cabinet

- 3) Refrigerator
- 4) Sorvall centrifuge

Also...

- 1) Locks for shaking incubator, refrigerator and doors to room. (Perhaps the room door locks could be keypad or number lock like in (b)(2))
- 2) Temperature recording devices (Temptrace or equivalent) for refrigerator and shaking incubator
- 3) Any necessary electrical outlets for 208 volts

Thank you.

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Spores for analysis
Date: Monday, May 03, 2004 11:32:06 AM

OK. Thanks!

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6)
Sent: Monday, May 03, 2004 11:32 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Spores for analysis

I guess 10'ish....I will be in and out of the suite tomorrow morning, but should be back in somewhere around that time. Just call me ahead of time to insure that I am here!

Thanks,
(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Monday, May 03, 2004 11:18 AM
To: (b) (6)
Subject: Spores for analysis

Hi, (b) (6)

What time tomorrow would you like the spores for characterization studies? I can have them brought over to the first floor airlock if you'd like.

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6) (b) (6)
Subject: RE: Spores
Date: Tuesday, April 06, 2004 9:07:29 AM

Hi, (b) (6) The spores we can send to (b) (6) (for them to grow up) are the primary subculture from the "original" Ames slant received from Texas in 1981. (We call the strain: Ames Primary Subculture.) It hasn't been passaged, and it's probably the closest to the original infectious agent that exists. We could send (b) (6) one or two ml at 1.5×10^9 per ml. We wouldn't send them the (b) (6) spores.

As far as sending spores purified and ready for challenge, we have some that were grown up using the Ames Primary Subculture as an inoculum. We know that they are virulent, since their aerosol LD50 in rhesus monkeys is (apparently) less than 10,000 inhaled spores. As far as these, purified, "ready to spray" spores, we'd have to know how many (b) (6) needed for their 20-LD50 and 200-LD50 sprays. We currently have about $7-8 \times 10^{11}$ spores from this material, with some of the spores reserved for the rest of the LD50 tests here. We could probably, without any problem, send enough for their 20-LD50 challenge. I'd have to see how much is needed here before I could commit the purified, "ready to spray" spores to their 200-LD50 challenge.

If you have any questions at all, please don't hesitate to write or call, (b) (6) Thanks!!

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6) (b) (6) (b) (6)
Sent: Tuesday, April 06, 2004 8:51 AM
To: 'Ivins, Bruce E Dr USAMRIID'
Subject: RE: Spores

Bruce,

Good to meet you too! Quick question: are the spores you are willing to send to (b) (6) from the (b) (6) lot or USAMRIID produced? I want to get it right for the memo.

Thanks,
(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID (b) (6)
Sent: Friday, April 02, 2004 10:57 AM
To: (b) (6) (b) (6)
Subject: Spores

Hi, (b) (6)

It was a pleasure to meet you and talk with you yesterday. (b) (6) and I were discussing the transfer of the challenge spores. Since there are a limited number of purified spores (ready for the 20 LD50 and 200 LD50 aerosols), perhaps the spores for the 20 LD50 aerosol could be sent and used. Then, if all of the controls die, there is no need to do a 200 LD50 challenge. (This would save animal and spore resources.) If they don't all die, then the spores for the 200 LD50 could be sent and the next set of monkeys could be sprayed. All of the spores (for the seed stock, the 20 LD50 aerosol and the 200 LD50 aerosol) could be requested at the same time, but they don't all need to be sent at the same time. We currently have on hand approximately 8×10^{11} spores ready for the aerosol (not needing

any further processing or purification). (b) (6) needs to ascertain just how much they need for each aerosol.

As far as the seed stock for the Ames strain, why don't we call this the Ames PSC (primary subculture) strain? That would differentiate it from all other "Ames" strains and would be the closest genotypically to the original material that came from the infected cow in Texas in 1981.

Thanks for everything, and I look forward to working with you in the future!!!

