

David C. Rubinsztein

Date of birth: 14 March 1963, Cape Town, South Africa

Qualifications: M.B. Ch.B; B.Sc. (Med) Hons; Ph.D., FRCPath, FMedSci, FRS

Position: Professor of Molecular Neurogenetics,
Deputy Director, Cambridge Institute for Medical Research,
UK Dementia Research Institute Professor,
Honorary Consultant, Department of Medical Genetics,
Academic Lead, Alzheimer's Research UK Cambridge Drug Discovery
Institute, University of Cambridge

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Cambridge Biomedical Campus, Hills Road, Cambridge, CB2 0XY, UK

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Education:

2005 FRCPath

1997 MRCPPath; CCST (clinical cytogenetics and molecular genetics)

1996 DipRCPath

1989 – 1992 Ph.D. thesis. Supervisor: Prof. D. R. van der Westhuyzen. Medical Research Council/University of Cape Town Unit for the Cell Biology of Atherosclerosis, Department of Medical Biochemistry, University of Cape Town.
Title: Monogenic Hypercholesterolemia in South Africans: Familial Hypercholesterolemia in Indians and Familial Defective Apolipoprotein B-100.

1988 B.Sc. (Med) Hons in Medical Biochemistry, University of Cape Town.

1981 – 1986 MB.ChB., University of Cape Town. Graduated with distinction in the First Professional examination

Employment:

2017 UK Dementia Research Institute Professor

2015 Academic Lead, Alzheimer's Research UK Cambridge Drug Discovery Institute

Dec 2012-2012-2017 Deputy Director, Cambridge Institute for Medical Research
Wellcome Trust Principal Research Fellow

2005 Professor of Molecular Neurogenetics, University of Cambridge

2003-2005 Reader in Molecular Neurogenetics, University of Cambridge

2002-2011 Wellcome Trust Senior Research Fellow in Clinical Science /Honorary Consultant in Medical Genetics, University of Cambridge

1998-2002 Glaxo Wellcome Research Fellow/Honorary Consultant in Medical Genetics, University of Cambridge

1993-1998 Senior Registrar in Genetic Pathology, Addenbrooke's Hospital, Cambridge.
First UK trainee in this specialty.

1989-1992 PhD; Dept of Medical Biochemistry, University of Cape Town
1988 BSc (Med) Hons; University of Cape Town
1987 Intern at Groote Schuur Hospital, Cape Town: 4 months, Medicine; 4 months, General Surgery; 4 months, Obstetrics & Gynaecology

Awards and honours:

2018 Roger de Spoelberch Prize
2017 Elected Fellow of the Royal Society
2017 Thudichum Medal from Biochemical Society for outstanding contributions to neuroscience
2015 Fourth highest cited cell biologist in Europe and Israel for articles published between 2007-2013 http://www.labtimes.org/labtimes/ranking/2015_05/index.lasso
2015 Selected as one of Thomson Reuters' Highly Cited Researchers 2015 in the category Biology and Biochemistry (<http://highlycited.com/>).
2015 Kohn Lecture – Royal College of Pathologists
2014 Selected as one of Thomson Reuters' Highly Cited Researchers 2014 in the categories Biology and Biochemistry and Molecular Biology and Genetics
2011 Elected member of European Molecular Biology Organisation
2009 Spinoza Visiting Professorship, University of Amsterdam
2007 Graham Bull Prize in Clinical Science, Royal College of Physicians
2004 Fellow of the Academy of Medical Sciences

Editorial boards:

EMBO Reports
 Human Molecular Genetics
 Autophagy (2005-2008) Editorial Board; Associate Editor (2008-2016)
 PLoS ONE (Academic editor)
 Cell Death and Differentiation
 Scientific Reports
 Advisory Editor Oncotarget "Autophagy and Cell Death"
 Cell Stress, Founding Editor

Grants and funding committees:

Wellcome Trust: Co-Chair of Investigator Awards Expert Review Group (2011-2013)
 Wellcome Trust Molecular & Cellular Neuroscience Committee (2007-11);
 MRC subcommittee – Strategic Review of Neurodegeneration (2008)
 MRC Advisory Board 2001-2005; MRC College of Experts 2005-
 Parkinson's Disease Brain Bank Assessment Panel (2009-2014)
 MRC Brain Banks Network Users Group (2009-2014)
 ARUK Clinical Trials Advisory Panel (2015-)

Advisory boards:

Neuromics EU Consortium Board
 E3Bio Scientific Advisory Board
 MRC Harwell

Faculty member:

Faculty of 1000 Biology

European Research Institute for Integrated Cellular Pathology (ERI-ICP), founding member

Conference organiser or co-organiser:

2018	Gordon conference on Autophagy 2018, co-chair
2016	Autophagy UK Network, steering committee
2016	Gordon Conference on Autophagy, co-Deputy Chair
2015	FEBS 2015 (Berlin), Session organiser/co-chair
2013	EMBO Autophagy conference, Norway, Co-organiser
2013	Local Organising Committee for 5th European Society for Neurochemistry conference
2011	Autophagy Keystone meeting, Whistler, Canada
2010	5 th Inproteolys meeting - Proteolysis and neurodegeneration, Madrid
2009	Autophagy EMBO Conference, Ascona, Switzerland

Publications:

Total number of publications: 348

citations: >56,000 (Google Scholar)

h-index: 111 (Google Scholar)

Twenty significant publications:

1. A Ashkenazi, CF Bento, T Ricketts, M Vicinanza, F Siddiqi, M Pavel, F Squitieri, MC Hardenberg, S Imarisio, FM Menzies & **DC Rubinsztein**. Polyglutamine tracts regulate beclin 1-dependent autophagy. *Nature* 545:108-111 (2017).
2. M Jimenez-Sanchez, W Lam, M Hannus, B Sönnichsen, S Imarisio, A Fleming, A Tarditi, F Menzies, T Ed Dami, C Xu, E Gonzalez-Couto, G Lazzeroni, F Heitz, D Diamanti, L Massai, VP Satagopam, G Marconi, C Caramelli, A Nencini, M Andreini, GL Sardone, NP Caradonna, V Porcari, C Scali, R Schneider, G Pollio, CJ O’Kane, A Caricasole & **DC Rubinsztein**. *Nature Chem. Biol.* 11:347-354 (2015).
3. M Vicinanza, VI Korolchuk, A Ashkenazi, C Puri, FM Menzies, JH Clarke & **DC Rubinsztein**. PI(5)P regulates autophagosome biogenesis. *Mol. Cell* 57:219-234 (2015).
4. E Zavodszky, MNJ Seaman, K Moreau, M Jimenez-Sanchez, SY Breusegem, ME Harbour & **DC Rubinsztein**. Mutation in VPS35 associated with Parkinson’s disease impairs WASH complex association and inhibits autophagy. *Nature Comm.* 5: 3828 (2014).
5. C Puri, M Renna, C Figueira Bento, K Moreau & **DC Rubinsztein**. Diverse autophagosome membrane sources coalesce in recycling endosomes. *Cell* 154: 1285-1299 (2013).

