Testimony of Matthew Harrison, M.D. to Senate State Affairs Committee **Feb. 12, 2018**

Mr. Chairman, Members of the State Affairs Committee, I am Dr. Matthew Harrison and I am here to ask for your support of S1243.

I would like to start by saying that like most physicians, I do not want to be told how to practice medicine by the government. But the job of the legislature is to ensure the protection and safety of its citizens against harmful, unethical, or dishonest practice and I am pleased to see that this committee has taken the time and interest to better understand the science behind Abortion Pill Reversal when a mother chooses life for her child. Many on this committee have a solid record of supporting women in their choice in medical care, and Abortion Pill Reversal has done just that, creating a network of providers who are ready at a moment's notice to help women who have changed their minds and want to save the life of their unborn child.

As a matter of credentials, I hold a Bachelor's Degree and a Master's Degree in Biology from the College of William and Mary. I have worked in research labs at Johns Hopkins, Duke, and the Medical College of Virginia where I coauthored papers in peer reviewed journals, refining protocols for childhood leukemia (1) and identifying cannabinoid receptors in rat brain (2), as well as searching for genes on chromosome 19 that may be associated with Alzheimer's Disease. I was awarded my Doctorate in Allopathic Medicine from the Medical College of Virginia and completed my residency at the University of South Alabama where I served as Chief Resident. I am currently a Board Certified Diplomate of the American Academy of Family Practice and work fulltime as a Hospitalist, with admitting privileges at 3 hospitals and active medical licenses in North Carolina and Virginia. I am the Medical Director for a free prenatal clinic near Charlotte as well as the Student Health Center at Belmont Abbey College. I am an Assistant Professor at Campbell Osteopathic School of Medicine and have served as an expert medical witness for the state of North Carolina. I might not be the sharpest tool in the shed, but I can assure you that I am not a purveyor of "junk science."

Abortion Pill Reversal is a "real thing" and is based on real science. Mifepristone, the abortion pill, is a progesterone receptor antagonist. It blocks the action of progesterone by blocking the receptor. This prevents the formation of healthy blood vessels to the developing embryo and the mother's body is tricked into thinking there is no progesterone. The lining of the uterus sloughs off just like in a normal menstrual cycle and the embryo dies. The second pill is taken 24-48 hours later and induces contractions, expelling the embryo (3). In 2006, a young woman named Ashley came into my office asking if there was any way for me to "save her baby" after she had taken the abortion pill 36 hours earlier. Knowing how Mifepristone worked, I offered her the chance of reversal by giving her progesterone supplementation, which we had already been using in our office as part of fertility treatments, to outcompete the Mifepristone at the receptor. Mifepristone is like a key that fits into a lock but cannot open it. By adding more functional keys, we are able to outcompete the mifepristone and turn the lock, activate the progesterone receptor, and sustain the life of the embryo. Even the pro-choice director of the reproductive and placental research unit at Yale School of Medicine, Dr. Harvey Kliman, said, "I think this is actually totally feasible...I bet you it would work," and said that he would give his daughter progesterone if she wanted to reverse her abortion (4). Ashley went on the deliver a healthy baby girl named Kaylie who is now 11 years old and doing great.

In 2012, Dr. George Delgado and Dr. Mary Davenport published a case study report in the Annals of Pharmacology, detailing 6 case reports of women who had attempted to rescue their embryos after

medical abortion attempt. 4 of these were successful and 2 abortions completed (5). Since that time we have seen over 350 healthy babies born with over 100 more mothers continuing their pregnancies while currently on the protocol. There are over 400 providers that are ready and willing to offer reversals and we have had successful attempts in 14 countries. Our success rate overall is around 55% but with perfect use of either the injection protocol or the twice a day pill protocol, the success rate is reaching 70%. A second case study was just published in Europe this past december concluding that progesterone should be studied to look into its ability to reverse abortions (6). But some, even in the medical community, are touting this as "junk science" and not standard of care. So let me address these challenges regarding our data.

