

BIOGRAPHICAL SKETCH

NAME Barry Plant	POSITION TITLE Professor, Dept of Medicine Director Adult CF Centre, Consultant Respiratory Physician, Cork University Hospital, University College Cork, Wilton. Cork. Ireland.
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INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	MM/YY	FIELD OF STUDY
National University of Ireland	M.B. B.Ch.BAO (Hons)	1996	Medicine
National University of Ireland	B. Med. Sc	1996	
Royal College of Physicians Ireland	MRCPI	1999	
Royal College of Physicians Ireland	MFSEM	2004	
Education Commission	E.C.F.M.G.	2004	
National University of Ireland	M.D.	2006	
University of Washington, Seattle	Fellowship PCCM	2006	
Royal College of Physicians Ireland	F.R.C.P.I	2012	

A. Brief Personal Statement

I have worked in the area of Adult CF medicine for almost 20 years as an active clinician and a committed researcher. My research focuses on improvement of Cystic Fibrosis disease (CF) treatment through a translational strategy with an emphasis on the lung/gut microbiome, “real world studies” and CFTR modulation. Currently our campus at CUH/UCC supports the ongoing medical care of 190 Adult and over 100 children with Cystic Fibrosis.

B. Positions and Honors

Positions and Employment

2000-2002 Special Lecturer in Internal Medicine, University College Dublin.
 2004-Current Respiratory Fellow, University College Dublin
 2004-2006 Pulmonary & Critical Care Medicine, University of Washington, Seattle. USA
 2007-Current Consultant Respiratory Physician, Cork University Hospital
 2006-Current Director of Adult CF Day Centre
 2011-Current Chairman of Medical and Scientific Committee, Cystic Fibrosis Ireland.
 2014-Current Clinical Professor of Medicine, Dept of Medicine, University College Cork
 2016-Current Chairperson – Clinical Advisory Group for Cystic Fibrosis, Royal College of Physicians of Ireland.

Selected Distinctions

2000 Irish Lung Foundation Research Grant, Consumables Support Grant (IR£23,344).
 2003 ‘Respiratory Tutor of the Year’ – Department of Medicine and Therapeutics, University College Dublin
 2003 Pulmonary and Critical Care Fellowship, University of Washington, Seattle.
 2004 Membership of the Faculty of Sports & Exercise Medicine.
 2004 Irish Thoracic Society Travelling Fellowship
 2004 National University Of Ireland Travelling Studentship in Medicine
 2005 Bursary Annual North American Cystic Fibrosis Conference Oral Presentation
 2006 Awarded Higher Medical Degree (MD) by thesis, University College Dublin

2007 Awarded Irish Lung Foundation Basic Research Grant.
 2007 Cystic Fibrosis Association of Ireland Clinical Fellowship Grant
 2007 Clinical Fellowship in Cystic Fibrosis
 2008 Cystic Fibrosis Association of Ireland Clinical Fellowship Grant
 2008 Cystic Fibrosis Association of Ireland Research award
 2009 1st Prize Best Oral Presentation Conference of the Faculty of Sports and Exercise Medicine,
 2009 1st Prize 9th National Cystic Fibrosis Meeting
 2009 1st Prize Best Clinical Presentation: Irish Otolaryngology Society Meeting, Dublin.
 2010 1st Prize 10th National Cystic Fibrosis Meeting
 2010 Cystic Fibrosis Association of Ireland Clinical Fellowship Grant
 2010 Appointed Founding Chairperson for the Irish CF Consortium
 2010 Appointed Scientific steering committee member European CF Society
 2010 Awarded Cystic Fibrosis Association of Ireland Research award
 2011 1st Prize 11th National Cystic Fibrosis Meeting
 2011 Appointed Chairperson of the Medical and Scientific Council CFAI
 2011 Appointed Executive Board of the CF Registry of Ireland.
 2012 Appointed Vice-President European CF Society Annual scientific Meeting
 2012 Awarded Irish Lung Foundation Basic Research Grant.
 2012 US Food and Drug Administration Invited expert
 2012 Invited board of management member to HRB Clinical Research Centre UCC.
 2012 APC Faculty member.
 2013 Moderator Expert Viewpoints in CF, Royal College Physicians Ireland
 2013 Moderator, ECFS, Lisbon
 2013 Moderator, Irish National CF Meeting
 2014 Clinical Professorship, Dept of Medicine, Cork University
 2014 Member of Association of Physicians of Great Britain and Ireland
 2015 1st Prize 10th National Cystic Fibrosis Meeting
 2016 Awarded the role of Chairperson – Clinical Advisory Group for Cystic Fibrosis, Royal College of Physicians of Ireland.
 2016 Invited as Clinical Lead Adult CF Clinician to prepare “Irish National CF Model of Care” document, HSE.

