



HASSAN RH ALI

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I-EDUCATION AND QUALIFICATIONS

April 2005 – April 2009 PhD “Vibrational Spectroscopic, Computational Studies and Solid-State Analysis of Drugs Used in the Management of Respiratory Disorders”

Chemical & Forensic sciences, University of Bradford, Bradford, UK

My thesis has focused on the structural analysis in the solid-state of certain pharmaceuticals using both vibrational spectroscopic techniques (Raman, near and mid infrared). In close Collaboration with the Computational Chemistry Group, Institute of Pharmaceutical Innovation, University of Bradford, I was able to deeply investigate the modes of interactions of several complex pharmaceuticals in the light of both quantum chemical calculations and experimental vibrational spectroscopic data.

In collaboration with TA instruments, I have developed a new instrumental set up using simultaneous Raman spectroscopy and differential scanning calorimetry to monitor *in situ* polymorphic transformation of certain important pharmaceuticals and reasonably estimate the transition temperature of certain enantiotropic polymorphic systems.

December 1997- December 2001 MSc “Physicochemical Study and Spectrofluorimetric Analysis of Certain Local Anaesthetics”

Faculty of Pharmacy – University of Assiut – Assiut – Egypt

The project had involved the physicochemical study of some local anaesthetics and their spectrofluorimetric analysis through enhancement of their native fluorescence using certain cyclodextrins, cationic and anionic surfactants where LOD as low as 1 ng/ml of these drugs have been achieved.

September 1991- June1996 BSc in Pharmaceutical Sciences (Very Good with Degree of Honour)

Faculty of Pharmacy – University of Assiut – Assiut – Egypt

I have gained experience of both the practical and interpretive aspects of a vast number of chemistry techniques during my undergraduate, postgraduate degrees and my postdoctoral work experiences. These include the following:

- Vibrational spectroscopy (Raman, Near and mid-infrared) and confocal Raman imaging
- Femtosecond time resolved near infrared laser spectroscopy
- Powder X-ray diffractometry

- Single crystal X-ray diffraction (from sample preparation, data collection, and structure refinement)
- Multinuclear NMR spectroscopy
- Hot stage microscopy
- Thermal analytical methods (DSC and TGA)
- UV, Visible and Fluorescence spectroscopies.
- Chromatographic techniques (HPLC, GC, IGC and MS)
- Trace element analysis using atomic absorption and flame photometry.
- Electrochemical techniques (voltammetry, polarography and potentiometry)
- General wet chemistry techniques, titrimetry, compleximetry, precipitometry and gravimetric analysis etc.
- Knowledge of synthesis in organic and inorganic chemistry.

II- RESEARCH INTERESTS

My principal research interests lie in the field of the solid-state investigation of the molecular self-assembly of different solid forms of the active pharmaceutical ingredients (APIs) (polymorphs, cocrystals, salts and hydrates). A rather important interest is the online monitoring of the transformation of these solid forms using either *in situ* Raman and NIR spectroscopy or a combination of *in situ* Raman spectroscopy and other relevant techniques (e.g. DSC and DVS) to provide a complete picture of physical and chemical changes that are occurring during the pharmaceutical processes.

III- TEACHING AND ADMINISTRATIVE EXPERIENCE

October 2019-present Professor and Head of Department of Pharmaceutical Analytical Chemistry, Faculty of Pharmacy-Assiut University-Egypt

June 2018-present, Director of Quality Assurance and Accreditation Unit, Faculty of Pharmacy-Assiut University-Egypt.

October 2017-present, member of Accreditation team of Assiut University.

August 2016-present, Acting Head of Department of Pharmaceutical Analytical Chemistry, Faculty of Pharmacy-Assiut University-Egypt

June 2016-August 2018, Director of the Centre of Pharmaceutical Services, Faculty of Pharmacy-Assiut University-Egypt

September 2014-present, Department of Pharmaceutical Analytical Chemistry, Faculty of Pharmacy-Assiut University-Egypt

Associate Professor of Analytical Chemistry, Teaching of analytical chemistry to the undergraduate students and vibrational spectroscopy to the postgraduate students and research in the vibrational spectroscopic investigation of pharmaceutical systems.

January 2014-June 2018, Deputy Director of Quality Assurance Unit (QAU), Faculty of Pharmacy-Assiut University-Egypt

October 2012- September 2014, Department of Pharmaceutical Analytical Chemistry, Faculty of Pharmacy-Assiut University-Egypt

Assistant Professor of Analytical Chemistry, Teaching of analytical chemistry to the undergraduate students and vibrational spectroscopy to the postgraduate students and research in the vibrational spectroscopic investigation of pharmaceutical systems.