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Spores
Date: Wednesday, April 21, 2004 10:56:09 AM

Also, I'm not sure what you'll need, should the 200 LD50 challenge be required. You may want to tell me how many spores you'd need. Also...I included enough spores for you to do 10 ml (instead of 8 ml) per spray, should you want to do so. We typically do 10-ml volumes here.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6) (b) (6) (b) (6)
Sent: Wednesday, April 21, 2004 10:02 AM
To: Ivins, Bruce E Dr USAMRIID
Cc: (b) (6) (b) (6) (b) (6)
Subject: Spores

Bruce,

Ok, thanks for the update. When they arrive (b) (6) or I will let you know.

Thanks,

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID (b) (6)
Sent: Wednesday, April 21, 2004 9:37 AM
To: (b) (6)
Subject:

Hi, (b) (6)

We are planning to send to you Tuesday the following:

1) 7.5 ml of the Ames spores ("ready to spray") at 1.5×10^{10} per ml - You can dilute this as appropriate into water for injection for your spray.

2) For future seed stocks, Ames Primary Subculture (Ames PSC), 2 vials, 0.5 ml per vial, at 1.5×10^9 per ml.

The material will be shipped to you with gel ice. You should keep it in the refrigerator once it gets there.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Strain request
Date: Friday, April 30, 2004 4:06:04 PM

I'll get it to you on Tuesday, 4 May.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

> -----Original Message-----

> From: (b) (6)
> Sent: Friday, April 30, 2004 3:02 PM
> To: Ivins, Bruce E Dr USAMRIID
> Subject: RE: Strain request
>
> Probably next week if they are available.

> (b) (6)

> -----Original Message-----

> From: Ivins, Bruce E Dr USAMRIID
> Sent: Friday, April 30, 2004 2:49 PM
> To: (b) (6)
> Subject: RE: Strain request

> (b) (6)

> Do you need more B. anthracis Vollum 1B spores? When?

> - Bruce

> Bruce Ivins
> USAMRIID (b) (6)
> (b) (6)
> (b) (6)

> -----Original Message-----

> From: (b) (6)
> Sent: Friday, April 30, 2004 2:39 PM
> To: Ivins, Bruce E Dr USAMRIID
> Subject: Strain request

> Bruce,

> (b) (6) got a copy of Ba V1b from you last fall; I need another copy.

> (b) (6)

>
>
>

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6) (b) (6) [Ivins, Bruce E Dr USAMRIID](#)
Subject: RE: Update
Date: Friday, March 26, 2004 5:35:46 PM

Gratuity? Gratuity? Maybe we should hitchhike, bring granola bars, and sleep in the park under blankets!

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6) (b) (6) (b) (6)
Sent: Friday, March 26, 2004 4:16 PM
To: (b) (6) Ivins, Bruce E Dr USAMRIID
Cc: (b) (6) (b) (6) (b) (6))
Subject: Update

(b) (5) (b) (6)
(b) (6) (b) (6)
(b) (6)

That all I know right now.

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6); [Ivins, Bruce E Dr USAMRIID](#); (b) (6)
Cc: (b) (6)
Subject: RE: Update
Date: Monday, March 29, 2004 2:36:31 PM

(b) (6) Please let me know about flight arrangements and accommodation arrangements when you (or (b) (6)) makes them. I am telling our (b) (6) that I will probably be leaving Wednesday afternoon, and will come back Friday afternoon at the latest or Thursday night at the earliest.

Thanks.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6); (b) (6); (b) (6)
Sent: Monday, March 29, 2004 11:51 AM
To: Ivins, Bruce E Dr USAMRIID
Cc: (b) (6); (b) (6); (b) (6); (b) (6)
Subject: RE: Update

Bruce,

(b) (5)
(b) (6)
(b) (6)
(b) (6)
(b) (6)
(b) (6)
(b) (6)

Sorry for the delay.

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID (b) (6)
Sent: Monday, March 29, 2004 9:04 AM
To: (b) (6); (b) (6); Ivins, Bruce E Dr USAMRIID
Cc: (b) (6); (b) (6); (b) (6)
Subject: RE: Update

Any word, (b) (6) I still can't file a Request And Authorization For TDY Travel of DOD Personnel until the word comes through and I get approval from (b) (6) and (b) (6)

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6) (b) (6) (b) (6)
Sent: Friday, March 26, 2004 5:27 PM
To: (b) (6) Ivins, Bruce E Dr USAMRIID
Cc: (b) (6) (b) (6) (b) (6)
(b) (6)
Subject: RE: Update

New update. (b) (5) (b) (6) (b) (6)

Sorry for the delay.
(b) (6)

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

From: (b) (6)
Sent: Friday, March 26, 2004 4:16 PM
To: (b) (6) 'Ivins, Bruce E Dr USAMRIID'
Cc: (b) (6) (b) (6) (b) (6)
Subject: Update

My apology. (b) (5)

That all I know right now.

