

# Curriculum Vitae

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## Experience

**Current position** **August 2021 - To date**

Post-doctoral Research associate in the UCL Centre for Clinical Microbiology (CCM), Division of Infection and Immunity, University College London (UCL), UK

**Previous post** **26<sup>th</sup> August 2015- 28th June 2021**

PhD Student in UCL Centre for Clinical Microbiology, Division of Infection and Immunity, University College London (UCL), UK;  
PhD Research Project title: **Airway Microbiome in Chronic Lung Disease.**

**January 2014- 25 August 2015**

Assistant Lecturer of Pharmaceutical Microbiology in Dept. of Microbiology and Immunology, Faculty of Pharmacy, University of Alexandria, Egypt.

**February 2010-December 2013**

Laboratory Demonstrator, Dept. of Pharmaceutical Microbiology, Faculty of Pharmacy, University of Alexandria, Egypt.

**September 2009-February 2010**

Volunteer Laboratory Demonstrator, Dept. of Pharmaceutical Microbiology, Faculty of Pharmacy, University of Alexandria, Egypt.

## **Teaching Experience in Higher Education**

### **At University College London**

- With colleagues, participated in preparing bioinformatics resource guide to students and researchers in the CCM. (June 2021)
- Trained and supervised 9 undergraduate and 3 MSc students in the laboratory in UCL Centre for Clinical Microbiology. (2015-2018)
- Gave lectures to the 2<sup>nd</sup> and 3<sup>rd</sup> years undergraduate students in UCL
  - " Introduction to Metagenomics" a 2 hours' lecture (online through MS teams) within the programme of optional module "Introduction to applied human genomics" to 2<sup>nd</sup> year undergraduate students doing the BSc degree in Applied Medical Sciences, at University College London (March 2021, March 2022)
  - "Lung microbiome in Health and Disease" a 3 hours' lecture within the programme of optional module "The Human Microbiome in Health and Disease" to 3<sup>rd</sup> year undergraduate students doing BSc degree in Applied Medical Sciences, at University College London (May 2017, January 2018, and October 2018)

### **At Faculty of Pharmacy, University of Alexandria (2010-2015)**

1. Teaching practical sessions of Pharmaceutical Microbiology and Public Health (including modules of bacteriology, virology, and parasitology) to the 2<sup>nd</sup> and 3<sup>rd</sup> years undergraduate students in the general B.Sc. Pharmacy programme and the specialised Clinical Pharmacy programme.
2. Supervising 2<sup>nd</sup> and 3<sup>rd</sup> years undergraduate students in laboratory during practical sessions.
3. Marking the practical exams of undergraduate students and providing feedback.

## **Qualification**

### **Post-graduate Studies**

#### **Doctor of Philosophy (28<sup>th</sup> June 2021)**

PhD in Microbiology, Infection and Immunity

Programme: Research Degree: Division of Infection and Immunity  
University College London, UK

#### **M. Pharm. Sc. (November 2013)**

Master in Pharmaceutical Sciences, Pharmaceutical Microbiology)  
Faculty of pharmacy, University of Alexandria, Egypt.

**25 Credit hours**

**CGPA: A- (3.853)**

**Thesis:** Microbiological Studies on Cross-Resistance between Commonly Used Disinfectants and Antibiotics in Microorganisms Isolated from Hospitals

**Tertiary  
Education**

B. Pharm. Sc. (Bachelor in Pharmaceutical Sciences), (June 2009)  
Faculty of pharmacy, University of Alexandria, Egypt.  
Grade: **Distinction (cumulative grades 93%) with Honours,**  
**Ranked the second in 2009 class.**

**Secondary  
Education**

El-Nasr Girls collage (E.G.C), Alexandria, Egypt  
Grade: 99.6% **(2004).**  
First Language: English  
Second Language: French

**Awards and  
Grants**

Winner of "**UCL Grand Challenges Doctoral Students' Small Grants Scheme**" (2000 GBP) for Characterising the respiratory resistome in chronic lung disease using novel metagenomics approaches (December 2018-July 2019)

Received **Newton-Mosharafa Scholarship** sponsored by British Council Egypt and the Egyptian Ministry of Higher Education, to fund my Doctoral degree in UCL in the UK (August 2015- August 2019)

**Publications**

**In Peer Reviewed  
Journals**

- Rofael, S. A. D., Brown, J., Pickett, E., Johnson, M., Hurst, J. R., Spratt, D., Lipman, M. and McHugh, T. D. 2020. Enrichment of the airway microbiome in people living with HIV with potential pathogenic bacteria despite antiretroviral therapy. **EClinicalMedicine-The Lancet**, 24, pp. 100427. doi: 10.1016/j.eclinm.2020.100427.
- Rofael S. A. D., McHugh T. D., Troughton R., Beckmann J., Spratt D., Marlow N., Hurst J. R. Airway Microbiome in Adult Survivors of Extremely Preterm Birth (The EPICure Study). **European Respiratory Journal**. November 2018; 21: 01225-2018
- Camon S, Quiros C, Saubi N, Moreno A, Marcos MA, Eto Y, Rofael S, Monclus E, Brown J, McHugh TD, Mallolas J, Perello R. Full blood count values as a predictor of poor outcome of pneumonia among HIV-infected patients. **BMC Infect Dis**. 2018

Apr 19;18(1):189. doi: 10.1186/s12879-018-3090-0.