Ocotber2010-September 2012, Pharmaceutical Lab. Department of Health Sciences, Lulea University of Technology, Lulea, Sweden

Research Scientist, Solid-state vibrational spectroscopic investigation of different solid forms of APIs and the use of *in situ* Raman spectroscopy to study the behaviour of pharmaceutical hydrates and cocrystals in various media.

August 2009-August 2010, Department of Chemistry-Gakushuin University-Tokyo-Japan

Research Associate, investigation of the molecular environment of yeast cells by low frequency Raman microspectroscopy.

June 2009-August, 2009, Department of Pharmaceutical Analytical Chemistry, Faculty of Pharmacy-Assiut University-Egypt

Lecturer of Analytical Chemistry, Teaching of analytical chemistry to the undergraduate students and vibrational spectroscopy to the postgraduate students and research in the vibrational spectroscopic investigation of pharmaceutical systems.

April 2005-April 2009 Chemical & Forensic Sciences, University of Bradford-UK

- Part-time demonstrator/tutor for undergraduate practical laboratory classes, (organic chemistry, inorganic and analytical chemistry)

- Alongside my own postgraduate research, I have supervised the laboratory project of three undergraduate students, both in the day-to-day running of the project and its overall planning, which has yielded valuable data.

- Mentor to three other postgraduate students

January 2002- March 2005 Faculty of Pharmacy – University of Assiut – Egypt

Assistant lecturer of Analytical Chemistry, Teaching of analytical chemistry to the undergraduate students and research in spectrofluorimetric analysis of pharmaceuticals.

December 1997- December 2001 Faculty of Pharmacy – University of Assiut – Egypt

Demonstrator of Analytical Chemistry, Teaching of analytical chemistry to the undergraduate students and research in spectrofluorimetric analysis of pharmaceuticals.

IV- KEY SKILLS

IT Skills - Proficient in all Microsoft Office packages (Word, PowerPoint etc), using many chemistry software packages for drawing and spectral manipulation in particular GRAMS, ChemOffice, ChemDraw, ChemWindow, ISIS Draw, Igor Pro, ChemSketch and Origin Pro and in the use of many scientific database packages such as the CDS service, SciFinder, ISI, CSD, MDL Crossfire. I am a holder of ECDL certificate.

Problem Solving- Collaboration with across five distinct areas of chemical sciences, demonstrated independent thought in analysing problems, adopting suitable strategies and developing new techniques. The results are being reviewed for publication, and have been presented to my colleagues in a series of seminars in Egypt, England and Japan.

Languages – Proficient in English and Arabic, basic spoken French, Japanese and Swedish.

V- PROFESSIONAL MEMBERSHIPS

- Member of the Royal Society of Chemistry (MRSC).

- Member of the Egyptian Pharmaceutical Syndicate

VI- PUBLICATIONS

Peer-reviewed articles

- 1- “FTIR spectroscopic study of two isostructural statins: simvastatin and lovastatin as authentic and in pharmaceuticals Ahmed F. Abdel Hakiem, Niveen A. Mohamed, ”, Hassan Refat H. Ali , *Vibrational Spectroscopy* 115 (2021), 103273.
- 2- “Facile determination of ezetimibe and either atorvastatin or simvastatin by Fourier transform infrared spectroscopy”, Hassan Refat H. Ali , Niveen A. Mohamed, Ahmed F. Abdel Hakiem, *Vibrational Spectroscopy* 115 (2021), 103273.
- 3- “In depth investigation of the retention behaviour of structurally related β -blockers on RP-HPLC column: Quality by design and quantitative structure-property relationship complementary approaches for optimization and validation ”, Ahmed F. Abdel Hakiem, Ahmed K. Hamdy, Hassan Refat H. Ali, Mohamed Gomaa, Ahmed Safwat Aboaraia, *Journal of Chromatography B* 1166 (2021), 122549.
- 4- “Towards understanding of the interaction of certain carbapenems with protein via combined experimental and theoretical approach”, Mohamed I. Gadallah, Hassan Refat H. Ali, Hassan F. Askal, Gamal A. Saleh, *Spectrochimica Acta Part A*, 246 (2021) 119005.