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6) (b) (6)
Subject: RE: UPDATED: contact info for sending Ames strain to ATCC
Date: Tuesday, May 04, 2004 10:57:37 AM

(b) (6) is it the "Vollum" strain that ATCC wants, or the "Vollum 1B" strain? They are not the same. Although we have the Vollum strain, it has been the Vollum 1B strain that has been used in animal challenge experiments here at Ft. Detrick.

The B. anthracis Vollum strain came from Dr. R. L. Vollum of the Sir William Dunn Institute of Pathology, Oxford, England. G. P. Gladstone of the Microbiological Research Department (Ministry of Supply), Experimental Station, Porton, Wiltshire, obtained the Vollum strain from Dr. Vollum. In the 1940s, researchers at Fort Detrick obtained the Vollum strain from Porton. Fort Detrick researchers passaged the Vollum strain in rabbits to increase virulence, and they gave the passaged strain the designation of "Vollum 1B." In 1957 a large batch of spores of the Vollum 1B was made, and the lot (store as a suspension in phenolized water), was labelled "Fort Detrick Lot No. 189." The Vollum 1B spores now used here at USAMRIID come from this Vollum 1B lot 189.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6) (b) (6) (b) (6)
Sent: Tuesday, May 04, 2004 8:48 AM
To: 'USAMRIID Ivins (E-mail)'
Cc: (b) (6) (b) (6)
Subject: UPDATED: contact info for sending Ames strain to ATCC

Hi Bruce,

We have been asked to provide ATCC with contact info for the folks who are submitting their Ames & Vollum strains to ATCC for comparative in vitro testing. I assume the USAMRIID contact will be you, and I have your email & phone info, and I could piece together your address unless it requires a room number. Let me know if the contact will be you or another person.

Also, (b) (6) sent us their protocol for the 20 LD50 challenge. We are to review it for this Friday's conference call of the animal working group. (b) (6) has that info if you are at all interested. (b) (6) said they will be making a spore prep from your PSC this week or whenever the media arrives. Thanks!

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6) (b) (6)
Subject: RE: UPDATED: contact info for sending Ames strain to ATCC
Date: Tuesday, May 04, 2004 11:19:34 AM

The Good, The Bad and The Ugly, in reference to spores...I LOVE it, (b) (6) I wish that (b) (6) had shown us some pictures of their spores after purification.

- Bruce

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

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

From: (b) (6) (b) (6) (b) (6)
Sent: Tuesday, May 04, 2004 11:07 AM
To: 'Ivins, Bruce E Dr USAMRIID'
Cc: (b) (6) (b) (6)
Subject: RE: UPDATED: contact info for sending Ames strain to ATCC

Well, ATCC will want what we want, so your explanation is very helpful. We'll go with the Vollum 1B, since that is what you use. The reason I want to have them tested as well is that (b) (6) also had a lot of Vollum spores where rhesus survived infection. The issue was raised at our meeting that Vollum & Vollum 1B are indistinguishable, but it might still be good to look at virulence determinants.

I reiterated to (b) (6) that they need to hang onto the questionable spores until we can run them through an assay, hopefully one that will distinguish the good from the bad and the ugly.

Thanks,
(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID (b) (6)
Sent: Tuesday, May 04, 2004 10:58 AM
To: (b) (6) (b) (6)
Subject: RE: UPDATED: contact info for sending Ames strain to ATCC

(b) (6) is it the "Vollum" strain that ATCC wants, or the "Vollum 1B" strain? They are not the same. Although we have the Vollum strain, it has been the Vollum 1B strain that has been used in animal challenge experiments here at Ft. Detrick.

