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**HILLER, PC**  
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UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

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MARVIN WASHINGTON, DEAN :  
BORTELL, as Parent of Infant ALEXIS :  
BORTELL; JOSE BELEN; SEBASTIEN :  
COTTE, as Parent of Infant JAGGER :  
COTTE; and CANNABIS CULTURAL :  
ASSOCIATION, INC., :

Plaintiffs, :

- against - :

JEFFERSON BEAUREGARD SESSIONS, :  
III, in his official capacity as United States :  
Attorney General; UNITED STATES :  
DEPARTMENT OF JUSTICE; CHARLES :  
"CHUCK" ROSENBERG, in his official :  
capacity as the Acting Director of the Drug :  
Enforcement Administration; UNITED :  
STATES DRUG ENFORCEMENT :  
ADMINISTRATION; and the :  
UNITED STATES OF AMERICA, :

Defendants. :

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State of Colorado )  
  :.ss:  
County of Douglas )

**AFFIDAVIT OF  
DR. MARGARET GEDDE**

17 Civ. 5625

**MARGARET GEDDE, MD**, having been duly sworn, deposes and says:

1. I am, and since 1993 have been, a medical doctor, with specialties in pathology, laboratory medicine and medical cannabis. I submit this Affidavit in connection with the request

by Alexis Bortell for relief from the restrictions associated with the Controlled Substances Act. As discussed below, Alexis is, and for approximately three years has been, under my care and has been treating successfully with medical Cannabis. Were Alexis to discontinue her medical Cannabis, I would be greatly concerned that her health would rapidly and substantially deteriorate, posing a risk to her safety and her life.

***My Background***

2. I am a 1981 graduate of Columbia University, with a Bachelor's of Science in Biochemistry. In 1993, I received both my medical degree and my Ph. D. in Biochemistry from Stanford University. From 1993 to 1997, I served as a Resident and Clinical Instructor at the University of Pennsylvania Medical Center, Division of Laboratory Medicine. From 1994-1995, I served as the Chief Resident and as a Post-Doctoral Fellow, also at University of Pennsylvania Medical Center.

3. In 1997, I became Board Certified in Clinical Pathology. I was a Howard Hughes Medical Institute Physician Postdoctoral Fellow from 1996-1999. I also performed research at such world-class institutions as The Rockefeller University and Sloan-Kettering Cancer Institute. All tolled, I performed approximately 12 years of research in molecular biology, microbiology, protein chemistry, biochemistry and biophysics. From 1999-2004, I served as a pharmaceutical development director and consultant.

4. Among the Honors and Awards I have received include:

- 1985 - Kevin Walton Summer Fellowship
- 1990 to 1992 - Jameson Research Foundation Fellowship
- 1995 to 1996 - Infectious Diseases and Virology Training Grant (NIH)

5. My published writings include:

- Maulucci-Gedde M, Choi DW. 1987. Cortical neurons exposed to glutamate rapidly leak preloaded 51-chromium. *Experimental Neurology* 96:420-429.
- Choi DW, Maulucci-Gedde M, Kriegstein AR. 1987. Glutamate toxicity in cortical cell culture. *Journal of Neuroscience* 7:357-368.
- Gedde MM, Yang E, Huestis WH. 1995. Response of human erythrocyte shape to altered cell pH. *Blood* 86:1595-1599.
- Mazzaccaro RJ, Gedde MM, Jensen ER, van Santen HM, Ploegh HL, Rock KL, Bloom BR. 1996. Major histocompatibility class 1 presentation of soluble antigen facilitated by *Mycobacterium tuberculosis* infection. *Proceedings of the National Academy of Science, USA* 93:11786-11791.
- Gedde MM, Huestis WH. 1997. Membrane potential and human erythrocyte shape. *Biophysical Journal* 72:1220-1233.
- Gedde MM, Davis DK, Huestis WH. 1997. Cytoplasmic pH and human erythrocyte shape. *Biophysical Journal* 72:1234-1246.
- Gedde MM, Yang E, Huestis WH. 1999. Resolution of the paradox of red cell changes in low and high pH. *Biochimica et Biophysica Acta* 1417:246-253.
- Gedde MM, Higgins DE, Tilney LG, Portnoy DA. 2000. Role of listeriolysin O in cell-to-cell spread of *Listeria monocytogenes*. *Infection and Immunity* 68:999-1003.
- Glomski IJ, Gedde MM, Tsang AW, Swanson JA, Portnoy DA. 2002. The *Listeria monocytogenes* hemolysin has an acidic pH optimum to compartmentalize activity and prevent damage to infected host cells. *Journal of Cell Biology* 156:1-12.
- Baden LR, Critchley IA, Sahm DF, So W, Gedde M, Porter S, Moellering RC Jr, Eliopoulos G. 2002. Molecular characterization of vancomycin-resistant enterococci repopulating the gastrointestinal tract following treatment with a novel glycolipopeptide, ramoplanin. *Journal of Clinical Microbiology* 40:1160-3.
- Chen JY, Brunauer LS, Chu FC, Helsel CM, Gedde MM, Huestis WH. 2003. Selective amphipathic nature of chlorpromazine binding to plasma membrane bilayers. *Biochimica Biophysica Acta (Biomembranes)* 1616(1):95-105.

