



SCHOOL OF

Pharmacy & Pharmaceutical Sciences

Welcome to the latest issue of our Elixir Newsletter.

2016 was another busy year for the School. In the early part of the year we underwent a successful accreditation visit from the Pharmaceutical Society of Ireland for our new pharmacy programme, and more recently, in December, underwent a whole School Quality Review. Staff have thus been working hard all year on accreditation and quality issues, as well as delivering on teaching and research fronts. Some of their achievements are captured in the following pages.

We have had a number of staff changes over the last year with our former Head of School, Professor Marek Radomski, leaving for pastures new in Canada, our School Administrative Manager, Dr Cecilia McAllister, taking up a position in the Department of Health, and other staff changing direction on foot of retirement. In this issue we have presented interviews with Professor Mary Meegan and Mrs. Betty Daly, both of whom retired in the autumn. As some staff leave others have joined, and you will see details of our new recruits over the past year in this newsletter.

We have also highlighted news of some of our alumni who have been appointed to prestigious positions at a national and international level. We are always keen to hear of the success of our graduates, so if you have any good news to share with fellow alumni and friends, please email griffilo@tcd.ie.

I do hope you enjoy reading through this latest Elixir newsletter. Finally, I'd like to wish you a happy, healthy and successful 2017; here's hoping it's even better than 2016!



Professor Anne Marie Healy

Head of School

School News

Our Lady's Hospice & Care Services Forge Academic Link with Trinity College Dublin

Trinity and Our Lady's Hospice & Care Services (OLH & CS) signed a Memorandum of Understanding (MOU) formalising an academic link between the Hospice and Trinity today. Speaking at the signing, Professor Linda Hogan, Vice-Provost and Chief Academic Officer of Trinity said: "Trinity is delighted to officially recognise OLH & CS as an affiliated clinical teaching centre. This collaboration includes undertaking and disseminating of research and clinical audits, and the provision of clinical teaching, including clinical placements and visits. Our Lady's Hospice & Care Services staff associated with the education and training of students will be formally affiliated with the School, will be awarded with the appropriate academic/clinical titles and will be provided access to Trinity's library facilities. Chief Executive of OLH & CS, Ms Audrey Houlihan said, "We believe this formal commitment to teaching, research and clinical links provides a wonderful opportunity for our staff and Trinity students and promotes excellence in patient care. We hope that



Representatives from the Pharmacy Department and Management of OLH & CS along with representatives from the School of Pharmacy and Pharmaceutical Sciences, together with the Vice-Provost, the Dean of the Faculty of Health Sciences and the Chief Executive of OLH & CS.

future multidisciplinary education programmes at OLH&CS will also benefit from this affiliation".

For more information: http://pharmacy.tcd.ie/news/MOU_Signing_OLHCS2016.php



Back row (L-R): Eimear O'Dwyer, Chief Pharmacist at OLH & CS, Professor Anne Marie Healy, Head of School of Pharmacy and Pharmaceutical Sciences. Front Row (L-R): Professor Linda Hogan, Vice-Provost and Chief Academic Officer of Trinity, Ms Audrey Houlihan, Chief Executive of OLH & CS.

New Staff Members Join School of Pharmacy & Pharmaceutical Sciences



1 Mr. Dimitrios Paraskevas
2 Mr. Jonathan Walsh
3 Dr. Simon Jackson
4 Dr. Emer Guinan

Over the year, new staff members have joined the School, and we would like to welcome them:

The new School Administrative Manager, **Mr. Dimitrios Paraskevas** joined us in May and brings a wealth of knowledge from his various roles within Trinity over the years. Joining Dimitri in the Administrative Team is Louise Griffin as Administrative officer for the Sophister years of the undergraduate programme, and Samantha Williams, as Executive Office, who will be based in the main School office.

In June, **Mr. Jonathan Walsh** was appointed to the newly created position of Instructional Designer. As part of his role, Jonathan will be responsible for the development of new high quality online content for the new five year Integrated Pharmacy programme.

Dr. Simon Jackson joined the School as Entrepreneur in Residence. Dr Jackson is a pharmacognosist with a wealth of experience in business and cosmeceuticals.

Dr. Emer Guinan, a Chartered physiotherapist, and former Research Fellow in School of Medicine, joined the School in a cross-Faculty position as Assistant Professor in Interprofessional Learning.

In addition to these new members of staff, two new Director appointments within the School have also been made: Associate Professor John Walsh as Director of Teaching & Learning (Undergraduate) and Associate Professor Helen Sheridan as Director of Research. We would like to congratulate all and wish them the best of luck in their new roles!



