**Rafael Aquino Leal**

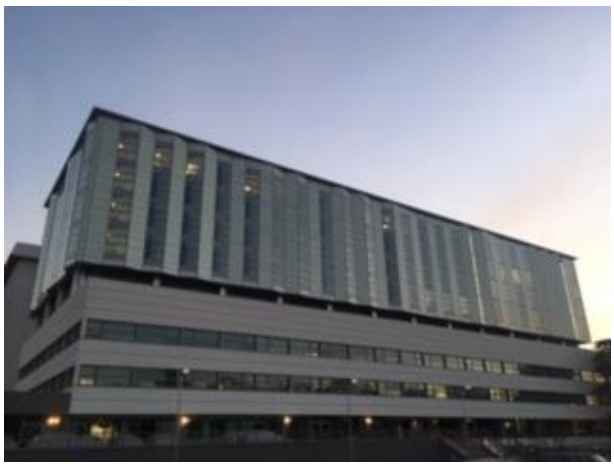
IBRA Scholarship Program Program C Report

December 2018

## Rafael Aquino Leal

### *Information*

| | |
|---|---|
| **Name of Scholar** | **Aquino Leal, Rafael** |
| **Country of Citizenship** | **Brazil** |
| **Name of Training Center** | **U.O.C. Chirurgia della Mano, Azienda Ospedaliera Universitaria Integrata, Verona, Italy** |
| **Name of Fellowship Director** | **Corain, Massimo** |
| **Scholarship Type** | **Program C** |
| **Name of research project** | **Treatment of marginal rim fractures of the distal radius using a fragment-specific plate** |
| **Scholarship date** | **From 13th August to 9th November 2018** |



*U.O.C. Chirurgia della Mano, Borgo Roma, Verona.*

## Professional and personal experience

### *Fellowship*

*IBRA Scholarship Program Application C in Hand Surgery Department - University Hospital Verona, Policlinico GB Rossi*

The main goal and expectation was to get experience for promoting an academic career, participating of clinical training and in a research project that could help me in a future Fellow Master degree and subsequentely a Fellow PhD degree. Also, following the footsteps of my main mentors in Brazil, Dr. Anderson Vieira Monteiro and Dr. Saulo Fontes Almeida, who dedicate a lot from their time practice to treat Upper Limb Congenital Deformities, I've chosen Verona because of Dr. Massimo Corain experience in this field.

During the 13 weeks program Fellowship I participated in consultant activities on Friday (medium of 60 patients/ day), surgery activities from Monday to Thursday (medium of 4 to 6 procedures/ day) and microvascular emergencies regarding the upper limb from elbow to fingers (medium of 3 procedures/ week).

Besides that, during this period I participated in the following scientific research aiming a future publication: *"Treatment of volar marginal rim fractures of the distal radius using a fragment-specific plate".* On October 15 2018 we've been submitted successfully this abstract project for oral or poster presentation at the venue of 14th IFSSH & 11th IFSHT Triennial Congress, Berlin 2019 (abstract number IFSSH19-1927), waiting for informations regarding acceptance by mid-January 2019. The goal is also to send the papers we've produced together with the team of surgeons from *U.O.C. Chirurgia della Mano* to the following scientific journals:

- Journal of Hand Surgery ISSN: 0363-5023
- Injury ISSN 0020-1383

Another research in which I paticipated during the scholarship was *"Evaluation of results and complications after surgical treatment of thumb duplication"*, aiming also publication in scientific journal.

The scholarship improved my Hand Surgeon career through the learning of a new surgical techniques. Furthermore, the clinical training in this IBRA Training Center provided me a wide knowledge in the fields of Microsurgery, Arthroscopy, Arthroplasty, Congenital Deformity and Elbow Surgery. All these experiences I've learned now I can apply it to my daily practice in my hometown, bringing clinical, scientific innovation and development in the hospitals I work. This is the list of fields and procedures I was able to see during the Fellowship:

- Acute & Chronic Infections of the Hand
- Dupuytren Disease
- Extensor & Flexor Tendon Injury
- Fractures of the Metacarpals & Phalanges
- Dislocations & Ligament Injuries of the Digits
- Perionychium
- Treatment of the Stiff Finger & Hand
- Treatment of the Osteoarthritic Hand & Thumb
- Wrist Arthrodesis & Arthroplasty
- Wrist Instabilities, Misalignments & Dislocations
- Distal Radioulnar Joint
- Distal Radius Fractures
- Fractures of the Carpal Bones
- Wrist Arthroscopy
- Elbow Tendinopathies
- Total Elbow Arthroplasty
- Compression Neuropathies
- Nerve Injury and Repair
- Deformities of the Hand, Fingers & Thumb
- Replantation & Mangled Upper Extremity
- Digital Amputations
- Nonmicrosurgical Coverage of the Upper Extremity
- Bone and Soft Tissue Tumors

The main focus of this Training Center is also listed below:

- fracture care, non unions and mal-unions
- digit-hand-upper limb replantation
- wrist surgery
- paediatric congenital deformity
- hand-wrist-elbow joint replacement and reconstruction
- arthritis of the major (elbow-wrist) and small joints
- percutaneous treatment with *Clostridium histoliticum* Collagenase for Dupuytren's disease.