- 5- "A novel fluorescent sensor for fast and highly selective turn-off detection of Fe³⁺ in water and pharmaceutical samples using synthesized azopyrazolebenzenesulfonamide derivative", A. Sayed, Ismail M. M. Othman, M. Hamam, H.Gomaa, Mohamed I. Gadallah, M. A. Mostafa, Hassan Refat H. Ali, Mohammed Y. Emran, Mohamed Abdel-Hakim, M. H. Mahross, *Journal of Molecular Structure* 1225 (2021), 129175.
- 6- "Towards Understanding of Different Solid Forms of Formoterol Fumarate: Combined Computational and Experimental Approach", Ahmed F. Abdel Hakiem, J. Kendrick, Hassan Refat H. Ali, *Vibrational Spectroscopy* 110 (2020), 103132.
- 7- "Combining Acetyl salicylic acid and Rofecoxib into Novel Oral Tablets Normalize Platelet Function with Potential Higher Tolerability in Patients with Cardiovascular Disorders", Hesham M. Tawfeek, M. Younis, H. Hetta, M. Abel-Malek, Hassan Refat H. Ali, Noha N. Atia, *Journal of Drug Delivery Science and Technology* 59, (2020), 110851.
- 8- "One pot fabrication of fluorescein functionalized manganese dioxide for fluorescence "Turn OFF-ON" sensing of hydrogen peroxide in water and cosmetic samples", Hassan Refat H. Ali, Ahmed I. Hassan, Mohamed M. El-Wekil, Yasser F. Hassan, *RSC Advances*,10, (2020), 17506-17514.
- 9- "Development of dual function polyamine-functionalized carbon dots derived from one step green synthesis for quantitation of Cu²⁺ and S²⁻ ions in complicated matrices with high selectivity", Hassan Refat H. Ali, Ahmed I. Hassan, Mohamed M. El-Wekil, Yasser F. Hassan, *Analytical and Bioanalytical Chemistry*,412, (2020), 1353-1363.
- 10- "Colorimetric and fluorimetric (dual-mode) nanoprobe for the determination of pyrogallol based on the complexation with copper (II)-and nitrogen-doped carbon dots", Hassan Refat H. Ali, Ahmed I. Hassan, Mohamed M. El-Wekil, Yasser F. Hassan, *Microchimica Acta*,186 (2019).
- 11- "Facile HPTLC-densitometric determination of ertapenem and paracetamol in pharmaceuticals and rabbit plasma with pharmacokinetic insights", Mohamed I. Gadallah, Hassan Refat H. Ali, Hassan F. Askal, Gamal A. Saleh, *Microchemical Journal*, 150 (2019), 104093.
- 12- "Investigating erythrosine B as a fluorimetric probe for the determination of benzimidazole drugs via facile complexation reaction", Sayed M. Derayea, Ahmed A. Hamad, Ramadan Ali, Hassan Refat H. Ali, *Microchemical Journal*, 149 (2019), 104024.
- 13- "Innovative HPTLC-densitometric method for therapeutic monitoring of meropenem and metronidazole in acute pancreatic patients", Mohamed I. Gadallah, Hassan Refat H. Ali, Hassan F. Askal, Gamal A. Saleh, *Microchemical Journal*, 146 (2019), 940-947.
- 14- "A single run, rapid polarity switching method for determination of 30 pharmaceuticals and personal care products in waste water using Q-Extractive Orbitrap high resolution accurate mass spectrometry", Mohamed Abou-Elwafa Abdalla, Khanh-Hoang Nguyen, Anekwe Jennifer Ebele, Noha N. Atia, Hassan Refat H. Ali, Stuart Harrod, *Journal of Chromatography A*, 1588 (2019), 68-76.
- 15- "A reductant colorimetric method for the rapid detection of certain cephalosporins via the production of gold and silver nanoparticles", Ramadan Ali, Hassan Refat H. Ali, Hany A. Batakoushy, Sayed M. Derayea, Mohamed M. Elsutohy *Microchemical Journal*, 146 (2019), 864-871.
- 16- "Development of terbium based sensor for determination of imipenem in dosage forms and real samples", Mohamed I. Gadallah, Hassan Refat H. Ali, Hassan F. Askal, Gamal A. Saleh, *Journal of Molecular Liquids*, 276 (2019), 705-713.
- 17- "Poly (bromocresol green) flakes-decorated pencil graphite electrode for selective electrochemical sensing applications and pharmacokinetic studies", Mohamed I. Gadallah, Hassan Refat H. Ali, Hassan F. Askal, Gamal A. Saleh, *Materials Science and Engineering C*, 102 (2019), 634-645.

