

CURRICULUM VITAE

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I. CURRENT POSITION

2015 – To date: **Associate Professor and Consultant of Medical Biochemistry**, Pathology Department,
College of Medicine, King Saud University Medical City (KSUMC)

2016 – To date: **Corporate Director of medical Laboratories at the Medical City of King Saud University** (King Khalid University Hospital King Abdul-Aziz University Hospital and Blood Bank), Riyadh, KSA

2007 - To date: **Director of the Clinical Biochemistry Unit and POCT Division** King Saud University
Medical City

II. QUALIFICATIONS and CERTIFICATIONS:

- King Saud University Fellowship in Pathology (Medical Biochemistry) (2003) College of Medicine, King Saud University, Saudi Arabia
- MBBS (1996), Aleppo U. Syria

III. PROFESSIONAL EXPERIENCE:

- Corporate Director, Medical Laboratories and Blood Bank' King Saud University Medical City (King Khalid University Hospital & King Abdul-Aziz University Hospital and Blood Bank), Riyadh, KSA
- Associate Professor of Medical Biochemistry & Consultant of Clinical Chemistry, Pathology Department, College of Medicine & KCUH, King Saud University, Riyadh, KSA
- Program Director for King Saud University Fellowship (Medical Biochemistry)
- Director of the Clinical Biochemistry Unit and POCT Division,
- King Saud University Medical City (KSUMC), Riyadh, KSA

- Assistant Professor of Medical Biochemistry & Consultant of Clinical Chemistry, Medical Biochemistry Department, College of Medicine & KCUH, King Saud University, Riyadh, KSA
- Consultant in Biochemistry, Medical Biochemistry Department, KCUH, King Saud University, Riyadh, KSA
- Senior Registrar. Medical Biochemistry Department, KCUH, King Saud University, Riyadh, KSA

IV. MAJOR ACHIEVEMENTS AT WORK:

A) Laboratory Director, September 2016 – To date King Saud University Medical City, Riyadh, KSA

- Advised Management Team about Clinical Laboratory activities and prepared the laboratory for future privatization.
- Executed Total Lab Automation Plan
- Introduced Guaranteed Price per Reportable Results (GPPRR) system and provided advice and consultation in protocol and quotation development.
- Supervised all training activities for approximately 200 Applied Medical Sciences students.
- Achieved 95% Saudization of the laboratory staff following a well drafted strategic plan
- Attained the Central Board for Accreditation of Health Care Institutions (CBAHI) Accreditation for KSUMC laboratories.
- Maintained Accreditation Canada and College of American Pathologists accreditation status for the laboratory
- Participated in the College of American Pathologists (CAP) inspections of other laboratories
- Directed Clinical Laboratory operations and responsible for the analytical results produced by the central laboratory in two hospitals.
- Responsible for the quality management of all laboratory units
- Managed ongoing education of the Central Laboratory staff.

B) Blood Bank Laboratory Director, October 2017 – To date King Saud University Medical City, Riyadh, KSA

- Established Blood Product Transfusion guidelines, massive transfusion guidelines.
- Designed and implemented Electronic Transfusion Reaction Workup and reporting procedure.
- Introduced state of the art Pathogen inactivation Technology
- Introduced Fully Automated Blood Processing System (REVEOS)
- Updated and maintained the (global) standard operating procedures (SOPs).
- Modified and updated the workflow and working hours for the Blood Bank Donation Center.
- Attained CBAHI accreditation for the Blood Bank with no significant findings.

C) Head of STAT Laboratory, October 2015- To date King Saud University Medical City, Riyadh, KSA

- Established Satellite laboratory services in the Emergency Department at King Khalid University Hospital.
- Achieved significant reduction in testing turnaround time (TAT) that contributed to alleviate Emergency Room overcrowding.

