


The Brussels Breast Surgery Fellowship | A Three-Month Experience in Advancing Skills in Breast Surgery

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Abstract: The Brussels Breast Surgery Fellowship at Brussels University Hospital offers a unique 3-month clinical immersion in reconstructive and aesthetic breast surgery. Under the guidance of fellowship director Prof. Moustapha Hamdi and his esteemed colleagues, the fellow is exposed to a high volume and wide breadth of cases spanning autologous and implant-based breast reconstruction, oncoplastic surgery, breast reduction and mastopexy, implant augmentation, revision breast surgery, and fat grafting. The multidisciplinary team approach, involving close collaboration with breast surgeons, provides valuable experience in oncoplastic planning and execution. In addition to time in the operating theater, the fellow gains knowledge through outpatient clinics, didactic teaching sessions, and clinical research opportunities leveraging the department's extensive prospective database. As the 2023 fellowship awardee, I had the privilege of learning directly from Prof. Dr. Moustapha Hamdi and participating in over 130 cases across the reconstructive and aesthetic spectrum. Unique features of the fellowship included exposure to lymphedema surgery utilizing the Symani robotic system, advanced techniques like the internal bra, volume distribution mastopexies, observation of private aesthetic clinic cases, and optional participation in academic workshops. This fellowship represents an outstanding opportunity to refine one's skills in breast surgery and microsurgery while experiencing the rich culture of Belgium.

Key Words: breast, reconstruction, aesthetics, fellowship, multidisciplinary

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The Department of Plastic and Reconstructive Surgery at Brussels University Hospital has earned an international reputation as a center of excellence in breast surgery. At the helm is Prof. Dr. Moustapha Hamdi, a globally recognized leader in the field who has pioneered techniques in autologous breast reconstruction and breast aesthetics. The Brussels Breast Surgery Fellowship aims to share the department's expertise with promising international surgeons. A 3-month clinical immersion offers intensive exposure to reconstructive and aesthetic breast surgery, with the goal of refining the fellow's skills and preparing them for a career in this challenging subspecialty.

As the recipient of the 2023 Brussels Breast Surgery Fellowship Award by Hamdi Foundation, sponsored by Polytech Health & Aesthetics,¹ I had the privilege of training under Prof. Hamdi and his distinguished team from February to April 2024. This report outlines my experience as a fellow, highlighting the unique learning opportunities and clinical insights I gained during my time in Brussels.

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The Hamdi Foundation

The Hamdi Foundation, created in 2018 by Professor Moustapha Hamdi, with the kind support of Polytech™, focuses on the field of breast surgery. It offers two fellowships: the Brussels Breast Surgery Fellowship² and the Albucasis Grant.³ These programs provide training opportunities for young surgeons to develop their skills in breast reconstruction surgery under the guidance of experienced professionals like Professor Hamdi in Belgium. The foundation also engages in advocacy and awareness activities to highlight the broader social impacts of breast cancer and improve access to reconstructive surgery. Additionally, it supports cultural exchanges and builds community networks to enhance the support system for patients and medical professionals involved in breast cancer care.

Site-Specific Information

The Brussels University Hospital is located in the suburb of Jette, with easy access from the city center (Laerbeek Avenue 101-1090 Brussels – Belgium).

Hospital can be reached easily by bus or tram, as there are stations exactly outside the hospital. The hospital houses state-of-the-art operating theaters, a comfortable inpatient ward with single or double bedrooms, and fully equipped outpatient consultation rooms. The Department of Plastic and Reconstructive Surgery, founded in 1979 by Prof. Paul Wylock, has grown into a major referral center offering the full spectrum of plastic surgery services. In 2010, leadership transitioned to Prof. Hamdi, who has built upon the department's strong foundation with an emphasis on cutting-edge breast reconstruction and microsurgery, leads a team of highly skilled surgeons with diverse expertise: Prof. Alexandru Nistor (lymphedema treatment), Dr. Karl Waked (body-contouring), and Dr. Giuseppe Giunta (lower extremity and hand). Additional expertise is provided by consulting surgeons Prof. Guelinckx—a world pioneer in facial reanimation surgery and Prof. Rutger Schols a specialist in cleft and pediatric plastic surgery, alongside with Prof. Randy De Baerdemaeker, and Dr. Bert De Brucker—previous trainees of Prof Hamdi—, making the department one of the largest plastic surgery departments in Belgium.

