# RESUME

### **Personal Details**

Full Name: John Heshmat Fawzy Dawod Phone: +254 740 410 277 Email: john@crk-cro.com | jheshmat@copticmission.org City and Country of Residence: Nairobi, Kenya & Cairo, Egypt Nationality: Egyptian Languages: Arabic (Mother Tongue), English (Fluent) ORCID ID: <u>https://orcid.org/0009-0000-2643-9597</u>

### **Educational Qualifications and Academic Awards**

#### Master of International Public Health

Liverpool John Moores University, Faculty of Health, School of Public and Allied Health Liverpool, United Kingdom Student ID: R2302D16136075 / PN1091805 Oct 2023 – Apr 2025

- All coursework completed
- **Dissertation:** Barriers to Cervical Cancer Screening and Treatment Among Women Living with HIV in Kenya: A Scoping Review (7,000 words)
- Dissertation Module Grade: 75%
- GPA: Results pending confirmation by the Board of Examiners
- Academic Awards: None to date

#### **Bachelor of Pharmaceutical Sciences**

October 6 University, Faculty of Pharmacy Giza, Egypt Sep 2002 – Jun 2007

- **GPA:** 71.76% (5-year program)
- Academic Awards: Awarded a Bachelor of Pharmaceutical Sciences

# **Professional Affiliations and Memberships**

- International Society of Amyloidosis (ISA) Full Member | Membership ID: 5000024 Jan 2025 – Dec 2026
- Clinical Research Society of Kenya (CRSK) Full Member | Membership ID: CRSK/M24/0108 Aug 2023 – Aug 2025
- **Project Management Institute (PMI)** Student Member | Membership ID: 9892154 2024 – Sep 2025
- Egyptian Pharmacists Syndicate Full Member (Registered Pharmacist) | Membership ID: 107306 2007 – Present

### **Employment history**

#### **Co-Founder | Project Lead and Principal Investigator** CRK Clinical Research Key (CRO & NGO), Nairobi, Kenya **May 2021 – Present**

CRK Clinical Research Key is independently registered as both a Clinical Research Organization (CRO) and a research-focused Non-Governmental Organization (NGO) in Kenya. It supports national capacity building in diagnostics, public health education, and research equity, particularly in underserved communities.

#### Main Duties and Research-Related Activities

- Co-founded and led a nationally accredited Continuing Professional Development (CPD) provider serving physicians, clinical officers, nurses, pharmacists, and pharmaceutical technologists in Kenya.
- Directed the design, implementation, and evaluation of public health education and clinical research programs focused on cardiac transthyretin amyloidosis (ATTR-CM), invasive fungal infections, and pharmacovigilance.
- Initiated diagnostic equity research programs, including AI-assisted pediatric cardiology diagnostics and investigations into measurable residual disease (MRD), biomarker discovery, and health system barriers—collaborating with Dr. Naomi Gachara and international academic partners.
- Led national grant writing, stakeholder engagement, ethics submissions, and interinstitutional research planning.
- Oversaw the development of Kenya's first CME-accredited e-learning platform to support digital and hybrid CPD delivery.

- Acted as institutional liaison with regulatory bodies, including the Kenya Medical Association (KMA), the Pharmacy and Poisons Board (PPB), the Kenya Clinical Officers Association, and the National Nurses Association of Kenya.
- Formalized MOUs with multiple stakeholders to support ethical clearances and collaborative research infrastructure.