D) Head of Point of Care Testing Division (POCT), 2010- To date King Saud University Medical City, Riyadh, KSA

- Established POCT Services in KSUMC and achieved CAP accreditation for the unit in a little over a year after its establishment.
- Supervised the Installation and Validation of POCT devices and the day to day operation of POCT services.
- Modernized the unit with up to date technology and connectivity

**E) Head of Clinical Biochemistry Unit, January 2007- To date
King Saud University Medical City, Riyadh, KSA**

- Established the semi-automated Biochemistry lab in 2007 before transforming it into state-of-the-art laboratory with Total Lab Automation with no interruptions in service in 2015.
- Integrated Toxicology and Therapeutic Drug Monitoring under TLA.
- Automation and expansion of Special Chemistry e.g. stone analysis, electrophoresis (protein and lipoprotein), ICPMS for trace elements, HPLC for antioxidant vitamins and Catecholamines
- Introduced metabolic lab including Amino Acid analysis, LCMS, GC-MS and GSP.
- Establishing Steroid and Metabolomics Laboratory: In progress

F) Associate Professor of Medical Biochemistry & Consultant of Clinical Biochemistry, 2006 – present, Medical Biochemistry Department, College of Medicine, KSUMC

- Teach first and second-year medical students
- Teach post-graduates of the Clinical Pathology Fellowship Program
- Training of rotating residents from different Fellowship programs.
- Key participant in the Integrated Practical Lab project between microbiology and Chemistry (project outcomes were published)
- Participated in the College of Medicine NCAAA Accreditation
- Participates in ongoing research activities

IV. MEMBERSHIP and LICENSURE:

2001: Professional Registration in the Saudi Council for Health Specialties (Reg. No. 04RM15337).

2001: The Saudi Association of Hematology (SAH)

2005: American Association for Clinical Chemistry (AACC)

2005: Canadian Society of Clinical Chemists (CSCC)

2013: Saudi Society for Clinical Chemistry (SSCC) as the Vice President

V. COMMITTEES and ADMINISTRATION

1. Medical Laboratory Board (Chair)
2. Technical Supervisors (Chair)
3. Medical Instruments and Supplies Committee (Chair)
4. Send-Out Tests Committee (Chair)
5. Training Committee for Applied Medical Sciences Graduates (Chair)
6. Laboratory Utilization Committee (Chair)
7. POCT Committee (Chair)
8. Quality and Safety Committee (Member)
9. Laboratory IT Committee (Chair)

10. King Saud Fellowship Residency Program (Member)
11. Clinical Pathology Residency (Member)
12. Clinical Council (Member)
13. Hospital Management (Member)
14. Utilization Management & Review (Member)
15. Executive Council/Team (Member)
16. Environmental and Safety (Member)
17. Medical Records Review (Member)
18. Pre-Hospitalization Unit Committee (Member)
19. Hematopoietic Stem Cell Transplant Taskforce Committee (Member)
20. Blood Transfusion Safety (Member)
21. Hospital IT Steering Committee (Member)
22. Pathology Departmental Postgraduate Committee
23. Pathology Departmental Media and Community Service Committee
24. Scientific Committee for “The Future of Applied Medical Specialties Towards 2030 Conference” (Member)
25. Scientific Committee for “Excellence in Laboratory Quality Management ELQM 2nd Symposium” (Member)
26. Standardization Committee For Procurement of Medical Supplies (KSU-MC)

