

MERCK RESEARCH LABORATORIES
Division of Merck & Co., Inc.
West Point, Pennsylvania 19486

January 15, 2009

Re: MK-0683 – blinded therapy

Dear Doctor:

This letter is to provide follow-up information on an adverse experience concerning MK-0683 – blinded therapy which has been reported to you previously.

U.S. Food and Drug Regulations require sponsors of clinical studies conducted under an IND to notify the FDA of any serious and unexpected adverse experiences occurring in a clinical study filed under that IND when either the investigator or the sponsor believes that there is a reasonable possibility that the experience may have been drug related or if the drug relationship is unknown. The sponsor is also required to inform all investigators working with the particular drug under the IND.

In compliance with these requirements, the enclosed report has been submitted to the FDA and, because you are an investigator in a clinical study under this IND, a copy is enclosed for your information.

Please append this report to the Confidential Investigator's Brochure for the appropriate investigational product or to the Product Circular for the appropriate marketed product and retain in your files.

Please submit a copy of this report promptly (within less than 30 days of receipt) to your Institutional Review Board(s) even though the report may not involve a patient in your study.

This report does not necessarily reflect a conclusion by Merck or the FDA that the drug caused or contributed to the adverse experience. If you have any questions about this report, please contact the Merck monitor for your study.

Enclosure(s): WAES # 0802USA00123, GENSTUDY # 0560091, AN # 63505

MedWatch

Merck Human Health Division

For use by user-facilities,
distributors and manufacturers for
MANDATORY reporting

Merck Facsimile of FDA Form 3500A
Approved by FDA (10/21/1993)

The FDA Medical Products Reporting Program

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Mfr report #	WAES 0802USA00123
UF/Dist report #	
	FDA Use On

A. Patient information

1. Patient identifier Confidential AN 63505 in confidence	2. Age at time of event: or 60 years Date of Birth: 02/15/1947	3. Sex <input type="checkbox"/> Female <input checked="" type="checkbox"/> Male	4. Weight 134 lbs
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B. Adverse event or product problem

1. <input checked="" type="checkbox"/> Adverse event and / or <input type="checkbox"/> Product problem (e.g., defects/ malfunctions)	
2. Outcomes attributed to adverse event (check all that apply) <input checked="" type="checkbox"/> Death 02/03/2008 (mm/dd/yyyy) <input type="checkbox"/> Disability or Permanent Damage <input type="checkbox"/> Life-threatening <input type="checkbox"/> Congenital Anomaly/Birth Defect <input checked="" type="checkbox"/> Hospitalization-initial or prolonged <input checked="" type="checkbox"/> Other Serious(Important Medical Events) <input type="checkbox"/> Required Intervention to Prevent Permanent Impairment/Damage (Devices)	
3. Date of event (mm/dd/yyyy) 01/25/2008	4. Date of this report (mm/dd/yyyy) 01/15/2009

5. Describe event or problem
This is in follow-up to report(s) previously submitted on 2/11/2008; 2/18/2008; 2/22/2008; 2/26/2008; 2/29/2008; 3/17/2008; 3/26/2008; 5/13/2008; 5/27/2008; 7/2/2008; 7/23/2008; 7/30/2008

A Phase II/III Randomized, Double-Blind Study of Paclitaxel plus Carboplatin in Combination with Vorinostat (MK-0683) or Placebo in Patients with Stage IIIB (with pleural effusion) or Stage IV Non-Small-Cell Lung Cancer (NSCLC)

Information has been received from an investigator concerning a 60 year old asian male with a history of a closed tube thoracostomy (22-DEC-2007) who entered a study, title as stated above. On 08-JAN-2008 (visit 1A), the patient was screened to receive study therapy for the treatment of non-small cell lung cancer (diagnosed 13-DEC-2007, staging 23-JAN-2008, T3, N2, M1 stage IV (with progressive disease). At this time he was in ECOG 0-1 but with severe bone pains and intermittent dyspnea which was relieved with tramadol, acetaminophen, and

(Continued on Additional Page)

6. Relevant tests/laboratory data, including dates
Refer to Additional Page

7. Other relevant history, including preexisting medical conditions (e.g., allergies, race, pregnancy, smoking and alcohol use, hepatic/renal dysfunction, etc.)