School of Pharmacy and Pharmaceutical Sciences Hosts First Workshop on Drug Transporters in the Lungs

An international group of 28 scientists from academia and pharmaceutical industry undertaking research in inhalation biopharmaceutics attended our first workshop on Drug Transporters in the Lung. The workshop was financially supported by the Science Foundation Ireland International Strategic Cooperation Award Japan initiative, designed to strengthen academic links between research bodies. The event was also co-sponsored by the Japanese Society for the study of Xenobiotics (JSSX). Participants heard about a series of studies focussing on new targets for the treatment of lung diseases, improving the efficiency of inhaled aerosol delivery which may improve the therapeutic response and minimise potential adverse effects. Assoc. Professor Carsten Ehrhardt said, "Thanks to the sponsorship this was a unique opportunity to engage not only with Japanese colleagues who are leading in transporter research, but also to include valuable input from pharmaceutical industry".

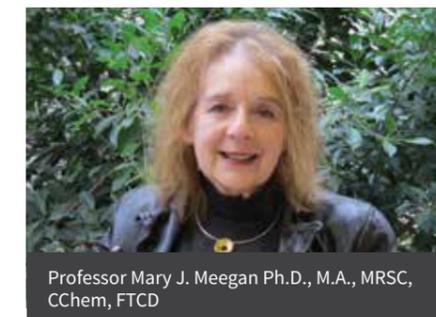
For more information please visit: www.pharmacy.tcd.ie/news/workshop-drugtransportersSept2016.php

Staff Profile

As in all areas of the health sciences, education and research in pharmacy has undergone enormous change over the past four decades. One academic who has been a part of those exciting developments as well as meeting the inherent challenges is our own Professor Mary J. Meegan who retired from the School of Pharmacy and Pharmaceutical Sciences in September 2016. Her expertise, like the discipline itself, is defined by growth and innovation, crucial factors she has passed on to her many generations of students. An enduring passion for her subject is also apparent in her work, and in conversation. Since joining the School of Pharmacy in Trinity in 1979, Professor Meegan has published over 90 papers in the field of pharmaceutical and medicinal chemistry. Her current research interests are focussed on the design and synthesis of new anti-cancer drugs. Mary remains, she says, on a constant learning curve.

Why pharmacy? A brief period working in a pharmacy in her native Newbridge, Co Kildare instilled an initial curiosity in chemistry and biologically active molecules. A career in academia beckoned the then budding young lecturer. By 1976, she had completed her Ph.D. in natural product chemistry, under the direction of Professor Dervilla Donnelly at University College Dublin, and went on to further postdoctoral research in Cambridge, followed by a post as visiting research fellow at the National Center for Scientific Research (CNRS), Gif-sur-Yvette.

Professor Meegan's strongest memory of her first experience of teaching pharmaceutical chemistry in Trinity was the "wonderful atmosphere". At that stage, in 1978, the School was based at 18 Shrewsbury Road, Dublin 4, where she worked alongside many names familiar to Trinity alumni including Dr John Clancy, Miss Alice Esmond, and the late Professor Richard Timoney. This was then the only pharmacy school in the country, with an intake of fifty students per year. The demands of the profession meant the course changed dramatically, Professor Meegan recalls. The introduction of electronic learning and the different means of course delivery were among the many changes, as well as a growth in student numbers. Practical classes became increasingly important in the introduction of modern experimental techniques into the teaching of pharmaceutical chemistry, as well as constant



Professor Mary J. Meegan Ph.D., M.A., MRSC, CChem, FTCD

updating in line with developments in drug discovery relevant to pharmacy.

Among the many events in her long teaching career, Professor Meegan recalls the opening of the Panoz Institute in 1998 as particularly memorable. Along with more laboratory space in an airy, modern building, the opening further consolidated the School within the University campus and marked a huge step forward in the development of Trinity's place in pharmaceutical education. Another notable landmark came three years ago when the School of Pharmacy and Pharmaceutical Sciences moved its research facilities to the Trinity Biomedical Sciences Institute, allowing more interaction and participation with multi-disciplinary research.

When it comes to the many rewarding aspects of her teaching and research, it is Professor Meegan's students who feature prominently. From the initial introduction of organic and pharmaceutical chemistry to first year students, right through to their fourth year projects, this interaction has genuinely proven the most satisfying part of her career as a lecturer.