### **Key Achievements**

- Built and scaled Kenya's first national CME/CPD-accredited e-learning platform in Kenya (<u>www.crkcourses.com</u>), through which I designed and led three Pfizer-funded national programs (2022–2025) that collectively reached over 13,000 healthcare professionals via hybrid and online formats.
- Developed academic curricula in pharmacovigilance, invasive fungal infections, and cardiac ATTR amyloidosis in collaboration with the Mayo Clinic, University of Nairobi, Johns Hopkins University, and the University of Copenhagen.
- Secured national regulatory accreditation from the PPB, KMA, Kenya Clinical Officers Association, and the National Nurses Association of Kenya.
- Negotiated and formalized multiple MOUs to support inter-institutional research ethics approvals and training infrastructure.
- Registered CRK Clinical Research Key as an approved CPD provider through Kenya's national regulatory bodies for healthcare professionals.
- Led multi-institutional research planning on pediatric cardiac AI diagnostics, pharmacovigilance education, and rare disease awareness strategies.
- Co-authored a peer-reviewed research article on pharmacovigilance capacity building, accepted for publication in *BMC Proceedings* (2025).
- Currently co-authoring a second research study on AI-based ECG interpretation in children with congenital heart disease, in collaboration with Johns Hopkins University and Kenyan pediatric cardiology teams.
- Led the translation of research findings into public health practice, including national awareness campaigns, CME modules, and policy briefs for decision-makers.
- Founded CRK Clinical Research Key (NGO) in 2025 to expand the organization's research portfolio into genomic equity and diagnostic disparities.

This role has established my capacity to lead nationally scaled research programs, develop evidence-based CME, and advance diagnostic and genomic equity through policy-relevant and translational research collaborations.

#### Coptic Mission Africa (Faith-Based Health Outreach) Nairobi, Kenya & Lubumbashi, DRC March 2017 – Present

Coptic Mission Africa is a faith-based, non-profit health organization delivering clinical care, public health programming, and infrastructure development across urban informal settlements and rural underserved areas in Kenya and the Democratic Republic of Congo. Over eight years, I held multiple progressively responsible roles in project leadership, field implementation, and program evaluation. My work contributed to translational research integration and long-term health system strengthening.

# Assistant Project Manager & Public Health Specialist

#### Coptic Hope Center for Infectious Diseases, Nairobi, Kenya Jan 2019 – Apr 2021 (Full-time); Apr 2022 – Present (Hybrid)

- Coordinated integrated care programs addressing HIV, TB, cervical cancer, and gender-based violence across urban informal settlements like Mathare, Korogocho, Mukuru, Kayole, and Dandora, and rural regions.
- Conducted needs assessments and implemented monitoring and evaluation frameworks, including data collection, analysis, and reporting on key health indicators to inform program adaptation.
- Facilitated capacity-building workshops for frontline health workers and volunteers, integrating research-informed practices to improve service delivery outcomes.
- Participated in targeted outreach and community engagement strategies, contributing to measurable increases in screening, testing uptake, and service access in underserved populations.
- Advised on hybrid support models post-2021, aligning program activities with national policy standards and using evidence from field data to support impact tracking and continuous improvement.

This role strengthened my capacity in research translation and health systems implementation, and deepened my commitment to advancing equitable, data-driven public health interventions through integrated, evidence-informed service models tailored to underserved populations.

### **Project Manager (Temporary Appointment)**

Coptic Mission Hospital, Lubumbashi, DRC Jun 2018 – Jan 2019

- Led the planning, equipping, and regulatory certification of a mission-run hospital and school in a resource-limited setting, applying health systems thinking to infrastructure development.
- Managed cross-sectoral partnerships with NGOs, ministries, and public health stakeholders, integrating local health data and contextual priorities into project planning.

- Applied strategic coordination and needs-based design to ensure infrastructure and services aligned with local population health demands.
- Contributed to implementation planning, progress reporting, and evaluation tools that informed long-term health system sustainability goals.

This position deepened my skills in data-informed infrastructure planning and stakeholder collaboration for sustainable health system design.