MEDICAL HISTORY: Thoracostomy
CONCURRENT CONDITIONS: Non-small cell lung cancer; Metastases to bone; Bronchospasm; Progression of non-small cell lung cancer; Pain relief; Routine health maintenance; Restlessness

C. Suspect medication(s)

1. Name (Give labeled strength & mfr/labeler) # 1 CAP 0683-blinded therapy Unk # 2 carboplatin Unk (Continued on Additional Page)	
2. Dose, frequency & route used # 1 Unk/Unk/PO # 2 Unk/Unk/IV	3. Therapy dates (if unknown, give duration) from/to (or best estimate) # 1 01/28/2008 - 02/03/2008 # 2 02/01/2008 - 02/01/2008
4. Diagnosis for use (indication) # 1 Non-small cell lung cancer # 2 Non-small cell lung cancer	5. Event abated after use stopped or dose reduced. yes no N/A unk # 1 <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> # 2 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
6. Lot # # 1 # 2	7. Exp. Date # 1 # 2
8. Event reappeared after reintroduction. yes no N/A unk # 1 <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> # 2 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	
9. NDC # or Unique ID Unknown	
10. Concomitant medical products and therapy dates (excluded treatment of event) APPEBON TABLETS 01/03/2008-01/25/2008 BENADRYL 02/01/2008-02/01/2008 (Continued on Additional Page)	

G. All manufacturers

1. Contact office - name/address Merck Human Health Division Merck & Co., Inc. P.O. Box 4 West Point, Pa. 19486-0004 Attn: World Wide Product Safety	2. Phone Number (215) 652-8071
4. Date received by manufacturer (mm/dd/yyyy) 01/09/2009	5. (A)NDA # IND # 58915 STN # PMA/ 510(k) # Combination Product <input type="checkbox"/> Yes Pre-1938 <input type="checkbox"/> Yes OTC product <input type="checkbox"/> Yes
6. If IND, protocol # 0560091	3. Report source. (check all that apply) <input checked="" type="checkbox"/> foreign <input checked="" type="checkbox"/> study <input type="checkbox"/> literature <input type="checkbox"/> consumer <input checked="" type="checkbox"/> health professional <input type="checkbox"/> user facility <input type="checkbox"/> company representative <input type="checkbox"/> distributor <input type="checkbox"/> other:
7. Type of report <input type="checkbox"/> 5-day <input type="checkbox"/> 30-day <input type="checkbox"/> 7-day <input type="checkbox"/> Periodic <input type="checkbox"/> 10-day <input type="checkbox"/> Initial <input checked="" type="checkbox"/> 15-day <input checked="" type="checkbox"/> Follow-up# 12	9. Mfr. report number WAES 0802USA00123

8. Adverse event term(s)
BONE PAIN; HAEMATURIA; DYSPNOEA; HYPERCAPNIA;
PULMONARY EMBOLISM; NON-SMALL CELL LUNG CANCER

E. Initial reporter

1. Name, address & phone #			
2. Health professional? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	3. Occupation	4. Initial reporter also sent report to FDA. <input type="checkbox"/> yes <input type="checkbox"/> no <input checked="" type="checkbox"/> unk	

FDA

Submission of a report does not constitute an admission that medical personnel, user facility, distributor, manufacturer or product caused or contributed to the event.

B. Adverse event or product problem

5. Describe event or problem

Duavent nebulization. Physical findings were decreased breath sounds at left lung field with occasional wheezes at the left. He was still able to travel via airplane for 2 hours back and forth and was able to socialize with his relatives during his 5-day stay there. On 17-JAN-2008 (visit 1B), the patient was ECOG 0-1, coherent and conversant but still had the same tolerable bone pains with intermittent dyspnea, occasional dry cough which was relieved by tramadol, paracetamol, Duavent nebulization on PRN basis for dyspnea and Medrol tab on PRN basis for wheezes. He underwent cranial and chest CT scans on this visit. On 22-JAN-2008, additional CT scans were done to document liver and adrenal metastases. He complained of additional knee and rib pains at this time and he was prescribed with morphine sulfate which relieved the bone pains. Total body bone scan was also requested. Other medicines were continued as needed. On 23-JAN-2008, he was able to undergo bone scanning, and results showed multiple bone metastases.