VI. BIBLIOGRAPHY

6.1 Participation in Symposia/Courses

6.1.1 INTERNATIONAL SYMPOSIA/MEETINGS

1. Jul 2018 American Association for Clinical Chemistry (AACC) 70th Annual Meeting & Clinical Lab Expo, Chicago, Illinois, USA, Jul. 29-Aug. 2, 2018.
2. Apr 2017 Siemens Healthineers Science & Innovation Days, Berlin, Germany, Apr. 24-27, 2017
3. Mar 2017 The Best of AACC: Middle East, Abu Dhabi, UAE, Mar. 23-24, 2017
4. Mar 2017 The 7th Annual Conference of Alexandria Clinical Pathology Department, Alexandria, Egypt, Mar. 7-9 2017 Speaker: Title "Total lab Automation: The Right Solution for your Lab's Challenges"
5. Sep 2016 The Benefits and Challenges of Point of Care Testing Across the Clinical Spectrum. AACC CPOCT International Symposium, Copenhagen, Denmark, Sep 21-24, 2016.
6. Jul 2016 American Association for Clinical Chemistry (AACC) 68th Annual Meeting & Clinical Lab Expo, Philadelphia, U.S.A, Jul.31-Aug.4, 2016
7. Apr 2015 Professional Practice in Clinical Chemistry: Supporting Patient Care from Cradle to Grave. Philadelphia, Pennsylvania 19107, United States
8. Mar 2015 EFLM-BD European Conference on Preanalytical Phase, Porto (Portugal)
9. Jul 2015 American Association for Clinical Chemistry (AACC) Annual Meeting & Clinical Lab Expo, Atlanta, U.S.A,
10. Jul 2011 AACC (Atlanta, Georgia), 24-28 July 2011
11. May 2011 FCC-World Lab-EuroMedlab Berlin, Berlin-Germany, 15-19 May 2011
12. Jul 2010 AACC (Anaheim), July 25-29 2010
13. Sep 2009 Joint AACC-ACB Meeting. Chronic Diseases. Royal College of Pathologists, London, UK, September 3 – 4, 2009
14. July 2009 61st Annual AACC Meeting, Chicago, Illinois, July 19-23, USA
15. April 2009 Professional Practice in Clinical Chemistry: A Review and Update by AACC and NACB, April 19 – 23, 2009, Virginia, USA
16. Jan 2009 Middle East Laboratory Medicine and Management Conference Arab Health 2009, January 26 - 29, Dubai, UAE
17. Dec 2005 The "Annual Conference of The American Society of Haematology (ASH)", USA, (9-12 December, 2005). Presented Scientific Paper titled "Zinc and Antioxidant Vitamin Deficiency in Patients with Severe Sickle Cell Anemia".

6.1.2 LOCAL AND NATIONAL SYMPOSIA/COURSES

1. Dec 2015 1st Annual Meeting Saudi Society for Clinical Chemistry, Riyadh.
2. Apr 2011 Designing Effective Continuing Professional Development, King Saud University, Vice Rector ship for Health Specialties, Riyadh, KSA, (April 19 2011)
3. Feb 2011 Governance of Research in Health Specialties, King Saud University, and Vice Rector ship for Health Specialties, Riyadh. KSA, (22Feb. 2011)
4. Mar 2011 Mastering the Art of Medical education Research, College of Medicine Bldg., King Saud University, Riyadh, Kingdom of Saudi Arabia, (April 04 2011) / (June 06 2011)
5. Oct 2010 2nd Constructing Problem-Based Learning Cases Hands-on Training Workshop, Medical Education Department, King Saud University, Riyadh, KSA, (Oct 2-3 2010)
6. Feb 2008 Quality Control Course, College of Medicine and King Khalid University Hospital, KSU, Riyadh, Saudi Arabia, (Jan 26.- Feb 7 , 2008). Representative of The Medical Biochemistry Department in the course.
7. Apr 2007 The "2nd Molecular Biology Workshop – Hands on" College of Medicine and King Khalid University Hospital, KSU, Riyadh, Saudi Arabia, (April 28-30, 2007). Member of the organizing committee.
8. Nov 2006 The 1st Molecular Biology Workshop – Hands on, College of Medicine and King Khalid University Hospital, KSU, Riyadh, Saudi Arabia, (November 27-29,2006)Member of organizing committee & speaker: Title" RNA Structure and Functions"
9. Nov 2006 The 1st Proteomics Education Course, College of Medicine and King Khalid University Hospital, KSU, Riyadh, Saudi Arabia, (March 16-19 ,2008).Member of the organizing committee & speaker: Title "Principles of Amino Acid Analysis".
10. Dec 2005 The 5th Intensive Course on: Clinical Research Methodology. College of Medicine and King Khalid University Hospital, KSU, Riyadh, Saudi Arabia, (December 29, 2005).
11. Dec 2005 The 7th Saudi School on: Human Molecular Genetics, College of Medicine and King Khalid University Hospital, KSU, Riyadh, Saudi Arabia, (December 3-7, 2005).
12. Dec 2005 The 4th Workshop on: Genetic Counseling and Ethics – The Science and the Art College of Medicine and King Khalid University Hospital, KSU, Riyadh, Saudi Arabia, (November 29 - December 1, 2005).
13. Apr 2005 The 3rd Workshop on: Genetic Counseling and Ethics – The Science and the Art, College of Medicine and King Khalid University Hospital, KSU, Riyadh,Saudi Arabia, (April 2-6, 2005).
14. Sep 2004 The 9th Symposium on Genetics in Health and Diseases-Implications for Individuals, Family and Community, College of Medicine and King Khalid University Hospital, KSU, Riyadh, Saudi Arabia (Sept.25-27 2004).
15. Mar2004 The 1st Scientific Conference on the March of Medical Education in Saudi Arabia, College of Medicine and King Khalid University Hospital, KSU, Riyadh, Saudi Arabia, (March 23-24, 2004).

