



The Elixir

VOLUME 2, ISSUE 1
APRIL-MAY 2010

See also: www.tcd.ie/pharmacy/

Welcome Statement by the Chair

Dear Friends,

Welcome to the current edition of The Elixir that, under the very able Editorial direction of Lorraine O' Driscoll, has become a major and eagerly awaited publication forum of our School.

Scrolling through its pages, I am delighted to add congratulations on successes of some of our high achievers. Indeed, Anne Marie Healy has now been elevated to a prestigious and richly-deserved honour of Fellow of Trinity College Dublin. John Gilmer has successfully launched a new spin-off company, Solvotrin Therapeutics. Anne Marie Carroll, Hanah Mesalatti, Claire Mullins and Fionualla Nevin have been elected to Trinity Scholarships.

You will also find compelling evidence of research excellence in the School, as highlighted by our recent Post-graduate Research Symposium, cutting-edge nanoresearch described by Maria Jose Santos Martinez in the Feature Article and the graduate student presentations (by Aine Daly and Jennifer Rouine) to the

(cont. overleaf)



FACULTY

Head of School & Chair in Pharmacology
Prof. Marek Radomski

Dr. Catriona Bradley, Lecturer
Dr. Deirdre D'Arcy, Lecturer
Dr. Carsten Ehrhardt, Senior Lecturer
Dr. Neil Frankish, Lecturer
Dr. John Gilmer, Lecturer
Dr. Andrew Harkin, Lecturer
Dr. Anne Marie Healy, Senior Lecturer
Dr. Martin Henman, Senior Lecturer
Mrs. Ingrid Hook, Senior Lecturer
Dr. Mariusz Kamionka, Research Lecturer (Merrion Pharmaceuticals, Ltd.)
Dr. Carlos Medina, Lecturer
Prof. Mary Meegan, Assoc. Professor
Dr. Lorraine O'Driscoll, Lecturer
Dr. John Quigley, Lecturer
Ms. Cicely Roche, Senior Lecturer
Ms. Sheila Ryder, Lecturer
Dr. Astrid Sasse, Lecturer
Dr. Helen Sheridan, Lecturer
Ms. Karen Sheridan, Boots Teacher Practitioner
Dr. Fabio de Sousa Menezes, Lecturer
Dr. Lidia Tajber, Lecturer
Dr. John Walsh, Lecturer

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Welcome Statement by the Chair (cont. from p1)

European Graduate School of Neuroscience in Braga.

Last, but not least, there is thought-provoking review by a Senior Sophister student, Thomas Broe, on the need of transparency in clinical trials.

These are but a few of our high-lights; enjoy your reading!

Best wishes,
Marek

Prof. Marek W. Radomski, MD, FTCD, DHC
Chair of Pharmacology (1979) and Head of School
School of Pharmacy and Pharmaceutical Sciences
Trinity College Dublin

Additional Faculty Information (cont. from p1)

<u>Directors</u>	<u>Undergraduate Year Coordinators</u>	<u>Postgraduate Course Coordinators</u>
Director of Teaching & Learning (Undergraduate)	Junior Freshman	M.Sc. in Hospital Pharmacy
Dr. Anne Marie Healy	Dr. John Walsh	Ms. Niamh McMahon
Director of Teaching & Learning (Postgraduate)	Senior Freshman	Diploma/M.Sc. Pharmaceutical Analysis
Dr. Andrew Harkin	Dr. John Quigley	Dr. John Gilmer
Director of Research	Junior Sophister	Diploma/M.Sc. Pharmaceutical Technology
Dr. Carsten Ehrhardt	Dr. John Quigley	Dr. Lidia Tajber
Disability Liaison Officer	Senior Sophister	Diploma/M.Sc. Community Pharmacy
Dr. Helen Sheridan	Dr. Deirdre D'Arcy	Ms. Sheila Ryder
Trinity Access Programmes Contact	Undergraduate Research Liaison Officer	Diploma/M.Sc. in Pharmaceutical Manufacturing Technology
Dr. John Walsh	Dr. Carlos Medina	Ms. Lorna Loughrey

Solvotrin Therapeutics: congratulations to Dr. John Gilmer

On 12th March, the national Irish news and leading national newspapers including The Irish Times, Irish Daily Mail (to name but a few!), announced the establishment of Solvotrin Therapeutics by **Dr. John Gilmer**.