C. Selected Peer-reviewed Publications

1. Nicola J. Ronan, Gisli G. Einarsson, Maria Twomey, Denver Mooney, David Mullane, Muireann NiChroinin, Grace O’Callaghan, Fergus Shanahan, Desmond M. Murphy, Owen J. O’Connor, Cathy A. Shortt, Michael M. Tunney, Joseph A. Eustace, Michael M. Maher, J Stuart Elborn, **Barry J. Plant**, ‘CORK study in CF: Sustained improvements in ultra-low dose chest CT scores post CFTR modulation with ivacaftor’. CHEST 2017.
2. Ronan NJ, Elborn JS, Plant BJ. Current and emerging comorbidities in cystic fibrosis. *Presse Med.* 2017 Jun;46(6 Pt2): e 125-e138.
3. Plant BJ, Downey DG, Eustace JA, Gunaratnam C, Haworth CS, Jones AM, McKone EF, Peckham DG, Ketchell RI, Bilton D. A treatment evaluator tool to monitor the real-world effectiveness of inhaled aztreonam lysine in cystic fibrosis. *J Cyst Fibros.* 2017 Nov;16(6):695-701. doi: 10.1016/j.jcf.2017.02.006. Epub 2017 Apr 6.
4. Hunt EB, Ward C, Power S, Sullivan A, Pearson JP, Lapthorne S, O’Byrne PM, Eustace J, Plant BJ, Maher MM, MacSharry J, Murphy DM. The Potential Role of Aspiration in the Asthmatic Airway. *Chest.* 2017 Jun;151(6):1272-1278. doi: 10.1016/j.chest.2017.03.005. Epub 2017 Mar 11
5. Thong L, O’Driscoll M, Casey C, Kennedy M, Plant BJ, Henry MT, Murphy DM. Eosinophils and COPD Readmission. *Chest.* 2017 Mar;151(3):724-725. doi: 10.1016/j.chest.2016.10.065.
6. Fouhy F, Ronan NJ, O’Sullivan O, McCarthy Y, Walsh AM, Murphy DM, Daly M, Flanagan ET, Fleming C, McCarthy M, Shortt C, Eustace JA, Shanahan F, Rea MC, Ross RP, Stanton C, **Plant BJ**. ‘A pilot