The B. anthracis Vollum strain came from Dr. R. L. Vollum of the Sir William Dunn Institute of Pathology, Oxford, England. G. P. Gladstone of the Microbiological Research Department (Ministry of Supply), Experimental Station, Porton, Wiltshire, obtained the Vollum strain from Dr. Vollum. In the 1940s, researchers at Fort Detrick obtained the Vollum strain from Porton. Fort Detrick researchers passaged the Vollum strain in rabbits to increase virulence, and they gave the passaged strain the designation of "Vollum 1B." In 1957 a large batch of spores of the Vollum 1B was made, and the lot (store as a suspension in phenolized water), was labelled "Fort Detrick Lot No. 189." The Vollum 1B spores now used here at USAMRIID come from this Vollum 1B lot 189.

- Bruce

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

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

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

Sent: Tuesday, May 04, 2004 8:48 AM

To: 'USAMRIID Ivins (E-mail)'

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

Subject: UPDATED: contact info for sending Ames strain to ATCC

Hi Bruce,

We have been asked to provide ATCC with contact info for the folks who are submitting their Ames & Vollum strains to ATCC for comparative in vitro testing. I assume the USAMRIID contact will be you, and I have your email & phone info, and I could piece together your address unless it requires a room number. Let me know if the contact will be you or another person.

Also, (b) (6) sent us their protocol for the 20 LD50 challenge. We are to review it for this Friday's conference call of the animal working group. (b) (6) has that info if you are at all interested. (b) (6) said they will be making a spore prep from your PSC this week or whenever the media arrives.

Thanks! (b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Vollum 1B spores
Date: Monday, May 03, 2004 11:25:44 AM

I'll get in about 7:30. Do you want to stop by about 9 am?

- Bruce

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

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

From: (b) (6)
Sent: Monday, May 03, 2004 11:23 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Vollum 1B spores

What time do you get in?

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Monday, May 03, 2004 11:20 AM
To: (b) (6)
Subject: Vollum 1B spores

Hi, (b) (6)

What time do you want the Vollum 1B spores tomorrow? Do you want to stop in and pick them up?

- Bruce

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: RE: Vollum 1B spores
Date: Monday, May 03, 2004 12:24:31 PM

Do you have access to the (b)(2) airlock?

- Bruce

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

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

From: (b) (6)
Sent: Monday, May 03, 2004 11:35 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Vollum 1B spores

Could we do 0800?

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID
Sent: Monday, May 03, 2004 11:26 AM
To: (b) (6)
Subject: RE: Vollum 1B spores

I'll get in about 7:30. Do you want to stop by about 9 am?

- Bruce

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

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

From: (b) (6)
Sent: Monday, May 03, 2004 11:23 AM
To: Ivins, Bruce E Dr USAMRIID
Subject: RE: Vollum 1B spores

What time do you get in?

(b) (6)

(b) (6)

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

From: Ivins, Bruce E Dr USAMRIID

Sent: Monday, May 03, 2004 11:20 AM

To: (b) (6)

Subject: Vollum 1B spores

Hi, (b) (6)

What time do you want the Vollum 1B spores tomorrow? Do you want to stop in and pick them up?

- Bruce

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: reference number (b)(6)
Date: Thursday, April 29, 2004 9:36:41 AM

Dear (b) (6)

I am sending you today the signed assignment for the patent application by Klinman et al., Method of Preventing Infections from Bioterrorism Agents with Immunostimulatory CPG Oligonucleotides.

If there is anything else needed, please don't hesitate in contacting me. Thank you very much.

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: Report of Survey
Date: Monday, April 12, 2004 4:05:49 PM

Hi, (b) (6)

I've done a Report of Survey for the Apple Computer that is on my hand receipt (R1K), and that I am unable to locate. Should I bring it to you? When?

Thanks for your help!!!

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: Requested Information
Date: Friday, March 19, 2004 2:43:07 PM
Attachments: [Redacted]

(b) (6)

I am sending you information requested over the telephone this morning.

Additional information:

USAMRIID Notebooks 3655 and 4010 contain information pertaining to Ames spore preparations RMR (Reference Material Receipt) 1030 and RMR 1029.

