BIOGRAPHICAL SKETCH

NAME: Nigel Waterhouse

POSITION TITLE: Microscopy Facility Manager

EDUCATION/TRAINING:

| INSTITUTION AND LOCATION | DEGREE | Completion Date | FIELD OF STUDY |
| --- | --- | --- | --- |
| University College Dublin, Ireland  The University of Queensland | BSc (Hons)  PhD | 1992  1998 | Biochemistry  Cancer Biology |

**A. Personal Statement**

I am a medical research scientist with 26 years’ experience. I completed my Bachelor of Science in Biochemistry at the University College Dublin (Dublin, Ireland) and my PhD at the Queensland Institute of Medical Research (Brisbane, Australia) and the Department of Surgery at the University of Queensland (Brisbane, Australia) followed by post-doctoral fellowships at the La Jolla Institute for Allergy and Immunology (San Diego, USA) and the Peter MacCallum Cancer Centre (Melbourne, Australia). I moved to the Mater Medical Research Institute (Brisbane, Australia) to run the Apoptosis and Cytotoxicity Laboratory where I was appointed Associate Professor and co-led the Cancer Biology Program with Dr. John Hooper. During my research, I helped elucidate key mechanisms of cell death triggered by radiation, chemotherapy, and immunotherapy. I was awarded more than $9 million in project grants and fellowships including a Peter Doherty Fellowship, an RD Wright Fellowship and a Career Development Award from the National Health and Medical Research Council (NHMRC), and a Futures Fellowship from the Australian Research Council (ARC).

I am currently the Microscopy Facility Manager at QIMR Berghofer Medical Research Institute where I manage a large laboratory equipped with state-of-the-art equipment for imaging cells and tissue including confocal microscopes, intravital imaging, super resolution microscopy, time lapse imaging, and spatial omics. My role involves managing staff, ensuring staff and user safety, maintenance of multi-million-dollar equipment, maintenance of budgets and cost recovery, planning for new equipment purchases, executing tenders, reporting to senior management, providing training and education, maintaining a high knowledge of the research environment, assisting with experimental design, assisting with clinical trials, and delivering medical research outcomes.

**B. Positions, Scientific Appointments, and Honors**

Positions

1998 - 2001 **Post-doctoral Fellow,** La Jolla Institute for Allergy and Immunology, 10355 Science Centre Drive, San Diego, California

2001 - 2009 **Research Officer and** **Senior Research Officer,** Cancer Cell Death Laboratory, Cancer Immunology Program, Peter MacCallum Cancer Centre, Vic.

2008 - 2009 **New Investigator,** Apoptosis and Natural Toxicity Laboratory, Cancer Therapeutics Program, Peter MacCallum Cancer Centre, Vic.

2009 – 2014 **Senior Research Fellow and Head of the Apoptosis and Cytotoxicity Laboratory**, Mater Medical Research Institute Level 3, Aubigny Place, Raymond Terrace, South Brisbane, Qld 4101 and Level 4, Translational Research Institute, Kent Road, Wooloongabba, Australia.

2013 – 2014 **Senior Microscopist & Cell Biologist,** Flow Cytometry and Imaging, QIMR Berghofer Medical Research Institute, 300 Herston Road, Herston, QLD 4006, Australia

2014 – Current **Microscopy Facility Manager,** Flow Cytometry and Imaging Facility, QIMR Berghofer Medical Research Institute, 300 Herston Road, Herston, QLD 4006, Australia

Appointments

2006 - 2010 **Honorary Fellow,** Department of Pathology, University of Melbourne, Parkville, Melbourne, Vic, Australia.