The department's proficiency extends beyond breast surgery to encompass a wide range of plastic surgery subspecialties. This includes reconstructive and aesthetic breast surgery, hand surgery, skin tumor surgery, management of skin and tissue defects, treatment of congenital head and neck anomalies, cleft surgery, pressure ulcer surgery, body contouring surgery, high-definition body contouring, rhinoplasty, and facial aesthetic surgery.

Recently, the department was accredited by LE&RN as a Center of Excellence for lymphedema, recognizing the UZ Brussel Lymphoedema Clinic's expertise in treating this condition.

Additionally, Delta Hospital (CHIREC) clinic is a private hospital where Prof. Hamdi is operating weekly his elective reconstructive and aesthetic cases. Chirec clinic is situated in the suburb of Delta (south Brussels), which is easily accessible by metro, tram, and bus.

Multidisciplinary Approach

The Brussels Breast Surgery Fellowship is characterized by a multidisciplinary approach. The program emphasizes collaboration

among various specialists, including plastic surgeons, breast surgeons for oncoplastic cases, as well as other specialties for head & neck reconstruction, orthoplastic cases, facial reanimation, and complex wound management. The collaboration with anesthesiologists is strong, aiming to create new protocols for postoperative patient comfort, reducing risks associated with deep vein thrombosis, bleeding, and bruising.

This team model exposes the fellow to a diversity of perspectives and techniques. This collaborative approach enables fellows to gain a comprehensive understanding of breast cancer management and the role of reconstructive surgery. Weekly multidisciplinary meetings provide a platform to discuss complex cases and develop personalized treatment strategies. The fellowship also includes exposure to breast oncology surgeries and close cooperation with oncologists in the perioperative setting.

Application and Selection Process

The Brussels Breast Surgery Fellowship accepts applications from plastic surgeons in their final year of training or who have recently completed residency. The application period opens in late winter for positions starting the following February. Required documents include a CV, letter of motivation, and two letters of recommendation. The selection committee, chaired by Prof. Hamdi, reviews applicants holistically based on their surgical experience, academic achievements, and career goals. As the fellowship has grown in reputation, it has attracted a competitive international applicant pool. Each year, the fellowship program receives over 150 applications, and the total number of successful applicants exceeds 50, including surgeons with backgrounds in plastic surgery or general surgery specialized in breast. While the Brussels Breast Fellowship and the Albuscas Fellowship winners are offered a grant, all other fellowships are unpaid.

As mentioned earlier, Hamdi Foundation offers two fellowships: the Brussels Breast Surgery (2) and the Albuscas Clinical Fellowships (3). Benefits, eligibility criteria and requirements are listed in Table 1. The Brussels Breast Clinical Fellowship and the Albuscas Fellowship starts yearly in January and September respectively, and run for 3 months.

Prospective fellows are expected to have a track record of excellence in their training and demonstrate a commitment to reconstructive breast surgery. The program seeks candidates who will take the knowledge and skills gained in Brussels and apply them in their future practice, with an emphasis on those returning to underserved areas. Prior fellows have come from the Middle East, Asia, Africa, South and North America, and Eastern Europe.

Teaching Philosophy and Training Program

The fellow is integrated into a team under the direct mentorship of Prof. Hamdi. A typical week includes 4 days in the operating theater, a half-day outpatient clinic, and didactic sessions. The core objective is

to expose the fellow to a high volume of cases representing the full spectrum of breast reconstruction and aesthetics. The training will cover a comprehensive range of breast reconstruction techniques, including autogenous procedures like pedicled flaps, free flaps, and perforator flaps, as well as implant-based reconstructions and oncoplastic approaches for treating breast cancer. The fellow will also engage in daily practices of fat grafting for both reconstructive and aesthetic enhancements. Techniques for breast reduction, mastopexy, and breast augmentation using implants will be demonstrated by various staff members within the department. Additionally, the department regularly handles complex cases requiring revision breast surgery. Finally, the fellow will participate in the multidisciplinary management of lymphedema at the lymph clinic. By observing a diversity of techniques in the hands of experienced surgeons and gradually taking on increasing responsibility, the fellow refines their clinical judgment and operative skills. The team employs a variety of state-of-the-art technologies including indocyanine green angiography, 3D imaging, and the Symani microsurgical robotic system.