Solvotrin Therapeutics is targeting a multi-billion-dollar market by developing a form of aspirin that avoids the most common side-effects associated with the drug.

Advancing on John's 38 patented compounds arising from his research on "superaspirins" to prevent cancers and address arthritic conditions, with support from Enterprise Ireland, Solvotrin Therapeutics was launched as the Government's Innovation Task Force reported its findings.



Solvotrin Therapeutics is now advancing towards Phase I clinical trials and we very much look forward to following its achievements as they progress.

Congratulations John on this fantastic achievement !

Congratulations to Dr. Anne Marie Healy on Election to Trinity College Fellowship

Congratulations to Dr. Anne Marie Healy on her recent election to Trinity College Fellowship. This richly-deserved announcement was made by the Provost on Trinity Monday, 12th April.

Sincere congratulations Anne Marie



Congratulations on Trinity Scholarships

Congratulations to the following undergraduate Pharmacy students whose elections to Trinity Scholarships were also announced by the Provost on Trinity Monday:

Anne-Marie Carroll

Hanah Mesallati

Claire Mullins

Fionnuala Nevin

We, in the School, are very proud of your terrific achievement, as you should be!

Western Balkans Post-Graduate Pharmacy Development Programme: Tempus IV partnership with our School

Tempus is the European Union's programme which supports the modernisation of higher education in the Partner Countries of Eastern Europe, Central Asia, the Western Balkans and the Mediterranean region, mainly through university cooperation projects. It also aims to promote voluntary convergence of Partner Country higher education systems with EU developments in the field of higher education such as the [Lisbon agenda](#) and the [Bologna process](#). In addition to institutional cooperation, Tempus also promotes a "people-to-people" approach. The Education, Audiovisual and Culture Agency Executive Agency (EACEA) is responsible for the management of Tempus IV (2007 – 2013), under the supervision of [EuropeAid - European Commission Co-operation Office](#) (AIDCO) and [Directorate-General for Enlargement](#) (DG ELARG of the European Commission). The overall objective of Tempus is to contribute to the creation of an area of cooperation in the field of higher education between the European Union and Partner Countries in the countries neighbouring the EU. (http://eacea.ec.europa.eu/tempus/programme/about_tempus_en.php)

The School of Pharmacy and Pharmaceutical Sciences, TCD, is participating in the Tempus IV programme as an EU partner institution in the project: "Postgraduate Education in Pharmacy—The Way Forward". The project is being co-ordinated by Dr. Jelena Parojcic, Senior Lecturer in the Faculty of Pharmacy, University of Belgrade, Serbia. The aim of the project is to improve the quality and effectiveness of the Postgraduate Qualification Curriculum at the Faculty of Pharmacy, University of Belgrade, and to initiate the Pharmacy Postgraduate Qualification Curricula at the other Republic of Serbia Universities and introduce the concept of Continuing Professional Development in the Pharmaceutical Sector in Serbia.

Traditionally, the Professional Specialization System in the Pharmaceutical Sector in Serbia was well established and the degrees recognized, similarly to that in Medical Education. There are currently ten postgraduate qualification/specialization programs delivered at the Faculty of Pharmacy, University of Belgrade; Eight of them are endorsed by the Ministry of Health. Additional postgraduate qualification programs were accredited by the Ministry of Education as a 60 or 90 ECTS courses (i.e. 12 or 18 months duration, respectively).

These, additional so-called 'academic specialization courses' are organized in the following areas: (i) Pharmaceutical Marketing and Management, (ii) Pharmacoeconomics and Pharmaceutical Legislation, (iii) Pharmaceutical Care, (iv) Industrial Pharmacy and (v) Cosmetology.

There is a great interest of pharmacy professionals for these types of postgraduate education programs. However, it was recognized that the existing postgraduate qualification curriculum is does not fully meet the modern needs and expectations of the pharmaceutical profession. Furthermore, the need is recognized to create a learning management platform which will integrate traditional teaching with e-learning technologies.

The project will involve staff re-training, curriculum review and development and updating of educational resources. Other partner higher education institutions in the project include the Faculty of Pharmacy, University of Ljubljana; the School of Pharmacy (University of London); the Advanced Pharmacy Studies Centre, Higher Education Association (UK); School of Science, University of Greenwich; Dept. of Pharmacy, University of Novi Sad (Serbia); Dept. of Chemistry, Medical Faculty, University of Nis (Serbia); Dept. of Pharmacy, University of Kragujevac (Serbia). The School of Pharmacy and Pharmaceutical Sciences (TCD)'s involvement in the project may include staff mobility, organization of symposia, conferences, workshops and meetings, exchange of academic materials and other information and the development of educational resources and programmes.