2010 – 2016 Associate Professor, Department of Medicine, The University of Queensland, Brisbane, Qld, Australia

Honours

### 1997 Travel Award. The Queensland Cancer Council

### 2002 Travel Award. Ian Potter Foundation, Australia

### 2002 Post Doctoral Award. AMRAD Pharmacia

### 2001-2005 Peter Doherty Fellowship, National Health and Medical Research Council, Australia

### 2005-2009 RD Wright Fellowship, National Health and Medical Research Council, Australia

2009-2012 Career Development Award Level 2, National Health and Medical Research Council, Australia

2010-2013 Futures Fellowship Level 2, Australian Research Council

### 2012 Julia Wilkins Research Award. Leukemia Foundation Qld

2020-2022 Executive, Light Microscopy Australia

### 2022- to date Executive, Australian Microscopy and Microanalysis Society

**C. Contributions to Science**

Record of research achievement – October 2024

Fellowships 4

Project grants 10

Equipment grants 5

Total publications 88

Total citations 11,104

H-score (48 publications with more than 48 citations) 48

<https://scholar.google.com.au/citations?user=M6smhgUAAAAJ&hl=en&oi=ao>

Publications

### THESIS AND GOVERNMENT PUBLICATIONS:

NW 1) Bowling, F; **Waterhouse, N**; Thomas, M; McDermott, B; Venter, D; McWhinney, A; Jansen, E; Crowley, L; Christensen, M; Scott, A; Price, G; Gallagher, R; Wallis, T; Bowlay, M; Marfell, B; Warner, R. Report on the molecular investigations into the jet fuel and solvent exposure in the DeSeal/ReSeal programme. **(2014)** *Hansaard Australia*.

NW 2) **Waterhouse, NJ.** Proteolytic events in apoptosis. **(1998)** *Thesis - University of Queensland*.

### SEMINAL PUBLICATIONS:

NW 3) (\*Joint first author) Goldstein, JC\*; **Waterhouse, NJ\*;** Juin, P; Evan, GI; Green, DR. The coordinate release of cytochrome c during apoptosis is rapid, complete and kinetically invariant. **(2000)** *Nature Cell Biology* 2:3. 156-162

NW4) Colell, A; Ricci, J-E; Tait, S; Milasta, S; Maurer, U; Bouchier-Hayes, L; Fitzgerald, P; Guio-Carrion, A; **Waterhouse, NJ**; Li, CW; Mari, B; Barbry, P; Newmeyer, DD; Beere HM; Green DR. GAPDH and autophagy preserve survival after apoptotic cytochrome c release in the absence of caspase activation. **(2007)** *Cell* 129:5. 983-997.

### RESEARCH PUBLICATIONS:

NW5) Lemech C, Dredge K, Bampton D, Hammond E, Clouston A, **Waterhouse NJ**, Stanley AC, Leveque-El Mouttie L, Chojnowski GM, Haydon A, Pavlakis N, Burge M, Brown MP, Goldstein D.  Phase Ib open-label, multicenter study of pixatimod, an activator of TLR9, in combination with nivolumab in subjects with microsatellite-stable metastatic colorectal cancer, metastatic pancreatic ductal adenocarcinoma and other solid tumors. (2023) *J Immunother Cancer.* 11:1:e006136.

NW 6) Stannard, KA; Lemoine, S; **Waterhouse, NJ**; Vari, F; Chatenoud, L; Gandhi, MK; Martinet, L; Smyth, MJ; Guillerey, C. Human peripheral blood DNAM-1neg NK cells are a terminally differentiated subset with limited effector functions. **(2019)** *Blood advances* 3:11. 1681-1694

NW 7) Bhat, P; Bergot, A-S; **Waterhouse, N**; Frazer, IH. Human papillomavirus E7 oncoprotein expression by keratinocytes alters the cytotoxic mechanisms used by CD8 T cells. **(2018)** *Oncotarget* 9:5. 6015

NW 8) Peters, AA; Jamaludin, SYN; Yapa, KTDS; Chalmers, S; Wiegmans, AP; Lim, HF; Milevskiy, MJG; Azimi, I; Davis, FM; Northwood, KS; Pera, E; Marcial, DL; Dray, E; **Waterhouse, NJ;** Cabot, PJ; Gonda, TJ; Kenny, PA; Brown, MA; Khanna KK; Robersts-Thomson, SJ; Monteith GR. Oncosis and apoptosis induction by activation of an overexpressed ion channel in breast cancer cells. **(2017)** *Oncogene* 36:46. 6490-6500

NW9) Bhat, P; Leggatt, G; **Waterhouse, N**; Frazer, IH. Interferon-γ derived from cytotoxic lymphocytes directly enhances their motility and cytotoxicity. **(2017)** *Cell death & disease* 8:6. e2836-e2836

