

Beth Croce

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Like Levent Efe, Beth specialises in the high standard medical illustration field. With an interest in science and medicine, as well as great technical skills, Beth shares her work and passion for this unique area of illustration.

Outline: Could you tell us about the studies involved to become a certified biological and medical artist?

Beth: As a medical artist, I'm the conduit between doctors and researchers and their audience—usually other health care and science professionals— so I have to have a good understanding of the subject or be ready to do some research in order to get up to speed. I have a masters degree from Johns Hopkins, one of the five medical schools in the USA that have a medical illustration program combining medical and biological sciences, illustration, and research components. You don't have to go through a formal program in order to become a Certified Medical Illustrator though. Certification is conducted by the USA based Association of Medical Illustrators and entails a formal exam and a portfolio review. The standards are high—you need to have an extensive science background and a strong illustration folio. But there certainly is a lot of latitude for anything from illustration to animation, molecular biology to surgery... check out <http://www.ami.org/index.php/medical-illustration/> enter-the-profession/board-certification if you're interested.

Outline: What attracted you to this area of illustration? Could you share with us some of your favourite projects to date?

Beth: I was lucky enough to stumble upon medical illustration when I was looking through a careers handbook

The thalamus processes and carries messages for sensory information, such as information sent from the ears, nose, eyes and skin to the cortex.

The brain stem sits mostly inside the brain. At its base it turns into the spinal cord. The brain stem is made up of three major parts—the medulla, the pons and the midbrain.

The cerebellum is like a smaller version of the cerebrum and is responsible for movement, balance and coordination.

The medulla is found at the bottom of the brain stem and controls automatic functions, like respiration (breathing) and digestive system activities. The pons assists in some automatic functions, like breathing, and also controls sleep and arousal. The midbrain contains areas that receive and process sensory information, such as movement and vision.

The hypothalamus is very important because it is primarily responsible for homeostasis. Homeostasis is the maintenance of a constant condition in your body. This includes maintaining a constant heart rate, body temperature and sleep pattern. What other things does your body look after without you even having to think about them? There are a lot! The hypothalamus is also involved in hormone production through the control of the pituitary gland.

art by Beth Croce
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in highschool. I was interested in science and medicine, but I instantly knew this was a good fit.

My second major project after finishing grad school, after working a year on a biochemistry book, was the one that brought me to Australia a second time (the first occasion was doing post graduate school work-experience with fellow medical artist and IA member Levent Efe) (*Also profiled in this edition - Ed*). I spent three years as in-house illustrator with the Austin Hospital (Melbourne) Cardiac Surgery Department working on an illustrated atlas of heart surgery. I spent most mornings observing and sketching the operating theatre and the rest of the day illustrating the procedures. Over the course of the project I gained an in depth knowledge of a very specialised area of anatomy, which led to more cardiac surgery illustration for freelance clients. I illustrate lots of subjects but the cardiothoracic area is the one I feel most at home in.

A recent, unusual project was creating some faux Victorian era style botanical plates illustrating a fictitious native Australian plant with ambulatory flowers large enough to ride on. The brief was brought to me by Queensland sculptor Russell Anderson, who was designing an interactive installation for the Brisbane botanical gardens playground. I had to create a plausible plant from the

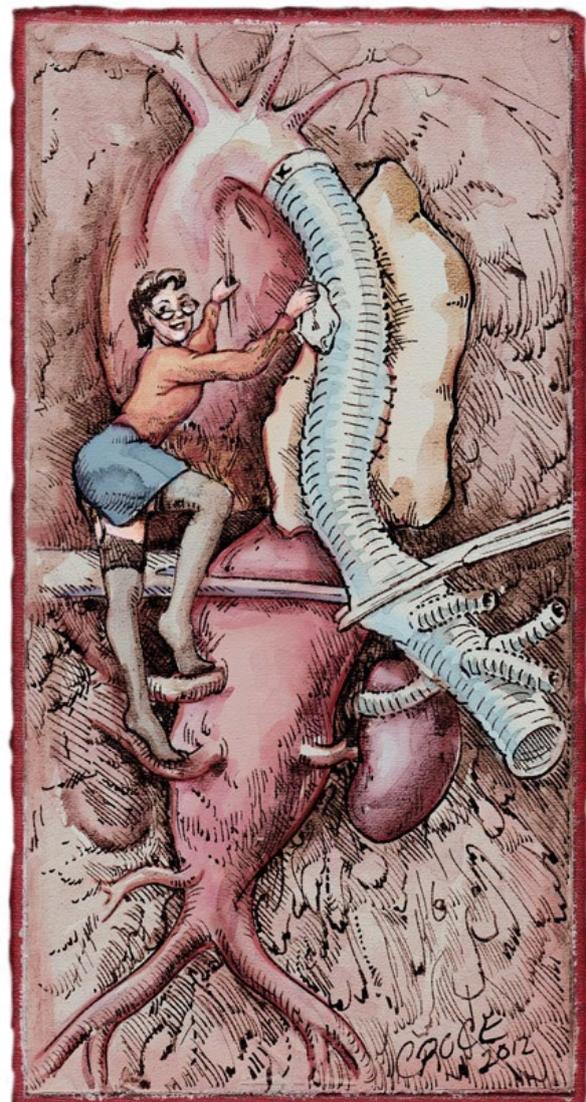
description, and show its lifecycle as well as how it might be ridden, which was a lot of fun. The end result was to be a laser engraved plate from which rubbings could be made so after my pencil sketches were approved, rather than heading to Photoshop like I usually do for commercial jobs, I went into the printmaking studio and made actual intaglio prints of the pieces. I sent the client scans of these prints, which had a distinctive detail and presence that never could have been achieved with digital media.