The project runs from January 2010 to January 2013.

We look forward to an exciting and fruitful co-operation with Dr. Parojcic and her colleagues at the Faculty of Pharmacy in Belgrade!

By Dr. Deirdre D'Arcy
Tempus Contact Person,
School of Pharmacy & Pharmaceutical Sciences,
TCD.

[Other named Tempus contact personnel:
Sheila Ryder,
Dr. Fabio de Sousa Menezes].



Postgraduate Teaching and Learning News: Reports on Recent Events....

I am happy to report that postgraduate activity in the School is thriving, with postgraduate student numbers at an all time high. With increased numbers follows activity which was very much in evidence at our recent post-graduate research symposium. For details on postgraduate opportunities in the School, check out our webpages on www.pharmacy.tcd.ie/postgraduate

Postgraduate Research Symposium

The School of Pharmacy and Pharmaceutical Sciences Annual Postgraduate Research Symposium took place on December 14th 2009. Ten of our postgraduate students, who have progressed to the PhD register, delivered presentations on their research projects to date and discussed their future plans.

The symposium got off to a lively start with presentations from The Ehrhardt laboratory with Leonie Baginski who presented on peptidases expression and activity in respiratory epithelial cells. Eve's project has involved optimisation of pulmonary drug delivery of the model peptide drug salmon calcitonin. Stephen Buckley, also representing the Ehrhardt group, presented his project on epithelial-mesenchymal transition of alveolar epithelial cells and described a role for RAGE and ERM proteins in this process.

Next up were presentations from the Healy research group with Bozena Adamczyk who presented on the development of commercially viable microemulsion formulations, penetration bioenhancer-based delivery systems and Krzysztof Paluch who described his research on the solid state and micromeritic characterisation of spray dried nanoparticles and microparticles.

The Meegan group was represented by Yvonne McNamara who discussed her work on the alpha-alkylphenethylamines and their novel anti-proliferative effects.

Jennifer Rouine, who works in the Harkin group, presented her work to date on the use of magnetic resonance imaging to determine the influence of MDMA ("ecstasy") on blood brain barrier integrity and cerebral perfusion.

Juan Carbolan Penas from the Medina & Radomski laboratory described his project on synthetic amorphous silica nanoparticles which induce inflammatory responses in human umbilical vein endothelial cells.

Presentations from the area of Practice of Pharmacy completed the afternoon's symposium, with presentations from Bernadette Flood working under the supervision Martin Henman, on quality indicators for medication use in people ageing with intellectual disability and behaviour disorders; Eileen Relihan working with Sheila Ryder on the design and implementation of medication safety programme in an acute Irish teaching hospital and last but by no means least, Paul Knox, also working under the supervision of Sheila Ryder, who presented his research on the Pharmacy Sentinel Surveillance System; which is reviewing antimicrobial consumption surveillance in Irish community practice.

Once again this year the symposium was a showcase for the wealth and diversity of current research in the School and was attended by fellow post-graduate students, staff and research collaborators.

Our thanks to the Post Graduate Student Committee, Catherine Coffey and Liesa Eckhardt for organising this event.

By Dr. Andrew Harkin



Postgraduate Teaching and Learning News: Reports on Recent Events (*cont.*)

Our Presenters at the Post-Graduate Research Symposium were.....



Back row (left to right): Stephen Buckley, Bozena Adamczyk, Krzysztof Paluch, Juan Carbalan Penas, Yvonne McNamara, Eileen Relihan

Front row (left to right): Bernadette Flood, Leonie Baginski, Jennifer Rouine, Paul Knox

By Yvonne McNamara
Representative of the Post-Graduate
Student Research Committee

Those attending the Post-Graduate Research Symposium included.....



(far left): Johanna McCarthy, Elaine Breen, Yvonne McNamara, Deirdre Finn



(left): Janani Swaminathan, Dr. Vincent Caron, Dr. Fabio De Sousa Menezes



(right): Wei Shi, Tadhg Cotter, Cathal Cadogan, Patrick Kelly

(far right): Niamh Mc Mahon & Eileen Relihan



New Method developed for measuring Flow-Induced Platelet Activation

Feature Article

Dr. Maria Jose Santos Martinez recently completed her PhD under the supervision of Professor Marek Radomski. This work involved the development of a novel method for the measurement of flow-induced platelet activation at nanoscale resolution level. In the summary below, Maria explains the background and main conclusions from her project.