Our laboratory's procedure for producing, harvesting and purifying anthrax spores was published: Ivins, B. E., (b) (6). Immunization against anthrax with aromatic compound-dependent (Aro-) Mutants of Bacillus anthracis and with recombinant strains of Bacillus subtilis that produce anthrax protective antigen. Infection and Immunity. 58:303-308.

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

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

To: (b) (6); (b) (6); (b) (6); (b) (6)

Subject: Spore amounts needed

Date: Wednesday, April 07, 2004 2:21:47 PM

I calculate that the number of anthrax spores needed in one year's time is approximately 2×10^{13} total. The basis of the calculation is as follows:

1) $40 \text{ rabbits per month} \times 12 \text{ months} \times 3 \times 10^9 \text{ CFU/ml (100 LD50s)} \times 10 \text{ ml per run} = 1.4 \times 10^{13} \text{ spores}$

2) $10 \text{ monkeys per month} \times 12 \text{ months} \times 5 \times 10^9 \text{ per ml (500 - 1,000 LD50)} \times 10 \text{ ml per run} = 0.6 \times 10^{13} \text{ spores}$

If we double that amount to allow for extra use, it comes to 4×10^{13} spores per year for a maximum spore requirement.

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: Spore Production SOP
Date: Thursday, April 29, 2004 4:05:25 PM
Attachments: [Redacted]

Here you are, (b) (6) Chop it up!!!

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Cc: (b) (6); (b) (6)
Subject: Spore shipment
Date: Monday, April 26, 2004 9:25:47 PM

(b) (6) the spores are scheduled to be shipped on Tuesday, 27 APR 04.

Here is information about the Ames PSC (Ames Primary Subculture), for your seed stock of B. anthracis Ames:

Ames PSC consists of spores made on sheep blood agar from the original slant (255414B) from Texas. The Ames strain came from an infected cow in May, 1981, on a Texas ranch near the Mexican border (New York Times, January 30, 2002 article). The case report was written up by (b) (6), a veterinarian in Falfurrias, Texas. (b) (6) sent specimens to the Texas Medical Veterinary Diagnostics Laboratory. The specimen and some specimen material streaked on an agar slant, were sent to (b) (6) at USAMRIID. In February of 2002, material from the original Ames slant was streaked onto sheep blood agar. After incubation for several days, the material (spores) was scraped off the surface of the agar and resuspended in about 25 ml of 1% phenolized water. This material is the closest that we have that came from the original agar slant from Texas.

The "ready-to-spray" spores that are being sent to you with the Ames PSC, were made from the Ames PSC. An inoculating loop was used to inoculate spores onto the surface of a blood agar plate. After about 16 hours incubation at 37C, material from a representative isolated colony was resuspended in 10 ml of PBS, which was then used to inoculate Leighton and Doi medium.

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: Spore transfer
Date: Friday, April 30, 2004 4:10:31 PM

Hi, (b) (6)
I'll give you the Ames (b) (6) 2003) spores on Tuesday.

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6) (b) (6) (b) (6) (b) (6)
(b) (6) (b) (6) (b) (6) (b) (6)
(b) (6)
Cc: (b) (6)
Subject: Spore-making at USAMRIID
Date: Tuesday, May 04, 2004 3:57:17 PM

Pending approval, here is what is planned for the (b)(2) laboratory.

Following removal of current contents, addition of the following:

- 1) Innova shaking incubator
- 2) 6-foot biosafety cabinet
- 3) Refrigerator
- 4) Sorvall centrifuge

Also...

- 1) Locks for shaking incubator, refrigerator and doors to room. (Perhaps the room door locks could be keypad or number lock like in (b)(2))
- 2) Temperature recording devices (Temptrace or equivalent) for refrigerator and shaking incubator
- 3) Any necessary electrical outlets for 208 volts

Thank you.

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: Spores for analysis
Date: Monday, May 03, 2004 11:18:05 AM

Hi, (b) (6)

What time tomorrow would you like the spores for characterization studies? I can have them brought over to the first floor airlock if you'd like.

