

Dear Editor,

I was in error when I stated in the Letter to the Editor of the JOI Vol 39, Issue 5 (October 2013); that Drs. Ralph and Harold Roberts invented the blade form dental implant. Dr. Leonard I. Linkow invented the blade form dental implant and Drs. Ralph and Harold Roberts invented the plate form dental implant. I had several personal conversations with Drs. Linkow and Roberts through November and December of 2013. According to Drs. Leonard I. Linkow and Ralph A. Roberts, the terms blade and plate form have been interchangeably used in this field for decades and this is incorrect, because they are two different types of implants. The blade and plate form dental implants both utilize horizontal bone and are used in bone that is narrow buccolingually and of moderate occlusoapical height. However, they have distinctly different insertion protocols. The brevity of this communication precludes intimate details as per the preparation of the osteotomies and insertion techniques, indications and contraindications for the two. The blade form osteotomy is prepared with burs and or saws and is at least one and one half times the length of the implant. The blade form is tapered occlusoapically, penetrates the bone like a wedge and is well suited for thin atrophic ridges. The blade form depending upon design and treatment plan, utilize a one or two stage protocol. The plate form is thicker in width and not tapered in the occlusoapical direction thus, greater width of bone is required, but not the same as for root forms. The plate form osteotomy is prepared by burs, osteotomes and templates, thus the osteotomy for the plate form is of precise shape and size. The plate form has a greater load bearing area and requires the use of a single stage protocol. Both blade and plate form are inserted by way of mallet and seating instrumentation. Dr. Leonard I. Linkow, in 1963, realized the need for utilizing horizontal bone in atrophic ridges and conceived the thin blade implant, after noticing issues with dehiscence with

the flapless approach with the Vent Plant (root form) implant and Scialom's tantalum pins. Dr. Linkow applied for his first blade patent on August 17, 1965 and the patent (3499,222) was granted on March 10, 1970. He applied for a patent (3,465,441) on the Blade Vent implant on March 20, 1968 that was granted on September 9, 1969. Ralph and Harold Roberts also realized the need to use horizontal bone in 1964. Dr. Harold Roberts showed Dr. Leonard Linkow his plate form prototype in 1965 and likewise in the exact same meeting, Dr. Linkow presented to Dr. Harold Roberts patterns of his Blade Vent implant, which were already in production and went on the market that very same week. These developments were almost concomitant! Drs. Harold and Ralph Roberts only placed a small number of the above mentioned prototypes but subsequently invented and patented the Ramus Frame implant. Dr. Harold Roberts invented and patented the Ramus Blade implant and Dr. Ralph Roberts invented and patented the STR implant and has performed thousands of implant cases. Dr. Leonard I. Linkow has performed thousands of dental implant cases, produced voluminous publications, and dental implant developments, such as the internal hexed platform, Blade Vent implants and its numerous derivations, hallow basket root form, endosseous implants used for orthodontic anchorage and open reduction of maxillofacial fractures, mandibular tripodial subperiosteal implant and the repositioning of the inferior alveolar nerve. Dr. Linkow, virtually singlehandedly spread the word about dental implants around the world. Drs. Linkow and Roberts are living legends of the marvelous academy and oral implantology at large. Both are still actively educating dentist worldwide about the art and science of oral implantology and creating dental implant innovations.

E. Richard Hughes, DDS  
Sterling, Va.