"Seeing undergraduates transforming into professional pharmacists is a wonderful aspect of my work," says Professor Meegan. "I am also really proud of my postgraduate students who have done so well in regulatory affairs in industry, academia and generally throughout the profession".

Plans for the future include more travelling, but also continuing ongoing research and collaboration with her postgraduate students as well as her own science research. Because, for this dedicated and inspiring lecturer, retirement is not the end of something, but a fresh new beginning.

Interview and article by Valerie Shanley

School Research Highlights

Professor Anne Marie Healy Awarded Research Funding from National Institutes of Health



Professor Anne Marie Healy has been awarded €600,000 in research funding to develop a new inhaler for the treatment of lung disease. The funding will be used to develop a new dry powder inhaler for the treatment of lung disease, and could help millions of patients with cystic fibrosis, asthma and chronic obstructive pulmonary disease (COPD). This innovative type of inhaler will be the first ever of its kind to treat lung disease.

Professor Healy said, "I am delighted to be part of a translational National Institutes

of Health project, which aims to take the research from bench to bedside. Ireland has the highest incidence of cystic fibrosis in the world, with approximately one in 19 Irish people carrying one copy of the altered gene that causes the condition". The proposed new treatment has the potential to greatly improve the respiratory function, thus improving overall quality of life.

For further information please visit: www.pharmacy.tcd.ie/news/amhealy-amberfunding.php

Researchers Find that People with Intellectual Disability Taking Multiple Medicines with Side Effects

The research team from Trinity and Aston University, UK, found that people with intellectual disabilities were commonly prescribed medicines described as having anti-cholinergic activity. These medicines block a key neurotransmitter called acetylcholine which is involved in passing messages between nerve cells. While this action is necessary in some clinical circumstances it can lead to negative side effects. Lead author and Associate Professor in Pharmacy Practice, Máire O'Dwyer said, "The side effects from anti-cholinergic medicines can have a significant impact on quality of life for people with



intellectual disabilities". The findings, which use data from a long-term study of older adults with intellectual disability in Ireland, the IDS-TILDA study, have been published in the British Journal of Psychiatry.

The paper 'is available here: www.tara.tcd.ie/handle/2262/77386

Cancer Research Success



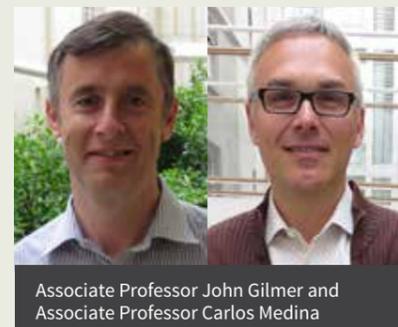
In early September, Professor Lorraine O'Driscoll spoke to both the Irish Times and RTE about the progress she and her team have been making in reprogramming cancer cells, making them less aggressive and more sensitive to anti-cancer drugs.

For more information on this exciting research please visit: <http://www.irishtimes.com/news/ireland/irish-news/shooting-science-trinity-biomedical-sciences-contest-1.2779132>

Progress in Treatment for Liver Diseases

Enterprise Ireland awarded researchers in the School, funding of €400,000 to develop hepatoprotective compounds discovered in Associate Professor John Gilmer's lab. The project sees John collaborate with Pharmacy colleague, gastroenterologist and scientist Associate Professor Carlos Medina as well as Trinity Medicine professors Pádraic Fallon and Aileen Long. The project is designed to evaluate the therapeutic potential of the lead compounds to treat sclerosing cholangitis, a rare but devastating condition for which there is no treatment. They will also investigate treatment of fatty liver disease and its complication, NASH, conditions becoming more prevalent due to the obesity epidemic.

For more information please visit: www.pharmacy.tcd.ie/news/jgilmer-enterprisefunding2016.php



Associate Professor John Gilmer and Associate Professor Carlos Medina

High Impact Research Papers Published

Associate Professor Máire O'Dwyer and colleagues in the Intellectual Disability Supplement to the Irish Longitudinal Study on Ageing (IDS TILDA) research paper "Factors associated with polypharmacy and excessive polypharmacy in adults with intellectual disabilities" is available through bmjopen.bmj.com/content/6/4/e010505.long

Professor Anne Marie Healy and Associate Professor Carsten Ehrhardt were invited, together with Associate Professor Alexander Zelikin (University of Aarhus, Denmark), to contribute a review in the prestigious Nature Chemistry journal. The publication, entitled Materials and methods for delivery of biological drugs can be found here: www.nature.com/nchem/journal/v8/n11/full/nchem.2629.html