Platelet aggregation is essential for vascular haemostasis and thrombosis. Inhibition of platelet aggregation underpins the pharmacological and clinical effects of anti-platelet drugs. These effects are commonly quantified using methods and devices that assess platelet aggregation under static conditions in macroscale. However, current devices neither mimic the conditions found in human microvasculature nor detect microaggregates.

The aim of my PhD project was to provide pharmacological characteristics of a novel method of flow-induced platelet aggregation using a commercially available nanoscale resolution device, the Quartz Crystal Microbalance with Dissipation (Q-Sense™ E4). In these experiments, the approach was to collect blood from healthy volunteers and platelet-rich plasma (PRP) was diluted with Phosphate Buffered Saline (PBS) at final concentrations of 50,000; 100,000; 150,000 and 210,000 platelets/ μL .

Platelet-poor plasma (PPP) was used as control. Gold (G) and polystyrene-coated (PL) quartz crystals coated with fibrinogen were used as sensors. Sensor crystals were mounted and perfused at 37°C at 10-100 $\mu\text{L}/\text{minutes}$ for up to 240 minutes. Platelet aggregation was then measured as changes in frequency f (Hz) and energy dissipation D ($1\text{E}-6$) on the crystal surface. Phase-contrast, confocal imaging, atomic force microscopy and pharmacological agents were used to study platelet activation detected by the device. The results are outlined as follows: microaggregates were detected in a platelet concentration-, flow- and shear stress-dependent manner. The optimal condition for the measurement of platelet aggregation was found when fibrinogen-coated PL crystals were perfused with PRP at the flow rate of 100 $\mu\text{L}/\text{minute}$. Platelet activation and aggregation were also detected by phase-contrast, confocal imaging and atomic force microscopy. In addition, platelet aggregation was modulated by agonists and antiplatelet agents.



In conclusion this novel method can be used to measure platelet function under flow conditions with nanoscale resolution in physiological, pathological and pharmacological studies.

By Dr. Maria Jose Santos Martinez

Congratulations Dr. Santos Martinez!

Meeting report

Drugs and the Brain Workshop



www.euronschool.eu

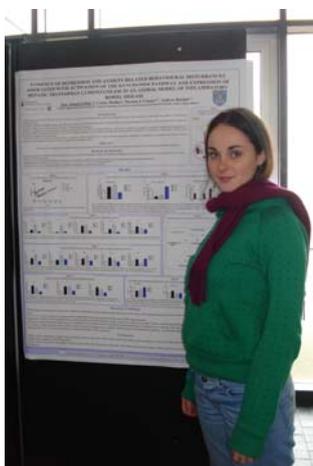
On March 21st-26th 2010 The European Graduate School of Neuroscience, together with the University of Minho Braga, Portugal, organised a scientific meeting entitled "Drugs and the Brain".

At the meeting, students and Post-Docs. from around Europe had the opportunity to expand their knowledge in the extended field of psychopharmacology. Aine and Jennifer, who are currently undertaking their PhD projects in Dr. Harkin's laboratory, now report to The Elixir on the meeting and the research presented.

Drugs and the Brain Workshop (*cont.*)

The 5 day long workshop was a brilliant learning experience, as the program included morning lectures given by European experts from the various neuroscience disciplines; as well as Industry. The afternoon workshops were interactive sessions aimed at discussing various problems or ethical issues in our research area. These presented a great opportunity to hear what both basic and clinical researchers thought of our progress in developing new drugs for the treatment of neurological conditions. After fighting the initial nerves, the debates proved to be very enjoyable and a novel way to interact with the other students attending the meeting. As well as the lectures and workshops, we were treated to traditional Portuguese meals each night and taken on a guided tour of the UNESCO World heritage city of Guimaraes. Overall it was a very educational and enjoyable week in Braga.

