



## *From idea to reality*

# TOURNISTRIP

Taking a great medical idea to reality is a huge step – never mind doing it whilst revising for medical school finals. Two Imperial College medical students, Christian Fellowes and Ryan Kerstein, did just that developing the award winning Tournistrip – a disposable single-use device aimed at reducing disease transmission during venesection. JuniorDr's *Ivor Vanhegan* asked them about their journey to a finished product.

### **How did you come up with the idea for the Tournistrip?**

We had been friends throughout medical school and found that we worked well together, regularly feeding ideas off one another and coming up with new projects. We struck upon the idea of a disposable tourniquet during our clinical attachments in the fourth year when we realised its potential as a means of reducing infection. We then set about trying to work out what worked best and if people would be really interested in it.

### **What did you learn from your initial research?**

The potential risk of infection with reusable tourniquets is self-evident. It is estimated that 40 million procedures requiring tourniquets are carried out each year in the NHS. During the early days of our investigation we were helped enormously by Dr Berge Azadian, a Consultant Microbiologist at Chelsea and Westminster Hospital. It was with his help that we designed our own work to investigate the need for single use tourniquets.

"IN ALL THIS, CERTAINLY THE MOST CRUCIAL STEP WAS OBTAINING THE PATENT."

### **How did you patent the idea?**

As soon as we knew the idea was valid we then approached a specialist patent solicitor. It is so important to get this process right first time as once it has been submitted you cannot change the initial patent. In

the entire process the most crucial step was obtaining this patent.

There are quite a few aspects to consider with the patent but one key factor is being able to justify the originality of your product. As I remember, Tournistrip has numerous separate claims of originality. Completing the paperwork can take some time so it also pays to be patient. With the prototype in hand and with enough scientific literature to back up our challenge we approached Lord Darzi who pointed us in the direction of Imperial Innovations for help developing the idea.

"IT IS VERY IMPORTANT TO BE WARY OF THE GREAT OFFERS THAT ARE MADE TO YOU IN THE BEGINNING."

Once our product was protected we then went to meet potential manufacturers and one particular company took sympathy on our plight as students with a novel product. With their help we were able to source the appropriate materials and then it was a long process of trial and error to get the right design and develop the prototype. In all this, certainly the most crucial step was obtaining the patent.

### **What support did you get along the way?**

We opted to go with Imperial Innovations as they have the expertise and experience necessary in the field of intellectual property and product development. They sat us down at the beginning to find out

what our ambition and idea for the product was.

They gave us the option of handing over all responsibility for manufacture and development to them and for us to take a back seat, or to remain involved in its development. Our aim has always been to see our idea turned into reality and it's that which motivates us so we remain involved in all aspects of the project to this day.

There are many other similar organisations out there that are willing to assist with your invention and it's well worth shopping around to find who is best for your needs. I'm aware that NHS innovations provide a similar service and it's my understanding that if your idea comes from working in the NHS then you have to use their support as they own the IP. As a student it's also worth considering that many universities have enterprises designed around helping to develop your inventions.

It is very important to be wary of the great offers that are made to you in the beginning. Always check the terms carefully and be realistic - just because you have an idea does not mean that you are entitled to all the potential benefits.

### **What stage is the Tournistrip at now?**

Things have moved on enormously in the last month or so. We were excited to hear that the product has made its way into the NHS Supplies Catalogue. This means that if a Trust is interested in buying a supply of Tournistrips it is now readily available for order and will hopefully be seen nationwide shortly.

We are also about to start a huge Showcase Hospitals Trial organised by the Department of Health. Furthermore, the design

# TOP TIPS TO GETTING YOUR IDEA TO MARKET

We asked Christian and Ryan for their top tips on taking a bright idea forward.

## (I) GET THE PATENT RIGHT

It is so important that this first step is done properly or else all is doomed to fail. It is important for the patent side to be robust. Once made it cannot be altered and you must be ready to face multiple challenges to your design and be able to justify the originality and novelty.

## (II) BE PATIENT

There's an old adage that invention is 1% inspiration and 99% perspiration! That's certainly true - we came up with the idea as fourth year medical students and now it is some five years later. We were warned that things move at this glacial pace and it certainly pays to be tolerant and patient. Our product was for use in the health sector so required MHRA and CE-Marking approval - both of which we found to be lengthy processes.

## (III) BE WARY

It might sound a cliché but be very wary of those that offer you fantastic sounding proposals. Read the small print and find out what they want in return or you may discover that you've handed over the entire asset to them. Also, when you meet new people make sure you have a Non-Disclosure Agreement and protect your asset at all times.

## (IV) HAVE A BUSINESS PLAN

We didn't have one at first and it was only when we entered a competition that required one that we actually got round to writing it. It was a really worthwhile experience actually committing to paper your thoughts of whom you're targeting, when you will be able to deliver, and how much time and cost you expect to incur. If you want to be taken seriously by an investor they will insist on seeing your plan. There is so much help out there to get you started - most banks have software available as well do many websites.



BOX OF TOURNISTRIPS



TOURNISTRIP SINGLE-USE TOURNIQUET

has been approved internationally and we will soon be distributing to New Zealand, Australia and Holland.

### What have you gained from the invention?

Coming up with a medical invention has been hugely rewarding. The product itself is highly acclaimed having won the Imperial College Innovations Awards, as well as being a finalist in the National Engineer Innovations awards and the Imperial College New Business Competition.

We also find that it has been of on-going help when it comes to job applications. There is often a space for explanation of management and innovation skills, as well as opportunity to discuss it at interviews. Throughout the whole process we have learnt valuable skills which have helped with our respective career progressions.

### Have either of you got any other ideas in the pipeline?

We always had some idea or other brewing when we were at medical school, and we both have a few very promising ideas that we are working on at the moment. In fact, we have learnt so much from our experiences with Tournistrip and feel this has been invaluable in knowing how to take these new ideas on. As to what they are exactly? You'll just have to wait and see!

### GOT MORE QUESTIONS?

Ask Ryan and Christian online at [JuniorDr.com](http://JuniorDr.com) (search: tournistrip)

For more information and a free sample visit: [www.asephealthcare.com](http://www.asephealthcare.com)