Continuing Education Articles.

- Gedde MM, Kricka LJ. 1994. Serum ferritin measurement: a case study approach to quality improvement. *Endocrinology and Metabolism In-Service Training and Continuing Education* 12(7):179-183.
- Gedde MM, Kricka LJ. 1994. Rhabdomyolysis. *Endocrinology and Metabolism In-Service Training and Continuing Education* 12(9):241-246.

6. My Abstracts include:

- Dec 1989  
American Society for Cell Biology, Houston, TX  
Gedde MM, Huestis WH.  
“Roles of internal pH, cell volume, and membrane potential in human erythrocyte pH-induced shape change.” *Journal of Cell Biology* 109:175a.
- Feb 1991  
Biophysical Society, San Francisco, CA  
Gedde MM, Huestis WH. “Human erythrocyte shape change induced by changes in buffer pH is most dependent on changes in cytoplasmic pH.” *Biophysical Journal* 59:639a.
- Dec 1993  
American Society for Cell Biology, New Orleans, LA  
Gedde MM, Yang E, Huestis WH. “Hydrophobic protein-lipid associations in human erythrocyte cell pH-mediated shape change.” *Molecular Biology of the Cell* 4:85a.
- Dec 1997  
American Society for Cell Biology, Washington, D.C  
Gedde MM, Higgins DE, Tilney LG, Portnoy DA. “Role of the pore-forming protein, listeriolysin O, in the cell-to-cell spread of *Listeria monocytogenes*.” *Molecular Biology of the Cell* 8:237a.
- Dec 1998  
American Society for Cell Biology, San Francisco, CA  
Chen JY, Chu FC, Gedde MM, Huestis WH. “Selective electrostatic interactions of chlorpromazine with plasma membrane components.” *Molecular Biology of the Cell* 9:80a.
- Feb 1999  
Biophysical Society, Baltimore, MD  
Gedde MM, Portnoy DA. “Structural basis of the pH-dependence of the

pore-forming protein listeriolysin O.” Biophysical Journal 76:22a.

- Feb 2000  
1st International ASM Conference on Enterococci, Banff, Alberta, Canada  
So W, White DJ, Gedde MM. “Comparison of selective media for isolation of vancomycin-resistant enterococci.” February 27 to March 2, 2000.
- Feb 2000  
1st International ASM Conference on Enterococci, Banff, Alberta, Canada  
Baden L, Critchley I, Sahn D, So W, Gedde MM, Porter S, Moellering RC Jr, Eliopoulos G. “Pulsed-field gel electrophoresis of VRE DNA isolated during a phase II clinical study of the novel glycolipodepsipeptide ramoplanin.” February 27 to March 2, 2000.
- May 2000  
American Society for Microbiology, Los Angeles, CA  
Gedde MM, Glomski IJ, Portnoy DA. “The role of the acidic pH optimum of listeriolysin O in *Listeria monocytogenes* pathogenesis.” 100th General Meeting. Abstract D-59, p 239.
- Sept. 2000  
Symposium on Pore-Forming Toxins, Trento, Italy  
Glomski IJ, Gedde MM, Portnoy DA. “Increasing the hemolytic activity of listeriolysin O at neutral pH decreases the virulence of *Listeria monocytogenes*.” September 14-17, 2000.
- Dec 2000  
1st Intl Symposium on Resistant Gram-Positive Infections, San Antonio, TX  
White DJ, Visweswaran V, So W, Hurst MA, Gedde MM. “Resistance profile of ramoplanin, a novel glycolipodepsipeptide with selective gram-positive activity.” December 3-5, 2000.
- Oct 2001  
North American Cystic Fibrosis Conference, Orlando, FL  
Loury DL, Gedde MM, Woods DE. “Aerosolized protegrin analog iseganan (IB-367) reduces microbial density in a rat model of lung infection with *Pseudomonas aeruginosa*.” October 25 28, 2001.