By Aine Daly, Jennifer Rouine

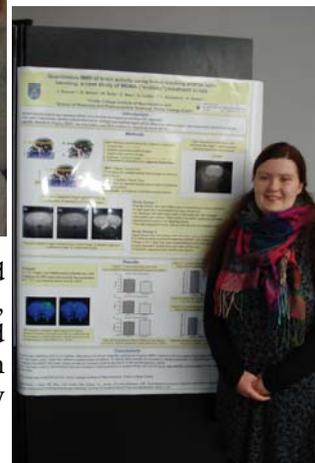


(above) Aine Daly presents her poster on depression and anxiety related behaviours associated with inflammatory bowel disease



Attending the EURON organised meeting on "Drugs and the Brain" were (from left) Aine Daly (Trinity College), Claire McKibben (Queens University Belfast), Richard O'Connor (University College Cork) Professor Brian Leonard (Conference Chair), Helene Savignac (University College Cork) and Jennifer Rouine (Trinity College Dublin)

(below) Jennifer Rouine presents her poster on cerebral blood flow changes associated with the recreational drug MDMA "Ecstasy" using a new MR imaging approach.



Strategic Educational Pathways Scholarship granted to Stephany Micallef for studies of Schizophrenia

Stephany Micallef, BSc. Pharm. (Malta), MSc. Pharm. Anal. (TCD), has recently been granted a three-year 'Strategic Educational Pathways Scholarship' (STEPS) which is part-financed by the European Union ESF. The project that Stephany will work on, will be supervised by **Dr. Astrid Sasse**, and is entitled 'Identifying Novel Therapeutic Targets for Patients Carrying Single Nucleotide Polymorphisms in Schizophrenia'.



Congratulations Stephany!

Clinical Trials: The need for transparency

A Review

By Thomas Broe, Senior Sophister

2004 can be seen as a tipping point in the quest for greater clinical trials transparency. This is evident through the impact of decisions taken that year and how clinical trials registries have evolved in the short period since. Registries existed prior to this seminal year, but lacked the cross science community support needed for them to become an intrinsic part of clinical research.

In 2004 the International Committee of Medical Journal Editors (ICMJE) set out acceptance criteria for the publications of clinical trial results in their member journals. The ICMJE, which represents such luminaries in medical publishing as the New England Journal of Medicine, stated that it wouldn't publish results from a clinical trial if the trial had not been registered on a publicly accessible clinical trials registry prior to the recruitment of the first patient. Also in 2004, action was called for from the WHO to establish a clinical trials registry to allow for the identification of and ease of access to clinical trials.

Having the support of the international committee in 2006, the WHO set up the International Clinical Trials Registry Platform (ICTRP). The ICTRP had been two years in the planning and key areas during this time had been the formalizing standards and technical implementation.

Formalising standards involved defining a clinical trial and agreeing on what clinical information would be gathered. This led to the following definition "A clinical trial is any research study that prospectively assigns human participants or groups of humans to one or more health-related interventions to evaluate the effects on health outcomes" and the approval of a 20 item Trial Registration Data Set (TRDS) which was issued in February 2006. (Table 1) This definition and data set has been adopted by major pharmaceutical associations and associations of medical journal editors.

As succinctly stated by Lorenzo et al, "The WHO finalized the criteria to build a global network of qualified registries, adopting a hierarchical structure

(primary and partner registries) and creating a web site that enables users to search a central database that contains the trial registration data sets provided by primary registries." On 18th August 2009 there were data on 89781 clinical trials on the ICTRP Search Portal, provided by databases in Australia, China, Germany, India, Iran, the Netherlands, Sri Lanka, the UK and USA.

The introduction of the United States Food and Drug Administration (FDA) Amendments Act 2007 (U.S. Public Law 110-85), made it a legal requirement for all phase II to IV clinical trials involving a drug, biological product or device regulated by the FDA to register on clinicaltrials.gov a feeder registry for the ICTRP. This applied to trials commenced after or ongoing on September 27th 2007.

In a European context, trials must be registered with the European Union Drug Regulating Authorities Clinical Trials (EudraCT) run by the European Medicines Agency (EMA). In February 2009, the European Commission published the data set from the EudraCT database that would be made available to the public. This move came as a response to legislation which had made the public disclosure of paediatric studies mandatory and which

was then extended to cover all clinical trials. Public access to the database will commence in the first half of 2010 and in 2011 results will be posted on the public data set.