Staff Awards



Left to right: Sinead Smith, Dean of Health Science Mary McCarron, Maria Jose Santos Martinez and Máire O'Dwyer

Dean's Research Awards 2016

Congratulations to three of our academic staff - Máire O'Dwyer, Maria Jose Santos Martinez and Sinéad Smith - who were the recipients of inaugural Dean's Research Initiatives Awards. Over 60 applications were received for these awards of €20,000 each, and only eight awards made across the Faculty, so this really is a tremendous achievement on the part of our three colleagues. The awards are designed to support new and innovative research that will enhance Trinity College's and the Faculty of Health Sciences' ability to compete for large-scale, interdisciplinary, single- and multi-investigator extramural awards. Congratulations to the awardees and their collaborators in the School and elsewhere.

Fabio Boylan Wins Certificate of Excellence at Global Engagement Awards



Left to right: Provost, Dr Patrick Prendergast, Vice President for Global Relations, Professor Juliette Hussey, Professor Daniel Faas, Professor Mauro Ferreira, Professor Rosemary Byrne, Professor Fabio Boylan, and Professor Nigel Stevenson.

Associate Professor Sheila Ryder awarded a Dean's Award for Innovation in Teaching



Congratulations to Associate Professor Sheila Ryder on her successful application for the Dean's Awards for Innovation in Teaching. The panel found it to be excellent, particularly strong on the pedagogy, truly innovative and they particularly liked the interactive elements. The second year of the awards sought to support innovations that would further one or more of the objectives of the Trinity Education Project. Seven innovations

were supported across the schools of Pharmacy & Pharmaceutical Sciences, Nursing & Midwifery and Medicine. Each of the 2016 innovations involved technology enhanced learning, indicating a firm shift within the Faculty of Health Sciences.

Sheila Ryder, School of Pharmacy and Pharmaceutical Sciences

Medication error is a significant problem, responsible for approximately 5% of hospital admissions. The skills of prescribing/counter-prescribing, dispensing and medication administration form part of healthcare students' training in University, and practice is essential. However, there is limited classroom time in the course curricula for students to respond to simulated patient cases. This innovation comprises patient simulations designed for students to practice and evaluate their performance outside the classroom/workplace.

They will be unique in the available interactivity with realistic 3-dimensional artefacts and characters, building upon completely novel 3D dispensed products already developed, and focusing on prescribing/counter-prescribing, Product selection for supply/administration and prescription/product review (dispensing/supply).

For further information, please follow this link: www.healthsciences.tcd.ie/awards/innovation-in-teaching-winners.php

The Provost hosted the second annual Trinity Global Engagement Awards ceremony which recognised the exceptional contribution made by staff to global education and research, cultural understanding and global experiences that directly benefits the Trinity community, raising the University's profile and supporting the development of students into global citizens. The three award winners were: Professor Mauro Ferreira, School of Physics; Professor Kevin Kelly, School of Engineering Professor Daniel Faas, School of Social Sciences and Philosophy.

In addition three academics received a Certificate of Excellence. These were: Professor Fabio Boylan, School of Pharmacy and Pharmaceutical Sciences; Professor Rosemary Byrne, School of Law and Professor Nigel Stevenson, School of Medicine. Nominations for Trinity's Global Engagement Awards were received from across all three faculties, demonstrating the range and diversity of Trinity's Global Engagement, the high calibre of award winners and their global impact. For more information on Global Relations please visit: www.tcd.ie/globalrelations

Student & Alumni News

Alumni Appointed to Prestigious Positions Nationally and Internationally

Congratulations to the following School alumni:

Ms. Aisling Reast appointed as the Director & National Co-ordinator of the Affiliation for Pharmacy Practice Experiential Learning (APPEL). Aisling registered as a pharmacist in 1999, and obtained her MSc in Community Pharmacy from Trinity in 2014. Her pharmacy practice experience includes six years as a pharmacy owner, and employment with both independent pharmacies and multiples. She has held several positions in healthcare education, pharmacy practice development, continuing professional development and programme management including at the Irish Centre for Continuing Pharmacy Education, Trinity, the Irish Pharmacy Union, the Pharmaceutical Society of Ireland and, prior to taking up the role in APPEL, as Director of Operations at the Irish Institute of Pharmacy. She is currently undertaking a MSc in Leadership, has a diploma in public relations and certificates in assessment and quality assurance of the assessment process. She is a Director and past President of the Pharmacy Benevolent Fund

Ms. Emer Cooke, a Trinity School of Pharmacy graduate and current member of the School's Strategic Advisory Board, was recently appointed as Head of Regulation of Medicines and other Health Technologies with the World Health Organisation (WHO) in Geneva. In this role, Ms Cooke will be responsible for leading WHO's global work on regulation of health technologies (medicines, vaccines, diagnostics and devices), co-ordinating the regulatory teams (Norms and

Standards, Prequalification, Regulatory Systems Strengthening, and Safety), and working with member states and international partners to assure the quality, safety and efficacy of appropriate health technologies.