7. Since 2004, I have maintained my own medical practice, with a concentration in treating patients in the context of the specialties referenced above.

*Alexis*

8. I began treating Alexis approximately three years ago. At the time, she had been diagnosed with intractable epilepsy, which is a seizure disorder that is resistant to medical treatment. These seizures are also often referred to as “uncontrolled,” “refractory” and “drug-resistant.” Those who suffer from intractable epilepsy have higher mortality rates than those who do not have the disease. The causes of death vary from, among other things, non-CNS malignancies, cardiovascular and cerebrovascular diseases, to death caused by the epilepsy itself (*i.e.*, sudden unexpected death in epilepsy otherwise known as SUDEP or status epilepticus).

9. Alexis’s form of intractable epilepsy was particularly challenging. She had, for approximately two years, experienced seizures on approximately a daily basis, often with multiple seizures in a single day. Video footage confirmed that Alexis would become non-responsive and seize as her parents attempted to administer medications to resolve the episode. When those efforts were unsuccessful, Alexis was rushed to the emergency room and was also hospitalized. Alexis generally did not respond to the medications prescribed for her. Consequently, her disease proceeded on its course, ostensibly as if untreated. Ultimately, Alexis’s physicians suggested brain surgery – a procedure which has had mixed results with patients.

10. I began Alexis on a regimen of medical Cannabis and she responded almost immediately. Since beginning her regimen of Cannabis, Alexis has not experienced a single seizure. That regimen includes: (i) daily doses of Haleigh’s Hope, which consists of a high strain of CBD and a lower strain of THC; and (ii) medical Cannabis with a higher concentration of THC to prevent the onset of an imminent seizure. I have recommended that Alexis take Haleigh’s Hope every day, and take the medical Cannabis with a higher concentration of THC only when she experiences pre-seizure sensations. In essence, the medical Cannabis with a higher concentration of THC is

comparable to a rescue inhaler for an asthmatic, or an epi-Pen for a person who suffers from anaphylaxis.

11. Studies around the Country have confirmed that Alexis's experience is not unique. Use of medical Cannabis, in various forms, has been administered to reduce and, in many cases, eliminate completely, the seizure activity that has haunted patients, particularly children, for decades. Without her two medications, Alexis would be at risk for relapse, which, in turn, would subject her to the seizures she has been able to avoid for approximately three years. Were the seizures to return, Alexis's quality of life would be reduced dramatically. She would be subjected to the suffering associated with seizure activity, along with the risks associated with the new onset, including death.

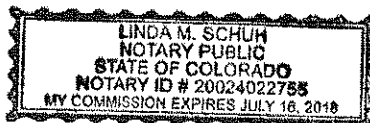
12. To date, no medication has resolved Alexis's symptoms other than Haleigh's Hope and the medical Cannabis with higher concentrations of THC. She does not take any other anti-seizure medication. Neither Alexis nor her family has reported any adverse side effects from the administration of her medical Cannabis.

I believe it is important for people to hear Alexis's story. The amount of publicly-disseminated disinformation relating to medical Cannabis and its administration to patients, including pediatric patients, is alarming and has unfortunately led to misunderstandings regarding what the medication is and how it works.

*M Gedde MD*

Margaret Gedde, MD

Sworn before me this 6<sup>th</sup>  
day of September, 2017.



*Linda M. Schuh*  
Notary