NW10) Prue, RL; Vari, F; Radford, KJ; Tong, H; Hardy, MY; D’Rozario, R; **Waterhouse, NJ**; Rossetti, T; Coleman, R; Tracey, C; Goossen, H; Gounder, V; Crosbie, G; Hancock, S; Diaz-Guilas, S; Mainwaring, P; Swindle, P; Hart, DNJ. A phase I clinical trial of CD1c (BDCA-1)+ dendritic cells pulsed with HLA-A\* 0201 peptides for immunotherapy of metastatic hormone refractory prostate cancer. **(2015)** *Journal of immunotherapy* 38:2. 71-76

NW11) Bird, CH; Christensen, Melinda E; Mangan, MSJ; Prakash, Monica Devi; Sedelies, Karin A; Smyth, MJ; Harper, I; **Waterhouse, NJ;** Bird, PI. The granzyme B-Serpinb9 axis controls the fate of lymphocytes after lysosomal stress. **(2014)** *Cell Death & Differentiation* 21:6. 876-887

NW12) Susanto, O; Stewart, SE; Voskoboinik, I; Brasacchio, D; Hagn, M; Ellis, S; Asquith, S; Sedelies, KA; Bird, PI; **Waterhouse, NJ**; Trapani, JA. Mouse granzyme A induces a novel death with writhing morphology that is mechanistically distinct from granzyme B-induced apoptosis. **(2013)** *Cell Death & Differentiation* 20:9. 1183-1193

NW13) Jeffery, JM; Grigoriev, I; Poser, I; van der Horst, A; Hamilton, N; **Waterhouse, N**; Bleier, J; Subramaniam, VN; Maly, IV; Akhmanova, A; Khanna, KK. Centrobin regulates centrosome function in interphase cells by limiting pericentriolar matrix recruitment. **(2013)** *Cell Cycle* 12:6. 899-906

NW14) Christensen, ME; Sinfield, LJ; Cullup, H; **Waterhouse, NJ**; Atkinson, K; Rice, AM. Environmental conditions are important for establishing and evaluating pre-clinical models of GVHD. **(2012)** *Bone marrow transplantation* 47:4. 607-609

NW15) Sutton, VR; Sedelies, K; Dewson, G; Christensen, ME; Bird, PI; Johnstone, RW; Kluck, RM; Trapani, JA; **Waterhouse, NJ**. Granzyme B triggers a prolonged pressure to die in Bcl-2 overexpressing cells, defining a window of opportunity for effective treatment with ABT-737. **(2012)** *Cell death & disease* 3:7. e344-e344

NW16) Freeman, LM; Lam, A; Petcu, E; Smith, R; Salajegheh, A; Diamond, P; Zannettino, A; Evdokiou, A; Luff, J; Wong, P-F; Khalil, D; **Waterhouse, NJ**; Vari, F; Rice, AM; Catley, L; Hart, DNJ; Vuckovic, S. Myeloma-induced alloreactive T cells arising in myeloma-infiltrated bones include double-positive CD8+ CD4+ T cells: evidence from myeloma-bearing mouse model. **(2011)** *The Journal of Immunology* 187:8. 3987-3996

NW17) Adams, MN; Christensen, ME; He, Y; **Waterhouse, NJ;** Hooper, JD. The role of palmitoylation in signalling, cellular trafficking and plasma membrane localization of protease-activated receptor-2. **(2011)** *PLoS One* 6:11. e28018

NW18) Wortmann, A; He, Y; Christensen, ME; Linn, M; Lumley, JW; Pollock, PM; **Waterhouse, NJ**; Hooper, JD. Cellular settings mediating Src Substrate switching between focal adhesion kinase tyrosine 861 and CUB-domain-containing protein 1 (CDCP1) tyrosine 734. **(2011)** *Journal of Biological Chemistry* 286:49. 42303-42315

NW19) Sheng, YH; Lourie, R; Lindén, SK; Jeffery, PL; Roche, D; Tran, TV; Png, CW; **Waterhouse, N**; Sutton, P; Florin, THJ; McGuckin, MA. The MUC13 cell-surface mucin protects against intestinal inflammation by inhibiting epithelial cell apoptosis. **(2011)** *Gut* 60:12. 1661-1670