6. S Luo, M Garcia-Arencibia, R Zhao, C Puri, PPC Toh, O Sadiq & **DC Rubinsztein**. Bim inhibits autophagy by recruiting Beclin 1 to microtubules. *Mol. Cell* 47:359-370 (2012).
7. K Moreau, B Ravikumar, C Puri & DC Rubinsztein. Arf6 promotes autophagosome formation via effects on phosphatidylinositol 4,5-bisphosphate and phospholipase D. *J. Cell Biol.* 196:483-496 (2012).
8. S Sarkar, VI Korolchuk, M Renna, S Imarisio, A Fleming, A Williams, M Garcia-Arencibia, C Rose, S Luo, BR Underwood, G Kroemer, CJ O’Kane & **DC Rubinsztein**. Complex inhibitory effects of nitric oxide on autophagy. *Mol. Cell* 43:19-32 (2011).
9. K Moreau, B Ravikumar, M Renna, C Puri & **DC Rubinsztein**. Autophagosome precursor maturation requires homotypic fusion. *Cell* 146:303-317 (2011).
10. VI Korolchuk, S Saiki, M Lichtenberg, FH Siddiqi, EA Roberts, S Imarisio, L Jahreiss, S Sarkar, M Futter, FM Menzies, CJ O’Kane, V Deretic & **DC Rubinsztein**. Lysosomal positioning coordinates cellular nutrient responses. *Nature Cell Biol.* 13:453-460 (2011).
11. AR Winslow, C-W Chen, S Corrochano, A Acevedo-Arozena, DE Gordon, A A Peden, M Lichtenberg, FM Menzies, B Ravikumar, S Imarisio, S Brown, CJ O’Kane & **DC Rubinsztein**. Alpha-synuclein impairs macroautophagy: implications for Parkinson’s disease. *J. Cell Biol.* 190:1023-1037 (2010).
12. B Ravikumar, K Moreau, L Jahreiss, C Puri & **DC Rubinsztein**. Plasma membrane contributes to the formation of pre-autophagosomal structures. *Nature Cell Biol.* 12:747-757 (2010).
13. VI Korolchuk, A Mansilla, FM Menzies & **DC Rubinsztein**. Autophagy inhibition compromises degradation of ubiquitin-proteasome pathway substrates. *Mol. Cell* 33:517-527 (2009).
14. A Williams, S Sarkar, P Cuddon, EK Tofi, S Saiki, FH. Siddiqi, L Jahreiss, A Fleming, D Pask, P Goldsmith, CJ O’Kane, RA Floto & **DC Rubinsztein**. Novel targets for Huntington’s disease in an mTOR-independent autophagy pathway. *Nature Chemical Biology* 4: 295-305 (2008).
15. S Sarkar, EO Perlstein, S Imarisio, S Pineau, A Cordenier, RL Maglathlin, JA Webster, TA Lewis, CJ O’Kane, SL Schreiber & **DC Rubinsztein**. Small molecules enhance autophagy and reduce toxicity in Huntington’s disease models. *Nature Chem. Biol.* 3, 331-338 (2007).
16. S Sarkar, RA Floto, Z Berger, S Imarisio, A Cordenier, M Pasco, LJ Cook & **DC Rubinsztein**. Lithium induces autophagy by inhibiting inositol monophosphatase. *J. Cell Biol.* 170: 1101-1111 (2005).
17. B Ravikumar, A Acevedo-Arozena, S Imarisio, Z Berger, C Vacher, CJ O’Kane, SDM Brown & **DC Rubinsztein** (2005). Dynein mutations impair autophagic clearance of aggregate-prone proteins. *Nature Genet.* 37:771-776.

18. JE Davies, L Wang, L Garcia-Oroz, LJ Cook, C Vacher, DG O'Donovan & **DC Rubinsztein**. Doxycycline attenuates and delays toxicity of the oculopharyngeal muscular dystrophy mutation in transgenic mice. *Nature Med.* 6:672-677 (2005).
19. B Ravikumar, C Vacher, Z Berger, JE Davies, S Luo, LG Oroz, F Scaravilli, DF Easton, R Duden, CJ O'Kane & **DC Rubinsztein**. mTOR inhibition induces autophagy and reduces toxicity of the Huntington's disease mutation in *Drosophila* and mouse models. *Nature Genet.* 36: 585-595 (2004).
20. B Ravikumar, R Duden & **DC Rubinsztein**. Aggregate-prone proteins with polyglutamine and polyalanine expansions are degraded by autophagy. *Hum. Mol. Genet.* 11:1107-1117 (2002).