### Medical Camp Manager & Hospital Pharmacist

Coptic Mission Hospital, Nairobi, Kenya Mar 2017 – Jun 2018

- Coordinated large-scale mobile medical camps across remote and underserved regions, including Masai communities in Kajiado and informal settlements such as Kibera (the largest informal settlement in Africa), Mathare, Kawangware, and Dandora in Nairobi.
- Led logistical planning, multidisciplinary staff coordination, and clinical service delivery, including diagnostics, consultations, immunizations, and public education.
- Directed health promotion efforts and delivered culturally tailored education sessions to enhance health literacy and preventive care.
- Provided pharmaceutical oversight during inpatient and outreach services, ensuring drug safety, inventory control, and treatment adherence.
- Conducted post-campaign evaluations and needs assessments, using findings to inform planning, optimize resource use, and improve future outreach strategies.

This experience grounded my commitment to equitable healthcare delivery and strengthened my understanding of field-based needs assessment and public health program evaluation.

# **Other Research Experience**

### Lead Author – Narrative Review

The African Amyloidosis Blindspot: Exploring Genetic Barriers, Diagnostic Delays, and Policy Pathways for hATTR in Kenya Affiliation: CRK Clinical Research Key (NGO), Nairobi, Kenya March 2025 – Present

- Draft a manuscript in preparation to examine diagnostic disparities, genetic underrepresentation, and policy challenges related to hereditary transthyretin amyloidosis (hATTR) in African populations, with a specific focus on Kenya.
- Co-authored with **Martha Grogan**, **MD**, *Assistant Professor of Cardiovascular Medicine at Mayo Clinic and Founder of the Cardiac Amyloid Clinic*. Dr. Grogan is a recognized authority in cardiac amyloidosis with prior leadership roles at the Federal Medical Center and Kaiser Permanente, and has served as the cardiovascular medical editor for MayoClinic.com.

• The review aims to bridge genetic, clinical, and policy dimensions in addressing Africa's underrecognized amyloidosis burden.

### **Principal Investigator**

Raising Awareness and Promoting Timely Diagnosis of Cardiac ATTR Amyloidosis in Kenya Affiliation: CRK Clinical Research Key (CRO), Nairobi, Kenya Jan 2025 – Jan 2026

- Pfizer-sponsored initiative implemented in collaboration with Mayo Clinic specialists and Global Bridges.
- Leading national outreach efforts to enhance awareness, diagnosis, and early clinical recognition of transthyretin cardiac amyloidosis (ATTR) in Kenya.
- Coordinating stakeholder engagement, clinician education, and integration of evidence-based diagnostic approaches into local practice settings.

#### Co-Investigator and Project Lead – Translational & Diagnostic Research CRK Clinical Research Key (NGO), Nairobi, Kenya Jan 2024 – Present

- Principal Investigator: **Dr. Naomi Gachara**, Consultant Paediatrician and Cardiologist
- Directing AI-assisted diagnostic research applying four machine learning models (SVM, Random Forest, CNN, RNN-LSTM) to classify ECG changes linked to ten congenital heart diseases.
- Leading data preprocessing, feature extraction, model training, and validation using AUC-ROC, sensitivity, and specificity performance metrics.
- Concept reviewed and academically supported by **Glenn Wetzel**, **MD**, **PhD**, Director of Pediatric Interventional Electrophysiology and Associate Professor of Clinical Pediatrics, Johns Hopkins School of Medicine.
- Coordinating research teams, ethical approvals, and clinical workflow integration in collaboration with Kenyan hospitals.
- Patient data will be collected in partnership with Kenyatta National Hospital and other public and private pediatric cardiac centers across Kenya, following ethical clearance.
- Concurrently initiating related studies in measurable residual disease (MRD) monitoring, biomarker discovery, and health system barriers to early pediatric cardiac diagnosis.
- Co-authoring the resulting research manuscript with the academic team, currently under preparation for peer-reviewed publication.
- Project is led through CRK Clinical Research Key's NGO arm as part of a broader national initiative to expand diagnostic equity in underserved pediatric populations.