On 25-JAN-2008, upon the patient's request, the patient was hospitalized due to long travel to the hospital and for severe bone pains, grade 4, progression of non small cell lung cancer, grade 3 and intermittent dyspnea, grade 3 with agitation, aggravated by movement and ambulation. At admission, physical findings were ECOG 0-1. Chest findings were decreased breath sounds at left lung field, occasional wheezing right lung field, otherwise unremarkable PE. Medications given afforded temporary relief. Laboratory (CBC and blood Chem) results were unremarkable except for leukocytosis from CBC (26-JAN-2008) and azithromycin was given for 5 days. On 26-JAN-2008, the patient's alkaline phosphatase was 220 u/l, AST was 70 u/l, complete blood count (reported as WBC) was $15 \times 10^9/l$, and granulocytes were 86%. Patient was given prophylactic antibiotic coverage although no clinical apparent signs of active infection were noted. The other consideration was leukocytosis secondary to malignancy. It was reported that there was no progression of NSCLC after screening only symptomatic progressive bone pains. Other labs were unremarkable.

On 28-JAN-2008, physical findings were ECOG 0-1 with mild respiratory distress, coherent and conversant, ambulatory, decreased breath sounds at left lung field, no rales nor wheezes at right lung field, otherwise unremarkable. On 28-JAN-2008, oral vorinostat or placebo was given with meals (witnessed dose), no adverse reaction noted. The following day, the patient remained on status quo. On 30-JAN-2008, the patient still had dyspneic episodes with O2 saturation in 92-95%. Additional aminophylline drip on 30-JAN-2008 started with relief of bronchospasm. On 30-JAN-2008, an indwelling foley catheter was inserted for accurate urine output monitoring and to minimize straining and to make the patient more comfortable since he was in severe pain due to bone metastases. No gross hematuria noted during insertion. Dyspnea was relieved by aminophylline drip (as needed), hydrocortisone IV, and oxygen supplementation. Morphine IV was given round the clock for bone pains, with moderate improvement.

On 01-FEB-2008, physical findings were ECOG-1, ambulatory, coherent and conversant, no air entry noted at left lung field, with good air entry on right lung field, other findings were essentially normal. Urine red blood cells were innumerable (abnormal) and urinalysis microscopic hematuria was performed (no numerical value). Cycle 1 meds of paclitaxel (300 mg) and carboplatin (800 mg) were given on 01-FEB-2008 with no immediate adverse reaction. Concomitant therapy included dexamethasone (manufacturer unknown), diphenhydramine HCl, ranitidine, zolpidem, methylprednisone (MEDROL), azithromycin, fenoterol hydrobromide (+) ipratropium bromide (DUOVENT), ascorbic acid (+) buclizine hydrochloride (+) cyanocobalamin (+) pyridoxine hydrochloride (+) thiamine hydrochloride (APPEBON) with iron capsules, zolpidem and ramosetron hydrochloride.

On 02-FEB-2008, the patient was noted to be comfortable, ambulatory but with slight body weakness and still with no air entry at left lung field, and had light tea-colored urine per urine bag. Aminophylline drip was discontinued and patient was hydrated via intravenous infusion (total urine output that day was 2100 cc/24 hrs). On the night of 02-FEB-2008, the patient had difficulty in breathing and was noted to be restless but coherent. BP was 130/90 mm/Hg. The patient was given zolpidem which relieved restlessness.