Outline: Is it a competitive field? How do your clients typically find you?

Beth: Yes, it's a competitive field, but one in which your clients really do appreciate experience and I've got a lot of loyal, long term clients. New clients often find me through word-of-mouth referral, or seeing my published work — good reason to make sure it's always legibly signed! And a good on-line folio is also invaluable. I get a fair number of enquires from my IA folio, as well as my personal Bioperspective one.

Outline: We'd love to hear of the process you follow to create your medical illustrations.

Beth: My process starts with gathering source material;



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the manuscript that is to be illustrated, sketches from the client, photos, other illustrations, medical imaging (xrays, CTs etc). I create my pencil drawing with as much details as I feel confident to put in, then email this to the client to comments on. Once all the details are ironed out, it's usually pretty straightforward to create final art, which I send by file transfer.

Outline: I loved hearing about your exhibition held last year, "How to Mend a Broken Heart." Could you tell us about the inspiration for this exhibition, and the response from the audience?

Beth: The 'How to Mend a Broken Heart' series was a lot of fun... I have a regular gig illustrating a cardiothoracic surgery journal and it's often running up against a tight publishing deadline. This series was born of one too many late nights at my computer drawing the details of heart surgery! I was given a set of vintage encyclopedias and decided to illustrate the covers with a selection of my actual heart surgery illustrations with mini 50s pin-up style guys and gals posing on the hearts, holding instruments or suture etc. A literal take on how to mend a heart. The exhibition launched at Lord Coconut, a men's jewellery boutique in Melbourne that carries my anatomical jewellery, just before Valentines Day and featured in the Midsumma Festival. It was an eclectic, mostly non-science crowd there, but *The Age* newspaper reviewed it (favourably) and somehow the exhibition was picked up by *Scientific American* magazines science art blog and their

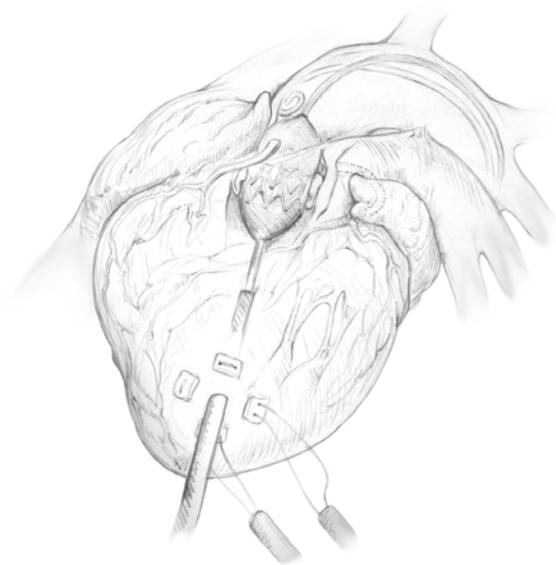
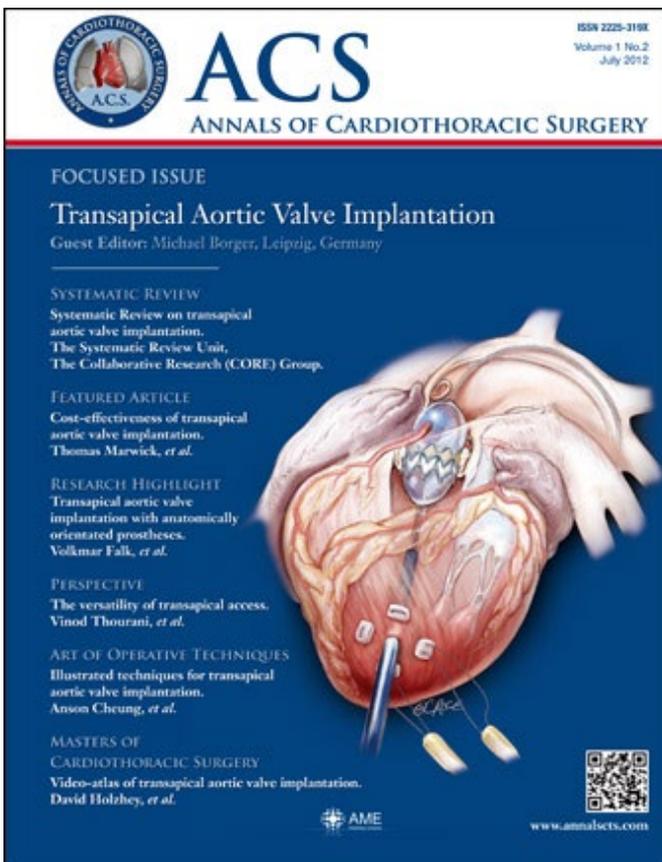
video podcast and got around the internet a bit. So a great response to a quirky, unusual little body of work!

Outline: Are there any famous or inspiring medical illustrators that you can recommend for further research for any interested IA members?

Beth: Frank Netter is the name that will come to the minds of anyone who's been to med school, but there are a lot of amazing contemporary medical illustrators out there. Check out the Association of Medical Illustration's website (ami.org) if you're curious about the field...

Outline: What projects are you excited about for the rest of 2014?

Beth: Well this isn't probably what you were getting at with that question, but I've successfully negotiated to retain the copyright of work that I do in my capacity as illustrator at a Sydney university. It involved a lot of persistence, patience, and the aid of the intellectual property rights lawyer that IA referred me to (worth every penny) but I now have an amendment to my contract and feel good about my continued work with them. I feel very strongly about illustrators not giving up copyright of their work unless they are appropriately compensated, but it's really important to recognise the value of future usage rights - for your client but also for yourself. 📍



{CLICK!} Beth Croce

Website <http://www.bioperspective.com>