- 18- "Facile complexation reactions for the selective spectrofluorimetric determination of albendazole in oral dosage forms and spiked human plasma", Ahmed A. Hamad, Ramadan Ali, Hassan Refat H. Ali, Dalia M. Nagy, Sayed M. Derayea RSC Advances, 8 (2018), 5373-5381.
- 19- "Improved spectrofluorimetric determination of mebendazole, a benzimidazole anthelmintic drug, through complex formation with lanthanum (III); Application to pharmaceutical preparations and human plasma", Sayed M. Derayea , Ahmed A. Hamad , Dalia M. Nagy , Deena A. Nour-Eldeen ,Hassan Refat H. Ali , Ramadan Ali, Journal of Molecular Liquids 272 (2018) 337-343
- 20- "Synthesis of Fe₃O₄ nanobeads functionalized 8-hydroxyquinoline sulfonic acid supported with ion imprinted biopolymer as a recognition site for Al³⁺ ions:estimation in human serum and water samples ", Mohamed M. El-Wakil, , Hassan Refat H. Ali, Adel A. Marzouk, Ramadan Ali, New Journal of Chemistry,42 (2018), 9828-9836.
- 21- "Enhanced dispersive solid phase extraction assisted by cloud point strategy prior to fluorimetric determination of anti-hepatitis C drug velpatasvir in pharmaceutical tablets and body fluids", Mohamed M. El-Wakil, , Hassan Refat H. Ali, Adel A. Marzouk, Ramadan Ali, RSC Advances, 8 (2018), 13292-13300.
- 22- "Advanced sensing nanomaterials based carbon paste electrode for simultaneous electrochemical measurement of esomeprazole and diclofenac sodium in human serum and urine samples", Mohamed M. El-Wakil, Saad A. Alkahtani, Hassan Refat H. Ali, Ashraf M. Mahmoud, Journal of Molecular Liquids, 262 (2018), 495-503.
- 23- "A rapid Fourier transform infrared spectroscopic method for analysis of certain proton pump inhibitors in binary and ternary mixtures", Pakinaz Y. Khashaba, Hassan Refat H. Ali, Mohamed M. El-Wakil, Spectrochimica Acta Part A, 190 (2018) 10-14.
- 24- "Spectrodensitometric simultaneous determination of esomeprazole and domperidone in human plasma", Pakinaz Y. Khashaba, Hassan Refat H. Ali, Mohamed M. El-Wakil, Open Chemistry, 15 (2017), 293-298.
- 25- "Voltammetric analysis of ATPase-inhibitor using redox mediator platform: application in biological", Pakinaz Y. Khashaba, Hassan Refat H. Ali, Mohamed M. El-Wakil, Der Chemica Sinica, 8 (2017), 461-470.
- 26- "Square wave stripping voltammetric analysis of pantoprazole using surfactant based pencil graphite electrode and its determination in rabbit plasma during pharmacokinetic study", Pakinaz Y. Khashaba, Hassan Refat H. Ali, Mohamed M. El-Wakil, Journal of Analytical Chemistry, in press.
- 27- "Spectroscopic analysis and antibacterial evaluation of certain third generation cephalosporins through metal complexation", Hassan Refat H. Ali, Ramadan Ali, Hany A. Batakoushy, Sayed M. Derayea, Analytical Chemistry Letters, 4 (2017), 445-457.
- 28- "Surfactant based voltammetric analysis of rabeprazole sodium in real samples", Pakinaz Y. Khashaba, Hassan Refat H. Ali, Mohamed M. El-Wakil, Journal of Analytical and Bioanalytical Electrochemistry , 9 (2017),729-740.
- 29- "Development of a novel and cost-effective redox sensor for voltammetric determination of pantoprazole sodium during pharmacokinetic studies", Pakinaz Y. Khashaba, Hassan Refat H. Ali, Mohamed M. El-Wakil, Royal Society Open Science, (2017), doi:org/10.1098/rsos.170324 .
- 30- "A new and cost effective approach for simultaneous voltammetric analysis of two related benzimidazole drugs and their determination in biological fluids", Pakinaz Y. Khashaba, Hassan Refat H. Ali, Mohamed M. El-Wakil, Electroanalysis, 29 (2017),1643-1650.
- 31- "Application of silver nanoparticles for the spectrophotometric determination of three benzimidazole anthelmintic drugs in their pharmaceutical preparations",