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: Spores
Date: Friday, April 02, 2004 11:57:17 AM

Hi, (b) (6)

It was a pleasure to meet you and talk with you yesterday. (b) (6) and I were discussing the transfer of the challenge spores. Since there are a limited number of purified spores (ready for the 20 LD50 and 200 LD50 aerosols), perhaps the spores for the 20 LD50 aerosol could be sent and used. Then, if all of the controls die, there is no need to do a 200 LD50 challenge. (This would save animal and spore resources.) If they don't all die, then the spores for the 200 LD50 could be sent and the next set of monkeys could be sprayed. All of the spores (for the seed stock, the 20 LD50 aerosol and the 200 LD50 aerosol) could be requested at the same time, but they don't all need to be sent at the same time. We currently have on hand approximately 8×10^{11} spores ready for the aerosol (not needing any further processing or purification). (b) (6) needs to ascertain just how much they need for each aerosol.

As far as the seed stock for the Ames strain, why don't we call this the Ames PSC (primary subculture) strain? That would differentiate it from all other "Ames" strains and would be the closest genotypically to the original material that came from the infected cow in Texas in 1981.

Thanks for everything, and I look forward to working with you in the future!!!

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: Strains to (b) (6) in 1998
Date: Thursday, April 08, 2004 10:50:58 AM

Hi, (b) (6)

Sorry to bother you but I have an important question - and if you can't recall, that's fine. Do you remember preparing 11 strains of B. anthracis for (b) (6) at (b) (6) in (b) (6). We sent them to (b) (6) frozen, and I can't remember if we just pulled them out of freezer cartons or if we grew them up on SBA, resuspended them, froze them and sent them. Some of the strains we sent were not strains in my frozen culture collection, and that's why I'm wondering if we didn't grow them up first (after taking them out of (b) (6) or (b) (6) or other (b) (6) collection. What I'm ultimately interested in is what Ames we sent to (b) (6) - (b) (6), (b) (6) RMR 1029, or something else.

If you can remember, please let me know. Thanks!

Bruce Ivins
USAMRIID (b) (6)
(b) (6)
(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: Strains
Date: Friday, April 30, 2004 4:09:39 PM

Hi, (b) (6)

I'll get you the 5 strains (BA1024, BA1007, BA0018, Ohio ACB, 17T5) on plates on Monday.

Bruce Ivins

USAMRIID (b) (6)

(b) (6)

(b) (6)

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: Very Important
Date: Saturday, April 03, 2004 3:39:12 PM
Attachments: [REDACTED]

Hi, (b) (6)

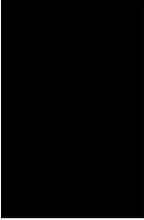
This is very important:

Please look at the two enclosed emails. We are supposed to have had 5 ml of Ames spores, in a 50-ml plastic tube, in the coldroom in (b)(2). Although the location is supposed to be, "2nd floor coldroom," I think it really means the coldroom close to rooms (b)(2) where we worked. Anyway, this material would have been made by (b)(6) since it was obviously used in the geographic strain study and made in the 1997-1999 timeframe.

The IMPORTANT QUESTION: Did you autoclave this material (The tube of Ames spores)? It apparently can't be found in either coldroom in (b)(2). I remember you were very insistent on destroying a bunch of strains (especially those of (b) (6) when you left, but I can't remember what you destroyed or what I destroyed when it comes to strains in (b)(2). It's the Ames strain that is the really important one, because (as I said in another email) the (b) (6) is extremely interested in finding it, and it will be more than embarrassing if I can't account for it. To my knowledge, this is the only material in (b)(2) that was ours that can't be found.

Thanks for your help.

- Bruce

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: Vials sent to (b) (6)
Date: Thursday, April 08, 2004 3:30:33 PM
Attachments: 

Here are the others, (b) (6) Do you recognize the handwriting?

- Bruce

From: [Ivins, Bruce E Dr USAMRIID](#)
To: (b) (6)
Subject: Vollum 1B spores
Date: Monday, May 03, 2004 11:19:55 AM

Hi, (b) (6)

What time do you want the Vollum 1B spores tomorrow? Do you want to stop in and pick them up?

- Bruce

Bruce Ivins
USAMRIID (b) (6)

(b) (6)

(b) (6)