16. Mar 2004 The 5th International Symposium on Hematology & Transfusion Medicine, King Fahad Cultural Center, Riyadh, Saudi Arabia, (March 14-17, 2004).
17. Jan 2003 The 2nd Intensive Course on: 1. Planning and Performing a Research Study, 2. Writing and Presenting a Scientific Paper, College of Medicine and King Khalid University Hospital, KSU, Riyadh Saudi Arabia (January 9, 2003).
18. Mar 2001 The Introductory Course in Molecular Biology, King Faisal Specialist Hospital and Research Center, (March 19-21, 2001).
19. May 2000 The 8th National Newborn Screening Symposium, King Faisal Specialist Hospital and Research Center, (May 9-10, 2000).
20. Feb 2000 The 2nd Annual Hematology & Blood Transfusion Symposium, College of Medicine and King Khalid University Hospital, KSU, Riyadh, Saudi Arabia, (February 12-15, 2000).
21. Nov 1999 The First Regional Symposium on Ethical and genetic Counseling Issues, College of Medicine and King Khalid University Hospital, KSU, Riyadh, Saudi Arabia, (November 13-14, 1999).

6.2 RESEARCH PROJECTS:

6.2.1 FUNDED RESEARCH PROJECT FROM PEER EVALUATED SOURCES

- 2002 – 2003: Research Centre - College of Medicine, King Saud University.
“Evaluation of Antioxidant Vitamins and some Trace Elements in Sickle Cell Anemia Patients”.

6.2.2 ATTENDED INTERNATIONAL COURSES, AND RESEARCH AND DEVELOPMENT (R & D) PROJECTS

- Accredited by ASCB (European) Limited – U.K. for training in quality assurance and Lean Six Sigma Courses. Conducted during February/march 2015 and passed A+ Grade by the Asian institute of quality management.
- Implementing the strategic initiatives and projects program, King Saud University 26/05/2015.
- Flipping Lectures: theory and Practice hands on workshop, King Saud University, 13/11/2014.
- British Council sponsored R&D project related to bone diseases: Measurement of Bone Turnover Biomarkers: Do all methods and all laboratories give the same result. Working with Professor Eastell, Bone and Mineral Research Lab, University of Sheffield, Sheffield, England, From August 17 to October 11, 2009.

6.2.3 ON-GOING RESEARCHS:

1. Vitamin D Levels in Pregnant Saudi women and their Newborns: A University Hospital Experience.
2. Screening for Macroprolactin in Hyperprolactinemia Patients by Polyethylene Glycol Precipitation Method.

3. Estimation of Levels of Trace Elements, Vitamin D, Folic Acid and B12 in our end Stage Renal Disease patients on Dialysis at KCUH and Correlation of these Levels with Clinical Outcome.
4. GFR Estimation In sickle Cell Disease: Correlation between Serum Creatinine, 24-hours Creatinine clearance, Cockcroft-Gault and MDRD Equations.