The need for the regulatory framework for clinical trial reporting to the public can be seen when one considers the unscrupulous methods used by pharmaceutical companies to push their agendas as highlighted in the British Medical Journal by Garrattini and Chalmers in April 2009. A classical example of this is a study from the New England Journal of Medicine (NEJM) that scrutinised data for 74 antidepressant studies submitted to the FDA between 1987 and 2004. While 94% of all published trials appeared to have positive results, the FDA reviews of the trials determined that 51% of all trials, both

"Clinical trials databases accessible by the public are pivotal"

Clinical Trials: The need for transparency (*cont.*)

published and unpublished, had positive outcomes. Based on that information one would assume that the sponsors simply didn't bother to publish the negative results and information regarding unsuccessful trials never made it into the public domain. Unfortunately that would present an incomplete picture, as 11 of the 14 negative trials that made it to print "conveyed a positive outcome" that was not justified by the FDA review. In twenty years, time if that study was conducted for the 17 year interval from 2004-2021 one would conceivably expect the FDA reviews to match the outcomes published in journals due to increased clinical trials transparency.

A study to examine selective publishing of clinical trial results found over half of all supporting trials for FDA-approved drugs remained unpublished ≥ 5 years after approval. It looked at trials supporting new drugs approved between 1998 and 2000, as described in FDA medical and statistical review documents and the FDA approved drug label. The investigators concluded that this result can act as a baseline for evaluating publication bias following the enforcement of the FDA Amendments Act and that this result highlighted that trials with statistically significant results and larger sample sizes are more likely to be published.

Another option to improve transparency, reporting and evaluation of clinical trials was considered in "The need for improved access to FDA reviews". The author makes the point that while decisions taken by clinicians are largely based on published material such as systemic reviews and meta-analyses; this does not present a full picture. He argues that this approach does not account for

not reported. The author concluded and that for proper use to made of this information when considering drug therapy, all reviews conducted by regulatory bodies should be made public. When they are carried out, Regulatory agency reviews give the truest picture of the uncondensed disclosures from clinical trials available. While many reviews are available, legal barriers delay the release of some. The author calls for "Individual RCTs (randomised control tests) and meta-analyses conducted by regulatory agencies could be indexed in MEDLINE and searched in tandem with the published medical literature. Search filters could be included to allow users to focus on or exclude unpublished regulatory analyses."

Sheldon Bradshaw, who was Chief Counsel for the FDA when the FDA Amendments Act was passed and has since joined a private law firm had this to say on reflection of the impact of the act "The FDA is the 800-pound gorilla, and companies will do whatever they say—whatever is at stake in [any] particular battle is one little matter". He adds that haranguing the FDA is not an option if you're constantly seeking approvals from it.

Regulatory agencies like the EMA and FDA serve the public interest by imposing terms on the pharmaceutical industry. As the 800-pound gorilla in the room, they have a duty to use their power with the utmost care and must balance patient protection and the dissemination of information with the needs of an innovative industry that we cannot afford to stifle. Clinical trials databases accessible by the public are pivotal if confidence is to be restored in the pharmaceutical industry and studies are to no longer remain unpublished. Hopefully public accessibility to all regulatory body reviews will happen in the ensuing years.

Table 1. WHO Trial Registration Data Set

	Item		Item
1.	Primary Registry and Trial identifying number	11.	Countries of Recruitment
2.	Date of Registration in Primary Registration	12.	Health Condition(s) or Problems Studied
3.	Secondary identifying numbers	13.	Intervention(s)
4.	Source (s) of Monetary or Material Support	14.	Key Inclusion and Exclusion Criteria
5.	Primary Sponsor	15.	Study Type
6.	Secondary Sponsor(s)	16.	Date of First Enrollment
7.	Contact for Public Queries	17.	Target Sample Size
8.	Contact for Scientific Queries	18.	Recruitment Status
9.	Public Title	18.	Primary Outcome(s)
10.	Scientific Title	20.	Key Secondary Outcomes

DUPSA hosts Cancer Awareness & Fund Raising



On Wednesday 20th January, DUPSA –in association with the Trinity Cancer Society- hosted a cancer awareness and funding raising event.

On the invitation of DUPSA, the evening kicked off with an overview by **Prof. Mary Meegan**. The past three decades have seen spectacular advances in our understanding of molecular and cell biology of cancer. Irish statistics note that breast cancer accounts for 28% of all cancers in women in Ireland, with an average of 1726 new diagnoses each year. Prof. Meegan's research is focussed on the design, synthesis and evaluation of novel therapeutic agents suitable for development as drugs for the treatment of breast cancer, particularly for multidrug resistant types. She is also interested in the use of *in silico* virtual high-throughput screening for the discovery of new lead compounds for development. The specific targets for the design of these potentially useful clinical compounds are the nuclear receptors such as the estrogen receptor and also the process of apoptosis. Recent research postgraduate students who have carried out this work include Dr. Tom Greene, Dr. Miriam Carr, Dr. Niall Keely, Dr. Andrew Knox, Dr. Jason Horan, and current postgraduate students Niamh O'Boyle, Wei Shi, Shu Wang, Yvonne McNamara, Tadhg Cotter, Pat Kelly, Billy Egan and Dr. Cormac O'Donohoe.