When not operating, the fellow participates in the weekly outpatient breast clinic and lymphedema clinic. This provides an opportunity to gain experience in patient selection, preoperative planning, and postoperative care under Prof. Hamdi's guidance. The clinic serves as a forum to discuss challenging cases and review postoperative results. The fellow acts as a resource of different approaches, techniques, and knowledge for residents and medical students rotating on the service.

Formal didactic sessions are held weekly. These include case presentations by faculty and trainees and lectures on core topics by Prof. Hamdi and the other staff members. The fellow is expected to prepare and present 1–2 times at these academic forums during a 3-months fellowship. Additionally, the monthly morbidity and mortality conference critically reviews all complications to identify opportunities for quality improvement. The department maintains a robust prospective patient registry that the fellow can leverage for clinical research, with the expectation of one project advancing to publication. Optional activities include a microsurgery lab where the fellows can practice their microsurgical skills on chicken thighs. Lastly, the fellow is welcomed to any local workshops (ie, interna bra using P4HB scaffold), audits and scientific events.

Unique Features of the Brussels Fellowship

Several aspects characterize the Brussels Breast Surgery Fellowship as a truly comprehensive experience:

Private Aesthetic Clinic

In addition to complex reconstructive procedures at the university hospital, the fellow has the opportunity to participate in additional high volume of aesthetic breast and body-contouring cases performed

TABLE 1. Summary of the Key Features of the Two Fellowships Offered by the Hamdi Foundation

Category	Albuscas Fellowship	Brussels Breast Fellowship
Site	Brussels University Hospital, Laerbeek Avenue 101–1090 Brussels – Belgium	Brussels University Hospital, Laerbeek Avenue 101–1090 Brussels – Belgium
Duration and benefits	3 months (Sept–Nov 2024), €1000/month scholarship, €500 travel stipend, prerequisite for MRBS-RMES master degrees at UAB	€4000 total from Polytech Health & Aesthetics GmbH; €3000 for living, €500 for scientific events, €500 administrative fee
Eligibility	Resident in <i>Middle Eastern countries</i> , proficiency in English, postgraduate (max 2 years after qualification in plastic surgery), academic excellence	Must have fully completed or be in last year of recognized Plastic Surgery training program
Required documents	CV with photo, Letter of motivation, Most recent degree diploma, Recommendation letters	CV with photo, Letter of motivation, Most recent degree diploma, Recommendation letters
Research opportunities	Highly encouraged	Opportunities for participating in or starting new clinical breast, artificial intelligence in breast reconstruction and robotic surgery research projects

by Prof. Hamdi at the Delta Hospital (CHIREC) private clinic. This part of the fellowship offers a unique opportunity to experience Prof. Hamdi's free flap breast reconstruction protocol, which significantly reduces surgical duration and postoperative recovery time, at the Delta Hospital (CHIREC) private clinic. Common procedures include breast augmentation, mastopexy, reduction, 360 liposuction, transconjunctival blepharoplasty etc. This private practice experience provides insight into the full spectrum of aesthetic breast surgery.

Academia

For fellows who are keen on academia, research, and publishing, the fellowship provides numerous opportunities to engage in cutting-edge research projects. Fellows can contribute to ongoing studies or initiate new investigations under the guidance of experienced mentors. Additionally, the environment is highly conducive to innovation, as Prof. Hamdi is very open and receptive to new ideas and technology. This openness presents fellows with ample possibilities to explore new research avenues and contribute meaningful advancements to the field.

Lymphedema Treatment

Prof. Nistor leads a dedicated lymphedema surgery program utilizing advanced techniques including vascularized lymph node transfer and lymphaticovenous anastomosis. The fellow receives exposure to lymphedema workup, surgical planning, and operative techniques aided by the Symani[®] robotic system.

Working Schedule and Logistics

The fellowship schedule is designed for an immersive experience in breast surgery. A typical week includes 4 days in the operating theater and a half-day outpatient clinic on Wednesday. The fellow is expected to be available during normal working hours (8 AM-6 PM) but there are no weekend duties or night call. Opportunities as mentioned to spend an occasional day at CHIREC Delta Hospital observing Prof. Hamdi's private aesthetic breast clinic cases weekly. Didactic sessions are held on Thursday mornings after the ward round which is exclusive to everyone on that day. The fellow can attend additional outpatients' clinics like wound and lymphedema clinics the afternoons that they happen at their discretion.

