

Professor Usmani – Bisoketch Summary August 2023

Professor Omar Usmani MB BS, PhD, FHEA, FRCP, FERS, is **Professor of Respiratory Medicine** at the [National Heart and Lung Institute](#) (NHLI), Imperial College London & **Consultant Physician** at the Royal Brompton Hospital (RBH) and St Mary's Hospital London. He is Clinical Director of Respiratory Trials at ICRRU (Imperial College Respiratory Research Unit). His current Hirsch index is 51 (Google Scholar accessed August 2023).

Training: Professor Usmani qualified in Medicine at King's College London and has dual Specialist Certification in Respiratory and General Internal Medicine. He underwent his Speciality Training at the London Teaching Hospitals of St Thomas', Guy's and King's College. During his clinical training he undertook a **PhD at Imperial College London**, through which his research into Medical Inhalers and Aerosol Science achieved wide Media publicity; [BBCNewsOnline](#), together with his research into the Treatment and Pharmacology of Cough; [BBCNewsOnline](#). He received the 2005 **NHLI Best Thesis Prize** [NHLI PhD Prize for the Best Thesis](#) submitted and an **Alavi-Mandell Award** from the American Society of Nuclear Medicine.

Clinical Specialisation: His **Clinical Specialist** areas are Asthma, COPD and Chronic Cough. He is Group Leader of the [Clinical Research Group](#) within the [Airway Disease](#) Section at NHLI and a Principal Investigator. His **Research Themes** are Inhaled Drug Delivery, Small Airways Physiology, Lung Imaging, Respiratory Pharmacology and Tele-monitoring / E-health.

Research: Professor Usmani is an **International Authority on Aerosol Science and Inhalation Medicine** whose research has fundamentally contributed to the understanding of therapeutic aerosol deposition and clinical effectiveness in inhaled drug delivery to the lungs. He is **Co-Director of [Imperial's Network of Excellence](#) in Aerosols and Health** established in 2021. Professor Usmani has pioneered novel and sophisticated techniques of assessing inhaled drug delivery, detecting dysfunction of small airways physiology, and characterising airflow heterogeneity using pulmonary imaging, in order to understand structure-function-treatment relationships within the lungs.

His research expertise has led to invitations to deliver **Keynote Lectures** at prestigious International scientific meetings. He has written **State-of-the Art** reviews in his field, and presented his views as a leading expert about the future of inhalation medicine on [ERS Vision](#). He advises on the future of inhalers and respiratory drugs on **Advisory Board Panels** to the Pharmaceutical Industry.

Key Research Grants: In 2012, Professor Usmani was awarded a UK - **National Institute for Health Research (NIHR) Career Development Fellowship** to investigate the lung deposition behaviour of inhaled bronchodilator aerosols of different particle size within the airways of patients with Chronic Obstructive Pulmonary Disease (COPD). This was the first time this award category was given to Respiratory Science research in the UK.

In 2015, as Lead Clinical PI, he was part of a team awarded a highly prestigious **EU HORIZON 2020** grant, [myaircoach](#), to investigate the role of Tele-monitoring and E-health in asthma self-management, where the proposal was ranked 4th highest of all 256 submissions to the call.

In Jan 2017, he was awarded as Co-PI and Lead Clinician, a highly competitive grant from the **UK Newton Fund** to tackle the increasing burden of chronic obstructive pulmonary disease (COPD) in China through the development of novel inhalable treatments <http://www.crystecpharma.com/news/latest-news/2017/05/20/newton-fund-grant/>

In Sep 2017, he was awarded a prestigious 5-year contract by the **United States Food and Drug Administration (FDA)** as Principal Investigator for a \$2.3M project entitled 'Patient's perception of dry powder Inhaler devices' in collaboration with the University of Hertfordshire.

Awards & Positions of Esteem: In 2015, Professor Usmani was awarded one of the highest accolades in Aerosol Science, the **Thomas T Mercer Award** from the American Association of Aerosol Research ([AAAR](#)) and the International Society of Aerosols in Medicine ([ISAM](#)), recognising his International Research Excellence in Pharmaceutical Aerosols and Inhalable Materials. He first attended ISAM in 2001 to present his initial findings from his doctoral thesis and 20 years later, in 2021, he was elected by ISAM members to the position **President-elect** of [ISAM](#).

In 2019, Professor Usmani was awarded **Fellow of the European Respiratory Society (FERS)**. In 2017 he became Secretary of Assembly 5 and in 2020, he was voted by the ERS Assembly 5 members as **Head of Assembly 5 (Airway Diseases - Asthma, COPD, Chronic Cough)**. In 2022, he was a recipient of a prestigious **ERS Teaching Award**, in recognition of his dedicated contributions to ERS educational content development. Professor Usmani is currently a committee member of the **ERS HERMES examination committee** in adult respiratory medicine.

As **Chair of the UK Inhaler Group (UKIG)**, working with Asthma UK, he oversaw the production of a series of validated [videos on inhaler technique](#) and he represents UKIG on the [Medicines Optimisation Working Group](#), part of the Taskforce on Lung Health. He was **Chair of the Guidelines Working Party** that developed the [Inhaler Choice Guideline](#) for UK healthcare professionals in 2017, which was updated in 2020.

Teaching: Professor Usmani is a keen educator, teaching and training the next generation of future scientists and doctors. He himself completed **CASLAT (Certificate of Advanced Study in Learning and Teaching)** awarded by Imperial College London in 2010 and is a **Fellow of the Higher Education Academy (FHEA)**. Professor Usmani was [appointed](#) **Co-Deputy Director** of [Imperial's MBBS Phase 1](#) programme in 2021, is the **Head of Phase 1c (Year 3)** and **Clinical Module Lead of CSI** (Clinical Scientific Integration), a flagship Module in Imperial's new MBBS curriculum. He is an external examiner to the University of Southampton MBBS programme.