The favorite procedures and new skills I could acquire were the following:

- Management of comminuted intra-articular distal radius fracture with a marginal rim fragment using a fragment-specific Hook Plates 1.5 (Medartis, Basel, Switzerland) associated standard volar plates, mini anchors, external fixators or K wires
- Wrist arthroplasty using cementless Motec total wrist prosthesis (Swemac Orthopaedics AB, Linköping, Sweden)
- Digits replantations
- percutaneous treatment with Xiapex (*Clostridium histoliticum* Collagenase) for Dupuytren's disease associated or not with progressive deformity correction using MiniFlo Fixator (Citieffe, Bologna, Italy)
- All reconstruction procedures for duplicated or hypoplastic thumb

I could also attend to 56th *Congresso Nazionale SICM - Società Italiana di Chirurgia della Mano* in Pordenone, on October 2018; and attend cadaver lab dissections of fresh specimen in ICLO Teaching and research Center San Francesco di Sales in Verona, November 2018.

The most significant personal experience for me was the cultural exchange, share and compare my personal experience with Hand Surgeons in Verona, learn their techniques and adopt many of them in my personal practice. Besides that, I was able to learn a new language, which is Italian, even very basically, this was the best way to get more in touch with the italian people and their culture.

## Closing words

### *Tips to future scholars*

It's important to plan well the trip and visa documents in advance depending of the country you are going to and the duration of your stay. Try buy flight tickets in advance of 4 months so you don't pay too much expensive fares, also for accommodation it was very interesting for me to live with local citizens, so it was easier to get in touch with the culture, language and the Verona city. Although it is not compulsory to learn the local language, it is one of the best ways to interact with all the people around both in the IBRA center and in the city itself.


### *Acknowledgements*

Thanks to IBRA (the International Bone Research Association) scholarship grant support for this great and unique experience, that has been one of the best of my career.

Thanks to Dr. Massimo Corain, IBRA Fellowship Director and Head of UOC Chirurgia Mano, for have been such a great mentor to me, dedicating your time to make this experience the best that I could have, I'll be forever grateful, your work has also became a great inspiration and example to me.

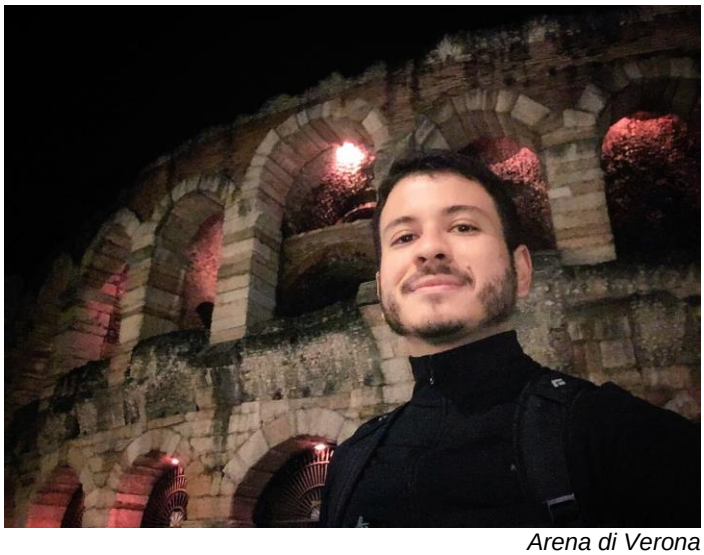
Thanks to all the team of Hand Surgeons from UOC Chirurgia Mano for have shared your great experience with me: Dr. Vito Zanella, Dr. Leone Pangalo, Dr. Filippo Zanotti, Dr. Roberta Sartore and Dr. Alberto Garofano, you all became my friends and always welcomed me in the best way, making me feel at home. Special thanks to Dr. Zanotti and Dr. Sartore, Sartore helped me a lot wih all the documents necessary for the fellowship application and Zanotti was the best host I could have had in the hospital, helping me absolutely in all the daily tasks of fellowship, I'll Always be very grateful.

Thanks to Dr. Mara Laterza who worked directly with me in the development of scientific research and has become a great friend and working partner.

Thanks to orthopedic residents that also were very welcoming and friendly, making the best hospitality for a foreigner: Dr. Sara Montanari, Dr. Valentina Autore and Dr. Mattia Giardini.

Thanks also to Dr. Alberto Donadelli and Dr. Enrico Carità, Verona Hand Surgeons that shared their experiences with me and were very hospitable.

Thanks to all of your support I can carry proudly in my history and in my career, the flag of the Verona Hand Surgery.

*Arena di Verona*


**Rafael Aquino Leal**

***MD Orthopaedic Surgeon/ Hand Surgery & Microsurgery***

## Certificate of Attendance

### *U.O.C. Chirurgia della Mano, Verona – Dott. Massimo Corain*

IBRA International Bone Research Association

CERTIFICATE OF ATTENDANCE

Awared to

Dr. Rafael Aquino Leal

For attending a Clinical Fellowship
At U.O.C. Chirurgia della Mano
Azienda Ospedaliera Universitaria Integrata, Verona, Italy
From 13th August to 9th November 2018

Dott. Massimo Corain

DIRECTOR FELLOWSHIP

### *Verona Hand Surgery IBRA Training Center Team*

*Farewell dinner at Piazza Erbe*

*SICM Congress in Pordenone*

*With Zanotti, Sartore & Zanella*

*With Carità & Donadelli*

*With Garofano, Pangallo, Zanella & Corain*

*With Autore, Zanotti & Montanari*

*Nurses from U.O.C. Chirurgia della Mano, Borgo Roma, Verona.*