- Daniel S A, Shawky M S, Omar H M G, Abou-Shleib H M, El-Nakeeb MA (2014). Antibiotic Resistance and its Association with Biocides Susceptibilities among Microbial Isolates in an Egyptian Hospital. **The International Arabic Journal of Antimicrobial Agents**. 4(4): dio10.3823/761. Available on: <http://imed.pub/ojs/index.php/IAJAA/article/view/943>

**Oral and Poster Presentations in Scientific meetings and conferences**

- Sylvia Rofael, James Brown, Elisha Pickett, Margaret Johnson, John Hurst, David Spratt, Marc Lipman, Timothy D. McHugh "Enrichment of the airway microbiome in people living with HIV with potential pathogenic bacteria despite antiretroviral therapy" Oral presentation at Microbiology@UCL Symposium (online meeting): 28th June 2021
- "Role of Respiratory Microbiome in Chronic Lung Disease": Oral presentation upon the nomination of the Division of Infection and Immunity for the UCL Faculty of Medical Sciences Dean's Research prize event (14<sup>th</sup> February 2019).
- Sylvia Rofael, Michael Shawky, Hoda Omar, Hamida Abou-Shleib, Moustafa El-Nakeeb. "Cross-Resistance between Biocides and Antibiotics in Clinical Isolates"; Poster presentation in MRF National PhD Training Programme in AMR Research Annual Conference: 15th August 2018, Bristol, UK.
- J. Brown, E. Pickett, C. Smith, **S. Rofael**, T. Mahungu, D. Lowe, S. Madge, M. Youle, M. Johnson, J. R. Hurst, T. McHugh, I. Abubakar, M. C. I. Lipman. "The Effect of HIV Status on the Frequency of Acute Respiratory Illness: A Longitudinal Cohort Study"; Poster Presentation in American Thoracic Society (ATS) 2018 International Conference: 22<sup>nd</sup> May 2018, San Diego Marina, USA. Conference proceedings published in American Journal of Respiratory and Critical Care Medicine 2018;197: A6096
- Sylvia Rofael, Rachael Troughton, Joanne Beckmann, David Spratt, Timothy D. McHugh, Neil Marlow, John Hurst. Airway Microbiome Profiling in Extremely Preterm Birth Survivors in Early Adulthood (The EPICure Study). Poster Presentation in 7<sup>th</sup> International Human Microbiome Consortium Meeting (IHMC); 26<sup>th</sup> -28<sup>th</sup> June, 2018, Killarney, Ireland.
- Sylvia Rofael, Timothy McHugh, Rachael Troughton, Joanne Beckmann, David Spratt, Neil Marlow, John Hurst. Airway Microbiome in Adult Survivors of Extremely Preterm Birth (The EPICure Study). Oral Presentation in 7<sup>th</sup> London Microbiome

Meeting; 24<sup>th</sup> October, 2018, St. Thomas Hospital, London, UK.

- Sylvia A. D. Rofael, John Hurst, Timothy D. McHugh. Changes in Microbiome in Response to Treatment in Patients with Chronic Lung Diseases (A Study Protocol). Poster Presentation in Exploring Human Host-Microbiome Interactions in Health and Disease; 7<sup>th</sup> -9<sup>th</sup> September, 2016. Wellcome Genome Campus, Hinxton, Cambridge, UK.
- Daniel S A, Shawky M S, Omar H M G, Abou-Shleib H M, El-Nakeeb MA (October 2016). Cross Resistance between Commonly Used Biocides and Antibiotics in Hospitals. Poster Presentation in Antibiotics 2016, Manchester, UK.
- Daniel S A, Shawky M S, Omar H M G, Abou-Shleib H M, El-Nakeeb MA (2014). Correlation between Reduced susceptibility to Biocides and Multi Antibiotic Resistance among Bacterial Isolates in an Egyptian Hospital. Poster presentation In The 22<sup>nd</sup> Annual Conference of the Egyptian Society for Infection Control (APIC) and the 5<sup>th</sup> Conference of the Eastern Mediterranean Regional Network for Infection Control (EMRNIC).
- "Quorum Sensing"; oral presentation in the Pharmaceutical Microbiology Annual Scientific Conference, faculty of Pharmacy, University of Alexandria (June 2014).
- "Cross-resistance between commonly used biocides and antibiotics in hospitals"; oral presentation in in the First Annual Research Day, Faculty of Pharmacy, University of Alexandria (February 2014).
- "The most common types of cancer in Egypt"; oral presentation in the sixth Students Scientific Forum - Faculty of Pharmacy, University of Alexandria (May 2008).
- Targeted Drug Delivery Systems" oral presentation in the Second Pharmacy Day (Student Scientific Forum), Pharos University, Alexandria, Egypt (May 2008).
- Highlight talk on "Herbal remedies used in treatment of Infertility"; in the sixth Students' Scientific Forum-Faculty of Pharmacy, University of Alexandria (the project won third place for undergraduate students in Pharmacognosy for the academic year 2006/2007) (2008).