Ms. Mary Rose Burke was appointed as the new CEO of Dublin Chamber of Commerce. Prior to her appointment, Mary Rose spent three years as Director of Strategy, International & Corporate affairs with Ibec. Mary Rose brings with her a wealth of expertise and a passion for representing business. The Chamber's Board is very excited and ambitious for the next phase of its development, building on its heritage of over 230 years to create a positive operating climate for businesses. Mary Rose has extensive experience pertinent to her new role. Her previous roles include Director of Pharmacy with Boots Ireland and establishing and running various businesses.



1 Ms. Aisling Reast
2 Ms. Emer Cooke
3 Ms. Mary Rose Burke

Trinity Pharmacy PhD Student Wins at Clanwilliam Pharmacist Awards

Congratulations to Susan O'Dwyer, Boots Ireland, who won the Practice-based Research Award at the Clanwilliam Pharmacist Awards in the Mansion House. This was in recognition for her PhD work, which was supervised by Associate Professor Sheila Ryder. The awards aim to provide an occasion that recognises the contribution of the professional to healthcare in general, as well as to celebrate and reward pharmacists and their teams. For more information of the Clanwilliam Pharmacist Awards please visit: www.pharmacistawards.com



Pictured (L-R): Matt Cooper, Master of Ceremonies for the event; Ultan Molloy, Chairperson of the Pharmacist Awards Committee; Susan O'Dwyer, Boots Ireland; Filipe Infante of hMR and Jennifer Hughes Director of Marketing, Clanwilliam Group

Annual Pharmacy Lecture



The Annual Pharmacy Lecture took place in January with guest speaker Tim Delaney, FPSI, Head of Pharmacy at Tallaght Hospital. Tim discussed his past experiences in Pharmacy and also the future possibilities in his lecture, *Letters from the Edge: Professionalism and Regulation, Pitfalls and Possibilities*.

Dr. Atif Madi Receives Researchers Award



Congratulations to Dr Atif Madi, a postdoctoral researcher in Professor Anne Marie Healy's group, on his graduation from QUB and on his Researcher Plus Award.

PhD Student presents at ISEV Rotterdam



Well done to PhD student Sadhbh O'Neill on her excellent talk at ISEV Rotterdam and paper in TEM (IF9.39).

Fundraiser for Breast Cancer Awareness

Congratulations to our Postgraduate Student Representative Michelle Lowry and all the 'Baking Team' on another very successful fundraiser for Breast Cancer Awareness.



Congratulations to Our Two New Scholars

On the 11 April, the Provost announced the new Fellows and Scholars in Front Square. Amongst those announced were our new Scholars: Sarah Fitzpatrick & Mark Lynch.

The objective of the Foundation Scholarship examination is to identify students who can consistently demonstrate exceptional knowledge and understanding of their subjects. The examination requires candidates to demonstrate skills in synthesising and integrating knowledge across the full range of the set examination materials; rigorous and informed critical thought; and a highly-developed ability to solve problems and apply knowledge. Our sincerest congratulations to both Sarah and Mark on their great and well deserved achievement.

Senior Sophister End of Year Reception 2016

The Senior Sophister Wine and Pizza Reception was held to mark the completion of their final exams. A huge thank you to Betty Daly for organising this and to all lecturing staff who attended, it was greatly appreciated by the students. Congratulations to the Class of 2016 and best of luck for the future!



Class of 2015/16

United Drug Sponsor our 2016/17 Junior Freshman Students

In September 2016, Ann Walsh and Roisin Kelly of United Drug were in the School to distribute complementary lab coats to our new Junior Freshman Pharmacy students. This is the sixth year that United Drug has sponsored the pharmacy students' lab coats. Dr John Walsh, Director of Teaching and Learning thanked Ann and Roisin for providing the students with their new white coats.



Ann Walsh and Roisin Kelly, with the Junior Freshman students in their new lab coats.