- Sayed M. Derayea, Hassan Refat H. Ali, Ahmed A. Hamad, Ramadan Ali, *Journal of Applied Pharmaceutical Science*, 7 (2017), 076-082.
- 32- "Simultaneous voltammetric analysis of anti-ulcer and D₂ antagonist agents in binary mixture using redox sensor and their determination in human serum", Pakinaz Y. Khashaba, Hassan Refat H. Ali, Mohamed M. El-Wekil, *Materials Science and Engineering C*, 75 (2017), 733-741.
 - 33- "Solid-state FTIR spectroscopic study of two binary mixtures: cefepime-metronidazole and cefoperazone-sulbactam", Hassan Refat H. Ali, Ramadan Ali, Hany A. Batakoushy, Sayed M. Derayea, *Journal of Spectroscopy*, (2017), doi:10.1155/2017/5673214.
 - 34- "Highly sensitive and selective complexation based voltammetric methods for the analysis of rabeprazole sodium in real samples", Pakinaz Y. Khashaba, Hassan Refat H. Ali, Mohamed M. El-Wekil, *RSC Advances*, 7 (2017), 3043-3050.
 - 35- "Complexation based voltammetric determination of pantoprazole sodium in pharmaceutical formulations and rabbit plasma", Pakinaz Y. Khashaba, Hassan Refat H. Ali, Mohamed M. El-Wekil, *Electroanalysis*, 29 (2017), 890-897.
 - 36- "Insight into inclusion complexation of indomethacin nicotinamide cocrystals", Hassan Refat H. Ali, Imran Y. Saleem, Hesham M. Tawfeek, *Journal of Inclusion Phenomena and Macrocyclic Chemistry*, 84 (2016), 179-188.
 - 37- "Different chromatographic and electrophoretic methods for analysis of proton pump inhibitors (PPIs): A Review" Michael E. El-Kommos, Pakinaz Y. Khashaba, Hassan Refat H. Ali, Mohamed M. El-Wekil, *Journal of Liquid Chromatography & Related Technologies*, 38 (2015), 1639-1659.
 - 38- "Simultaneous estimation of metformin hydrochloride and certain cardiovascular drugs with a pharmacokinetic study" Michael E. El-Kommos, Niveen A. Mohamed, Hassan Refat H. Ali, Ahmed F. Abdel Hakiem, *Journal of Liquid Chromatography & Related Technologies*, 38 (2015), 1759-1766.
 - 39- "Spectrodensitometric Determination of Some Antihyperlipidemics in Pharmaceutical Combinations and in Plasma with a Pharmacokinetic Application" Michael E. El-Kommos, Niveen A. Mohamed, Hassan Refat H. Ali, Ahmed F. Abdel Hakiem, *Journal of Planar Chromatography*, 28 (2015) 362-372.
 - 40- "A sensitive micellar electrokinetic chromatographic (MEKC) method for the determination of rosuvastatin in plasma and its application to pharmacokinetics with niacin" Michael E. El-Kommos, Niveen A. Mohamed, Hassan Refat H. Ali and Ahmed F. Abdel Hakiem, *Biomedical Chromatography*, 28 (2014) 1828-1838.
 - 41- "Effects of polymer and surfactant on the dissolution and transformation profiles of cocrystals in aqueous media" Hassan Refat H. Ali, Amjad Alhalaweh, Sitaram P. Velaga, *Crystal Growth & Design*, 14 (2014) 643-648.
 - 42- "A validated reversed phase liquid chromatographic method for simultaneous determination of some antihyperlipidemic drugs", Michael E. El-Kommos, Niveen A. Mohamed, Hassan Refat H. Ali and Ahmed F. Abdel Hakiem, *Research Journal of Pharmaceutical, Biological and Chemical Sciences*, 5(2014) 1485-1501.
 - 43- "Simultaneous Chromatographic Determination of a Critical Combination of Itraconazole, Clonazepam, and Glipizide" Noha N. Attia Hassan Refat.H. Ali, *Asian Journal of Biochemical and Pharmaceutical Research*, 3 (2013) 55-63.
 - 44- "In-Depth qualitative and quantitative FTIR spectroscopic study of glipizide and gliclazide" Hassan R.H. Ali, Gamal A. Saleh, Samiha A. Hussein, Ahmed I. Ibrahim, *Analytical Chemistry : An Indian Journal*, 14 (2014), 127-134.
 - 45- "Preparation, characterization and atomic absorption spectroscopic determination of some metal complexes of glipizide" Hassan R.H. Ali, Gamal A. Saleh, Samiha A. Hussein, Ahmed I. Ibrahim, *Der Pharma Chemica*, 5 (2013) 156-163.
 - 46- "Vibrational spectroscopic investigation of polymorphs and cocrystals of indomethacin" Hassan Refat H. Ali, Amjad Alhalaweh, Sitaram P. Velaga, *Drug Development and Industrial Pharmacy*, 39 (2013) 625-634.