First, we should have a general understanding of how research is performed and how new drugs or protocols come into being. A woman who has just tried to abort her child and then changed her mind is generally in a very delicate and often emotional state of mind when seeking medical care to reverse her abortion. But that doesn't mean she should be ignored or pressured to complete a procedure she does not want. Instead we should respect her wishes and do whatever we can to save her child while keeping her safety of utmost importance. The best way to help the person in the womb, is to help the person with the womb, and that is what we strive to do. Our data, therefore, must be restrospectively collected. It certainly would be unethical to give 1000 pregnant women the abortion pill and then give half of them progesterone and the other half placebo and see how many embryos survive, but that seems to be what some of our opposition would like to do. Instead, we take the science that is known to us already and apply it in the new way.

1. The science of progesterone competing with mifepristone for the receptor site is solid. This is easily found and described in the literature that was used to approve the abortion pill for use in 2000.
2. Animal models have shown that the effects of mifepristone on mice are reversed and nullified by progesterone supplementation (7).
3. Our retrospective case studies of almost 1000 women who have chosen to rescue their offspring has consistently shown 55% or greater successful reversals.

One of the main attacks on this science is from physicians saying that if a woman takes the first pill but not the second one that induces labor, that the chance of failed abortion is between 20%-50%. I have coauthored a paper with Dr. Mary Davenport that carefully reviews the literature regarding pregnancy termination by mifepristone alone (8). We reviewed hundreds of papers to find out the true survival rate of embryos after exposure to the abortion pill without exposure to the labor inducing pill. Our review shows that the true survival rate of embryos to be between 10% and 23.3% when they are only exposed to the abortion pill. This is significantly lower than the 55%-70% survival rate that we see after progesterone rescue. So where are their 50% failed abortion rates coming from? In the literature sited by opponents, they define "failed abortion" as the failure of the mother to expel a dead embryo or fetus. So, many of the "failed abortions" actually have resulted in a dead embryo, but it has remained in the uterus and was not expelled when the labor inducing pill was not taken. So there is no doubt that the progesterone treatments are effective. But what about safety?

Progesterone supplementation has been used for over 30 years in fertility treatments, specifically in women who have shortened luteal phases and are unable to produce enough progesterone to sustain a pregnancy, often resulting in multiple miscarriages. Dr. Thomas Hilgers has done the bulk of this

research while developing NaPro fertility treatment protocols. It has been found safe for the mother and produces no increased risk of birth defects to the baby (9). We use bioidentical progesterone, such as Prometrium at physiologically equivalent levels, so risk of clots or other side effects to the mother is minimal. The incidence of serious side effects for women using supplemental progesterone is no greater than for women using similar doses for birth regulation. Gynecologists consider progesterone use for birth control or cycle control as standard of care, and they routinely prescribe if for years on end. Our protocol, however, generally uses progesterone only for about 3 to 7 weeks, from the time of attempted abortion to the end of the first trimester. But what about birth defects in babies that survive the abortion pill? Surprising, the only birth defect that has been attributed to the abortion pill, mifepristone, is death. In embryos that survive the abortion pill, there is no significant increase in other birth defects (10). If embryos survive the combination of Mifepristone and Misoprostol, there is a 5%-50% chance of Moebius Syndrome which causes a weakness or paralysis of the 6^{th} and or 7^{th} cranial nerves resulting in an inward turning eye or a facial nerve palsy and possibly limb abnormalities (11). But our patients have not taken the second pill which can cause birth defects. So, to reiterate, there is no increased risk of birth defects with progesterone use or with the abortion pill, but there is an increased risk if the embryo is exposed to misoprostol.

So we have established the science and the safety, but why the law? In speaking with the hundreds of women that have taken the abortion pill and regretted it, we have heard countless stories of mothers returning to the abortion clinic for help, only to be mislead by incorrect information and scare tactics to complete their abortions. This is unethical, unscientific, and can be unsafe for a frustrated mother who may then abandon all medical advice and have a prolonged and unsupervised abortion at home. S1243 provides for mothers to have full informed consent regarding the possibility of reversal if they change their minds. Mothers who do not change their minds can simple ignore the information, but for those that have regrets, this information gives them hope, help, and the potential of life for their child. Thank you, Mr Chairman and members of the State Affairs Committee, I will be happy to answer any of your questions.