## Training Courses and Workshops

### In Teaching and Evaluation in Higher Education Institutes

- UCL Arena: Core Teaching Skills: E-learning course designed by Epigeum/Oxford University Press in collaboration with the UCL Arena Centre (September 2021)
- UCL Arena One: Teaching Associate Programme (TAP); 6 sessions once/week (January-March 2019)

Session1: How can I design and plan successful sessions?

Session 2: How can I facilitate active learning?

Session 3: How can I teach more effectively?

Session 4: How can I assess student learning and give helpful feedback?

Session 5: My teaching: where am I and where am I going?

Session 6: UCL Education Conference; 1st April 2019

- "UCL Arena One Gateway Workshop" (April 2017)
- Certified training courses in:
  - Credit Hour System. (August 2014)
  - Student Evaluation and Examination Techniques(Sep 2014)
  - Use of Technology in Teaching (July 2010)
  - Quality Standards in the Education Process (August 2011)

from the International FLDC (Faculty and Leadership Development centre), Alexandria.

### In Sequencing, Bioinformatics and Data Analysis

- "Bioinformatics for Biologists" by Wellcome Connecting Science; e-learning course (3 weeks, 5 hours per week), score 93% (July/August 2021)
- "Reproducible data analysis with Snakemake" by Johannes Köster (University of Duisburg-Essen) invited in Blue Waters webinars (Illinois, USA) l(ink: <https://bluewaters.ncsa.illinois.edu/webinars/workflows/snakemake>)
- " Whole genome sequencing of bacterial genomes tools and applications" e-learning course by Technical University of Denmark (DTU) (January 2021)
- Infectious Disease Sequencing using Oxford Nanopore Sequencing Technology in UCL Centre for Clinical Microbiology (18<sup>th</sup>-20<sup>th</sup> September).
- "Metagenomics Bioinformatics" course by EMBL-EBI, in Wellcome Genome Campus, Hinxton, Cambridge, UK (October 2017)
- "Introduction to phylogenetics" (online course); by European Molecular Biology Laboratory- European Bioinformatics Institute (EMBL-EBI) (August 2016)
- "Introduction to R for Statistical Analysis" by UCL Institute of Child Health (ICH) Statistics Course, London UK (April 2016)

**In Research  
methodologies  
and  
transferable  
skills**

- "Introduction to SPSS" by UCL ICH Statistics Course, London UK (April 2016).
- "An Introduction to R with R studio" provided by UCL ISD training, London, UK (November 2015).
- "Basic Statistics for Research: e- learning course" by UCL Doctoral School, London, UK (October 2015).
- Medical Research Foundation National PhD Training Programme in Antimicrobial Resistance Research in Bristol, UK, we worked in groups and our team (Challenge Team 1B) won Best press conference for demonstrating the importance of diagnosing tools to tackle antimicrobial resistance (AMR). (12-17 August, 2018)
- "Academic presentations"; by UCL Doctoral School London UK (June 2016)
- "Metabolomics: molecule of life, an Introduction"; by European Bioinformatics Institute (EBI) (8<sup>th</sup> February, 2017).
- "How to write a paper for publication"; UCL Doctoral School London UK (November 2016)
- "Next Generation Sequencing" Online Course; European Bioinformatics Institute (EBI) (September 2016)
- "Introduction to Good Clinical Practice (GCP) in Secondary Care"; both the e-learning course (4<sup>th</sup> May 2016) and face to face workshop provided by North Thames NIHR CRN (20<sup>th</sup> May 2016).
- "Plagiarism and citing for life and medical sciences students" by UCL Doctoral School, London, UK (March 2016).
- "Introduction to biomedical databases and literature searching for life and medical sciences students" by UCL Doctoral School, London, UK (November 2015).
- Certified training courses in:
  - Decision-making and Problem-solving
  - Crises and Disasters Management
  - References Management System
  - Research Team Managementfrom the International FLDC (Faculty and Leadership Development centre), Alexandria (August/ September 2014)
- "1<sup>st</sup> Workshop on Molecular Therapeutics" a certified two credit hours workshop in molecular biology techniques provided by the Biochemistry Department, faculty of Science, University of Alexandria (March 2014).

