



**2016 PSBR High School Essay Contest**  
***Finalist***

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Happy, sad, scared, excited, and relieved. These are just a few of the emotions one might experience when he or she learns of his or her eligibility to receive a heart transplant. After months of excruciating chest pain, extreme fatigue, and gnawing anticipation, one can only imagine the tangled mess of emotions unravelling inside; however, I know someone who doesn't have to imagine that feeling, for she went through it herself. Her name is Rebecca "Becca" Voltmer, a friend of mine through my parish and grade school, and she is the fourth and youngest person to successfully undergo BiVAD treatment into a heart transplant. (Schickling; Voltmer)

Nearly 100 years prior to Rebecca's heart surgery, a man by the name of Alexis Carrel began his research in the field of transplantation. Using cats and dogs in his experiments, Carrel deduced that the blood vessels of the new organ must be joined with those of the organism into which it is being transplanted. He is also credited with being the first person to observe the process of rejection, the body's natural way of ridding itself of foreign or unfamiliar matter. For this work, Carrel received a Nobel Prize in 1912 (Heart Transplants Successful). Fast forward about 45 years to two gentlemen by the names of Norman Shumway and Robert Lower. The pair worked for nearly a decade, also using dogs, to perfect a transplantation procedure suitable for animals and humans. Christiaan Barnard actually performed the first successful heart transplant in South Africa in 1967, and Shumway replicated this procedure in the United States the following year (Patterson). Since then, many doctors and scientists have built upon these discoveries in the fields of organ preservation, immunosuppressants, and drugs, such as cyclosporine, which lower the risk of rejection (Heart Transplant Timeline).

As is the case with many medical advancements, research with animals was conducted in order to develop safe, sure-fire transplantation procedures for humans. This is often a topic of controversy, for some believe experimentation on animals is inhumane while others support the perfection of a drug or procedure on animals before it comes anywhere near humans. When it comes to animal research, or rather any new medical research, perhaps the rule of thumb could be, "If the deaths of a few can save the lives of many, then go for it." However, if that statement was inverted, then another plan of action should probably be taken.

Every person's transplant story is different, and Rebecca's is most definitely worth telling. In April of 2014, Rebecca was in and out of the hospital, her doctors dismissing her shortness of breath and fatigue as dehydration or an act to receive attention. A cardiologist in Elkins Park was the one who first acknowledged Becca was in heart failure, and she was immediately rushed to CHOP. Once there, doctors diagnosed her with myocarditis (Schickling), which is usually caused by some sort of a viral infection. In her case, Becca's immune system was attacking her heart. After months of traveling in and out of hospitals and coming on and off machines, the Voltmers received a phone call on July 28 informing them a heart had been found for Becca. Her surgery was performed on the same day, lasting at least six hours. Almost a year

and half out from her surgery, Becca is back to singing at Church, performing in shows wherever and whenever she can, and pretty much back to the same person she was prior to her transplant. When asked about how her heart transplant has affected her life, she said, "I was a lot more... fulfilled I guess. I came so close to death, and coming back, I felt so strong, which is something I was very worried about before this entire situation" (Voltmer). Rebecca is a real role model to me, for she is so dedicated to and passionate about music and theater, two hobbies in which I am very involved as well; she displayed such bravery during the time she spent in the hospital; and she is so grateful for the second chance at life she has been given thanks to her surgery, which is a lesson everyone should take to heart - no pun intended.

### Works Cited

- Calandra, Robert. "A Teen and the Year of the Transplant." Philly-archives. N.p., 01 Dec. 2014. Web. 28 Feb. 2016. <[http://articles.philly.com/2014-12-01/news/56586531\\_1\\_heart-transplant-rebecca-egon](http://articles.philly.com/2014-12-01/news/56586531_1_heart-transplant-rebecca-egon)>. This is an online article published about Becca's story.
- "Heart Transplant Timeline." Timeline. Stanford Health Care, n.d. Web. 20 Feb. 2016. <<https://stanfordhealthcare.org/medical-clinics/heart-transplant-program/timeline.html>>.
- "Heart Transplantation." Medline Plus. U.S. National Library of Medicine, 12 Sept. 2014. Web. 19 Feb. 2016. <<https://www.nlm.nih.gov/medlineplus/hearttransplantation.html>>.
- "Heart Transplants Successful in Humans." AnimalResearch.info. N.p., n.d. Web. 20 Feb. 2016. <<http://www.animalresearch.info/en/medical-advances/timeline/heart-transplants-successful-humans/>>.
- Patterson, David. "A History of Heart Transplants." ACLS Training Center. N.p., 26 Feb. 2016. Web. 27 Feb. 2016. <<https://www.acls.net/a-history-of-heart-transplants.htm>>.
- Schickling, Matt. "Change of Heart: Abington High School Senior Is Back Onstage after Undergoing a Heart Transplant." The Midweek Wire. Wordpress, 29 Oct. 2014. Web. 28 Feb. 2016. <<https://midweekwire.com/2014/10/29/change-of-heart-abington-high-school-senior-is-onstage-again-after-undergoing-a-heart-transplant/>>. This is an online article published about Becca's story.
- Voltmer, Rebecca. "Rebecca's Heart Transplant." E-mail interview. 20 Feb. 2016