ROYAL COLLEGE OF SURGEONS IN IRELAND
COLÁISTE RÍOGA NA MÁINLEÁ IN ÉIRINN

# Grant/Fellowship Report Form

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| **Fellowship/Grant Holder Name** | Christina Fleming PhD FRCSI |
| **Brief biography, including qualification and year of graduation (no more than 100 words)** | I graduated from UCC in 2011 with a first class honours degree and was awarded FRCSI in 2020 and CCST in 2021. I have a strong interest in academia, with more than 80 papers and five book chapters published and 30 prizes, bursaries and research grants for my work. I also hold a basic science PhD and qualifications in human factors and clinical leadership and I am past Chair of the Irish Surgical Research Collaborative. Other leadership roles held include: Vice President of the Association of Surgeons in Training, YoungESCP member, ESCP Programme Committee member. I will shortly commence a Consultant General and Colorectal Surgeon post at University of Limerick Hospital Group, Limerick. |
| **Title of Project/Fellowship** | Robotic and Colorectal Surgery Fellowship, CHU Bordeaux France |
| **Year of Award:**<br>**Commencement Date:**<br>**Conclusion Date:** | 2022<br>October 2021<br>September 2022 |


**Summary (no more than 250 words)**

The Colorectal Surgery Department at Centre Hospitalier Universitaire (CHU) de Bordeaux (and its academic centre *Pelvicare*), is a tertiary referral colorectal surgery unit and the highest volume rectal cancer centre in France offering all treatment and surgical options from organ preservation to pelvic exenteration to a catchment area of over 8 million people. It is also an active contributor to the GRECCAR (Groupe Francais Chirurgie du Rectum) academic consortium, a world leader in rectal cancer research and clinical trial delivery. All surgical approaches are practiced including: open, laparoscopic, robotic and transanal surgery.

The fellowship post had an 80:20 clinical:academic time allocation which translated into four operative days and one clinical/academic day. The operative opportunities were vast and for my time I focused the majority of my fellowship on rectal cancer including: robotic and transanal approaches to TME, exenterative surgery including both open and robotic approaches to the pelvis and beyond TME surgery (including mulit-disciplinary operating) and approaches to organ preservation. I attended the weekly benign and cancer MDM and a monthly regional advanced cancer MDM which matured my decision making skills for many colorectal disorders. I contributed to research including GRECCAR and departmental research and the development of the EUREKA (Expert DUtch, FREnch, and UK robotic rectal cAncer centres) research collaborative.

**Grant Report (in the region of but no more than 500 words)**

Objectives of Project/Fellowship:
The aim of the fellowship at CHU was to gain experience as both primary operator and as part of a multidisciplinary operative team in managing a wide range of colorectal disorders with a particular emphasis on rectal cancer and advanced pelvic malignancies. All surgical approaches were practiced including: open, laparoscopic, robotic and transanal but as this was a European Society of Coloproctology (ESCP) approved robotic surgery fellowship there was a significant focus on the development of advanced robotic skills with dual console daVinci Xi (Intuitive Surgical) 5-day access in the colorectal unit. Due to the high volume of rectal cancer managed in the unit there was opportunity to learn the entire spectrum of rectal cancer management and how a vast array of operative techniques can be integrated into practice in a tailored, patient centred, evidence-based way. A focus not just on oncological outcomes but also optimising functionality and survivorship was also central to decision making.

To complement my colorectal surgery training in Ireland, the unit offered opportunity to develop skills in the following areas:
- ultra-high volume of TME resections
- transanal surgery to complement transabdominal TME surgery
- further mature my robotic surgery skills
- operative approaches to pelvic exenteration, lateral lymph node dissection and sacrectomy
- gastrointestinal reconstruction (especially for rectal tumours <5cm with routine use of TTSS and delayed coloanal anastomosis, intra-corporeal anastomosis as examples)
- multivisceral reconstruction (including enterovagino- colovaginoplasty, ileal conduit and IGAP flaps)

Non-operatively, the weekly benign and cancer MDM and monthly advanced cancer MDM (discussed through French) offered opportunity to mature key decision making skills regarding a broad range of colorectal disease. The ethos of the unit for tailored, patient-centred care and to innovate and evolve with emerging evidence and technology offered a fresh perspective on surgical practice in general and how I will approach my Consultant practice.

