OFFICE OF THE MEDICAL EXAMINER COUNTY OF COOK, ILLINOIS

REPORT OF POSTMORTEM EXAMINATION

NAME JENKINS, KEN'NEKA L.

CASE NO. ME2017-04241

AGE 19 RACE BLACK SEX FEMALE

DATE DEATH PRONOUNCED SEPTEMBER 10, 2017

DATE EXAMINED SEPTEMBER 10, 2017 (10:00AM) EXAMINED BY Kirstin E. Howell, MD

SUPERVISING MEDICAL EXAMINER Kristin Escobar Alvarenga, MD

EXTERNAL EXAMINATION

The body is clothed in a white bra top, blue denim jacket, blue jeans, and purple underwear. Accompanying the body is a left gray shoe. Cook County Morgue identification bands are on the bilateral great toes and right wrist.

The body is that of a normally developed, well-nourished, adult black female. The body weighs 159 pounds, is 66 inches in length, and appears compatible with the reported age of 19 years.

The body is cool following refrigeration. Rigor mortis is well developed and symmetrical in the upper and lower extremities, neck, and jaw. Fixed, red-purple lividity is present on the left anterior and posterior surfaces of the body, except in areas exposed to pressure. The body is well preserved and is not embalmed.

A long black weave is attached to the natural black scalp hair which is braided. The eyes are closed. Long, black false eyelashes are on the upper eyelids. The irides are brown. The corneas are clear. The conjunctivae are mildly hyperemic and free of petechiae on the bulbar and palpebral surfaces. The external auditory canals, nares, and oral cavity are free of foreign material and abnormal secretions. No calvarial or facial fractures are present. The ears are normally developed and have no trauma. Each earlobe is remotely pierced twice. The nose has

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a palpably intact bridge and septum. The lips and frenula are intact. The teeth are natural and in good repair. Examination of the neck reveals no external evidence of injury.

The chest and breasts are symmetrical. No breast masses are palpable. Each nipple is remotely pierced once and there is a multicolored barbell type stud in each piercing defect. The abdomen is slightly rounded.

The pubic hair is shaved. The external genitalia are those of a normal adult female and are free of injury or abnormality. The clitoral hood is remotely pierced and a white metal barbell type stud is in in the piercing defect. The posterior torso is without note. The anus and perineum are atraumatic and unremarkable. The back and buttocks have no traumatic abnormalities.

The upper and lower extremities are well developed and symmetrical. There are no bony deformities, pitting edema or palpable fractures. The fingernails are covered by intact artificial nails covered by white nail polish. The toenails are covered by white nail polish.

TATTOOS, SCARS, AND IDENTIFYING MARKS

1. Tattoos, documented photographically, are on the lower right and left sides of the abdomen and back.

EVIDENCE OF INJURY

- 1. A $1/2 \times 1/4$ inch red purple irregular abrasion is on the lateral right ankle.
- 2. A $1/2 \times 1/2$ inch ill-defined purple contusion is on the posterolateral right leg.

INTERNAL EXAMINATION

Body Cavities: The body is opened by the usual thoracoabdominal Y-shaped incision and the chest plate is removed. No adhesions or abnormal collections of fluid are in any of the body cavities. All body organs are present in the normal anatomic positions. The subcutaneous fat layer of the abdominal wall is 2 cm thick at the umbilicus.

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Head: The scalp is incised and reflected in the usual manner. The intrascalp and subscalp regions have no contusions or hemorrhages. The calvaria and skull base are intact, without bony abnormalities or fractures. The dura mater and falx cerebri are intact and unremarkable. There are no epidural, subdural, or subarachnoid hemorrhages. The 1350 gram brain is normal in shape. The leptomeninges are thin, delicate, and without exudates. The cerebral hemispheres are symmetrical with mild edema as characterized by flattening of the gyri and narrowing of the sulci. The cerebral vessels have no aneurysms or atherosclerosis. The cranial nerves are normally developed. Sections through the cerebral hemispheres reveal no focal lesions of the cortex, white matter, or deep nuclear structures. Sectioning of the brainstem and cerebellum shows no focal abnormalities. The ventricular system is of normal size, shape and configuration.

<u>Neck</u>: An in situ, layered anterior neck dissection reveals no subcutaneous or intramuscular hemorrhage. The tongue is intact and has no bite marks or contusions. The hyoid bone and laryngeal cartilage are intact. The epiglottis is unremarkable. The atlanto-occipital articulation is stable. An in situ, layered posterior neck dissection reveals no subcutaneous or intramuscular hemorrhage. No cervical fractures are visualized or palpated.

