



Fellowship report

Report by:	Javier García Alba MD PhD
Date of the fellowship:	04/24 to 10/24
Visited institution:	Charité
Host surgeon:	Prof Perka/Prof Stöckle

Introduction:

I am incredibly proud and deeply grateful to EFORT for granting me the opportunity to participate in this highly competitive fellowship. It was both an honor and a surprise to receive the acceptance letter for the fellowship, and I did not hesitate to choose Charité, given its worldwide recognition and internationally acclaimed scientific reputation. This is evidenced by the fact that several Nobel Prize winners in medicine have worked at this institution. Their support will significantly enhance the quality of my career as an orthopedic surgeon.

Charité Hospital in Berlin, founded in 1710, is one of the most prestigious and oldest medical institutions in Europe. With a worldwide reputation for excellence in medical care and research, Charité has been a guiding light of innovation and knowledge in the field of medicine. The hospital boasts multiple specialized centers, among which the Research Center for Musculoskeletal Diseases stands out. This center is renowned for its comprehensive approach to the study and treatment of orthopedic, trauma, and rheumatic diseases, combining basic and applied research to improve therapies and surgical techniques.

Within this center, prominent figures such as Professor Carsten Perka and Professor Uhlrich Stöckle are noteworthy. Professor Perka is known for his significant contributions in the field of joint replacement surgery and research on periprosthetic infections, while Professor Stöckle is distinguished in the field of trauma surgery, particularly in the treatment of complex fractures and multi-organ injuries.

Another attractive aspect of this fellowship is everything Berlin has to offer. The city has a rich history and is a vibrant cultural hub. Berlin has been at the center of many significant historical events, from its days as the capital of the Prussian Empire to its role in the Cold War when it was divided by the Berlin Wall. Today, Berlin is a symbol of reunification and resilience, boasting a dynamic blend of historic and modern attractions. Visitors and residents can explore numerous museums, art galleries, and historic sites such as the Brandenburg Gate, the Berlin Wall Memorial, and the Reichstag building. The city's diverse neighborhoods, lively arts scene, and world-renowned cuisine further add to its charm, making it an exciting place to live and work.

My interest in the fellowship at Charité Hospital lies in the unique opportunity to collaborate and learn from these experts, as well as to participate in innovative research projects addressing critical challenges in musculoskeletal medicine. Specifically, my main interest has been to improve my knowledge in knee surgery, as I have been specializing in this joint over the past two years. The experience and knowledge gained in this cutting-edge environment, along with the enriching experience of living in Berlin, will enable me to significantly contribute to the advancement of this field and improve patients' quality of life.



Moving to Berlin with my wife and our one-year-old son presented its own set of challenges. Finding an apartment in a bustling city like Berlin was no easy feat. Fortunately, we were able to secure accommodation at the IBZ (Internationales Begegnungszentrum der Wissenschaft Berlin), which provides housing for researchers and their families. The IBZ offers fully furnished apartments and a supportive community, making it easier for international researchers to settle in Berlin.

Additionally, securing childcare for our son was another hurdle. After navigating through extensive paperwork—a popular sport in Germany—we were able to find a suitable daycare. The process was time-consuming, but ultimately, it allowed us to ensure that our son had a safe and nurturing environment while I pursued my fellowship.

Given my primary interest in knee surgery, I plan to join Dr. Tobias Jung's team and Dr. Clemens Gwinner's team at the Charité Mitte campus. Dr. Tobias Jung is renowned for his expertise in sports-related knee injuries, and Dr. Clemens Gwinner is highly respected for his work in knee reconstruction and arthroplasty surgery. Their combined knowledge and experience will provide an invaluable learning environment and allow me to advance my skills in knee surgery significantly.

In the final months of my fellowship, I intend to join Dr. Sebastian Meller at the Virchow Campus to gain experience in surgeries related to septic processes. Dr. Meller is a distinguished surgeon known for his specialized work in managing septic joint conditions and complex infections, making him an ideal mentor for this critical aspect of orthopedic surgery.

The combination of both campuses allows me to approach knee pathology comprehensively like nowhere else in the world. At Charité, I can observe everything from knee preservation treatments using biological therapies to the most severe septic revisions. This unique opportunity has enabled me to understand the knee as a complete organ rather than as separate osteoligamentous structures.

