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DEPARTMENT of PATHOLOGY

INSIDE THIS ISSUE:

To be an international leader in pathology education and research while providing the highest quality of diagnostic service.

Teaching of Pathology to Undergraduate Medical and Dental Students at McGill University: Changes, challenges and chances

by René Michel

René P. Michel, MD, CM, FRCP(C)

As the warmer season approaches, I thought it might be time to pause and take stock of where we have been, where we are and where we are heading with the "New Curriculum".

Thank-you.

Before doing so, however, I pedal back in time a few months, as we have put to final rest Units 7 and 8 of BOM and have labored through the first two-thirds of the different blocks of FMD (Fundamentals of Medicine and Dentistry) and thank all of you, academic staff and residents, for the major effort you have put into teaching the medical and dental students during the course of this most challenging fall where we were juggling the vestiges of Unit 8 and the dawn of an entirely new curriculum, with fresh students right "off the street". I know it was not easy for any of you with all of our busy schedules.

I wish to acknowledge the contributions of the Department of Pathology Teaching Committee, who have contributed to assist and advise in organizing the curriculum, setting and correcting the exams, and serving as a sounding board for the various issues confronting the delivery of the teaching of Pathology to our undergraduate students in Medicine and Dentistry.

I also take this opportunity to publicly thank Mrs. Mira Hoffmann who faithfully served as teaching secretary from November 1994 to the spring of 2013. She not only ran the teaching program for Medical and Dental Undergraduates with great efficiency but was responsible for the Graduate student and Postgraduate residency training programs in the department. Her dedication, insight and hard work were greatly appreciated.

Once again, I invite you to join me in thanking Eileen Grenier for having taken on with courage and gusto the daunting position left vacant by Mira Hoffmann! This near impossible task involves juggling complex schedules, multiple staff, residents, and faculty support staff, as well as numerous Excel spreadsheets. I also thank Isabel Bolivar, Carolynna Olha and Joan O'Malley who helped in times of need.

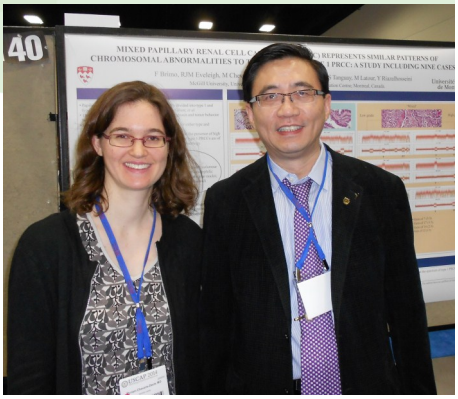
(Read full feature article on page four and five.)

USCAP

Pathology Excellence Through Education

103rd Annual Meeting of the United States & Canadian Academy of Pathology

San Diego, California ~ March 1 to 7, 2014.



The **103rd Annual Meeting of the United States & Canadian Academy of Pathology** took place this year in sunny San Diego, California from March 1 to 7, 2014. This internationally recognized annual meeting is the world's largest meeting of pathology professionals offering a myriad of unique opportunities to learn, and collaborate. Among the thousands of participants that apply to have their scientific abstracts accepted and presented at this meeting each year, 11 abstracts were presented from the Department of Pathology:

USCAP 2014 abstracts

- F Brimo, RJM Eveleigh, M Chevarie-Davis, M Arsenault, N Bertos, S Tanguay, M Latour, Y Riazalhosseini (2014). *Mixed Papillary Renal Cell Carcinoma (PRCC) Represents Similar Patterns of Chromosomal Abnormalities to Those of Pure Type 1 PRCC: A Study Including Nine Cases*. USCAP 2014, #896, Mod Pathology 27 (S2): 219.
- S Dauphin-Pierre, W Kassouf, F Brimo (2014). *Does the Mitotic Rate in Non-Invasive Low-Grade Papillary Urothelial Carcinoma (LG) Carry a Prognostic Significance?* USCAP 2014, #914, Mod Pathology 27 (S2): 223.
- B Dave, L Quintana, A Ward, B Xu, F Brimo, H Ye (2014). *Highest Percentage of Core Involvement by Gleason Score 7 (%GS7) Is an Independent Predictor for pT3 Tumor on Radical Prostatectomy (RP) in Patients Diagnosed with Gleason Score 7 (GS7) Prostatic Carcinoma (PCa) on Biopsy.* USCAP 2014, #915, Mod Pathology 27 (S2): 223.
- H ElMansi, A Aprikian, S Tanguay, B Bachir, L Florianova, W Kassouf, F Brimo (2014). *Enhancer of Zeste Homolog 2 (EZH2) Over-Expression Is Associated with Metastasis but Not with Local Tumor Characteristics nor with Mortality in Urothelial Carcinoma of the Bladder.* USCAP 2014, #927, Mod Pathology 27 (S2): 226.
- L Florianova, B Bachir, H Elmansy, S Tanguay, A Aprikian, W Kassouf, F Brimo (2014). *RNA Binding Motif Protein 3 (RBM3) Over-Expression Is Associated with Favorable Histopathological Findings but Not with Outcome in Urothelial Carcinoma of the Bladder.* USCAP 2014, #937, Mod Pathology 27 (S2): 228.
- B Xu, E Scarlata, L Begin, A Spatz, L Salomon, G Ploussard, H Ye, A Aprikian, F Brimo (2014). *Biopsy Characteristics in Men with a Preoperative Diagnosis of High Gleason Score Adenocarcinoma (GS= 8-10) Predict Pathologic Outcome at Radical Prostatectomy (RP).* USCAP 2014, #1117, Mod Pathology 27 (S2): 271.
- TN Ton Nu, M Charbonneau, M Auger, F Brimo (2014). *What Is the Value of 'Suspicious for Urothelial Carcinoma' Cytology Category? A Correlative Study of Four Years Including 324 Patients.* USCAP 2014, #500, Mod Pathology 27 (S2): 125.
- JM Guilmette, A Semionov, CJ Dennie, G Gahide, M-P Cordeau, J Pressacco, R Fraser, R Albadine, C Chartrand-Lefebvre (2014). *Hemorrhagic Infiltration of the Pulmonary Artery Connective Sheath as a Complication of Acute Aortic Dissection: A Multicenter Case Series.* USCAP 2014, #11, Mod Pathology 27 (S2): 6.
- C Maedler, T Cotton, R Fraser (2014). Autopsy Practice over the Last 100 Years: *A Comparative Analysisof Cases Preformed at the Montreal General Hospital in 1912 and 2012.* USCAP 2014, #17, Mod Pathology 27 (S2): 8.
- CB Gilks, N Singh, A Soma, J Arseneau, P Shaw, S Gallinger, B Clarke (2014). Ovarian Neoplasia Associated with Lynch Syndrome Is of Non-Serous Histotypes. USCAP 2014, #1172, Mod Pathology 27 (S2): 284.
- PO Fiset, AM Fontebasso, N Jabado, S Albrecht (2014). Presence and Maintenance of BRAF V600E Mutation in a Pilocytic Astrocytoma Evolving into a Ganglioglioma. USCAP 2014, #1790, Mod Pathology 27 (S2): 436.

Congratulations Fadi !

Ambassador of the United Stated and Canada Academy of Pathology (USCAP)

Dr. Fadi Brimo has been chosen to be an Ambassador of the United States and Canada Academy of Pathology (USCAP).

The Ambassadors help disseminate information about the Academy and its educational programs to house staff, fellows, and colleagues at their institutions. Fadi's association with the Academy with respect to his studies in genitourinary pathology make him an ideal person to fulfill this task. The current membership in USCAP is greater than 10,000 pathologists, making it the largest of the International Academy of Pathology's 54 world-wide divisions. Membership in the USCAP automatically conveys membership in the IAP.

From left to Right: Drs. Hui Jun wang, Chelsea Maedler-Kron, Myriam Chevarie-Davis, Chantal Atallah, Pierre Fiset.

USCAP Alumni Luncheon, hosted by the Chair, Dr. Zu-hua Gao took place March 3, 2014. Among those who attended were: Drs. Mojgan Ebrahimi, Bin Xu, Elisa Ferreira-Brega, Cristina Storoz, Hui Jun Wang, Nhung Ton Nu, Sangeeta Sandhu, Jocelyne Arseneau, Saheeda Almarzooki, Myriam Chevarie-Davis, Pierre Fiset, Golnar Rasty, Alia Albawardi, Marie-Josée Cardin, Livia Florianova, Fadi Brimo, Chelsea Maedler-Kron and Chantal Atallah.

SAVE THE DATE!

McGill University
Department of Pathology

FINLAYSON RESEARCH DAY

You are invited to attend
Finlayson Research Day
June 13, 2014
McGill University Faculty Club
3450 McTavish Street

Feature article by René P. Michel, MD,CM, FRCP(C)

Teaching of Pathology to Undergraduate Medical and Dental Students at McGill University: Changes, challenges and chances

A blast from the past.

Prior to elaborating on the present and attempting to predict the future, particularly for those of you who may not be familiar with the "really old curricula" (*circa* before 1994), here is a brief summary. The basic sciences spanned the first year and the second year until the end of January (not to the end of December currently); Pathology was taught mostly in the fall of second year.

Until 1984, the basic science course was divided into Phases I and IB, during which we gave lectures and small groups on "General" and "Special" Pathology. In addition, the Department of Pathology largely organized and taught, with several other disciplines, the integrated lecture course "Biology of Disease" (BOD) on topics such as pulmonary edema, lung cancer, and others, each 3 hours. Another course was the "Basic Science Options", given towards the end of 4th year medical school, bringing the students "back to basics". The option involved one month of tri-weekly 3 hour sessions, with an exam, combining case reviews, pathology-radiology correlations, practical sessions with work at the microscope; Dr. Nai-San Wang and I did one together for many years on Lung Pathology where the students looked at slides that were discussed in a clinico-pathological context.

Between 1985 and 1993, yet another curricular iteration occurred, with 2 courses in the first 1.5 years, Med I (546-121M), and Med II (546-221M), covering again General and Systemic Pathology, lectures and small groups. It is noteworthy that we have always had as the basis for the small groups actual patient-centered clinical cases (originally designed by Drs. David Khan and Ray Murphy at St-Mary's hospital) that utilized many of the famous "clinical presentations" now espoused by the Medical Council of Canada as the latest innovation in teaching and learning rivaling the discovery of fire! As an aside, numerous textbooks of internal medicine in the past have utilized precisely this methodology of focusing on specific clinical presentations and problems to formulate a differential diagnosis, and (hopefully) arrive at the correct final diagnosis, rather than systematically examining diseases in a purely didactic fashion.

In 1993 (plus a year or so prior) the faculty resolved to strike yet again a New Curriculum Committee that culminated in **"Curriculum '94"** in which Basis of Medicine (aka BOM) was the component involving Pathology and comprising of 9 Units. BOM ended in December of second year and in January the students went on the wards for ICM (Introduction to Clinical Medicine), so one month of basic science teaching was "gone with the winter winds".

Unit 1 was an intense introduction to medical/dental school with much basic science teaching including cellular and molecular biology, whose mission was "leveling of the playing field" so students from different backgrounds were put on an equal footing in the basic sciences. Units 2 to 6 covered principally normal anatomy and histology, physiology, biochemistry, largely using a systems-based approach.

Pathology appeared in Units 7 and 8; the former, termed "Host Defense and Host-Parasite Relationships" chaired initially by Dr. Dal Briedis, and later by Drs. C. McCusker and C. Karatazios, covered Immunology and Infectious diseases with a progressively increasing clinical flavor. The Pathology contribution to Unit 7 was General Pathology, specifically Cell injury and Inflammation, as well as selected infectious diseases. Here we piggybacked Histopathology labs onto the Histology labs taught by the Dept. of Anatomy and Cell biology.

Unit 8, titled "Pathobiology, Treatment and Prevention of Disease" was co-coordinated by professors from the departments of Pathology, Pharmacology and Therapeutics, Human Genetics, Epidemiology and Biostatics, and Psychiatry. This course lasted 12-13 weeks, and Pathology had the greatest number of teaching hours, covering Neoplasia and Systemic Pathology, integrated with the other components as logistics permitted. For Pathology, it combined lectures, small group sessions (SGS) generally case-based for a systematic study of the principal diseases. Already the philosophy of this approach was to render the Basic Sciences more clinically relevant, to ensure a smoother integration between departments, and to facilitate a variety of teaching, learning, and problem-solving methods.

Unit 8 was viewed, along with Unit 7 as a "Super Unit" providing a view of the "abnormal" following the largely "Normal" covered in Units 1 to 6. Other methods used in varying proportions during the BOM included "Super integrated small-group sessions" for example on "Breast Cancer", and "Diabetes", in which two or more small group leaders from different departments; a few years ago, Family medicine joined Pathology and Pharmacology to teach the Diabetes superintegrated small group. We introduced Forums, comprising a self-directed small group session followed by a large lecture format going over the answers to the cases given to the students and ran Histopathology labs on Breast Cancer and the G.I. diseases.

Throughout BOM and in previous curricula, the textbook of choice was the Robbins Pathologic Basis of Disease. The philosophy of this voluminous tome was that it not only provided the students with an excellent foundation and reference material for the Pathology course, but was to serve as reference text in later years along with standard textbooks of Internal Medicine, Surgery etc. However, the students seemed to buy the book less and less and the quantity of material, in retrospect, was perhaps excessive, a feeling echoed throughout medical schools across North America.

If you are still reading to this point, despair not, light shines at the end of the tunnel.

The Dawn of a New Era or, Back to the Future?

"Thinking Dangerously" the previous Dean of Medicine and the Faculty initiated a process in the Summer of 2008 that conceived and delivered a bold "Strategic Plan for a Revised McGill Medical Undergraduate Curriculum" in 2010, and struck yet another New Curriculum Committee to design yet another "New Curriculum". Initially scheduled to launch in the fall of 2012, a revolt of the troops in the trenches managed to defer the inevitable until the fall of 2013, a major accomplishment.

So, as you now all know, since September 2013, we have begun teaching in the "New Curriculum" and this literally from day 1, when the students have no medical background and little or no knowledge of normal human anatomy, histology, physiology or biochemistry. How did we, do we and should we deal with this novel situation? The answer is simple: compassion, understanding and patience: don't forget, a physician needs patience and patients! Indeed, the philosophy of the Fundamentals of Medicine and Dentistry (FMD, the new terminology for BOM), is an organ systems-based study encompassing the Normal and the Pathology, as well as the Pharmacology and clinical aspects, all in segments of 1 or 2 months. We replaced numerical "Units" (1-9) with alphabetical "Blocks" (A to J). Block A is an interesting anomaly in that there is essentially little or no time for the normal because it focuses on global, public and aboriginal health. We have had to boldly go and push forward the notion that Disease actually matters. My view on this (and yours also, I suspect) and one I try to make with the students (and indeed the faculty), is that without diseases, Medicine and Dentistry are unnecessary and we would be in some other profession!

Here are the salient points of the "New Curriculum '13" to serve as a reminder to all of us and a guideline to the new staff and residents joining us shortly.

- We teach throughout the curriculum of FMD, i.e. from September of year 1 to the end of December of year 2, meaning we overlap in the fall the initial part of the first year students with the end of the cycle of the second year students (i.e., blocks A, B, C with blocks I, and J), so fall is the busiest time. In January to March of 1st year we teach the GI and renal blocks and the teaching eases off in late spring.
- Pathology and the other "basic sciences" are no longer in charge of the new Blocks; there are clinical "Block Leaders" responsible for content, coordination, scheduling, exams etc, so we have limited control and essentially no power over what happens, making it difficult to get our viewpoints across. I have been doing my utmost, but it is an uphill battle reminiscent of the myth of Sisyphus!
- This curriculum has resulted in a substantial loss of teaching time for Pathology: specifically about 45% reduction in lecture hours and 27% reduction in small group teaching hours.
- As a consequence, the Pathology textbook for FMD is no longer the "big" Robbins, but the "baby" Robbins (*Kumar, Abbas, Aster, eds: Robbins Basic Pathology, 9th edition, Elsevier, Saunders, 2013)*.
- Pathology is now taught in an even greater clinical context. As aptly pointed out by Dr. Randy Gascoyne at a recent symposium, we are as Pathologists, Diagnostic Clinicians (as opposed to treating clinicians or physicians) and this is worthy of emphasis. Indeed, we provide, as you well know, not only diagnoses critical for patient care but also key information of prognostic factors and predictive indicators.
- What this means for the teaching is that we should not hesitate to provide clinically relevant background and even clinical insights in our lectures and small groups, particularly since several of the latter are taught with treating physicians from the clinical departments. Pathology occupies a unique position in the University and Hospital being both a clinical and a basic science department.
- The bottom line to all of this is that we have to be *flexible* because schedules, location and several other parameters are changing all the time, *understanding* of the initially limited knowledge of the incoming students and of the *changing* environment around us (how many students have you seen who do not have a computer during any given small group?). As intimated above, *patience* with the students, other small group leaders, residents and the staff of the department and faculty is required if we are to make this work and I know I can count on each and every one of you to deliver the goods!! May the force be with us!

Final histopathology laboratory of Unit 8 taking place in the Strathcona Medical building in autumn of 2013. Approximately 40 stations, each with a microscope and a computer terminal, are setup to accommodate 6 students per station to view the slides on the topic being discussed, while staff and residents circulate and answer questions. Each lab lasts 2 hours, with a short presentation at the beginning and a Quiz at the end.

Please feel free to address any questions and comments to me.

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News from the Henry C. Witelson Ocular Pathology Laboratory

BIOPSY Meeting 2014
Balneario Camboriu, Brazil

We are pleased to announce that the 3rd BIOPSY (Burnier International Ocular Pathology Society) Meeting was held in Balneario Camboriu, Santa Catarina, Brazil from April 10-12, 2014.

BIOPSY is a society composed of Dr. Burnier's past and present Fellows from around the world and the meetings provide a great opportunity to share and discuss together interesting ocular pathology cases and research. This meeting included Fellows from six different countries; Brazil, Canada, England, Mexico, Portugal and Spain. The BIOPSY meeting is held every two years, with the next meeting to be held in Montreal, Quebec, Canada in 2016.

ARVO 2014 – Association for Research in Vision and Ophthalmology
For the past ten years, the Henry C. Witelson Ocular Pathology Laboratory has been one of the largest participants at ARVO's annual meeting. This year's ARVO meeting took place in Orlando, Florida from May 4-8, 2014. We are proud to have had a total of eleven posters and four presentations.

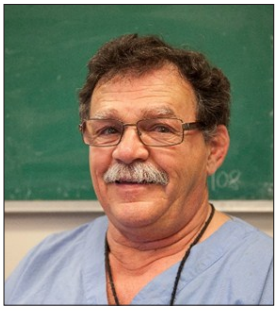
- Clinically unsuspected ocular surface squamous neoplasia and melanocytic conjunctival lesions in pinguecula and pterygium: a 20-year survey. *H.L. Dietrich, P. Zoroquiain, P. Logan, F. Ceballos, E. Antecka, M.N. Burnier Jr.*
- Elevated photoreceptor COX-2 expression correlates with aging retinas. *C. Quezada, P. Logan, A.B.T. Dias, F. Ceballos, L. Jagan, T. Briccoli, M.N. Burnier Jr.*
- Sirtuins are differentially expressed in distinct retinal layers. *N. Vila, P. Zoroquiain, S.C. Maloney, A.B.T. Dias, E. Antecka, M.N. Burnier Jr.*
- Toll-like receptor 3 is expressed in all layers of the human retina. *M. Qutub, N. Vila, S.C. Maloney, D. Faingold, N. AlSaati, E. Antecka, M.N. Burnier Jr.*
- Histopathological features of vitreous samples in diabetic patients. *P. Zoroquiain, N. Vila, V. Bravo-Filho, J. Chen, J. Galic, M.N. Burnier Jr.*
- Sebaceous adenomas of the eyelid and Muir-Torre syndrome. *L. Jagan, V. Bravo-Filho, P. Logan, M. Qutub, E. Al-Sharif, M.N. Burnier Jr.*
- FOXO1 expression in uveal melanoma and ocular tissues of normal eyes. *V. Bravo-Filho, S. Bakalian, P. Blanco, L-A. Lim, E. Antecka, J.J, Mansure, M.N. Burnier Jr.*
- VEGF-A expression is positively correlated with metastasis in uveal melanoma. *P. Logan, S.C. Maloney, V. Bravo-Filho, N. Vila, M. Balazsi, M.N. Burnier Jr.*
- The effect of 17-AAG on focal adhesion kinase expression in uveal melanoma cell lines. *D. Faingold, S. Bakalian, V. Bravo-Filho, H.A. Wood, M.E. Orellana, E. Antecka, M.N. Burnier Jr.*
- The expression of FoxC1 in uveal melanoma. *S. Bakalian, D. Faingold, P. Zoroquiain, M. Balazsi, N. Vila, E. Antecka, M.N. Burnier Jr.*
- SIRT2 expression is higher in uveal melanoma than ocular melanocytes. *H.A. Wood, P. Zoroquiain, P. Logan, S. C. Maloney, N. AlSaati, M.N. Burnier Jr.*

For more information about the Henry C. Witelson Ocular Pathology Laboratory please visit their website at:
http://www.mcgill.ca/ocularpathology/

News & Notes

Well Done Laila!

Laila Ali Al-Alwan successfully defended her PhD in Pathology on March 26, 2014. Her thesis, entitled "Consequences of the interaction between IL17 cytokines and airway smooth muscle cells in the pathogenesis of airway remodeling in asthma", focused on the thickening of airway smooth muscle mass as one of the fundamental structural changes that occur in the lung of asthmatics and the factors that may play a role. Laila is an accomplished winning a number of awards at McGill including "First prize for best scientific research presentation" in the Department of Pathology, School of Medicine three years in a row. Currently, Laila is considering furthering her studies at McGill and we wish her all the best in her scholarly pursuits.



Jules Lewis Retires!

Jules Lewis, pathology assistant, retired Friday, May 16, 2014. Jules started working in the Pathology Department in 1967; Dr. Robert Moore was Chair and Dr. Shao-Nan Huang was Chief of Autopsy Services. Retirement plans include kayaking and home renovations. After 47 years of working, Jules is looking forward to having meals at regular times and relaxing with his family.
Best wishes for a happy retirement.

Oluyomi (Yomi) Ajise, MD, FRCPC, FCAP is joining the Department of Pathology at McGill University as an Assistant Professor in August. She is Board certified in Anatomic Pathology in Canada by the Royal College of Physicians and Surgeons of Canada; and in Anatomic Pathology and Clinical Pathology in the United States by the American Board of Pathology. She is a fellow of the Royal College of Physicians and Surgeons of Canada and a fellow of the College of American Pathologists.

Prior to coming to McGill, Yomi completed two fellowships at the Memorial Sloan-Kettering Cancer Center in New York focusing on Oncologic Surgical Pathology at first and thereafter Hematopathology; with the latter expected to be completed in June 2014.

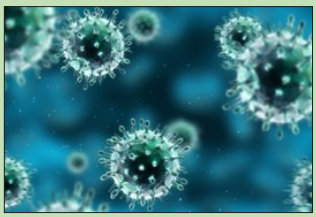
Yomi received her MD degree from Howard University College of Medicine in Washington, DC in 2005 where she graduated with distinction and was honored as Medical School Valedictorian. She subsequently completed two years of residency in Internal Medicine at New-York-Presbyterian Hospital/Weill Cornell Medical Center; followed by 4 years of residency training in Anatomic and Clinical Pathology at New York University in New York, USA.

Her professional areas of interest include optimum clinical diagnostic services; teaching and clinical research including collaborative research studies.

Yomi, a Canadian Citizen of Nigerian descent, is married and has a 4-year old daughter.

Update from the Meakins-Christie Laboratories – A New Way To Fight The Flu!

A recent study published in the journal *Immunity* by Department of Pathology Associate Member, **Maziar Divangahi**, (Assistant Professor in the Department of Microbiology and Immunology) and his team demonstrated that targeted suppression of prostaglandin E_2 (PGE_2) significantly improved the survival rates of mice infected with a lethal dose of the H1N1 flu virus, by boosting their immune response.



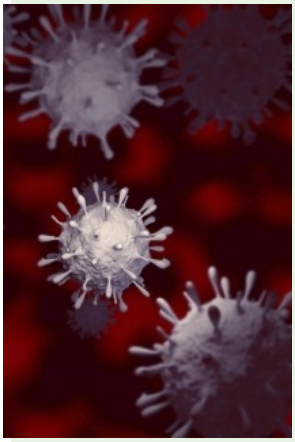
These findings represent a viable therapeutic approach for the treatment of influenza and possibly other viral infections.

See press release on page 8.

Journal Link: Immunity Volume 40, Issue 4, 17 April 2014, Pages 554–568

Researchers find that influenza has an Achilles' Heel

Flu epidemics cause up to half a million deaths worldwide each year, and emerging strains continually threaten to spread to humans and cause even deadlier pandemics.



A study by McGill University professor Maziar Divangahi published by Cell Press on April 10 in the journal Immunity reveals that a drug that inhibits a molecule called prostaglandin E2 (PGE2) increases survival rates in mice infected with a lethal dose of the H1N1 flu virus. The findings pave the way for an urgently needed therapy that is highly effective against the flu virus and potentially other viral infections.

"Drugs that specifically target PGE2 pathways have already been developed and tested in animals, so our results have excellent potential for clinical translation, not only for the treatment of influenza, but other viral respiratory infections that interact with similar host immune pathways," says senior study author Divangahi, who is also a member of the Infectious and Immunity Axis at the Research Institute of the McGill University Health Centre (RI-MUHC).

Persistent threat to human health

Despite the worldwide use of vaccination and other antiviral interventions, the flu virus remains a persistent threat to human health. To investigate molecular pathways that could be targeted by new interventions, Divangahi, an assistant professor in the Faculty of Medicine (Department of Microbiology and Immunology), and his team focussed on drugs such as aspirin and ibuprofen, commonly used to manage flu-like symptoms. By inhibiting a molecule called cyclooxygenase (COX), ibuprofen and other nonsteroidal anti-inflammatory drugs (NSAIDs) lower the production of five major prostanoids—immune molecules that contribute to pain and fever.

"But since these drugs inhibit all prostanoids, each may contribute differently towards the immunity against influenza virus," says Francois Coulombe, a McGill Ph.D. student and the study's first author. "Understanding their individual role is crucial in developing a new therapy."

Enhanced antiviral immunity

Divangahi's research team found that mice genetically engineered to lack a member of the prostanoid family, PGE2, showed remarkably enhanced immunity to flu infection. Most importantly, the vast majority of these mice infected with a lethal dose of the H1N1 flu virus survived. Similarly, mice treated with a compound that inhibits PGE2 showed enhanced antiviral immunity and produced better survival rates following infection with a lethal dose of the flu virus compared with untreated mice.

"Previous studies produced conflicting results due to the inhibition of all prostanoids, not just PGE2," Divangahi says. "Our findings suggest that different prostaglandins have different roles in antiviral immunity and that specific inhibition of PGE2 will be an effective therapy against influenza viral infection by boosting immune responses."

Reprinted from the McGill Media Relations Office

PATHOLOGY SCIENTIFIC LECTURE SERIES

Sponsored by: Roche

May 2014 Lecture

Dr. Nicole Beauchemin
Professor of Biochemistry, Medicine and Oncology
Goodman Cancer Research Centre

Wednesday, May 20
4pm

Duff Medical Building,
Room 112
3775 University Street

Do you have a news story?

The McGill Department of Pathology Newsletter is published four times a year. It is available by email and on the Department webpage at http://www.mcgill.ca/pathology/newsletter

If you would like to submit an article or receive the newsletter by email, please contact the Editor at carolynna.olha@mcgill.ca

Deadline for submissions to the Summer issue is July 20th, 2014

McGill

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