Cardiovascular System: The pericardial sac is intact. It has smooth, glistening surfaces and is free of significant fluid or adhesions. The heart weighs 242 grams. The coronary arteries arise normally, follow the usual distribution, and are widely patent with no evidence of atherosclerosis or thrombosis. The chambers and valves exhibit the usual size-position relationships and are unremarkable. The tricuspid valve circumference is 10.2 cm, the pulmonary valve is 5.6 cm, the mitral valve is 8.5 cm, and the aortic valve is 5.5 cm. The myocardium is red-brown and firm, with no focal lesions; the atrial and ventricular septa are intact. The left ventricular wall is 1.3 cm thick, the septum is 1.0 cm, and the right ventricle is 0.3 cm.

The aorta and its major branches arise normally, follow the usual course, and are widely patent. The intimal surface of the aorta is free of atherosclerosis. The vena cavae and their major tributaries return to the heart in the usual distribution and are free of thrombi.

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Respiratory System: The upper airway is clear of debris and foreign material; the mucosal surfaces are smooth, pink-tan, and unremarkable. The pleural surfaces are smooth and glistening with no focal lesions. The pulmonary parenchyma is deep purple, exhibiting slight-to-moderate amounts of bloody fluid upon sectioning; no mass lesions are noted. There is mild anthracosis. The right lung is bilobate; no middle lobe is present. The pulmonary arteries are normally developed, patent, and without thrombus or embolus. The right lung weighs 238 grams and the left lung weighs 193 grams.

<u>Hepatobiliary System</u>: The liver weighs 1176 grams. The hepatic capsule is smooth, glistening, intact, and covers a moderately firm, red-brown parenchyma. No nodules or lesions are identified. No fibrosis is visible or palpable.

The gallbladder contains approximately 20 mL of watery green-brown bile; the mucosa is velvety and unremarkable. The extrahepatic biliary tree is patent, without evidence of calculi.

Alimentary System: The esophagus is lined by gray-pink, smooth mucosa. The gastric mucosa is slightly autolyzed and normally rugated. There are scattered punctate to 0.3 cm black, flat lesions on the gastric mucosa. The lumen contains trace mucoid material. No tablets or capsules are noted. The small and large intestines are unremarkable externally. The appendix is present.

Genitourinary System: The right kidney weighs 136 grams; the left kidney weighs 159 grams. The renal capsules are smooth, thin, semitransparent, and strip with ease from the underlying smooth, slightly lobulated, red-brown cortical surfaces. The cortices are sharply delineated from the medullary pyramids which are purple-tan and unremarkable. The calyces, pelves, and ureters are without note. The urinary bladder contains trace yellow urine. The bladder mucosa is tan pink and unremarkable.

The uterus has a pink-tan, glistening serosa and unremarkable myometrium and endometrium. The vaginal vault is atraumatic and unremarkable. Both ovaries are of normal size with cerebriform external surfaces. No lesions of the ovaries are identified. The fallopian tubes are unremarkable. There is no evidence of intrauterine pregnancy.

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Hemolymphatic System: The 93 gram spleen is covered by a smooth, blue-gray and intact capsule. The parenchyma is firm and red-purple, without masses or nodules. The regional lymph nodes appear normal. The thymus is not identified.

Endocrine System: The pituitary is unremarkable. The thyroid gland is of normal position, size, and texture. The adrenal glands have normal cut surfaces with yellow cortices and golden brown medullae. The pancreas has a pink-yellow, lobulated appearance without hemorrhage. The pancreatic ducts are clear.

<u>Musculoskeletal System</u>: The vertebral column, pelvis, and long bones of the extremities are intact, without palpable fractures. The skeletal muscle is uniformly red-brown, with no muscular atrophy. The diaphragm is intact.

SPECIMENS SUBMITTED

- 1. A DNA blood stain card is retained.
- 2. Samples of vitreous fluid, central blood, peripheral blood, bile, and urine are submitted to the toxicology laboratory for analysis.
- 3. Sections of various organs are submitted for microscopic analysis.
- 4. Sections of organs are retained.

PATHOLOGICAL FINDINGS

- I. Cold exposure.
 - A. Found in walk-in freezer (investigation).
 - B. Wischnevsky lesions in the stomach.
- II. Ethanol and topiramate intoxication.
 - A. Ethanol in peripheral blood (112 mg/dL).
 - B. Ethanol in vitreous humor (157 mg/dl).
 - C. Topiramate in peripheral blood (3000 ng/ml).
 - D. Visibly impaired (investigation).
- III. Superficial blunt force injuries:
 - A. Abrasion of lateral right ankle.
 - B. Contusion of posterolateral right leg.

