

Eugene de Juan, Jr., MD

Eugene de Juan Jr., MD, is a retinal surgeon, inventor, and founder of the Doheny Retina Institute.



1. Of the more than 40 patents, medical devices, and techniques that you have been involved in developing, which do you feel have the most promise?

I am proud of the work my colleagues and I have done in many different areas. Some of them are small advances, and some of them are methods of doing surgery—like 25-gauge surgery and the transconjunctival approach—which now probably accounts for 50% of all vitreoretinal surgery. Another is an electronic prosthesis for the eye called the Argus II, with a company, Second Sight, which we began developing about 20 years ago.

We have also been involved in a new treatment for choroidal neovascularization with a company called NeoVista.

2. What do you see as the most promising innovation or technology for the future of ophthalmology?

For all its potential, ranibizumab (Lucentis; Genentech, San Francisco) still requires a monthly injection into the eye. If we could figure out effective ways of getting powerful drugs to where they are needed—without it causing complications—that would be a huge advance. I have worked with SurModics to create new drug delivery methods to treat the back of the eye with a variety of compounds. We've developed a small coil that is placed in the wall of the eye and can deliver medicines for more than a year.

I think that in the next 10 years or so, we are going to see a move toward getting drugs to the back or front of the eye in a reliable, patient-independent

method. That is going to dramatically change ophthalmology and also how we approach preventative medicine's importance in our practice.

3. What is the focus of your current research?

Currently, I am examining ways of delivering surgical care in the most efficient, minimally invasive manner. I hope to find the appropriate line of what treatments we can perform in the office, versus, what we can perform in the operating room. I am also interested in working on solutions for diseases we cannot currently treat (eg, retinitis pigmentosa). I am in clinical trials for the Second Sight prosthesis, which electronically stimulates the retina to pick up images. Technologies like these are exciting, but there is still a long way to go.

4. What is your greatest motivator to practice medicine?

At the end of the day, I am just a doctor who cares about making patients better. I am not particularly happy with the way we do things, so I have tried to come up with ways to make it better. For me, it is the patient battling blindness, who is sitting in front of me, that compels me to do everything I can to make them better.

I am proud of my role in motivating young doctors, ophthalmologists and scientists, to get excited about these big problems, and helping them to realize that they can make a difference.

We are in an exciting phase of medicine. Where as we used to feel powerless when people came to us, now we are becoming much more equipped.

5. Who was your biggest influence?

My dad, Eugene de Juan Sr., was in private practice and supported me throughout my career, especially while I worked in university settings. I think my concept of patient care and the importance of mentoring, came from watching him.

Recently my family was able to establish a chair for ophthalmic teaching at Wilmer Eye Institute at Johns Hopkins in my father's honor. ■