- 47- "Solid-state Vibrational Spectroscopic Investigation of Cocrystals and Salt of Indomethacin" Hassan Refat H. Ali, Amjad Alhalaweh, N. F.C. Mendes, Paulo Ribeiro-Claro, Sitaram P. Velaga, *CrystEngComm*, 14 (2012) 6665-6674.
- 48- "Non-invasive *in situ* identification and band assignments of diazepam, flunitrazepam and methadone hydrochloride with near-infrared spectroscopy" Hassan Refat H. Ali, *Forensic Science International*, 206 (2011) 87-91.
- 49- "An experimental and computational study on the epimeric contribution to the infrared spectrum of budesonide" H.R.H. Ali, H.G.M. Edwards, J. Kendrick, T. Munshi, I. J. Scowen, *Drug Testing and Analysis*, 2(2010) 447-451.
- 50- "Insight to thermally induced solid state polymorphic transformation of sulfathiazole using simultaneous *in situ* Raman spectroscopy and differential scanning calorimetry" H.R.H. Ali, H.G.M. Edwards, I. Scowen, *Journal of Raman spectroscopy*, 40 (2009) 887-892.
- 51- "Computational and Vibrational Spectroscopic Studies of Ipratropium Bromide" H.R.H. Ali, H.G.M. Edwards, J.Kendrick, I. Scowen, *Drug Testing and Analysis*, 1(2009) 73-80.
- 52- "Vibrational spectroscopic study of salbutamol hemisulfate" H.R.H. Ali, H.G.M. Edwards, J.Kendrick, I. Scowen, *Drug Testing and Analysis*, 1 (2009) 51-56.
- 53- "Non invasive *in situ* identification and band assignments of some pharmaceutical excipients inside USP vials with FT near-infrared spectroscopy" H.R.H. Ali, H.G.M. Edwards, I. Scowen, *Spectrochimica Acta Part A*, 72 (2009) 890-896.
- 54- "Vibrational spectroscopic study of terbutaline hemisulfate" H.R.H. Ali, H.G.M. Edwards, J.Kendrick, I. Scowen, *Spectrochimica Acta Part A*, 72 (2009) 715-719.
- 55- "Vibrational spectroscopic study of fluticasone propionate" H.R.H. Ali, H.G.M. Edwards, J.Kendrick, I. Scowen, *Spectrochimica Acta Part A*, 72 (2009) 244-247.
- 56- "Vibrational spectroscopic characterisation of salmeterol xinafoate polymorphs and a preliminary investigation of their transformation using simultaneous *in situ* portable Raman spectroscopy and differential scanning calorimetry" Hassan Refat H. Ali, Howell G.M. Edwards, Micheal D. Hargreaves, Tasnim Munshi, Ian J. Scowen, Richrad J. Telford, *Analytica Chimica Acta*, 620 (2008) 103-112.
- 57- "Raman spectroscopy of *natron*: Shedding light on ancient Egyptian mummification" Howell G.M. Edwards, Katherine J. Currie, Hassan R.H. Ali, Susana E. Jorge Villar, A. Rosalie David, Hohn Denton, *Analytical & Bioanalytical Chemistry*, 388 (2007) 683-689.
- 58- "Vibrational spectroscopic study of budesonide" H.R.H. Ali, H.G.M. Edwards, J. Kendrick, T.Munshi, I.J.Scowen, *Journal of Raman spectroscopy* 38 (2007) 903-908.
- 59- "Spectrofluorometric determination of certain local anaesthetics" A.I. Mohamed, S.R. El-Shabouri, H.M. Abdel-Wadood, Hassan R.H. Ali, *Bulletin of the Faculty of Science, Assiut University, B:Chemistry*, 31(2) (2002) 39-57.

Peer-reviewed conference contributions

- 1- "Rapid and non-invasive determination of certain metronidazole combinations by FTIR spectroscopy", Nada A. Y. Abdd El-Malek, Hassan Refat H. Ali, Hassan F. Askal, Gamal A. Saleh, Assiut University 12th Pharmaceutical Sciences Conference. 4-5 November 2020, Assiut, Egypt.
- 2- "Towards Understanding of Different Solid Forms of Formoterol Fumarate: Combined Computational and Experimental Approach", Ahmed F. Abdel Hakiem, J. Kendrick, Hassan Refat H. Ali, Assiut University 12th Pharmaceutical Sciences Conference. 4-5 November 2020, Assiut, Egypt.
- 3- "Densitometric method for the simultaneous determination of binary mixture of meropenem and metronidazole or meropenem and secnidazole in pure and