NW20) Christensen, ME; Turner, BE; Sinfield, LJ; Kollar, K; Cullup, H; **Waterhouse, NJ**; Hart, DNJ; Atkinson, K; Rice, AM. Mesenchymal stromal cells transiently alter the inflammatory milieu post-transplant to delay graft-versus-host disease. **(2010)** *Haematologica* 95:12. 2102-2110

NW21) Oliaro, J; Van Ham, V; Sacirbegovic, F; Pasam, A; Bomzon, Z; Pham, K; Ludford-Menting, MJ; **Waterhouse, NJ;** Bots, M; Hawkins, ED; Watt, SV; Cluse, LA; Clarke, CJP; Izon, DJ; Chang, JT; Thompson, N; Gu, M; Johnstone, RW; Smyth, MJ; Humbert, PO; Reiner, SL; Russell, SM. Asymmetric cell division of T cells upon antigen presentation uses multiple conserved mechanisms. **(2010)** *The Journal of Immunology* 185:1. 367-375

NW22) Jenkins, MR; La Gruta, NL; Doherty, Peter C; Trapani, JA; Turner, SJ; **Waterhouse, NJ.** Visualizing CTL activity for different CD8+ effector T cells supports the idea that lower TCR/epitope avidity may be advantageous for target cell killing. **(2009)** *Cell Death & Differentiation* 16:4. 537-542

NW23) Sedelies, KA; Ciccone, A; Clarke, CJP; Oliaro, J; Sutton, VR; Scott, FL; Silke, J; Susanto, O; Green, DR; Johnstone, RW; Bird, PI; Trapani, JA; **Waterhouse, NJ**. Blocking granule-mediated death by primary human NK cells requires both protection of mitochondria and inhibition of caspase activity. **(2008)** *Cell Death & Differentiation* 15:4. 708-717

NW24) Gueven, N; Becherel, OJ; Howe, O; Chen, P; Haince, JF; Ouellet, ME; Poirier, GG; **Waterhouse, N;** Fusser, M; Epe, B, JM de; Murcia, G de; McGowan, CH; Parton, R; Mothersill, C; Grattan-Smith, P; Lavin MF. A novel form of ataxia oculomotor apraxia characterized by oxidative stress and apoptosis resistance. **(2007)** *Cell Death & Differentiation* 14:6. 1149-1161

NW25) Sutton, VR; **Waterhouse, NJ**; Browne, KA; Sedelies, K; Ciccone, A; Anthony, D; Koskinen, A; Mullbacher, A; Trapani, JA. Residual active granzyme B in cathepsin C–null lymphocytes is sufficient for perforin-dependent target cell apoptosis. **(2007)** *The Journal of Cell Biology* 176:(4). 425-433

NW26) Oliaro, J; Pasam, A; **Waterhouse, NJ**; Browne, KA; Ludford-Menting, MJ; Trapani, JA; Russell, SM. Ligation of the cell surface receptor, CD46, alters T cell polarity and response to antigen presentation. **(2006)** *Proceedings of the National Academy of Sciences* 103:49. 18685-18690

NW27) **Waterhouse, NJ**; Sedelies, KA; Trapani, JA. Role of Bid-induced mitochondrial outer membrane permeabilization in granzyme B-induced apoptosis. **(2006)** *Immunology and Cell Biology* 84:1. 72-78

NW28) **Waterhouse, NJ;** Sedelies, Karin A; Sutton, VR; Pinkoski, MJ; Thia, KY; Johnstone, R; Bird, PI; Green, DR; Trapani, JA. Functional dissociation of ΔΨm and cytochrome c release defines the contribution of mitochondria upstream of caspase activation during granzyme B-induced apoptosis. **(2006)** *Cell Death & Differentiation* 13:4. 607-618

NW29) **Waterhouse, NJ;** Sutton, VR; Sedelies, KA; Ciccone, A; Jenkins, M; Turner, SJ; Bird, PI; Trapani, JA. Cytotoxic T lymphocyte–induced killing in the absence of granzymes A and B is unique and distinct from both apoptosis and perforin-dependent lysis. **(2006)** *The Journal of Cell Biology* 173:1. 133-144