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- IV. Cerebral edema, nonspecific.
- V. Bilobate right lung.

OPINION

This 19-year-old black female, KEN'NEKA L. JENKINS, died of hypothermia due to cold exposure in a walk-in freezer. Ethanol and topiramate intoxication were significant contributing factors in her death.

According to investigation, the decedent was found unresponsive in the freezer of the walk-in dual compartment cooler and freezer unit which was located in an unused kitchen of the hotel. Police and emergency medical personnel determined that the decedent was dead at the scene.

Video surveillance recorded the decedent entering the kitchen alone at approximately 0332 hours on September 9, 2017 but recordings did not clearly show her entering the hotel walk-in dual compartment cooler and freezer unit. She was discovered unresponsive in the freezer approximately 21 hours after she was documented entering the kitchen.

Per investigation, the walk-in dual compartment cooler and freezer unit was operational, although not currently in use by the hotel. The doors of both the cooler and freezer had external handles that must be pulled to open, and both doors were equipped with a circular, functional, internal door opening mechanism. The freezer was empty. The temperature within the walk in freezer was 34° Fahrenheit approximately two hours after discovery (note: the doors of the cooler and freezer had been open for approximately 2 hours when this temperature was recorded). The freezer had the capacity to go to 8° Fahrenheit.

At autopsy, the body was not frozen. The stomach demonstrated Wischnevsky lesions and the brain was edematous (swollen). The autopsy did not reveal any trauma that would have caused or contributed to her death. A superficial abrasion (scrape) was on the right ankle and a contusion (bruise) was on the right leg. There was no other evidence of external or internal trauma.

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Postmortem toxicology was remarkable for ethanol, which was identified in the peripheral blood at a concentration of 112 mg/dL and in the vitreous humor at a concentration of 157 mg/dL. Topiramate was also identified in the peripheral blood at a concentration of 3000 ng/ml. These drugs can cause increased somnolence, impaired memory and concentration, poor coordination, confusion and impaired judgment. Central nervous system depression combined with cold exposure can hasten the onset of hypothermia and death.

<u>CAUSE OF DEATH</u>: Hypothermia due to cold exposure in a walk-in freezer with ethanol and topiramate intoxication as significant contributory conditions.

MANNER OF DEATH: Accident.

Kirstin E. Howell, MD Forensic Pathology Fellow

10/6/2017

Supervised by Kristin Escobar Alvarenga, MD Assistant Medical Examiner

WTT:jm J: 341286

D: 09/11/17@11:41 T: 09/12/17@18:34



NMS Labs

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Robert A. Middleberg, PhD, F-ABFT, DABCC-TC, Laboratory Director

Corrected Report

Report Issued 09/27/2017 09:00 **Last Report Issued** 09/23/2017 13:01

To: 10075

Cook County Medical Examiner Attn: Dr. Eimad Zakariya 2121 West Harrison Street Chicago, IL 60612 Patient Name Patient ID

JENKINS, KEN' NEKA L ME2017-04241, 17-3579

Chain 17284523

Age 19 Y **DOB** 05/27/1998

Gender Female Workorder 17284523

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Positive Findings:

Compound	Result	<u>Units</u>	Matrix Source
Ethanol	112	mg/dL	001 - Peripheral Blood
Blood Alcohol Concentration (BAC)	0.112	g/100 mL	001 - Peripheral Blood
Caffeine	Positive	mcg/mL	001 - Peripheral Blood
Topiramate	3000	ng/mL	001 - Peripheral Blood

See Detailed Findings section for additional information

Testing Requested:

Analysis Code	Description		
9326B	Gamma-Hydroxybutyric Acid Screen, Blood		
8052B	Postmortem, Expanded, Blood (Forensic)		
8050U	Postmortem, Urine Screen Add-on (6-MAM Quantification only)		

Specimens Received:

ID T	ube/Container	Volume/ Mass	Collection Date/Time	Matrix Source	Miscellaneous Information
001 G	ray Top Tube	8.75 mL	09/10/2017	Peripheral Blood	
002 B	lue Vial	10 mL	09/10/2017	Urine	

All sample volumes/weights are approximations.

Specimens received on 09/14/2017.