- pharmaceutical formulations ”, Gamal A. Saleh, Hassan F. Askal, Hassan R.H. Ali, , Mohamed I. Gadallah, Assiut University 11th Pharmaceutical Sciences Conference. 11-12 April 2018, Assiut, Egypt.
- 4- “Spectrofluorometric determination of carbapenems via interaction with bovine serum albumin”, Gamal A. Saleh, Hassan F. Askal, Hassan R.H. Ali, , Mohamed I. Gadallah, Assiut University 11th Pharmaceutical Sciences Conference. 11-12 April 2018, Assiut, Egypt.
 - 5- “Solid-state FTIR spectroscopic determination of a critical combination of medroxyprogesterone and tamoxifen”, Gamal A. Saleh, Hassan R.H. Ali, , Noha S. Abbas, Assiut University 11th Pharmaceutical Sciences Conference. 11-12 April 2018, Assiut, Egypt.
 - 6- “FTIR spectroscopic studies on intermolecular self-assembly of crystalline and amorphous forms of sulfonylurea drugs ”, Hassan R.H. Ali, Gamal A. Saleh, Samiha A. Hussein, Ahmed I. Ibrahim, AICPD2017, 13-15 September, 2017, Hurghada, Egypt.
 - 7- “Voltammetric analysis of ATPase inhibitor using redox mediator platform: application in biological fluids ”, Pakinaz Y. Khashaba, Hassan Refat H. Ali, Mohamed M. El-Wekil, AICPD2017, 13-15 September, 2017, Hurghada, Egypt.
 - 8- “Spectroscopic investigation of solution complexation of indomethacin–saccharin cocrystals in ethanol”, Hassan Refat H. Ali, Waseem Kaialy, 8thAPS International PharmSci Conference, 5-7 September,2017, Hatfield, UK.
 - 9- “Cyclic voltammetric study for determination of omeprazole and lansoprazole in pure forms and pharmaceutical formulation using pencil graphite electrode and anionic surfactant”, Michael E. El-Kommos, Pakinaz Y. Khashaba, Hassan Refat H. Ali, Mohamed M. El-Wekil, Assiut University 10th Pharmaceutical Sciences Conference. 13-14 March 2016, Assiut, Egypt.
 - 10- “Qualitative and quantitative FTIR spectroscopic studies for nifedipine and atenolol in pure, binary mixture and dosage forms”, Gamal A. Saleh, Hassan F. Askal, Sameh A. Ahmed , Hassan Refat H. Ali, Mostafa A. Marzouk, Assiut University 10th Pharmaceutical Sciences Conference. 13-14 March 2016, Assiut, Egypt.
 - 11- “Insight into inclusion complexation of indomethacin nicotinamide cocrystals”, Hassan Refat H. Ali, I.Y. Saleem, H.M. Tawfeek, PharmSci Conference, 7-9 September,2015, Nottingham, UK.
 - 12- “Preparation, characterization and atomic absorption spectroscopic determination of some metal complexes of cefixime”, Hassan Refat H. Ali, Sayed M. Derayea, Ramadan M. Ali, Hany A. Batakoushy, First International Scientific Conference on Health Between Nutrition and Treatment, 30-31 August,2015, Beni-Swef, Egypt.
 - 13- “Simultaneous densitometric analysis of some antihyperlipidemics in spiked plasma and tablet dosage forms”, Michael E. El-Kommos, Niveen A. Mohamed, Hassan Refat H. Ali and Ahmed F. Abdel Hakiem, Assiut University 9th Pharmaceutical Sciences Conference. 12-13 March 2014, Assiut, Egypt.
 - 14- “Qualitative and quantitative FTIR spectroscopic study of glipizide and gliclazide ”, Hassan R.H. Ali, Gamal A. Saleh, Samiha A. Hussein, Ahmed I. Ibrahim, ICNHBAS2013, September, 2013, Hurghada, Egypt.
 - 15- “Raman spectroscopy for in situ monitoring of cocrystal formation ”, Hassan R.H. Ali, Amjad Alhalaweh, Sitaram Velaga, 8th world meeting on pharmaceuticals, biopharmaceuticals and pharmaceutical technology, 19-22 March, 2012, Istanbul, Turkey.
 - 16- “Preliminary screening of cocrystallization of glipizide using FT-IR vibrational spectroscopy”, G.A. Saleh, S.A. Hussein, Hassan R.H. Ali, A.I. Hassan, Assiut University 8th Pharmaceutical Sciences Conference. 14-15 March 2012, Assiut, Egypt.

- 17- "Solid-state vibrational spectroscopic investigation of indomethacin salt and cocrystal", Hassan R.H. Ali, Amjad Alhalaweh, Sitaram Velaga, AAPS conference, October, 23-27, 2011, Washington DC, USA.
- 18- "Monitoring cocrystal formation kinetics in organic solvents by in situ Raman spectroscopy", Hassan R.H. Ali, Amjad Alhalaweh, Sitaram Velaga, AAPS conference, October, 23-27, 2011, Washington DC, USA.
- 19- "Vibrational spectroscopy for distinguishing salt and cocrystal of gamma indomethacin", Hassan R.H. Ali, Amjad Alhalaweh, Sitaram Velaga, PharmScifair, June, 13-17, 2011, Prague, Czech Republic.
- 20- "Vibrational spectroscopic characterisation of salmeterol xinafoate polymorphs and a preliminary investigation of their transformation using simultaneous *in situ* portable Raman spectroscopy and differential scanning calorimetry" Hassan R. H. Ali, Howell G.M.Edwards, Micheal D. Hargreaves, Tasnim Munshi, Ian J. Scowen, Richrad J. Telford, International Conference on Raman Spectroscopy (ICORS XXI), 17-22 August 2008, Uxbridge, West London, UK.
- 21- "Vibrational spectroscopic study of fluticasone propionate" HassanR.H. Ali, H.G.M. Edwards, J.Kendrick, I. Scowen, EUROanalysis XIV, 9-14 September 2007, Antwerp, Belgium.
- 22- "Vibrational spectroscopic study of terbutaline hemisulfate" Hassan R.H. Ali, H.G.M. Edwards, J.Kendrick, I. Scowen, EUROanalysis XIV, 9-14 September 2007, Antwerp, Belgium.
- 23- "Raman spectroscopy of some drugs used in the treatment of certain respiratory disorders" Hassan R.H. Ali, H.G.M. Edwards, International Conference on Raman Spectroscopy (ICORS XX), 20-25 August, 2006, Yokohama, Japan.
- 24- "Near infrared Raman and infrared spectroscopic analysis of salmeterol polymorphs" Hassan R.H. Ali, H.G.M. Edwards, J. Kendrick, T.Munshi, I.J.Scowen, International Conference on Raman Spectroscopy (ICORS XX), 20-25 August, 2006, Yokohama, Japan.
- 25- "Raman spectroscopic analysis of ipratropium bromide" Hassan R.H. Ali, H.G.M. Edwards, J. Kendrick, I.J.Scowen, International Conference on Raman Spectroscopy (ICORS XX), 20-25 August, 2006, Yokohama, Japan.
- 26- "Near infrared screening of some pharmaceutical excipients and drugs" Hassan R.H. Ali, H.G.M. Edwards, A.J.O'Neil, Assiut University 5th Pharmaceutical Sciences Conference. 7-8 March 2006, Assiut, Egypt.
- 27- "Raman spectroscopic analysis of salmeterol polymorphs" Hassan R.H. Ali, H.G.M. Edwards, Assiut University 5th Pharmaceutical Sciences Conference. 7-8 March 2006, Assiut, Egypt.
- 28- "Raman spectroscopic analysis of ipratropium bromide" Hassan R.H. Ali, H.G.M. Edwards, Assiut University 5th Pharmaceutical Sciences Conference. 7-8 March 2006, Assiut, Egypt