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2. **Immunohistochemical localization of the neural cannabinoid receptor in rat brain**, Denise A. Dove Pettit, Matthew P. Harrison, John M. Olsen, Robert F. Spencer, Guy A. Cabral, *Journal of Neuroscience Research*, Feb 1998.
3. **RU486 (mifepristone): mechanisms of action and clinical uses.** Cadepond, F. et al. *Annu Rev Med.* 1997.
4. **A New Front in the War Over Reproductive Rights: 'Abortion-Pill Reversal,'** Ruth Graham, *The New Your Times Magazine*, July 2017.
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6. **Progesterone for preventing pregnancy termination after initiation of medical abortion with mifepristone,** Deborah Garratt, Joseph V. Turner, *The European Journal of Contraception & Reproductive Health Care.* Dec 2017.

7. **The effect of RU486 and progesterone on luteal function during pregnancy,** Yamabe, S; Katayama, K; Mochizuki, M, *Nihon Naibunpi Gakkai Zasshi.* May 1989.
8. **Embryo survival after mifepristone: a systematic review of the literature**, M Davenport, G Delgado, MP Harrison, V Khauv, *Issues in Law and Medicine*, 2017.
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10. **Continuation of pregnancy after first-trimester exposure to mifepristone: an observational prospective study,** N Bernard, E. Elefant, P Carlier, M Tebacher, CE Barjhoux, MA Bod-Thompson, E Amar, J Descotes, T Vial, *BJOG: An International Journal of Obstetrics & Gynecology,* April 2013.
11. **Use of Misoprostol during Pregnancy and Moebius Syndrome in Infants,** A. Patuszak, L. Schuler, C. Speck-Martins, K. Coelho, et al. *The New England Journal of Medicine*, June 1998.

How Can You be a Part of This History Changing Team?

irst, pray that God will open the door for the APR Protocol to be used in emergency epartments throughout the country. Second, please support this ministry financially

$25 will provide Progesterone for 2 days to help bring back health and vitality to God's precious child.

$50 will assist us in contacting 10 doctors throughout the country, to introduce them to this protocol so that they may be able to safely and effectively administer the progesterone injections to that mother who so greatly desires a "second chance."

$100 will provide the counseling and ultrasound procedure to make the difference in the mother's choosing life.

$200 will staff our 24/7 APR Hotline for one day.

$1000 will cover progesterone, ultrasound exams and medical appointments for women undergoing reversal.

For More Information, Please Contact:

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Or Visit Our Website at:

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Since 2000 When Mifepristone (RU 486) Was First Approved by the FDA, the So-Called "Abortion Pill" Has Resulted in Over 2,000,000 Abortions.

What is the Abortion Pill Reversal Protocol?

George Delgado, M.D. and other physicians have discovered that the hormone progesterone, when taken in sufficient doses, can reverse the effects of mifepristone (RU 486). Dr. Delgado published the first article in the medical literature describing the reversal of mifepristone using progesterone (Annals of Pharmacotherapy Dec. 2012).

As of January 2015, the APR staff has taken calls form over 500 women who took mifepristone and had regrets. Not all the women who called started the reversal protocol. Of those that started the protocol and we were able to follow, more than 60 have delivered healthy babies, with no birth defects reported. More than 120 are currently pregnant.

Can There be Birth Defects from Taking Mifepristone (RU 486)?

Although the second drug in the medical abortion protocol, misopristol, can cause birth defects, the current medical consensus is that mifepristone (RU 486) does not appreciably increase the risk of birth defects.

What About any Side Effects from Receiving Progesterone?

Progesterone has been used in pregnancy for many years. All of the scientific studies conclude that progesterone does not cause birth defects.

How Successful Has Progesterone Been in Preventing Miscarriage After Mifepristone (RU 486) Has Been Taken?

Currently, there is about a (update all stats) 60% success rate of the mother carrying her baby to full term after taking progesterone as prescribed by her physician.

Can the Abortion Pill Revers Protocol Be a Game Change

Absolutely! Dr. Delgado and his tea will soon have enough data to publi a larger case series in another recognized medical journal. Statistically proven research demonstrating the success of the AP protocol will lay the foundation for i acceptance in emergency departments throughout the countr and around the world. With increase awareness of Abortion Pill Reversal, will become the standard of care fo women who change their minds aft taking mifepristone (RU 486). Information regarding abortion pil reversal could become part of the informed consent process that abortion centers would discuss wit their patients inquiring about medic abortion.

With over 200,000 chemical abortion being performed ever year, reaching just 5% of the women with this life saving protocol could save 10,000 babi each year!