Objectives for the fellowship

My primary objectives for the fellowship encompass a comprehensive scope aimed at advancing my skills and knowledge in orthopedic surgery:

1. **Advanced Arthroplasty Techniques:** Acquiring extensive experience and mastering the latest techniques in primary and revision arthroplasty under the guidance of global leaders in the field.
2. **Management of Complex Cases:** Increasing my proficiency in managing challenging scenarios such as periprosthetic fractures and septic joint surgeries at one of Europe's foremost centers.
3. **Joint Preservation in Osteoarthritis:** Learning advanced techniques in joint preservation specifically tailored for osteoarthritis patients.
4. **Deformity Correction:** Mastering techniques for correcting deformities around the knee, crucial for optimizing patient outcomes.
5. **Algorithms for Knee Injuries:** Understanding and applying decision-making algorithms for multiligamentous knee injuries to ensure optimal treatment pathways.
6. **Surgery for Extensor Apparatus and Femoropatellar Joint:** Mastering decision-making algorithms for surgical interventions involving the extensor apparatus and femoropatellar joint.
7. **Biological Therapies for Chondral Lesions:** Acquiring protocols and techniques for implementing biological therapies in the treatment of chondral lesions of the knee.



8. **Networking and Collaboration:** Utilizing this unique opportunity to engage, exchange knowledge, and collaborate with orthopedic surgeons from the host center and visiting fellows, fostering future research collaborations.

Theoretical knowledge and technical skills acquire during the fellowship

Based on the objectives I established for my fellowship at Charité Hospital in Berlin, I have had the opportunity to acquire a wide array of technical skills that have significantly enhanced my surgical proficiency and broadened my expertise in orthopedic surgery. These skills include:

1. **Advanced Arthroplasty Techniques:**

- Primary Arthroplasty: I learned the latest techniques in primary joint replacement surgeries, focusing on optimizing implant positioning and patient-specific approaches to improve outcomes.
- Revision Arthroplasty: Gained hands-on experience in complex revision surgeries, learning strategies for managing bone loss, instability, and infection.

2. **Periprosthetic Fracture Management:** Developed proficiency in surgical techniques for stabilizing periprosthetic fractures, including the use of specialized fixation devices and understanding biomechanical principles to ensure effective fracture healing.

3. **Septic Joint Surgery:** Acquired skills in diagnosing and treating septic arthritis, including joint debridement, antibiotic-loaded cement spacers, and revision procedures for infected prostheses.

4. **Joint Preservation Techniques:**

- Osteoarthritis Management: Learned various joint preservation techniques such as osteotomies, biological injections (e.g., PRP, stem cells), and minimally invasive arthroscopic procedures to manage early osteoarthritis and delay the need for joint replacement.
- Deformity Correction: Gained expertise in performing corrective osteotomies around the knee, utilizing preoperative planning software, intraoperative navigation, and fixation techniques to correct angular deformities and restore joint alignment.

5. **Multiligamentous Knee Injury Management:** Mastered decision-making algorithms and surgical techniques for repairing and reconstructing multiple ligament injuries of the knee, employing graft selection, fixation methods, and rehabilitation protocols.

6. **Extensor Apparatus and Femoropatellar Joint Surgery:** Enhanced my skills in surgical interventions for patellar instability and extensor mechanism injuries, including trochleoplasty, medial patellofemoral ligament reconstruction, and distal realignment procedures.

7. **Biological Therapies for Chondral Lesions:** Learned protocols for administering biological therapies such as autologous chondrocyte implantation, microfracture techniques, and the use of new techniques to promote cartilage regeneration in chondral lesions.

8. **Minimally Invasive Techniques:** Gained experience in minimally invasive surgical techniques, enhancing my ability to perform arthroscopic procedures, manage smaller incisions, and reduce patient recovery times.

Conclusion

The fellowship at Charité Hospital in Berlin has been a transformative experience that significantly advanced my professional development. Being immersed in one of Europe's foremost orthopedic centers

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provided unparalleled opportunities to enhance my skills, expand my knowledge, and deepen my understanding of orthopedic surgery. Interacting with people from diverse backgrounds—from India and Iran to the USA, Europe, Arabia, and New Zealand—has profoundly enriched both my professional expertise and personal growth.

Looking ahead, I am committed to applying the knowledge and skills gained during this fellowship to my daily practice. My goal is to improve the quality of life for my patients through enhanced care and innovative approaches.

I would like to extend my heartfelt gratitude once again to EFORT and everyone who supported me during my tenure at Charité Hospital. Special thanks to Dr. Stephane Oehme, whose unwavering assistance and guidance were invaluable throughout these intensive six months.



Expenses:

Please provide approximate amounts for the following fellowship expenses:

Travel: EUR 600 €
 Accommodation: EUR 7200€
 Other expenses: EUR 5000€

Topic	Please tick one of the boxes <input checked="" type="checkbox"/> 1 (poor) to 5 (very good)					Your comments, thoughts, recommendations
	1	2	3	4	5	
Education						
Could you improve your knowledge and gain new experiences?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Host Department						
How was your communication with your host centre (regarding accommodation, programme, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Did they offer you a social programme?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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