# Academic Contributions to Capacity Building

#### Ambassador – Formation 5/5 Pediatric Cardiology Training Program Mécénat Chirurgie Cardiaque Jan 2024 – Present

- Appointed national ambassador for a global digital education initiative designed to strengthen pediatric cardiology capacity in low-resource settings.
- The program consists of 14 structured training courses, built around video-based, case-by-case instruction by **Prof. Francine Leca**, Founder of Mécénat Chirurgie Cardiaque.
- Courses cover diagnosis and treatment of complex congenital heart disease, drug therapy, surgical repair techniques, and post-operative follow-up.
- The training incorporates real clinical cases to promote diagnostic reasoning and therapeutic decision-making in diverse care contexts.
- Led Kenya's national rollout, training over 500 clinicians and integrating standardized pediatric cardiology education into local health systems.
- Collaborated with pediatric cardiologists nationwide to support clinical mentorship and dissemination.
- Engaged with a scientifically active global network and contributed to discussions around data-informed quality improvement and research.
- Funded by the Boston Scientific Foundation and Abbott, the initiative aligns with broader efforts to reduce diagnostic delays and inequities in pediatric cardiac care.
- Participating in scientific dialogue with potential for future co-authorship on outcomes-based publications related to the program.

### **Research Outputs**

#### **Refereed Journal Articles – In Press**

**Heshmat, J.**, Mohamed, O., & Hamza, N. (2025). Enhancing drug safety monitoring through pharmacovigilance capacity building through the first e-learning management system in Kenya. *BMC Proceedings*, 19(9):OS17. *(In press)* 

**DOI:** Not yet available

**Journal Context:** *BMC Proceedings* is a peer-reviewed, Scopus—and PubMed-indexed journal that publishes biomedical and public health research presented at international conferences.

**My contribution:** I served as lead author. I conceptualized and designed the study, led curriculum development, coordinated stakeholder engagement, collected program data, and

authored the manuscript. The study was funded by Pfizer and derived from a nationally accredited pharmacovigilance training program I directed.

## **Professional Service and Leadership**

#### **Country Representative (Volunteer)**

Mécénat Chirurgie Cardiaque, Nairobi, Kenya Jan 2023 – Present

- Coordinated national referral pathways for pediatric cardiac surgery, enabling access to care for children with congenital heart disease.
- Managed case identification, pre-operative logistics, and post-operative follow-up in collaboration with French surgical teams and Kenyan hospitals.
- Strengthened operational partnerships between local institutions and international heart centers.
- Facilitated clinician collaboration and system integration with pediatric cardiology units across Kenya.

### **Certifications and Continuing Medical Education**

#### Advanced Cardiac Life Support (ACLS) Certification

Postgraduate Institute for Medicine (Jointly accredited by ACCME, ACPE, ANCC) Issued: 11/23/2023

#### Pediatric Advanced Life Support (PALS) Certification

Postgraduate Institute for Medicine (Jointly accredited by ACCME, ACPE, ANCC) Issued: 11/27/2023

### **Good Clinical Practice (GCP) Certification**

NIDA Clinical Trials Network (U.S. National Institute on Drug Abuse) Course Completion Date: 7 September 2024 | CTN Expiration Date: 7 September 2027

#### Fundamentals of Global Health Research

University of Washington Issued: Jun 2023 | Final Score: 97.78% Covers ethics, study design, and implementation in low-resource settings

#### Health Research Methodology and Publishing Program

BMJ Learning / Research to Publication platform Issued: Apr 2023 Focused on study design, peer review, and academic writing

### Editing the Genome to Treat Cardiovascular Disease

Stanford University School of Medicine (online CME) Issued: May 2024 Explores gene editing applications in cardiovascular translational research

#### Stress CMR Imaging of Chest Pain Syndromes - Cardiology Grand Rounds

Stanford University School of Medicine (online CME) Issued: Aug 2024 Focuses on cardiovascular magnetic resonance imaging in diagnostic pathways, which is one of the important keys in cardiac amyloidosis diagnosis.

#### **Diploma in Project Management in Practice**

Alison (Online Training Provider) Issued: Nov 2023 Covered project lifecycle, stakeholder engagement, and risk management; relevant to managing research grants and multicenter implementation studies