6.3 ABSTRACTS:

1. **Rana Hasanato**, Sawsan Saad Haj-Bakry, Dina Khaled Assiri, Nori Abdullah Aldosari, Deema Essam Jomar, Felwa Abdulaziz AlMarshad, Layla Mohammed Zeitouni, Assessment of essential and toxic trace elements in blood: associations with different lifestyle exposures among healthy female medical students, 1st Annual Meeting Saudi Society for Clinical Chemistry, Riyadh, Dec 2016.
2. **Rana Hasanato**, Total Lab Automation, 1st Annual Meeting.Saudi Society for Clinical Chemistry, Riyadh, Dec 2016.
3. **Rana Hasanato**, Hassan Elfaki, Evelyn Donguines, Gamel Appeidu, comparison of cation exchange HPLC method of TOSOH G8 with immunoturbidimetric method of dimension xpand for the determination of HbA1C, 1st Annual Meeting Saudi Society for Clinical Chemistry, Riyadh, Dec 2016.
4. **Rana Hasanato**, quality performance indicator of sample rejection policy and performance assessment, EFLM-BD European Conference on Preanalytical Phase, 20.-21. March 2015, Porto (Portugal)
5. **Rana Hasanato**, Capillary blood gas analysis in POCT: pre-analytical phase error correction by using magnetic mixer, American Association for Clinical Chemistry (AACC) Annual Meeting & Clinical Lab Expo, 26 - 30 July 2015 / GWCC - Georgia World Congress Center, U.S.A, Atlanta.
6. **Rana Hasanato**, Omalkhair Abulkhair, Nawaf Alotabi, Ikram Alhassan, Dalal Nemenqani, Waleed Tamimi, Measurement of Human Epididymis Protein 4 (HE4) may be Closely Associated with Breast Cancer Progression, American Association for Clinical Chemistry (AACC) Annual Meeting & Clinical Lab Expo, 26 - 30 July 2015 / GWCC - Georgia World Congress Center, U.S.A, Atlanta.
7. **Rana Hasanato**, Waleed Tamimi, Amalgam fillings, fish consumption and urbanization are associated with high urinary excretion of mercury in healthy individuals, American Association for Clinical Chemistry (AACC) Annual Meeting & Clinical Lab Expo, 26 - 30 July 2015 / GWCC - Georgia World Congress Center, U.S.A, Atlanta.
8. **Rana Hasanato**, Performance of random albumin creatinine ratio for detection of micro and macro-albuminuria in patients with type 2 diabetes mellitus, American Association for Clinical Chemistry (AACC) Annual Meeting & Clinical Lab Expo, 26 - 30 July 2015 / GWCC - Georgia World Congress Center, U.S.A, Atlanta.
9. **Hasanato R.M.W.**, J. Martin Ballesteros, S. Brearton, A. Al Sadhan, T. Bautista, M. Al Shebani, W. Tamimi, Evaluation of Biological Specimen Acceptability in High-Complex Clinical Laboratory Before and After Implementing Automated Processing Serum Indices (IFCC-WorldLab-EuroMedlab Berlin 2011).

