

# The search for perfection

Lorenzo Vanini talks to *Aesthetic Dentistry Today* about his pioneering research, obsessions, and where he gets his inspiration from



Lorenzo Vanini spoke about the relationship between music and colour at Dentistry 16: Stars of Dentistry in June

## Tell us a bit about your background – how did you get into dentistry?

Soon after I graduated from university I was lucky enough to meet my teachers, Dr Ivano Casartelli and Dr Fabio Toffenetti. They not only taught the basics to become a good dentist, but more importantly, I was imparted two fundamental values: professional honesty and a genuine passion for dentistry.

## Why did you decide to specialise in cosmetic and restorative dentistry?

I do not consider myself to be a specialist in 'cosmetic dentistry'; nowadays, patients pursue and demand an excellent aesthetic result for which every good dentist must be specialised in.

For this reason, I dedicated myself to reconstructive dentistry with a continuous

effort in trying to cure not only the aesthetics, but also the function of dentistry.

## You are well-known for your innovations and research. How did these come about?

From the very beginning of my career I have been attracted to researching; I have a curiosity for understanding how things work and learning as much as I can.

I began as a consultant in the field of composite materials for international companies, testing their products in clinical practice and informing the producers of my impressions of the material, both from an aesthetic point of view and a technical one.

I also started to develop an innovative stratification technique that would make the restoration resemble the anatomy of the natural tooth more closely. The anatomic stratification technique was thus born, which requires the use of a silicone matrix mask on IV classes.

I presented this technique for the first time in 1989 at an international congress, the Amici di Brugg in Rimini, Italy, and subsequently published the technique in 1995.

At that time, in collaboration with Micerium and GDF, the Enamel Plus system was born –

the first composite system with fluorescent dentines and opalescent enamels, and later in 2008 the Enamel Plus HRI, the first enamel-composite with the same refractor index as the natural enamel of the tooth.

In 2003, I published two volumes of books – *Conservative Restoration of Anterior Teeth* – with my friend, Professor Francesco Mangani, and my wife, Olga Klimovskaia.

## 'The determination of the colour is one of the critical points of reconstructive dentistry'

In more recent years I have been dedicating myself to researching difunctional problems and the pathologies of the temporomandibular joint. Together with friend Professor Camillo D'Arcangelo, and the chemists of GDF, I developed the Enamel Plus Function for the posteriors and function. I have also written my new book with Professor D'Arcangelo and Stefano Mastroberardino, called *Aesthetics, Function and Posture*, which is waiting to be published.

## You often marry art and science in your work – the issue of colour

## in cosmetic dentistry: a particular example of a philosophy for

The determination of the colour is one of the critical points of reconstructive dentistry.

Today, dentistry has developed many new techniques and materials. However, the study of colour relies on the work of Munsell, dating back to the 1930s, namely the study of the tooth and the relationship between the tooth and the eye upon the theory of Munsell colour system.

In the natural tooth, there are three dimensions of colour: hue, value and chroma. From this perspective, the theory of the five primary colours offers clinicians many practical suggestions regarding the colour of the restoration.

This new theory is based on the study of the relationship between the tooth's hard tissue and the eye, analysing the image of the teeth that have been restored. The techniques of illumination under the microscope, the presence of a light source of colour in nature that I classified: the characterisations.

## 'Music has been a source of inspiration for my profession'

Together with my friend Professor D'Arcangelo, I published a paper on the dimensions of colour (2001), and introduced the concept of the indirect art photography.

Micerium also offers a scholarship, the Micerium scholarship, for dentistry students, awarded annually at the University of Turin. Professor D'Arcangelo collaborated with me in the field of reconstructive dentistry. I conduct intensive courses in reconstructive dentistry, offering the winners a unique professional experience.

## How did you combine art and science in your practice, the Vanini method?

I developed and improved my technique over a course of 35 years, with enormous experience and outstanding clinical results.



## **in cosmetic dentistry being a particular example. What's your philosophy for this approach?**

The determination of tooth colour is one of the critical points of reconstructive dentistry.

Today, dentists have an array of modern techniques and materials at their disposal – however, the study of the determination of colour relies on methodologies that date back to the 1930s, namely the direct confrontation of the tooth and the colour scale that is based upon the theory of the three dimensions in the Munsell colour system.

In the natural tooth, however, more than three dimensions of colour co-exist, so starting from this presupposition, I designed the theory of the five dimensions of colour, which offer clinicians more information and details regarding the colour of the tooth.