This was followed by a presentation by **Niamh O'Boyle** (PhD student with Prof. Meegan) who presented a short summary of her research work in the area of design and synthesis of some tubulin-targeting agents. The work involved chemical synthesis of a library of over 150 heterocyclic anti-cancer agents, followed by biochemical studies in breast cancer cells, to evaluate the effects of these compounds. The results to date were presented and are very promising, with significant anti-cancer activity observed for a number of products which have been patented and are under further evaluation.

Again, highlighting aspects of breast cancer research on-going in the School of Pharmacy & Pharmaceutical Sciences, **Dr. Lorraine O'Driscoll** summarising studies being performed by members of her research group (Dr. Anne Friel, Dr. Serena Germano, Dr. Sweta Rani, Claire Corcoran B.Sc., Dagmar Himler B.Sc. and Rizwan Sheikh MD) aimed at identifying new biomarkers and therapeutic targets. Here Lorraine outlined research that her group have successfully translated from bench discoveries to Phase II cancer clinical trials (with support from HRB, SFI, Enterprise Ireland, IRCSET, TCD, AgnaGen AG, and ICORG).



Congratulations to DUPSA on the success of this event

IRCSET EMBARK Scholarship granted to Dr. Hanan Eishelmani for studies of Macular Degeneration

Dr. Hanan Eishelmani, MB BCh. (B.Sc. of Medicine and Surgery) and Specialist SHO in Ophthalmology has recently been granted an IRCSET EMBARK Postgraduate Research Scholarship to support her fees and stipend. Hanan's PhD project, that will be supervised by **Dr. Lorraine O'Driscoll** is entitled 'New Diagnostic and Prognostic Biomarkers for Age-Related Macular Degeneration'.

Lorraine is very grateful for the necessary grants for bench-costs/consumables which she has secured from the charity *Fighting Blindness* and the *Mater Hospital Foundation* to make Hanan's research project possible.

Congratulations Hanan !

PUBLICATIONS FROM OUR SCHOOL (December 2009-April 2010)

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Announcing Ireland's first AAPS Student Chapter

In January, the first American Association of Pharmaceutical Scientists (AAPS) Student Chapter in Ireland was approved by AAPS and started its life!!! AAPS is a professional and scientific association of pharmaceutical scientists who work in academia, industry, government or other research institutes. Approximately 12,000 people are members of this worldwide association whose aims are to serve and promote pharmaceutical sciences and to represent scientific interests within academia and industry. Official journals include Pharmaceutical Research. AAPS offers timely scientific programs, ongoing education, professional mentoring and networking opportunity. It contributes over \$100,000 to support student chapters, travelships and awards, and student programming. Each AAPS Student Chapter is a separate unincorporated entity affiliated with AAPS that furthers the purposes of AAPS and provides a local forum for postgraduate students and postdoctoral researchers interested in the pharmaceutical sciences. More than 65 AAPS Student Chapters have been created worldwide and the one initiated in our School is the first of its kind in Ireland. AAPS provided a stipend of \$1000 to start this Chapter, comprising of more than 20 members, five of which make up the Executive Committee: Stephen Buckley (Chair), Dr Vincent Caron (Chair Elect), Dr Frederic Tewes (Vice Chair), Evelyn O'Shea (Secretary and Treasurer), with and Dr Carsten Ehrhardt as Faculty Advisor.

Among the recent activities, a Potluck was held in March where culinary delights from a multitude of cuisines were enjoyed, with a "Best Dish" contest rewarding the tastiest creations on offer. Guest lectures include Dr John Patton (former co-founder of Nektar Therapeutics and now currently having set up a new company, DancePharma). Dr. Patton is one of the founders of inhalable insulin. Prof. Michael J. Pikal (an internationally recognized specialist of freeze-drying of pharmaceutical systems) from the University of Connecticut will give a seminar in September and spend the rest of the day meeting students and staff. A career workshop and more activities are planned in the months ahead.