- study demonstrating the altered gut microbiota functionality in stable adults with Cystic Fibrosis.' *Nature Scientific Reports*. 2017 Jul 27;7(1):6685.
7. N.J. Ronan, Y. McCarthy, K. James, P. Arooj, E.B. Hunt, C. Shortt, C. Fleming, M. McCarthy, C. Howlett C. Hickey, E. Flanagan, M. Daly, J.A. Eustace, M.M. Maher, **B.J. Plant**. '232 Lumacaftor/Ivacaftor is associated with a significant improvement in walk test and reduction in sweat chloride in a cohort of homozygous F508del CF patients with severe disease – a single centre experience'. *Journal of cystic fibrosis*. June 2017, Vol 16. Supplement 1, Page S12
 8. Barry PJ, Ronan NR, **Plant BJ**. Cystic Fibrosis Transmembrane Conductance Regulator Modulators: The End of the Beginning. *Semin Respir Crit Care Med* 2015.
 9. The Role of Ivacaftor in Severe Cystic Fibrosis in a Patient With the R117H Mutation Ronan NR, Fleming C, O'Callaghan G, Maher MM, Murphy DM, **Plant BJ**. *CHEST* 2015.
 10. Konstan MW, **Plant BJ**, Elborn JS, Rodriguez S, Munck A, Ahrens R, Johnson C. Efficacy response in CF patients treated with ivacaftor: Post-hoc analysis. *Pediatr Pulmonol*. 2015 Mar 9. doi: 10.1002/ppul.23173.
 11. Fouhy F, Deane J, Rea MC, O'Sullivan Ó, Ross RP, O'Callaghan G, **Plant BJ**, Stanton C. The Effects of Freezing on Faecal Microbiota as Determined Using MiSeq Sequencing and Culture-Based Investigations. *PLoS One*. 2015 Mar 6;10(3):e0119355. doi: 10.1371/journal.pone.0119355. eCollection 2015.
 12. Harrison MJ, Ronan NJ, Khan KA, O'Callaghan G, Murphy DM, **Plant BJ**. Ivacaftor therapy in siblings with cystic fibrosis-the potential implications of Itraconazole in dosage and efficacy. *Pulm Pharmacol Ther*. 2015 Feb 4. pii: S1094-5539(15)00004-8. doi: 10.1016/j.pupt.2015.01.003.
 13. Casserly P, Harrison M, O'Connell O, O'Donovan N, **Plant BJ**, O'Sullivan P. Nasal endoscopy and paranasal sinus computerised tomography (CT) findings in an Irish cystic fibrosis adult patient group. *Eur Arch Otorhinolaryngol*. 2014 Dec 24.
 14. Kennedy MP, **Plant BJ**. Primary ciliary dyskinesia and the heart: cilia breaking symmetry. *Chest*. 2014 Nov;146(5):1136-8. doi: 10.1378/chest.14-0722.
 15. Murphy KP, O'Connell OJ, O'Connor OJ, **Plant BJ**, Maher MM. Cumulative radiation exposure to abdominal organs in patients with cystic fibrosis should not be forgotten. *Am J Respir Crit Care Med*. 2014 Oct 15;190(8):961-2.
 16. McKone EF, Borowitz D, Drevinek P, Griese M, Konstan MW, Wainwright C, Ratjen F, Sermet-Gaudelus I, **Plant B**, Munck A, Jiang Y, Gilmartin G, Davies JC; VX08-770-105 (PERSIST) Study Group. Long-term safety and efficacy of ivacaftor in patients with cystic fibrosis who have the Gly551Asp-CFTR mutation: a phase 3, open-label extension study (PERSIST). *Lancet Respir Med*. 2014 Nov;2(11):902-10.
 17. O'Brien ME, Murphy DM, **Plant BJ**. A 76 year old female diagnosed with cystic fibrosis. *Ir Med J*. 2014 Sep;107(8):240-1
 18. McCourt F, O'Neill B, Logan I, Abbott J, **Plant B**, McCrum-Gardner E, McKeown S, Stuart Elborn J, Bradley JM. Indicators of pulmonary exacerbation in cystic fibrosis: A Delphi survey of patients and health professionals. *J Cyst Fibros*. 2015 Jan;14(1):90-6. *J Cyst Fibros*. 2015 Jan;14(1):90-6
 19. Harrison MJ, McCarthy M, Fleming C, Hickey C, Shortt C, Eustace JA, Murphy DM, **Plant BJ**. Inhaled versus nebulised tobramycin: a real world comparison in adult cystic fibrosis (CF). *J Cyst Fibros*. 2014 Dec;13(6):692-8.
 20. Barry PJ, **Plant BJ**, Nair A, MB, Bicknell S, Simmonds NJ, Bell NJ, Shafi N, Daniels T, Shelmerdine S, Felton I, Gunaratnam C, Jones AM, Horsley AR. Effects of Ivacaftor in cystic fibrosis patients carrying the G551D mutation with severe lung disease *Chest*. 2014. doi:10.1378/chest.13-2397
 21. Harrison MJ, Murphy DM, **Plant BJ**. Ivacaftor in patient with CF and homozygous for the G551D mutation. *N Engl J Med*. 2013 Sep 26;369(13):1280-2.
 22. **Plant BJ**, Goss CH, Plant WD, Bell SC. Management of comorbidities in older patients with cystic fibrosis *The Lancet Respiratory Medicine* - 1 April 2013 (Vol. 1, Issue 2, Pages 164-174).
 23. Peri-lung transplant renal issues in patients with cystic fibrosis. O'Connell OJ, Harrison MJ, Murphy DM, Plant WD, **Plant BJ**. *Chest*. 2013 Jan;143(1):271
 24. Optimising pediatric radiation dose from CT imaging in patients with CF. O'Connell OJ, McGarrigle AM, O'Connor OJ, Maher MM, **Plant BJ**. *Chest* 2012 Oct;142(4):1078.