This new theory of colour is a result of a study of the relationship between light and the tooth's hard tissues (enamel and dentine): analysing the images of sections of extracted teeth that have been realised with various techniques of illumination. Photographed under the microscope, it is possible to observe the presence of at least other three dimensions of colour in natural teeth – dimensions that I classified: intensive, opalescence and characterisations.

## **'Music has been an inexhaustible source of inspiration, even in my profession'**

Together with Professor Mangani, I then published a paper on the theory of the five dimensions of colour (Vanini, Mangani, 2001), and introduced the use of the polariser for the indirect analysis of colour through photography.

Micerium also instituted a European scholarship, the Jules Allemand Trophy, for dentistry students, which takes place annually at the University of Chieti-Pescara. Professor D'Arcangelo, whom I have collaborated with for years, is a lecturer of reconstructive dentistry at the university and conducts intensive researching in the field of reconstructive dentistry with his students, offering the winners of the scholarship a unique professional experience.

## **How did you come to set up your practice, the Vanini Dental Clinic?**

I developed and improved my clinic over the course of 35 years, choosing to work with enormously experienced collaborators with outstanding clinical abilities.

Throughout the years I have also had the pleasure of collaborating with external colleagues, getting the chance to confront our work and exchange our various knowledge and experience.

## **The Vanini Masterclass has been running in Lake Como for more than a decade now. Tell us more**

The masterclass is an advanced course that covers the topic of the reconstruction of anterior teeth. I am in close contact with the participants and able to discuss every issue that is of interest to them.

There is also a practical section of the course, where every participant is trained in the stratification technique.

## **What is your proudest achievement in your career so far?**

Throughout my career I have had many moments of fulfilment; there is no real goal that I could consider more valuable than the rest. They are all important to me, but the greatest satisfaction has been the publication of my book, *Conservative Restoration of Anterior Teeth*.

I will soon have achieved yet another great accomplishment when my new book, *Aesthetic, Function and Posture*, is published. This topic is new, stimulating and very complex; I have been working on it for years!

## **Who or what inspires you?**

I get inspired by the work I do every single day in clinic.

First and foremost, I am a clinician, and I enjoy treating complex cases. I find myself having to tackle different problems daily, which I try to solve by relying on the experience I have accumulated over the course of 36 years in the profession. My patients stimulate and inspire me continuously.

## **What are some of the biggest changes that you've seen in cosmetic dentistry?**

Dentists today always try to be more conservative, therefore, when possible, adhesive reconstructive techniques are preferred to prosthetic ones, which are more invasive and difficult to integrate with the periodontium.

What preoccupies me most is the search for the 'white' tooth, a search that often overlooks the factor of functionality with the use of aesthetic materials in inadequate thicknesses in posteriors, and a lack of correct analysis of the neuromuscular system and the temporomandibular joint.

## **How do you see the landscape of cosmetic dentistry changing in the next 10 years?**

The future of aesthetic dentistry is represented by the change in the general conception of dentistry itself.

To achieve an aesthetic result in the anterior sectors, such as in the perioral zone of the face, the 'problematic' posteriors must be taken into consideration; without an occlusal equilibrium, it is not possible to obtain results that are stable for a long period.

## **What do you enjoy most about the work you do?**

I enjoy dentistry in each of its specialties, however, the one I enjoy the most is the direct restoration of anterior teeth with composite materials.

## **Outside of dentistry, you are also a pianist and jazz composer. How do you balance your clinical passions with your musical ones?**

I started playing the piano from a very young age, and over time I have been lucky enough to develop this passion.

I've had the pleasure of playing with world famous musicians and collaborating in various discographic productions. Even my daughters, Margherita and Letizia, love music, and this gives me great joy.

Music has been an inexhaustible source of inspiration, even in my profession. I often talk about the relationship between music and colour in my lectures; I use it to explain the means by which it is possible to determine colour in dentistry more clearly.

In my free time I manage to relax by taking walks in the woods near my home or by enjoying a good read.

## **What three pieces of advice would you give dentists looking to become successful in cosmetic and aesthetic dentistry?**

Never agree to compromise, and always search for perfection in everything you do. In order to achieve this, passion and dedication to your work are vital.

Care to comment? @AesDenToday

## **References**

Vanini L, Mangani FM (2001) Determination and communication of color using the five color dimensions of teeth. *Pract Proced Aesthet Dent* 13(1):19-26