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Workorder

17284523 17284523

Patient ID

Chain

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Detailed Findings:

Analysis and Comments	Result	Units	Rpt. Limit	Specimen Source	Analysis By
Ethanol	112	mg/dL	10	001 - Peripheral Blood	Headspace GC
Blood Alcohol Concentration (BAC)	0.112	g/100 mL	0.010	001 - Peripheral Blood	Headspace GC
Caffeine	Positive	mcg/mL	0.20	001 - Peripheral Blood	LC/TOF-MS
Topiramate	3000	ng/mL	200	001 - Peripheral Blood	LC-MS/MS
Ethanol	Confirmed	mg/dL	10	001 - Peripheral Blood	Headspace GC

Other than the above findings, examination of the specimen(s) submitted did not reveal any positive findings of toxicological significance by procedures outlined in the accompanying Analysis Summary.

Reference Comments:

1. Caffeine (No-Doz) - Peripheral Blood:

Caffeine is a xanthine-derived central nervous system stimulant. It also produces diuresis and cardiac and respiratory stimulation. It can be readily found in such items as coffee, tea, soft drinks and chocolate. As a reference, a typical cup of coffee or tea contains between 40 to 100 mg caffeine.

The reported qualitative result for this substance was based upon a single analysis only. If confirmation testing is required please contact the laboratory.

2. Ethanol (Ethyl Alcohol) - Peripheral Blood:

Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples. The blood alcohol concentrations (BAC) can be expressed as a whole number with the units of mg/dL or as a decimal number with units of g/100 mL which is equivalent to % w/v. For example, a BAC of 85 mg/dL equals 0.085 g/100 mL or 0.085% w/v of ethanol.

3. Topiramate (Topamax®) - Peripheral Blood:

Topiramate is an anticonvulsant drug with central nervous system depressant effects. The majority of epileptic patients taking 200 to 400 mg topiramate daily had mean trough serum topiramate concentrations between 2400 and 8000 ng/mL. Topiramate may also be used as a treatment for migraines (25 to 100 mg daily) and to promote weight loss (23 to 92 mg daily). The blood to plasma ratio for topiramate varies depending on the concentration, but is typically greater than 2.

Common adverse effects include somnolence, dizziness, impaired memory and concentration, nausea, and diarrhea. Signs of overdose may include convulsions, drowsiness, poor coordination, slurred speech, confusion and agitation. Topiramate deaths have been reported at concentrations greater than 49000 ng/mL in blood.

Sample Comments:

001 * Patient Name modified 09/26/17. Previous value: JENKINS, KENNEKA

001 Physician/Pathologist Name: DR. HOWELL

Unless alternate arrangements are made by you, the remainder of the submitted specimens will be discarded one (1) year from the date of this report; and generated data will be discarded five (5) years from the date the analyses were performed.

Workorder 17284523 was electronically signed on 09/27/2017 08:21 by:

Denice M. Teem, Certifying Scientist

Leuw M In



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Patient ID ME2017-04241, 17-3579

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Analysis Summary and Reporting Limits:

All of the following tests were performed for this case. For each test, the compounds listed were included in the scope. The Reporting Limit listed for each compound represents the lowest concentration of the compound that will be reported as being positive. If the compound is listed as None Detected, it is not present above the Reporting Limit. Please refer to the Positive Findings section of the report for those compounds that were identified as being present.

Acode 5101B - Gamma-Hydroxybutyric Acid Confirmation, Blood - Peripheral Blood

 -Analysis by Gas Chromatography/Mass Spectrometry (GC/MS) for:

<u>Compound</u> <u>Rpt. Limit</u> <u>Compound</u> <u>Rpt. Limit</u>

Gamma-Hydroxybutyric Acid 2.0 mcg/mL

Acode 52127B - Topiramate Confirmation, Blood (Forensic) - Peripheral Blood

-Analysis by High Performance Liquid Chromatography/

TandemMass Spectrometry (LC-MS/MS) for:

Compound Rpt. Limit Compound Rpt. Limit

Topiramate 200 ng/mL

Acode 52250B - Alcohols and Acetone Confirmation, Blood (Forensic) - Peripheral Blood

-Analysis by Headspace Gas Chromatography (GC) for:

 Compound
 Rpt. Limit
 Compound
 Rpt. Limit

 Acetone
 5.0 mg/dL
 Isopropanol
 5.0 mg/dL

 Ethanol
 10 mg/dL
 Methanol
 5.0 mg/dL

Acode 8050U - Postmortem, Urine Screen Add-on (6-MAM Quantification only)

-Analysis by Enzyme Immunoassay (EIA) for:

Compound Rpt. Limit Compound Rpt. Limit **Amphetamines** 500 ng/mL Fentanyl / Metabolite 2.0 ng/mL Barbiturates 0.30 mcg/mL Methadone / Metabolite 300 ng/mL Benzodiazepines 50 ng/mL Opiates 300 ng/mL Cannabinoids 20 ng/mL Oxycodone / Oxymorphone 100 ng/mL Cocaine / Metabolites 150 ng/mL Phencyclidine 25 ng/mL

Acode 8052B - Postmortem, Expanded, Blood (Forensic) - Peripheral Blood

-Analysis by Enzyme-Linked Immunosorbent Assay (ELISA) for:

 Compound
 Rpt. Limit
 Compound
 Rpt. Limit

 Barbiturates
 0.040 mcg/mL
 Salicylates
 120 mcg/mL

Cannabinoids 10 ng/mL

-Analysis by Headspace Gas Chromatography (GC) for:

 Compound
 Rpt. Limit
 Compound
 Rpt. Limit

 Acetone
 5.0 mg/dL
 Isopropanol
 5.0 mg/dL

 Ethanol
 10 mg/dL
 Methanol
 5.0 mg/dL



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Workorder 17284523 Chain

17284523

Patient ID

ME2017-04241, 17-3579

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Analysis Summary and Reporting Limits:

-Analysis by High Performance Liquid Chromatography/Time ofFlight-Mass Spectrometry (LC/TOF-MS) for: The following is a general list of compound classes included in this screen. The detection of any specific analyte is concentration-dependent. Note, not all known analytes in each specified compound class are included. Some specific analytes outside these classes are also included. For a detailed list of all analytes and reporting limits, please contact NMS Labs.

Amphetamines, Anticonvulsants, Antidepressants, Antihistamines, Antipsychotic Agents, Benzodiazepines, CNS Stimulants, Cocaine and Metabolites, Hallucinogens, Hypnosedatives, Hypoglycemics, Muscle Relaxants, Non-Steroidal Anti-Inflammatory Agents, Opiates and Opioids.

Acode 9326B - Gamma-Hydroxybutyric Acid Screen, Blood - Peripheral Blood

-Analysis by Gas Chromatography/Mass Spectrometry (GC/MS) for:

Compound Rpt. Limit Compound Rpt. Limit

Gamma-Hydroxybutyric Acid 2.0 mcg/mL OFFICE OF THE MEDICAL EXAMINER COUNTY OF COOK, ILLINOIS 2121 W. Harrison Street Chicago, IL 60612 TOXICOLOGY REPORT

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FINAL

M.E. Case:

ME2017-04241

Deceased Name:

JENKINS, KEN' NEKA L

Autopsy Date:

09/10/2017

Report Date: Pathologist:

09/27/2017 Howell, Kirstin

Gender: Race:

Tox Case:

Female

17-3579

Black

Age:

19

Confirmed Positives

Sample # Analyte

Sample Type

Methodology

Result

Foot note

Screen

Sample # Analyte

Sample Type

Methodology

Result

Subcontracted Tests

Test Name

6-MAM Urine Screen Add-on (8050U) NMS

Expanded Postmortem Toxicology, NMS

See NMS Report for Results See NMS Report for Result

GHB (NMS)

See NMS Report for Result

Comments (See NMS and/or LabCorp Reports, if applicable)

GHB: got verbal approval from Dr. A.

Lab Director

Date reviewed:

09/27/2017

Footnotes

Test Panels

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AMENDED

M.E. Case:

ME2017-04241

Deceased Name:

JENKINS, KEN' NEKA L

Autopsy Date: Report Date:

09/10/2017 10/05/2017

Pathologist:

Howell, Kirstin

Tox Case:

17-3579 Female

Gender: Race:

Black

Age:

19

Confirmed Positives

01-07

Sample # Analyte **ETHANOL** Sample Type VITREOUS HUMOR Methodology GC_GC

Result 157 mg/dL Foot note (1)

Screen

Sample # Analyte 01-07 **ETHANOL**

Sample Type VITREOUS HUMOR Methodology

Result

Positive

Subcontracted Tests

Test Name

6-MAM Urine Screen Add-on (8050U) NMS Expanded Postmortem Toxicology, NMS

GHB (NMS)

See NMS Report for Results See NMS Report for Result See NMS Report for Result

Comments (See NMS and/or LabCorp Reports, if applicable)

GHB: got verbal approval from Dr. A. Stat vitreous ethanol also ordered. ez

AMENDED BY: ZAKARIYA, EIMAD

Lab Director

Date reviewed:

10/05/2017

Footnotes

Quantitation by GC, Confirmation by GC

Test Panels