25. Pulmonary Mycobacterium szulgai infection. McSweeney FG, O'Brien ME, Sheehan S, **Plant B**, Corcoran G. *Ir Med J*. 2012 Sep;105(8):275-7.
26. O'Connell OJ, McWilliams S, McGarrigle AM, O'Connor OJ, Shanahan F, Mullane D, Eustace J, Maher MM, **Plant BJ**. Radiological imaging in cystic fibrosis: cumulative effective dose & changing trends over 2 decades. *Chest*. 2012 Jun;141(6):1575-83.
27. Twomey KB, O'Connell OJ, McCarthy Y, Dow JM, O'Toole GA, **Plant BJ**, Ryan RP. Bacterial cis-2-unsaturated fatty acids found in the cystic fibrosis airway modulate virulence and persistence of *Pseudomonas aeruginosa*. *ISME J* 2011 Dec 1.
28. O'Connell OJ, O'Farrell C, Harrison M, Eustace JA, Henry MT, **Plant BJ**. Nebulized hypertonic saline via positive expiratory pressure versus via jet nebulizer in patients with severe cystic fibrosis. *Respir Care*. 2011 Jun;56(6):771-5.
29. Ramsey BW, Davies J, McElvaney NG, Tullis E, Bell SC, Dřevínek P, Griese M, McKone EF, Wainwright CE, Konstan MW, Moss R, Ratjen F, Sermet-Gaudelus I, Rowe SM, Dong Q, Rodriguez S, Yen K, Ordoñez C, Elborn JS. VX08-770-102 Study Group. A CFTR potentiator in patients with cystic fibrosis and the G551D mutation. *N Engl J Med*. 2011 Nov 3;365(18):1663-72. (**Named collaborator**)
30. O'Cathail SM, O'Connell O, Long N, Morgan M Eustace JA, **Plant BJ**, Hourihane JO'B. Association Of Cigarette Smoking With Drug Use And Risk-Taking Behaviour In Irish Teenagers. *Addictive Behaviours*. *Addict Behav*. 2011 May;36(5):547-50.
31. Dineen J, Saidha S, McNamara B, **Plant B**, Ryan AM. Brachial neuritis masquerading as acute coronary syndrome. *Ir J Med Sci*. 2011 Mar;180(1):291
32. Falvey EC, McCarthy C, O'Connor TM, Shanahan F, Molloy MG, **Plant BJ**. Exercise- induced bronchoconstriction and exercise testing in an international rugby union team. *Thorax*. 2010 Sep;65(9):843-4.
33. Oisín O'Connell, Ciara N. Magee, Brendan Fitzgerald, Louise Burke, William D. Plant, and **Barry J. Plant**. A CF patient with progressive proteinuric renal disease: a CF-specific nodular glomerulosclerosis? *NDT Plus* (2010) 3(4): 354-356
34. TT Nicholson, **BJ Plant**, MT Henry, CP Bredin. Sarcoidosis in Ireland: Regional differences in prevalence and mortality from 1996-2005. *Sarcoidosis, Vasculitis and Diffuse Lung Disease*. 2010; 27; 111-120
35. O'Connell O, Plant WD, **Plant BJ**. Mechanisms of the rapid decline in glomerular filtration rate following lung transplantation in patients with Cystic Fibrosis. *Am J Transplant*. 2010 Apr;10(4):954

List of Interdisciplinary publications

1. T. Vagg, C. Shortt, C. Hickey, J. Eustace, **B. Plant**, and S. Tabirca, "A mhealth patient passport for adult cystic fibrosis patients", in Proceedings of the International Conference on Wireless Mobile Communication and Healthcare (MobiHealth), European Alliance for Innovation, 2017.
2. T. Vagg, Y. Y. Tan, J. Eustace, **B. Plant**, and S. Tabirca, "A serious mobile game app for adults with cystic fibrosis", in Proceedings of The 7th Irish Conference on Game-Based Learning (IGBL2017), Irish Conference on Game-Based Learning, 2017.
3. T. Vagg, S. Tabirca, J. Eustace, and **B. Plant**, "A review of educational content for adults with cystic fibrosis", in The International Scientific Conference eLearning and Software for Education, vol. 2, pp. 225 – 233, Carol I National Defence University Publishing House, 2017.
4. T. Vagg, **B. J. Plant**, and S. Tabirca, "A general mhealth design pipeline", in Proceedings of the 14th International Conference on Advances in Mobile Computing and Multi Media, pp. 190 – 194, ACM, 2016.
5. Y. Y. Tan, S. Tabirca, **B. J. Plant**, and T. Vagg, "Using a mobile game application to monitor well-being data for patients with cystic fibrosis", in Proceedings of the 14th International Conference on Advances in Mobile Computing and Multi Media, pp. 195 – 198, ACM, 2016.