- "Advances in Molecular Biology Workshop" by Mubarak City For Scientific Research and Technology applications and sponsored by Fermentas and Sigma Scientific Services Co. (March 2010)
- Certified training courses in
  - Time and Meeting Management
  - Effective Presentation Skills
  - International Publishing of Scientific Research
  - Research Methods

from the International FLDC (Faculty and Leadership Development centre), Alexandria (2010/2011).

## **Professional Training**

- "ICH Good Clinical Practice E6"; e-learning course by The Global Health Network (score: 100%) (April 2021)
- "Good Clinical Laboratory Practice (GCLP)"; e-learning 7 modules course by The Global Health Network (April 2021)
- Introduction to GCLP (score: 100%)
- GCLP: Organisation and Personnel (score: 100%)
- GCLP: Facilities, Equipment, Materials and reagents (score: 95%)
- GCLP: Standard Operating Procedures and Analytical Plan (score: 95%)
- GCLP: Method and Systems Validation (score: 93%)
- GCLP: Quality Management (score: 100%)
- GCLP: Sample Management, Conduct of the work, Data recording, and Data reporting (score: 100%)
- Summer training in dispensing at a community pharmacy (2007, 2009).
- Training in pharmaceutical industry at El-Amriya Pharmaceutical Factory in collaboration with Faculty of Pharmacy, University of Alexandria (2008)
- Summer training programme in Pharmaceutical Marketing at Novartis Pharmaceutical Company, Egypt (2008).



**Attended  
Conferences  
and  
International  
Meetings**

- "Genomic Inference of Pathogen Direction of Transmission"; online meeting by London School of Hygiene and Tropical Medicine (LSHTM) (22 June 2021)
- 7<sup>th</sup> International Human Microbiome Consortium Meeting (IHMC), Killarney, Ireland. (26<sup>th</sup> -28<sup>th</sup> June, 2018)
- 21<sup>st</sup> International Conference on Advances in New Technologies and their impact on Microbial Research: The Impact of Advances in Mass Spectrometry and Analytical Techniques on Detecting and Revealing Microbial Behaviour and Interaction with their environment 21<sup>st</sup>-22<sup>nd</sup> June 2018 Middlesex University, London, UK.
- 7<sup>th</sup> London Microbiome Meeting, St. Thomas Hospital, London, UK. (24<sup>th</sup> October, 2018)
- TB molecular diagnostics: a call to action by UCL-TB in UCL Institute of Child Health (15 June 2018)
- World TB Day Symposium 2018 by UCL-TB and LSHTM TB Centre in LSHTM (23 March 2018)
- Acid Fast Club, Winter meeting, at the Francis Crick Institute, London (15 Jan 2018)
- 6<sup>th</sup> London Microbiome meeting, St. Thomas Hospital, London, UK. (7<sup>th</sup> June 2017)
- The Microbiome and Human Health meeting, Society for Applied Microbiology, London, UK (12<sup>th</sup> April 2017)
- World TB day Symposium, in UCL Institute of Child Health London, UK (24<sup>th</sup> March 2017)
- 5<sup>th</sup> London Microbiome meeting, St. Thomas Hospital, London. (28<sup>th</sup> January 2017)
- Exploring Human Host-Microbiome Interactions in Health and Disease. Wellcome Genome Campus, Hinxton, Cambridge, UK. (7<sup>th</sup> -9<sup>th</sup> September, 2016)
- UCL LSHTM TB Symposium, in LSHTM, London, UK (23<sup>rd</sup> March 2016).
- Biovision Alexandria 2014 "New life Sciences; The Next Decade" (April 2014).
- The 22<sup>nd</sup> Annual Conference of the Egyptian Society for Infection Control (APIC) and the 5<sup>th</sup> Conference of the Eastern Mediterranean Regional Network for Infection Control (EMRNIC) "Infection Perfectionists: Ready for Disasters (2014)"

## **Skills**

### **Language Skills**

**Arabic:** Mother tongue

**English:** Very good (reading, writing, listening and speaking),  
Academic IELT's score 7.5 (August 2013)

**French:** Moderate

### **Computer skills**

Competent with Microsoft Word, PowerPoint, and Excel programs, SPSS and End Note.

Familiar with Windows, MacOS and Linux Operating Systems, High Performance Computing (HPC), Unix/Linux command line, BASH script, R studio, R and Python programming languages, and SnakeMake.

Familiar with the following Bioinformatics pipelines:

- Quantitative Insights Into Microbial Ecology (QIIME) for 16S rRNA analysis
- TBprofiler
- Mykrobe
- MTBseq
- MGnify pipeline (EBI-Metagenomics pipeline)