Code of Conduct Ceremony 2016

Commitment to the Student Code of Conduct underpins and supports each pharmacy student's journey on his or her way to registration as a pharmacist. As the School of Pharmacy and Pharmaceutical Sciences embarks on its first delivery of the Five-Year Fully Integrated Master's Degree Programme in Pharmacy, all staff want to assure that incoming students recognise the significance of their commitment to this Code, and understand the implications of being bound by its six core principles:

- Your primary concern must be to maintain and improve the health, wellbeing, care and safety of patients.
- Develop your professional competence, skills and standing so as to bring health gain



- and value to the community and society.
- Be honest and trustworthy and show respect for others.
- Conduct yourself in a manner which enhances the service provided to society and which will maintain the good name of your profession.
- Maintain your professional knowledge and competence.

- Be aware of your obligations under the Code of Conduct and do not do anything which constitutes a breach of the Code.
- Junior Freshman students developed an understanding of the Code, and the associated meaning of being a professional, through lectures, workshops, problem-based learning and online activities in their first term on the programme.

The School Bids a Fond Farewell to Elizabeth Daly

Our popular School Executive Officer who retired this September may have been Elizabeth Daly on formal College emails, but was known to everyone as Betty. In welcoming visitors to the School Office, Betty created positive first impressions and contributed hugely to the School's friendly as well as professional reputation.

The challenges of front office administration in any institution - accomplishing a myriad of tasks while dealing with multiple requests - demands proficiency while keeping calm under pressure. Betty did all of this, and more, with customary charm (and an impressively organised desk). During her 16-year tenure in the School of Pharmacy, her guiding principle remained simple and effective, "Everyone that comes into the School office is important and deserves to be heard and facilitated in their query/request," she told *The Elixir*. "Giving the correct information is important. The only way is to treat people as you would like to be treated if the roles were reversed."

Betty began work in the School of Pharmacy in 2000, coming from the English Department in Trinity, and before that, working full-time with a recruitment agency.

"I enjoyed recruitment work but felt like I needed a change. I was interviewed by the Director of the School of Pharmacy, Dr. Desmond Corrigan. He was then, and still is, a real gentleman".

The move across campus to a smaller School at the East End proved an oasis of calm after the buzz of the Arts block. Her own first impression was of a tranquil environment where even the students appeared very quiet. Despite the change, "I was terrified for the first

6 six months - it was so different to anywhere I had worked previously!" - Betty quickly became a key member of the School's staff.

What has been her experience during the major changes in academic education over the past two decades?

"It can be very busy during term time but even outside of that there is the preparation work for the next term. The day goes very quickly. Meeting visitors, staff and students brings great variety to the job. We have more students and more staff now, so the amount of work has increased. The biggest change must be the new technology available to the academic, administration and technical staff. And the course has been updated a number of times over the last few years and now we have the Five Year Integrated Pharmacy Programme".

Betty retains special praise for those hundreds of students, both undergraduate and postgraduate, that she met along the way and who gave her the greatest job satisfaction of all.

There have been many memorable moments, too. Top of the list was when her son Ronan received his Ph.D. from Trinity. Then there was the visit to Trinity by her namesake in May 2011 - Betty was in the specially invited audience outside the Old Library when Queen Elizabeth II and Prince Philip emerged from viewing the Book of Kells. Royal visits aside, work as School secretary is not without its lighter moments.

"We have had a few very funny experiences over the years in the School. One morning we came in to find someone, overnight, had piled



up wine glasses into a large pyramid in one of the corridors. It must have been a ghostly resident of No.23 Westland Row with a sense of humour".

As our resident 'First Lady' for the past 16 years, Betty has been the recipient of many compliments. Are there any which stand out?

"It is difficult to rate a compliment - I take whatever I can get!! Our Senior Sophister students and DUPSA have, over the years, given me some beautiful bouquets of flowers. Their generosity is very much appreciated. I owe all our students, past and present, a very big thank you as they have made my time in Pharmacy so enjoyable, interesting and fulfilling".

Interview and article by Valerie Shanley

Get Involved

Trinity has a long tradition of outreach and community engagement. To find out about the numerous ways you can get involved with Trinity both at home and abroad, see www.tcd.ie/alumni/volunteer

Class Notes

Do you have any news or updates that you'd like to share with your fellow alumni? Submit your news with an image, subject of study and year of graduation to alumni@tcd.ie

For more information please visit www.tcd.ie/alumni/news-events/publications

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www.tcd.ie/pharmacy

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