Unlike membership of AAPS, membership of an AAPS Student Chapter is free (but limited to undergraduate students, postgraduate students and postdoctoral researchers). It is not mandatory to be an AAPS member to join the Chapter, so don't hesitate to contact one of the Executive Committee members to join us and help make this chapter to grow bigger and become a wonderful tool to promote pharmaceutical research, enhance members' understanding of the latest advances in pharmaceutical sciences and to develop scientific networks.

By Vincent Caron, Chair Elect of AAPS Student Chapter TCD

AAPS Annual Meeting and Exposition 2009

The AAPS Annual Meeting and Exposition 2009 was held on November 8-12th in the Los Angeles Convention Center, Los Angeles, California. AAPS is a professional, scientific society of more than 12,000 members worldwide. Its Annual Meeting is a showcase of the latest research and technology in the pharmaceutical sciences. The meeting was attended by over 8,000 researchers representing dozens of countries, including 16 attendees from our School

The conference offered over ninety sessions, with expert speakers in every field and from a diverse collection of backgrounds, including U.S Food and Drug Administration, National Institutes of Health, leading pharmaceutical companies and academia. In addition, hundreds of poster presentations were displayed, of which twelve were from researchers here in the School.

The conference proved a hugely educating and rewarding experience, offering the opportunity to meet fellow researchers from Universities and Industry across the U.S, Europe and Asia; not to mention the wonderfully warm, sunny weather of Southern California! We look forward to AAPS Annual Meeting and Exposition 2010!

By Stephen Buckley



(above): Dr. Carsten Ehrhardt, Leonie Baginski, Haris Boutsikaris

(below): Anita Umerska, Dr. Vincent Caron, Janani Swaminathan



Prof. Radomski hosts Reception in honour of “The Class of 2010”

On the evening of their final under-graduate lecture (8th April), Professor Radomski hosted a reception in the School Atrium for the Senior Sophister class. On behalf of himself and his staff in the School of Pharmacy & Pharmaceutical Sciences, Prof. Radomski took the opportunity to wish the class members success and happiness in all that they do and expressed the School's enthusiasm for working together in the future. Representative of the class, in turn, expressed their thanks and appreciation to both former and current members of the School.

As indicated in the photographs below, an enjoyable evening was had by all attendees....



Photographs courtesy of Betty Daly; thanks also to Alison, Aileen & Bernadette for all the organising !

TCD Chinese Alumni Association Inaugural Meeting & Wine Reception

A wine reception to mark the launch of TCD's Chinese Alumni Association was held in GMB on Friday, 4th December 2009. More than 100 Chinese students and Alumni attended. **Bo Liu** (PhD student working with supervisor **Dr. Deirdre D'Arcy**) is the Founder of TCD Chinese Alumni Association; which is the first Chinese Alumni Association in any Irish University or Colleges. The objective of this Association is to promote cultural and academic exchanges between China and Ireland. The support from the School of Pharmacy and Pharmaceutical Sciences for this event is greatly appreciated.

By Bo Liu



(left to right): Bing Ma, Binbin Li, Bo Liu, Bing Wu (Alumni Representative), Biwei Liu (Chinese Ambassador), Prof. Barkhoff (Registrar of College), John Mc Partland (Director of TCD international office), John Dillon (Director of TCD Alumni & Friends)

Welcome to Baby Gabriel Caron

Sincerest congratulations to **Dr. Vincent Caron and his wife Geraldine** on the arrival of their son, Gabriel. Gabriel was born in the National Maternity Hospital on 4th February.

Vincent is a Post-Doctoral Fellow (in Dr. Healy's research group) in our School. So, Gabriel is already a regular visitor!



*Very best wishes to Geraldine, Vincent & Gabriel
for a happy & healthy life together*

The Caron family

Finally...

We hope you have enjoyed reading this issue of The Elixir.

A special word of thanks is due to the *many contributors* of articles for inclusion in this issue and also to those who contributed suggestions along the way, incl. Prof. Marek Radomski, Dr. Andrew Harkin, Dr. Carsten Ehrhardt, Dr. Anne Marie Healy. Thanks also to Ms. Betty Daly and Dr. Mariusz Kamionka for contributing some photographs. Our next Newsletter is planned for late Summer, so if you have any suggestions of what you would like to see included, Class photographs taken over the years, *etc.*, please do let us know by sending your comments/articles/photographs by post or e-mail to **Lorraine O'Driscoll (lodrisc@tcd.ie)**.

Thank you !