While the fellowship is structured, there is flexibility for the fellow to pursue their individual clinical and academic interests. Those with a strong background in plastic surgery may focus on advanced techniques like perforator flaps and lymphatic surgery. Fellows coming from a general surgery pathway often gain more experience with oncoplastic approaches and aesthetic procedures. All fellows are encouraged to participate in research or quality improvement projects using departmental data, with a goal of presenting at a national meeting or publishing in a peer-reviewed journal.

Living in Brussels

Brussels, the capital of Belgium and hub of the European Union, is a vibrant multicultural city. The Brussels University Hospital is located in the suburb of Jette, a quick commute from the city center. Fellows have the option of living near the hospital or in central Brussels, with a variety of short-term rental options available in both locations.

TABLE 2. Fellowship at a Glance

Fellowship Title	The Brussels Breast Surgery Fellowship
Fellowship director	Prof. Moustapha Hamdi MD, PhD (Moustapha.Hamdi@uzbrussel.be)
Faculty	Prof. Moustapha Hamdi MD, PhD – Chairman Prof. Alex Nistor MD, PhD – Lymph Clinic Coordinator Prof. Randy De Baerdemaeker MD – Local Coordinator Dr. Karl Waked MD – Local Coordinator Dr. Gabriele Giunta
Locations	Consulting Faculty: Prof. Guelinckx, Prof. Rutger Schols, Prof. Randy De Baerdemaeker and Dr. Bert De Brucker Brussels University Hospital, Brussels, Belgium (Plus code: V8Q5 + 4C Jette) CHIREC Delta Hospital (private clinic), Brussels, Belgium (Plus code: R98X + GX Auderghem)
Daytime duties	8:00 AM–6:00 PM (variable)
On-call duties/night shifts/weekend responsibilities	None
Length of fellowship available	3 months (February to April)
Salary	None
Accommodation	Private rental options available near hospitals
Requirements/experience	Fully completed plastic surgery training or final year resident
Selection process	CV, motivation letter, 2 recommendation letters
No. operations performed per year at UZB	More than 1.000
What was particularly good?	High volume and diversity of cases Close mentorship with Prof. Hamdi Exposure to reconstructive and aesthetic breast surgery Multidisciplinary approach Opportunities in lymphedema and robotic microsurgery Opportunities in research/publications
What could be improved?	Provide more detailed advance information on fellow responsibilities and learning objectives Speak only in English when fellows are present

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The fellowship provides a list of recommended housing contacts, but fellows are responsible for making their own arrangements.

The cost of living in Belgium is on par with other Western European countries. Fellows should budget approximately €1500 per month for housing and living expenses. Groceries, dining out, and entertainment tend to be less affordable than in southern Europe. Many fellows take advantage of Belgium's central location to explore nearby European destinations on weekends, with excellent train and bus connections to Paris, Amsterdam, and London.

Apart from the winners of the aforementioned fellowships, the program does not include salary support, health insurance, or travel expenses. Fellows may be eligible for external scholarship programs through their home institution or specialty society. The department can provide documentation needed for visa applications and some logistical advice, but the fellow is ultimately responsible for securing necessary permits. Accepted fellows must obtain appropriate medical licensing and malpractice coverage, which the department can guide them through. Table 2 provides a concise overview of the key features of the Brussels Breast Surgery Fellowship, including details about the fellowship director, faculty, locations, duties, requirements, and my personal assessment of the experience.

Three Months in Brussels: My Fellowship Experience

As the 2023 fellowship winner, I had the privilege of an intensive clinical immersion in reconstructive and aesthetic breast surgery. I spent the majority of my time in the operating theater. One of the most valuable aspects was the opportunity to work 95% of my time with Prof. Hamdi on a daily basis. By observing his approach to complex cases and learning his technical tips and tricks, I was able to refine my own clinical judgment and microsurgical skills. We developed an easy camaraderie and I felt increasingly comfortable raising questions.

Over my 3 months, I participated in over 120 breast reconstruction procedures both primary and delayed. DIEP flaps comprised the bulk of the microsurgical cases, but I also gained exposure to transverse musculocutaneous gracilis flaps, AICAP and LICAP flaps, breast reduction and volume distribution mastopexies with or without the use of internal scaffold that acts as an “internal bra”, as well as the full range of implant-based techniques. The use of adjuvant techniques like liposuctions and lipofilling were a daily routine.