NW30) **Waterhouse, NJ**; Sedelies, KA; Browne, KA; Wowk, ME; Newbold, A; Sutton, VR; Clarke, CJP; Oliaro, J; Lindemann, RK; Bird, PI; Johnstone, RW; Trapani, JA. A central role for Bid in granzyme B-induced apoptosis. **(2005)** *Journal of Biological Chemistry* 280:6. 4476-4482

NW31) Ludford-Menting, MJ; Oliaro, J; Sacirbegovic, F; Cheah, ET-Y; Pedersen, N; Thomas, SJ; Pasam, A; Iazzolino, R; Dow, LE; **Waterhouse, NJ**; Murphy, A; Ellis, S; Smyth, MJ; Kershaw, MH; Darcy, PK; Humbert, PO; Russell, SM. A network of PDZ-containing proteins regulates T cell polarity and morphology during migration and immunological synapse formation. **(2005)** *Immunity* 22:6. 737-748

NW32) Kelly, JM; **Waterhouse, NJ**; Cretney, E; Browne, KA; Ellis, S; Trapani, JA; Smyth, MJ. Granzyme M mediates a novel form of perforin-dependent cell death. **(2004)** *Journal of Biological Chemistry* 279:21. 22236-22242

NW33) Schuler, M; Maurer, U; Goldstein, JC; Breitenbücher, F; Hoffarth, S; **Waterhouse, NJ**; Green, DR. p53 triggers apoptosis in oncogene-expressing fibroblasts by the induction of Noxa and mitochondrial Bax translocation. **(2003)** *Cell Death & Differentiation* 10:4. 451-460

NW34) Warrener, R; Beamish, H; Burgess, A; **Waterhouse, NJ**; Giles, N; Fairlie, DP; Gabrielli, B. Tumor cell-specific cytotoxicity by targeting cell cycle checkpoints. **(2003)** *The FASEB journal* 17:(11). Jan-21

NW35) Peart, MJ; Tainton, KM; Ruefli, AA; Dear, AE; Sedelies, KA; O’Reilly, LA; **Waterhouse, NJ**; Trapani, JA; Johnstone, RW. Novel mechanisms of apoptosis induced by histone deacetylase inhibitors. **(2003)** *Cancer Research* 63:15. 4460-4471

NW36) **Waterhouse, NJ**; Goldstein, JC; von Ahsen, O; Schuler M, Newmeyer DD, Green DR. Cytochrome c maintains mitochondrial transmembrane potential and ATP generation after outer mitochondrial membrane permeabilization during the apoptotic process. **(2001)** The *Journal of Cell Biology* 153:2. 319-328

NW37) Pinkoski, MJ; **Waterhouse, NJ**; Heibein, JA; Wolf, BB; Kuwana, T; Goldstein, JC; Newmeyer, DD; Bleackley, RC; Green, DR. Granzyme B-mediated apoptosis proceeds predominantly through a Bcl-2-inhibitable mitochondrial pathway. **(2001)** *Journal of Biological Chemistry* 276:15. 12060-12067

NW38) Pinkoski, Michael J; **Waterhouse, NJ**; Heibein, Jeffrey A; Wolf, Beni B; Kuwana, Tomomi; Goldstein, Joshua C; Newmeyer, Donald D; Bleackley, R Chris; Green, Douglas R. Granzyme B-mediated apoptosis proceeds predominantly through a Bcl-2-inhibitable mitochondrial pathway. **(2001)** *Journal of Biological Chemistry* 276:15. 12060-12067

NW39) **Waterhouse, NJ**; Goldstein, Joshua C; Von Ahsen, Oliver; Schuler, Martin; Newmeyer, Donald D; Green, Douglas R. Cytochrome c maintains mitochondrial transmembrane potential and ATP generation after outer mitochondrial membrane permeabilization during the apoptotic process. **(2001)** *The Journal of Cell Biology* 153:2. 319-328

NW40) Zimmermann, Katja C; **Waterhouse, NJ**; Goldstein, Joshua C; Schuler, Martin; Green, Douglas R. Aspirin induces apoptosis through release of cytochrome c from mitochondria. **(2000)** *Neoplasia* 2:6. 505-513

NW41) Finucane, Deborah M; **Waterhouse, NJ**; Amarante-Mendes, GP; