

Mohamed Abouelhassan, Ph.D., FCACB
Queen Elizabeth Hospital, PEI;
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EDUCATION

Clinical Chemistry Diploma 2015
Faculty of Medicine, University of Toronto, Canada

PhD in Biochemistry 2004
Faculty of Medicine, Free University
Amsterdam, the Netherlands.

M.Sc. Biological Chemistry 1996
Faculty of Science
Cairo University, Egypt

EDITORIAL EXPERIENCES

- Editorial Board Member of Prostate Cancer Journal 2016-Present
- Editor of the Canadian Society of Clinical Chemistry (CSCC) website 2014-Present
- SmartBrief Advisory Panel, American Diabetes Association 2014-Present

CERTIFICATION AND LICENCING

- Fellow of the Canadian Academy of Clinical Biochemistry 2016-Present
- Clinical Laboratory Leadership and Management Certificate, AACC 2015
- Clinical Biochemist License, Ministry of Health, Egypt 2004-Present

GRANTS AND FELLOWSHIPS

- Clinical Chemistry Fellowship, University of Toronto 2013-2015
- Krembil Postdoctoral Fellowship, Krembil Foundation, Canada 2006-2007
- Ph.D. Student Supporting Grant, Dutch Cancer Society, The Netherlands 2004
- Ph.D. Student Supporting Grant, Dutch Heart Association, The Netherlands 2004
- PhD Fellowship, Ministry of Higher Education, Egypt 1999-2004
- Scholarship of the Netherlands Organization for International Cooperation 1998-1999

HONOURS, AWARDS

- Canadian Society of Clinical Chemistry Travel Grant 2015
- Distinguished poster, CSCC Meeting, Montreal, Canada 2015
- LMP Travel Award, University of Toronto 2015
- LMP Travel Award, University of Toronto 2014
- OSCC Travel Award, Ontario, Canada 2014
- Rand Travel Award, AACC, Canada 2014
- TFRI Travel Award, Terry Fox Research Institute, Canada 2010

RESEARCH AND CLINICAL WORK EXPERIENCE

Assistant Professor 2016-Present
Department of Pathology, Faculty of Medicine, Dalhousie University, Canada

Clinical Biochemist, Division Head 2015- Present
Queen Elizabeth Hospital, Health PEI, Canada

Research Postdoctoral Fellow
The Lunenfeld-Tanenbaum Research Institute, Mount Sinai Hospital, Toronto 2011-2012

University Health Network, Toronto, Canada 2006-2011

Staff Research Scientist/Senior Clinical Biochemist 2004-2006
National Cancer Institute, Cairo University, Cairo, Egypt.

Ph.D. student 1998-2004
Free University, Amsterdam, The Netherlands

TEACHING AND SUPERVISION EXPERIENCE

Assistant professor
PATH 5013: Biochemistry of Clinical Disorders Fall 2016
Department of Pathology, Faculty of Medicine,
Dalhousie University

Teaching Assistant
PSL444Y: Cellular and Molecular Mechanisms of Neuronal Death Fall 2012
Department of Physiology, Faculty of Medicine,
University of Toronto

Teaching Assistant
LMP1404H: Molecular & Cellular Mechanisms of Disease Winter 2011
Department of Lab Medicine and Pathobiology, Faculty of Medicine,
University of Toronto

Lecturer
Course: Biochemistry and Molecular Biology 2004-2006
National Cancer Institute, Cairo University, Egypt

Assistant Lecturer
Course: Biochemistry and Molecular Biology 1992-1998
National Cancer Institute, Cairo University Egypt

PATENTS

Roderick Bremner; **Mohamed Abou El Hassan**, Serial No.: US61/603,054, Therapeutic Targeting of Polycomb Repressor Complex 2 using siRNA and small molecule inhibitors.

PUBLICATIONS

In Preparation

29. **M. Abou El Hassan**, Z. Xu, K. Huang, T. Yu, R. Bremner. Unique transcription factor binding in mammalian cells in the absence of cofactor recruitment or histone modification.
28. **M. Abou El Hassan**, E. Delvin, B. Hoffman. Diurnal variation of biological markers: an underappreciated source of error

Published

27. **M. Abou El Hassan**, K. Huang, Z. Xu, M. B. K. Eswara, T. Yu, Z. Ni, I. Livne-bar, M. Sangwan, M. Ahmad and R. Bremner. Properties of STAT1 and IRF1 Enhancers and the Influence of SNPs. BMC Molecular Biology. 18 (2017) 6.
26. **M. Abou El Hassan**, D. Lin, T. Earle, M. Millar, I. M. Blasutig. Analytical evaluation of the BioPlex® 2200 25-OH Vitamin D total assay. Clin Biochem. 49 (2016) 723-5.
25. **M. Abou El Hassan**, A. Stoianov, P.A. Araújo, T. Sadeghieh, M.K. Chan MK, Y. Chen, E. Randell, M. Niewesteeg, K. Adeli. CLSI-based transference of CALIPER pediatric reference intervals to Beckman Coulter AU biochemical assays. Clin Biochem. 48 (2015) 1151-9.
24. **M. Abou El Hassan**, K. Huang, M. B. K. Eswara, M. Zhao, L. Song, T. Yu, Y. Liu, J. Liu, S. McCurdy, A. Ma, J. Wither, J. Jin, E. Zacksenhaus, J. L. Wrana and R. Bremner. Cancer Cells Hijack PRC2 to Modify Multiple Cytokine Pathways. Plos One. 10 (2015) e0126466.
23. **M. Abou El Hassan**, T. Yu, L. Song, R. Bremner. Polycomb Repressive Complex 2 Confers BRG1 Dependency on the CIITA Locus. J Immunol. 194 (2015) 5007-5013.

22. **M. Abou El Hassan**, E. P. Diamandis, S. A. Karumanchi, A. H. Shennan, R. N. Taylor. Preeclampsia: An Old Disease with New Tools for Better Diagnosis and Risk Management. *Clin Chem.* 61 (2015) 694-698.
21. K. H. T. Leung, **M. Abou El Hassan** and R. Bremner. A rapid and efficient method to purify proteins at replication forks under native conditions. *BioTechniques*, 55 (2013) 204–206.
20. M.M. Goodwin, J.M. Molleston, S. Canny, **M. Abou El Hassan**, E.K. Willert, R. Bremner and H.W. Virgin. Histone deacetylases and the nuclear receptor corepressor NCoR regulate the lytic-latent switch gene 50 in murine gammaherpesvirus 68-infected macrophages. *J. Virol.* 84 (2010) 12039-47.
19. **M. Abou El Hassan** and R. Bremner. A rapid simple approach to quantify chromosome conformation capture. *Nucleic Acids Res.* 37(5) (2009) e35.
18. Z. Ni†, **M. Abou El Hassan**†, Z. Xu, T. Yu, R. Bremner. BRG1 coordinates CIITA induction through multiple inter-dependent remote enhancers. *Nature Immunology*. 9(7) (2008) 785-93. † **Equal contributors**.
17. J. Voortman, T.P. Resende, **M. Abou El Hassan**, G. Giaccone, F.A.E. Kruyt. TRAIL therapy in Non-Small Cell Lung Cancer cells: sensitization to death receptor mediated apoptosis by proteasome inhibitor bortezomib. *Mol. Cancer Ther.* 6 (2007) 2103-12.
16. A.M. Bruynzeel, **M. Abou El Hassan**, C. Schalkwijk, J. Berkhof, A. Bast, H.W. Niessen, W.J. van der Vijgh. Anti-inflammatory agents and monoHER protect against DOX-induced cardiotoxicity and accumulation of CML in mice. *Br. J. Cancer.* 96 (2007) 937-943.
15. A.M. Bruynzeel, **M. Abou El Hassan**, E. Torun, A. Bast, W.J. van der Vijgh, F.A. Kruyt. Caspase-dependent and -independent suppression of apoptosis by monoHER in Doxorubicin treated cells. *Br. J. Cancer.* 96(2007) 450-456.
14. **M. Abou El Hassan**, S.R. Braam, F.A. Kruyt. Paclitaxel and vincristine potentiate adenoviral oncolysis that is associated with cell cycle and apoptosis modulation, whereas they differentially affect the viral life cycle in non-small-cell lung cancer cells. *Cancer Gene. Ther.* 13 (2006) 1105-14.
13. **M. Abou El Hassan**, S.R. Braam, F.A. Kruyt. A real-time RT-PCR assay for the quantitative determination of adenoviral gene expression in Tumor cells. *J. Virol. Methods.* 133(2006) 53-61.
12. J.E. Carette, H.C. Graat, F.H. Schagen, **M. Abou El Hassan**, W. R. Gerritsen, V. W. van Beusechem. Replication-dependent transgene expression from a conditionally replicating adenovirus via alternative splicing to a heterologous splice-acceptor site. *J. Gene. Med.* 7 (2005) 1053-1062.
11. **M. Abou El Hassan**, I. Van der Meulen-Muileman, S. Abbas, F. A.E. Kruyt. Conditionally replicating adenoviruses kill tumor cells via a basic apoptotic machinery-independent mechanism that resembles necrosis-like programmed cell death. *J. Virol.* 78 (2004) 12243-51.
10. **M. Abou El Hassan**, D. C. J. Mastenbroek, W.R. Gerritsen, G. Giaccone, and F.A.E. Kruyt. Overexpression of Bcl2 abrogates chemo- and radiotherapy-induced sensitisation of NCI-H460 Non-Small Cell Lung Cancer cells to adenovirus-mediated expression of full-length TRAIL. *Br. J. Cancer.* 91 (2004) 171-7.
9. **M. Abou El Hassan**, M.J.W.E. Rabelink, W.J.F. van der Vijgh, A. Bast and R.C. Hoeben. A comparative study between catalase gene therapy and the cardioprotector Monohydroxyethylrutoside (monoHER) in protecting against doxorubicin-induced cardiotoxicity in vitro. *Br. J. Cancer.* 89 (2003) 2140-2146.
8. **M. Abou El Hassan**, M.A. Kedde, U.T. Zwiers, E. Torun, G.R. Haenen, A. Bast, W.J.F. van Der Vijgh. Bioavailability and pharmacokinetics of the cardioprotecting flavonoid 7-monohydroxyethylrutoside in mice. *Cancer Chemother. Pharmacol.* 52 (2003) 371-376.
7. **M. Abou El Hassan**, H.M. Verheul, A.S. Jorna, C. Schalkwijk, J. van Bezu, W.J.F. van der Vijgh, A. Bast. The new cardioprotector monohydroxyethylrutoside protects against doxorubicin-induced inflammatory effects in vitro. *Br. J. Cancer.* 89 (2003) 357-362.
6. **M. Abou El Hassan**, M.A. Kedde, U.T. Zwiers, A. Bast, W.J.F. van der Vijgh. The cardioprotector monoHER does not interfere with the pharmacokinetics or the metabolism of the cardiotoxic agent doxorubicin in mice. *Cancer Chemother. Pharmacol.* 51 (2003) 306-310.
5. **M. Abou El Hassan**, M. Heijn, M.J. Rabelink, W.J.F. van der Vijgh, A. Bast, R.C. Hoeben. The protective effect of cardiac gene transfer of CuZn-sod in comparison with the cardioprotector monohydroxyethylrutoside against doxorubicin-induced cardiotoxicity in cultured cells. *Cancer Gene. Ther.* 10 (2003) 270-277.
4. H.J. Rademaker, **M. Abou El Hassan**, G.A. Versteeg, M.J. Rabelink, R.C. Hoeben. Efficient mobilization of E1-deleted adenovirus type 5 vectors by wild-type adenoviruses of other serotypes. *J. Gen. Virol.* 83 (2002) 1311-1314.
3. **M. El Hassan**, M.A. Kedde, A. Bast, W.J.F. van der Vijgh. High performance liquid chromatography with electrochemical detection for the determination of 7-monohydroxyethylrutoside (monoHER) in Plasma. *J. Chromatogr. B.* 752 (2001) 115-121.

2. **M. Abou El Hassan**, M.A. Kedde, A. Bast, W.J.F. van der Vijgh. Determination of monohydroxyethylrutoside (monoHER) in heart tissue by HPLC with electrochemical detection. **J. Chromatogr. B.** 757 (2001) 191-196.
1. **M. Abou El Hassan**, D.J. Touw, A.J. Wilhelm, A. Bast, W.J.F. van der Vijgh. Stability of monoHER in an aqueous formulation for i.v. administration. **Int. J. Pharmaceut.** 211 (2000) 51-56.

INVITED LECTURES AND PRESENTATIONS

- 2016 Drug testing in newborns, Staff Educational Event, Department of Pediatrics, Queen Elizabeth Hospital, Charlottetown, PEI, Canada
- 2015 Introducing High Sensitivity Cardiac Troponin I Assay, Internal Medicine Rounds, Queen Elizabeth Hospital, Charlottetown, PEI, Canada
- 2015 "Stroke biomarkers: Is it an impossible mission?". Biochemistry Rounds, Sunnybrook Health Sciences Centre, Toronto, Canada
- 2015 "Hemolysis Index-Based Auto-Verification in Pediatric Clinical Chemistry Testing". City Wide Clinical Biochemistry Rounds, Department of Pathobiology and Laboratory Medicine, The Hospital for Sick Children, Toronto, Canada.
- 2014 "Hemolysis index-based auto-verification in pediatric clinical chemistry testing". OSCC Annual Meeting, Ottawa, Canada
- 2014 "Diurnal variation of analytes: an underestimated pre-analytical factor in clinical chemistry" AACC Annual Spring Meeting, Upstate NY Section, Niagara Falls, Canada
- 2010 "BRG1 dependency of IFN γ targets is linked to the presence of multiple epigenetic repressors" Annual TWRI Research Day, Toronto, Canada
- 2010 "Epigenetics and IFN γ signaling"
5th Barbados Workshop on Gene Regulation: The Role of Chromatin 3D Structure, Bellairs Research Institute of McGill University, Barbados
- 2009 "Epigenetic regulation of IFN γ stimulated genes"
Postdoctoral Association Seminar Series, University Health Network, Toronto, Canada
- 2007 "Transcription factor signatures for IFN γ responsiveness"
Annual TWRI Research Day, Toronto, Canada
- 2005 "Replicating adenoviruses and the basic apoptotic machinery"
International Union Against Cancer (UICC) Conference, Cairo, Egypt
- 2005 "Cancer gene therapy: Possible applications in lung cancer patients"
Staff Seminars, National Cancer Institute, Cairo, Egypt
- 1999 "Determination of the bioavailability and antioxidant capacity of monoHER after oral and i.p. administration in mice"
20th Anniversary Meeting of the EORTC PAMM-SPG-PTMG groups, Amsterdam, The Netherlands

REVIEWED ARTICLES

Clinical Biochemistry, eJIFCC, Annals of Urological Research