Working alongside Prof. Hamdi, I had the opportunity to learn his innovative techniques; the “Hug Flap” technique⁴ aimed to enhance breast projection in autologous reconstruction by utilizing de-epithelialized caudal mastectomy skin and the “Hamdi's Hammock”⁵ technique offered a minimally invasive approach to refine the inframammary fold and improve breast shape. Additionally, I gained lots of experience in the application of “interna bra” using P4HB scaffold to provide additional support and shape to the breast post mastopexies.

Learn beside him it was valuable to learn the department's algorithms for flap and reconstructive approach selection. I found lymphedema surgery using the Symani robot to be a unique tool in the arsenal of supermicrosurgeons.

Clinic time was just as educational as my operative experience. Through the process of seeing consults and follow-ups alongside Prof. Hamdi, I learned his methodology for setting patient expectations, shared decision making, and analyzing aesthetic outcomes. We had thought-provoking discussions about complex cases, and I was often asked for my opinion, which made me feel like a valued member of the team. The lymphedema clinic offered exposure to the full cycle of care, from diagnosis through surgery and rehabilitation.

While my experience was weighted toward reconstructive surgery, I had the chance to spend time observing aesthetic procedures with Prof. Hamdi at CHIREC Delta Hospital. The strong involvement in aesthetic operations was an unexpected benefit of my experience. These included

periorbital rejuvenation, body contouring (abdominoplasties, thigh/arm lifts, HD liposuction, etc) as well as cases of aesthetic breast surgery.

On the academic front, I have actively participated in five publications both in realms of reconstructive and aesthetic plastic surgery, which have been submitted for publication. This active participation in publishing not only enriches the fellow's learning experience but also helps to advance the overall knowledge base of breast surgery practices. I also had the chance to attend the annual Royal Belgian Society for Plastic Surgery Spring Meeting in Antwerp, a city well-known internationally for its rich history, and as a global hub of the diamond trade.

One notable aspect of the fellowship was the welcoming and friendly environment cultivated by Prof. Hamdi. From the start, I felt integrated into the group. The team's support and interest in my development as a surgeon contributed to a positive experience. The diversity within the team, with members from various cultural backgrounds, enriched the fellowship. We frequently shared meals together, discussing our experiences and learning about each other's cultures. This inclusive atmosphere helped me feel comfortable and facilitated the learning experience by providing an environment conducive to asking questions, discussing cases, and collaborating on research projects. It is my belief that Prof. Hamdi's leadership in fostering this supportive environment demonstrates his dedication to mentorship and his genuine interest in understanding and connecting with his fellows on a personal level.

One of the joys of being in Brussels was the chance to experience Belgium's rich culture. From the gastronomy (I certainly ate my fill of waffles, chocolate, and frites) to the stunning medieval architecture, there was no shortage of ways to spend my free time. The central location made it easy to take weekend trips to nearby cities like Bruges, Ghent, Antwerp as well as Amsterdam, Rotterdam, Luxemburg and Paris. This work-life balance made for a tremendously rewarding experience both professionally and personally.

CONCLUSIONS

The Brussels Breast Surgery Fellowship offers a unique opportunity for early-career surgeons to gain concentrated experience in reconstructive and aesthetic breast techniques. With a robust clinical volume, diverse case mix, and guided mentorship, it provides a strong foundation for a career in breast surgery. Prof. Hamdi and his colleagues are dedicated to creating a supportive learning environment that promotes operative skills, clinical judgment, and research abilities. For surgeons looking to deepen their knowledge of state-of-the-art breast reconstruction and microsurgery, there is no better place than Brussels.

As the 2023 fellow, I can attest to the tremendous personal and professional growth I experienced during my time at Brussels University Hospital. The chance to learn from thought leaders in the field, participate in groundbreaking procedures, and contribute to academic investigations has further enhanced my trajectory as a surgeon. I am deeply grateful to Prof. Hamdi, the Brussels University Hospital Department of Plastic and Reconstructive Surgery, and Polytech Health & Aesthetics for investing in my development.

I look forward to representing the Brussels Breast Surgery Fellowship as an alumnus and would give the experience my highest recommendation.

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