Did you achieve these objectives?
My learning objectives were achieved and I believe the challenge of working through a second language also offered huge opportunity for personal development. I was involved in over 170 major cancer resections (including over 100 robotic TME) and 25 transanal local excisions. I learnt and practiced the fundamentals of pelvic extenteration techniques in both primary and recurrent pelvic malignancies and operative approaches to multivisceral and lateral lymph node dissection and the intra-operative decision making in complex pelvic resections. I learned a vast array of gastrointestinal and multivisceral reconstructive options.

Having a strong foundation in robotic surgery skills prior to fellowship I had huge opportunity to mature and perfect these skills in TME and in more advanced areas including redo and beyond TME surgery (one third of the departmental pelvic exenterations were performed robotically). This development of advanced skill also meant I was confident to transition into a trainer role and train the residents in key elements of robotic TME surgery and offer them console operating opportunity. This was complemented by convening a robotic skills wet lab course for residents on two occasions during the year.

It was a very fruitful academic experience also due to the well-established research infrastructure and multidisciplinary research team in the department. I had the opportunity to co-author a GRECCAR trial protocol and develop the international EUREKA collaborative to perform outcomes

based research in robotic rectal cancer surgery. I published widely (as first or co-author) in peer review journals including Annals of Surgery, BJS and Colorectal Disease and supervised residents to both publish research projects and present their work Internationally.

Overall, training in Bordeaux allowed me to develop a more in-depth understanding of the spectrum of management options in rectal cancer and other colorectal disease. In particular how each operative option can be applied in a patient-centred approach and tailored both to the tumour/condition and patient treatment priorities supported by an ever-evolving evidence base and surgical technology and a strong knowledge of National and departmental data and outcomes.

In your opinion, what is the value of your award to:

(a) Yourself

This fellowship has significantly advanced both my clinical and operative skills in colorectal surgery. I have developed a new repertoire of operative techniques to complement my surgical training that will enhance the quality of care that I can provide in my Consultant practice. The high volume of operating really improved my anatomical knowledge and improved my confidence particularly when operating in planes that were beyond the 'norm' in colorectal surgery using both open and robotic approaches. My transition to a robotic trainer was also accelerated by the high volume of robotic training and operating I received. Through the fellowship in Bordeaux and the associated research and international collaborating I participated in throughout my time there I have developed a wide network of highly specialised colleagues that I can turn to for clinical and personal advice and support throughout my career. I think the challenge of working and living through a second language was also an invaluable learning experience, not only from the point of view of personal resilience but I feel I also have a better perspective on the lived experience of International colleagues that come to work in Ireland and the hidden challenges that they may face.

(b) The institution in which you worked

I think the value of Irish surgical training is highly recognised internationally with an endpoint of independent operating and strong academic performance and the fellowship post in Bordeaux also recognised this. I actively participated in training, particularly robotic surgery skills, both in the wet lab and in the operating theatre including console training in key components of TME surgery for residents as I had a quite a mature robotic skill set prior to commencing fellowship. My ability to operate independently prior to fellowship also meant that I could run an operating theatre with a resident and intermittent supervision from my fellowship supervisor with appropriate graded autonomy for more advanced and complex procedures. I had a strong research experience prior to fellowship which meant I could accelerate the research projects I became involved with and integrate into the already strong collaborative National and International research networks in Bordeaux. I could also support junior peers to develop their academic writing skills and prepare posters and presentations in English for International conferences all of which was very rewarding.

(c) In the future for Irish patients

The operative skills and clinical maturity I have developed have made me a better clinician and surgeon and will significantly enhance the standard and complexity of care I can deliver to Irish patients and I am proud to provide this care close to home. I have developed a comprehensive, complex skill set in robotic surgery transferable to both colorectal and general surgery practice so that patients can benefit from precision surgery and enhanced recovery after surgery. Fundamentally, I believe the way I prioritise outcomes and place value on outcome following colorectal surgery has evolved during my fellowship and as a Consultant I aim to employ more tailored and individualised approaches to decision making, improving the balance between cancer or disease cure and functionality and survivorship.