6.4 PUBLICATIONS

1. **Rana Hasanato** , Jumanah Abbas Mirah, Nada Al-Shahrani , Nouf Alfulayyih , Afrah Almutairi , Basma Ogailan, Sumbul Fatma. Incidence of Thyroid Diseases in Female Saudi Adults Visiting a Tertiary Care Hospital in Riyadh. *Epidemiology: Open Access*. 01/2018; DOI: 10.4172/2161-1165.1000286.
2. Tamimi W, AlJasser S, Kanan R, dafterdar R, Aldegaither N, Alrwali M, ElFatah A, Alsaeed W, Alenzi FQ, and **Hasanato R**. Effects of hemoglobin S variants on the measurement of glycosylated hemoglobin A1c by four analytical methods. *Int J Diabetes Dev Ctries*. 03/2015; DOI:10.1007/s13410-014-0257-0.
3. Alzahri MS, Mousa SA, Almomen AM, **Hasanato RM**, Polimeni JM, Racz MJ. Lactate dehydrogenase as a biomarker for early renal damage in patients with sickle cell disease. *Saudi J Kidney Dis Transpl*. 2015 Nov-Dec;26(6):1161-8.
4. Meo SA, Alsubaie Y, Almubarak Z, Almutawa H, AlQasem Y, **Hasanato RM**. Association of Exposure to Radio-Frequency Electromagnetic Field Radiation (RF-EMFR) Generated by Mobile Phone Base Stations with Glycated hemoglobin (HbA1c) and Risk of Type 2 Diabetes Mellitus. *Int J Environ Res Public Health*. 2015 Nov 13;12(11):14519-28.
5. Alharbi KK, Kashour TS, Al-Hussaini W, Nbaheen MS, **Hasanato RM**, Mohamed S, Tamimi W, Khan IA. Screening for genetic mutations in LDLR gene with familial hypercholesterolemia patients in the Saudi population. *Acta Biochim Pol*. 2015;62(3):559-62. doi: 10.18388/abp.2015_1015. Epub 2015 Sep 8.
6. **Hasanato RM**, Almomen AM. Unusual presentation of arsenic poisoning in a case of celiac disease. *Ann Saudi Med*. 2015 Mar-Apr;35(2):165-7.
7. R. Dafterdar, M. Al-Fayoumi, S. Saadeddin, R. Khan, A. Alothaim, **R. Hasanato**, A. Al-Shangiti, H. Fakhoury, W. Tamimi, Vitamin D immunoassay systems: a comparison, *British journal of biomedical science (Impact Factor: 1.3)*. 09/2014; 71(3):127-30.
8. Almogren A, Shakoor Z, **Hasanato RM**, Algassim A, Al-Furaih NA, Al-Mudaiheem FA, Al-Abdulkarim OA. Autoantibody detection: prevailing practices at a tertiary care hospital in Riyadh. *Clin Lab*. 2014;60(4):671-5.
9. Assessment of trace elements in sera of patients undergoing renal dialysis. **Hasanato RM**. *Saudi Med J*. 2014 Apr;35(4):365-70.
10. AlFaleh KM, Al-Manie AM, Al-Mahmoud HF, Al-Razqan HM, Al-Mutlaq AB, Al-Rumaih SA, **Hasanato RM**, Al-Mandeel HM. Prevalence of vitamin D deficiency in Saudi newborns at a tertiary care center. *Saudi Med J*. 2014 Feb;35(2):178-82.
11. Alharbi KK, Kashour TS, Al-Hussaini W, Al-Nbaheen MS, Mohamed S, **Hasanato RM**, Tamimi W, Al-Naami MY, Khan IA. Association of angiotensin converting enzyme gene insertion/deletion polymorphism and familial hypercholesterolemia in the Saudi population. *Lipids Health Dis*. 2013 Dec 1;12:177. doi: 10.1186/1476-511X-12-177.
12. Almughrabi OM, Marzouk KM, **Hasanato RM**, Shafik SS. Melatonin levels in periodontal health and disease. *J Periodontal Res*. 2013 Jun;48(3):315-21.
13. Sabir N, Iqbal Z, Aleem A, Awan T, Naeem T, Asad S, Tahir AH, Absar M, **Hasanato RM**, Basit S, Chishti MA, Faiyaz Ul-Haque M, Khalid AM, Sabar MF, Rasool M, Karim S, Khan M,

- Samreen B, Akram AM, Siddiqi MH, Shahzadi S, Shahbaz S, Ali AS, Mahmood A, Akram M, Saeed T, Saleem A, Mohsin D, Shah IH, Khalid M, Asif M, Iqbal M, Akhtar T. Prognostically significant fusion oncogenes in Pakistani patients with adult acute lymphoblastic leukemia and their association with disease biology and outcome. *Asian Pac J Cancer Prev*. 2012;13(7):3349-55.
14. Genetics of glucose-6-phosphate dehydrogenase deficiency in Saudi patients. Faiyaz-Ul-Haque M, Zaidi SH, **Hasanato RM**, Al-Abdullatif A, Cluntun A, Teresita G, Toulimat M, Al-Nounou R, Al-Dayel F, Peltekova I, Bhuiyan JA. *Clin Genet*. 2010 Jul;78(1):98-100.
15. **Hasanato R.M.W.** Zinc and Antioxidant Vitamin Deficiency in Patients with Severe Sickle Cell Anemia, *Annals Saudi Medicine* 2006 ;26 (1): 17-2.
16. **Hasanato R.M.W.** RNA Structure and Functions. The proceeding of the 1st Molecular Biology Workshop – Hands-On, College of Medicine, KSU, 2006; 8-17.
17. **Hasanato R.M.W.** Principles of Amino Acid Analysis. The proceeding of the 1st Proteomics Education Course, College of Medicine, KSU 2008; 13-21.