6. T. Vagg, N. Ronan, J. Eustace, **B. Plant**, and S. Tabirca, "A cystic fibrosis virtual reality gamified experience for medical students", in Proceedings of The 6th Irish Conference on Game-Based Learning (IGBL2016), pp. 93 – 99, Irish Conference on Game-Based Learning, 2016.
7. T. Vagg, S. Tabirca, N. Ronan, **B. J. Plant**, and J. Eustace, "A web-based 3d lung anatomy learning environment using gamification", in The International Scientific Conference eLearning and Software for Education, vol. 1, pp. 556 – 560, Carol I National Defence University Publishing House, 2016.
8. T. Vagg, **B. J. Plant**, and S. Tabirca, "A multi-platform interactive 3d educational application for bronchoscopy & bronchial anatomy", in eProceedings 18th International Conference on Medical Image Computing and Computer Assisted Interventions, Workshop on Interactive Medical Image Computing (IMIC), Technische Universitat Munchen, 2015.
9. T. Vagg, **B. J. Plant**, and S. Tabirca, "Interactive bronchial tree e-learning environment", in Proceedings of 7th International Conference on Education and New Learning Technologies, pp. 7151 – 7158, IATED, 2015.

D. Research Support

In the last 10 years as an independent researcher my lab has generated in excess of Euro7.5 million in research funding. Relevant grants listed below.

R01 Irish Lung Foundation Real world CFTR modulation grant Role: Supervisor	Plant (Supervisor)	01/018/-12/23/19
R02 Irish Lung Foundation VR 'start-up' grant Role: Supervisor	Plant (Supervisor)	01/01/18-12/23/19
R03 Cystic Fibrosis Association Ireland Support laboratory consumables, funding total. Role: PI	Plant (PI)	07/01/17-06/30/19
R04 EU Commission FP7 Award CFMATTERS - Cystic Fibrosis Microbiome-determined Antibiotic Therapy Trial in Exacerbations: Results Stratified. The goal of this multicenter EU funded (6 million euro over 3 years) study is to compare current empiric treatment in CF to a Microbiome directed treatment option based on the Microbiome profile of each individual patient.. Role: Overall PI/ Co-coordinator	Plant (Coordinator)	10/01/13-09/30/16
R05 ITS/HRB/MRCG Research Fellowship Clinical implications and utility of an Endotoxin-tolerant (ET) state in Cystic Fibrosis. Role: PI	Plant (PI)	10/01/12-09/30/14
R06 Irish Lung Foundation Clinical implications and utility of an Endotoxin-tolerant (ET) state in Cystic Fibrosis Role: PI	Plant (PI)	07/01/12-09/30/13
R07 CFAI + Bandon CF support group CF Laboratory renovation in Clinical Sciences Building. Role: PI	Plant (PI)	01/10/12-12/25/12

R07 Philanthropic Funding Support of Post-doctoral fellow and laboratory consumables. Role: PI	Plant (PI)	01/10/12-12/25/14
R08 Cystic Fibrosis Association Ireland Support laboratory consumables, funding total. Role: PI	Plant (PI)	01/10/12-12/25/12
R09 Irish Thoracic Society Supervision of Boehringer Ingelheim Research Fellow in Respiratory Medicine Role: PI	Plant (PI)	07/01/08-12/23/10
R10 Cystic Fibrosis Association Ireland 'Toll like receptors in CF' Role: PI	Plant (PI)	07/01/07-07/01/10
R11 Cystic Fibrosis Association Ireland Supervision Clinical Research Fellow in Cystic Fibrosis Role: PI	Plant (PI)	07/01/07-07/01/10
R12 Irish Lung Foundation Basic research 'start-up' grant Role: PI	Plant (PI)	07/01/07-12/23/07

Clinical trials to date include:

- VERTEX: VX102, VX14-661-106, VX14-661-109, VX14-661-110. VX16-659-101
- Galapagos: GLPG2222-CL-201-Albatross
- Novartis: CQBW251X2101

E. Experience in training young career professionals (eg graduate students)

I have an active and ongoing role in the training of young career professionals locally, nationally and internationally. Over the last five years I have supervised 3 M.D. by thesis, 3 PhD by thesis, 2 MSc by thesis as well as 7 final medical research projects (3 for the Graduate Medical Entry program) at University College Cork. All these have been in the area of Translational CF care. Additionally during this I have co-ordinated the Irish National CF meeting on two occasions during this time, Experts in CF meetings RCPI on two occasions and the Cystic Fibrosis Ireland Annual Scientific meeting in 2017. Additionally in 2016 and 2017 hosted at Cork University Cork I have co-ordinated the CF GUIDE meeting which is a two day overview CF clinical and research training course which has invited a total of 42 young career professional from 16 different countries (4 continents) to participate.