VII- COURSES

November 2011- Associate professor course (research ethics, grants applications, academic supervision, gender equality and leadership), Luleå University of Technology, Sweden.

May and June 2009-Advanced staff development courses, Assiut University, Egypt

November 2006- Institute of Pharmaceutical Innovation – Quality assurance workshop.

April – June 2005- Graduate School – University of Bradford- UK, developing skills in project management, time management, report writing, presentation skills, IT skills team-working, ethics of research, statistics and teaching and examination skills.

November 2005- Laboratory and laser safety courses – University of Bradford - UK.

December 1997-April 1998- Intensive Pedagogy course, Faculty of Education, Assiut University, Egypt

VIII-Tutoring Experience

Main supervisor of 3 PhD students and 7 Master students.

IX- Networks in academia

Prof. Howell G.M. Edwards, University of Bradford, UK, Dr. John Kendrick, University of Bradford, UK, Dr. Ian Scowen, University of Bradford, UK, Dr. Tasnim Munchi, University of Bradford, UK, Prof. Koichi Iwata, Gakushuin University, Japan, Prof. S.E. Jorge Villar, Universidad de Burgos Calle Villadiego, Spain, Prof. K.J. Currie, University of Manchester, UK, Dr. Sitaram Velaga, Luleå University of Technology, Sweden and Prof. Paulo Ribeiro-Claro, University of Aveiro, Portugal.

X- Other Merits of Relevance

Individual Grants

- 1- FAPESP, Brazil, Proposal No. 2010/06231-6 as an inherent part of the Thematic FAPESP project No. 07/53073-4, 2010.
- 2- FCT, Portugal, SFRH/BPD/72411/2010, 2010.

Invited lectures and talks

- 1- "Raman spectroscopy as a primary tool for drugs analysis", invited lecture, Department of Physical Chemistry, Gakushuin University, Tokyo, Japan, April, 2010.
- 2- "Raman spectroscopy of pharmaceuticals", invited lecture, Hamaguchi Laboratory, Department of Chemistry, University of Tokyo, Tokyo, Japan, October, 2009.
- 3- "Vibrational spectroscopic study of budesonide" invited talk, International Conference on Raman Spectroscopy (ICORS XX). 20-25 August 2006, Yokohama, Japan.
- 4- "Raman spectroscopy for pharmaceutical analysis", invited presentation, University of Bradford, Bradford, UK, May, 2005.
- 5- "Spectrofluorometric analysis of certain local anesthetics", invited talk, The Egyptian Pharmaceutical Syndicate Conference, Cairo, Egypt, January 2001.

Reviewer

Talanta, Nanoscale, Analyst, Analytical Methods, RSC Advances, Forensic Science International, Drug Testing and Analysis, Analytical Letters, CHEM, the journal of Canadian Centre of Academic Art and Science, Spectrochimica Acta, International Journal of Pharmaceutics, Journal of Inclusion Phenomena and Macrocyclic Chemistry, Recent Patents on Nanotechnology, Saudi Pharmaceutical Journal, Science Asia, Materials chemistry and physics, Measurement, Bulletin of Pharmaceutical Sciences, Assiut University.

Editorial Board Membership

Journal of Trace Analysis in Food and Drugs

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