

Matthew Sarkar

M.Des(RCA) • Dip.I.C • B.Eng(Hons) • ACGI • PGCert(IP Law)
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EXPERT WITNESS PROFILE

Matthew Sarkar is a named inventor on more than 20 granted US and European patent families in medical and drug delivery technology, with nearly three decades of hands-on experience spanning respiratory device engineering, inhaled drug delivery, intellectual property strategy, and technology commercialisation. He has provided expert analysis in Hatch-Waxman patent litigation involving inhaler technology, breath actuation, and dose counter mechanisms, acting for a branded pharmaceutical plaintiff and contributing to a favourable settlement. He holds a PGCert in IP Law from Brunel University alongside his engineering qualifications, giving him legal and technical fluency to provide rigorous expert analysis in patent infringement and validity disputes.

EXPERT WITNESS & LITIGATION SUPPORT

2025–Present **Consulting Expert — Hatch-Waxman Patent Litigation**

Principia Technica / Engaged by Tier 1 US law firm

- Retained in patent litigation involving inhaled drug delivery device technology
- Acting for branded pharmaceutical plaintiff against generic market entrant
- Expert analysis of infringement and validity: inhaler mechanisms, breath actuation, dose counter technology

CORE TECHNICAL EXPERTISE

Inhaled Drug Delivery & Respiratory Device Technology

- Active and passive DPI, pMDI, breath actuation, dose counters, blister strip transport and coiling mechanisms; cyclone aerosolisation
- Marketed products: NEXThaler®, GyroHaler™, LOMI, (approved UK/EU/US/RoW); Aspirair® active DPI through Phase 2b clinical trials
- Drug-device combination products; deep lung delivery of large molecules; digital connectivity

Intellectual Property — Generation, Prosecution & Licensing

- Named inventor on 20+ granted US/EP patent families; strategic prosecution of 40+ concurrent families (Vectura plc)
- Technology licensing & transfer; Boehringer Ingelheim collaboration (£30M milestones); IP ownership & inventorship disputes

Medical Device Engineering

- Full device lifecycle: concept, design, V&V, regulatory submission, production scale-up (EU MDR / FDA)

CAREER HISTORY

2025–Present **Consulting Expert Witness — Principia Technica**

- Hatch-Waxman ANDA litigation support; inhaled drug delivery device patents; advised and acted for innovator branded pharma

2023–2025 **Technology Partnerships Director — Digital Catapult (Innovate UK)**

- Technology partnerships for the £37.6M UK Digital Twin Centre (funded by Belfast Region City Deal and Innovate UK); AI, distributed ledger and deep tech ecosystem partnerships

2020–2023 **VP Medical — Science Group (Sagentia Innovation)**

- Connected diagnostics and digital therapeutics business development; seven-figure development partnership

2019–2020 **Director of Corporate Development — Enmovi Limited (McLaren / Orthosensor JV)**

- Deal architect; MotionSense™ digital orthopaedic remote monitoring and advice platform for optimised patient outcomes; acquired by Stryker 2020

- 2016–2019** **Head of Health Partnerships — McLaren Applied Technologies**
- Digital therapeutics and wearable health device business; originated Enmovi JV
- 2014–2016** **Director, IP & Licensing — Cambridge Temperature Concepts**
- IP portfolio development; EU/US medical device compliance
- 2013–2014** **Head of Technology Licensing — Vectura Group**
- Licensing and technology transfer; respiratory device and formulation technology
- 2009–2013** **IP Portfolio Manager — Vectura Delivery Devices**
- Strategic prosecution of 40+ concurrent patent families; IP strategy across licensing and due diligence
- 2002–2008** **Programme Manager — Vectura Delivery Devices**
- Technical lead: Boehringer Ingelheim collaboration (£30M milestones + royalty agreement)
 - Aspirair® active DPI platform: aerosolisation technology for systemic pulmonary delivery — developed through Phase 2b clinical trials (Apomorphine)
 - F1P unit dose DPI for higher payload volumes: patented cyclone aerosolisation design for greater lung deposition
 - GyroHaler™ 60-dose DPI (Salmeterol/Fluticasone) with intuitive UI: blister transport mechanisms — approved and marketed UK, EU and RoW
 - Gyro+ variant: patented miniature cyclonic airway for cohesive drug combinations (Budesonide/Formoterol)
 - LOMI (Lever-Operated Multidose Inhaler) 60-dose DPI with 4-step operation: patented blister strip coiling mechanism — approved and marketed US
- 2001–2002** **Senior Designer / Co-Founder — Vivid Medical (Cambridge Consultants spin-out)**
- Co-invented Aspirair® active DPI technology; IP acquired by Vectura; floated LSE AIM 2004
 - NEXThaler® metering / reservoir DPI (extra fine Beclomethasone/Formoterol): integral mechanical dose counter to display only fully delivered doses — approved and marketed UK and EU
- 2000–1996** **Design Engineer — Cambridge Consultants**
- Medical device and drug delivery product development; inhaler development; electrosurgical handsets

EDUCATION

- 2013** **General Management Certificate — Cambridge Judge Business School**
- 2009–2010** **PGCert Intellectual Property Law — Brunel University**
- 1993–1995** **M.Des Industrial Design Engineering — Royal College of Art, Diploma of Imperial College**
Royal Commission for the Exhibition of 1851 Industrial Design Studentship
- 1990–1993** **B.Eng (Hons) First Class, Mechanical Engineering — Imperial College of Science, Technology and Medicine**

GRANTED PATENTS (SELECTED)

Named inventor on 20+ granted US/EP patent families in respiratory and digital medicine:

GB2532919B • EP1191966B1 • US7246617B1 • EP1301231B1 • US6948496B2 • EP1386630B1 • US7107988B2 • US7854226B2 • EP1658872B1 • EP1732630B1 • US7845349B2 • US8474453B2 • EP2254633B1 • US8739784B2 • US8739785B2 • US8522776B2 • EP2389214B1 • US8919342B2 • EP2082769B1 • US9125998B2

PROFESSIONAL MEMBERSHIPS & BOARD ROLES

- Senior Associate, Royal Society of Medicine (elected 2018)
- Trustee and Engineering Committee Member, Cambridge Museum of Technology
- ACGI — Associate of the City and Guilds Institute (Imperial College)