Two days after chemotherapy, the patient was noted to be dyspneic and agitated with transient cyanosis at 1:00 am on 03-FEB-2008. A few hours after, he was obtunded and with shallow breathing. He had increased abdominal girth with bloody urine in the catheter and decreased urine output (200 cc/8 hr shift). O2 saturation was fluctuating from 75% to 80% to 90%. He was intubated for impending respiratory distress but had CP arrest during the process. Clinical impression at this time was acute respiratory distress secondary to carbon dioxide retention (grade 5) secondary to severe pulmonary obstruction secondary to NSCLC, highly considering massive pulmonary embolism (grade 5) secondary to malignancy. During intubation patient had frothy secretions per orem and no air entry noted at the left lung field. NGT inserted with note of light brown aspirate amounting to 100-150 cc and no urine output was noted. After intubation, he had decreasing heart rate and eventually had CP arrest. CPR was performed for 45 minutes with no success. The patient was pronounced expired at 4:35 pm 03-FEB-2008. Pertinent laboratory examinations (blood chemistry) only showed increased BUN at 36 mg/dL. Discharge diagnoses included non-small cell lung cancer stage IV with progressive disease, carbon dioxide retention secondary to severe pulmonary obstruction, hematuria etiology undetermined, shortness of breath secondary to bronchospasm secondary to pulmonary obstruction, carbon dioxide retention secondary to severe pulmonary obstruction, and

pulmonary embolism secondary to hypercoagulable state secondary to cancer. It was reported that an autopsy was not performed.

Hematuria, grade 1 was considered an other important medical event by the investigator.

Cause of death was reported as hypercapnia grade 5, non-small cell lung cancer stage IV with progressive disease grade 5, bone pains grade 4 and pulmonary embolism grade 5.

The reporting investigator felt that bone pain grade 4, dyspnea grade 3, progression of non small cell lung cancer, grade 3, hypercapnia grade 5 and pulmonary embolism grade 5 were not related to study therapy of vorinostat or placebo, carboplatin and paclitaxel. Acute gross hematuria, etiology unknown, grade 1 was probably related to study drugs vorinostat or matching placebo and was not related to carboplatin or paclitaxel.

Additional information has been requested.

A 7 calendar day phone call was placed to FDA on 21-FEB-2008.

6. Relevant tests/laboratory data, including dates

DIAGNOSTIC TEST

<u>Tests</u>	<u>Date</u>	<u>Value</u> <u>Unit</u>	<u>Normal Range</u>
bone scan	01/23/2008		
diagnostic urinalysis test Comment: rbc/ microscopic hematuria	02/01/2008		
blood pressure measurement	02/02/2008	130/90 mm/Hg	

LABORATORY RESULTS

<u>Tests</u>	<u>Date</u>	<u>Value</u> <u>Unit</u>	<u>Normal Range</u>
WBC count	01/26/2008	15 10 ⁹ /l	
serum alkaline phosphatase	01/26/2008	220 u/l	38 - 126
serum aspartate aminotransferase	01/26/2008	70 u/l	17 - 59
complete blood cell count	01/26/2008	15 10 ⁹ /l	5 - 10
blood granulocyte count	01/26/2008	86 %	50 - 70
pulse oximetry Comment: 92-95%	01/28/2008		
urine RBC count Comment: innumerable-abnormal	02/01/2008		
serum alkaline phosphatase	02/??/2008	194 U/L	35 - 125
pulse oximetry Comment: fluctuating from 75 to 80%	02/03/2008		
serum blood urea nitrogen	02/03/2008	36 mg/dL	

C. Suspect medication(s)

1. Name (Give labeled strength & mfr/labeler)

#3 paclitaxel Unk

2. Dose, frequency & route used

#3 Unk/Unk/IV

3. Therapy dates (if unknown, give duration) from/to (or best estimate)

#3 02/01/2008 - 02/01/2008

4. Diagnosis for use (indication)

#3 Non-small cell lung cancer

5. Event abated after use stopped or dose reduced

YES NO N/A UNK

#3 X

6. Lot # (if known)

#3

7. Exp date (if known)

#3

8. Event reappeared after reintroduction

	YES	NO	N/A	UNK
#3				X

C. Suspect medication(s)

10. Concomitant medical products and therapy dates (exclude treatment of event)

DUOVENT	01/03/2008 - Cont
MEDROL	01/17/2008 - 01/26/2008
NASEA	02/01/2008 - 02/01/2008
ZANTAC	02/01/2008 - 02/01/2008
acetaminophen	12/??/2007 - 02/03/2008
azithromycin	01/26/2008 - 01/30/2008
dexamethasone	01/31/2008 - 02/01/2008
dexamethasone	02/01/2008 - 02/01/2008
tramadol hydrochloride	12/??/2007 - 02/03/2008
zolpidem tartrate	02/02/2008 - 02/02/2008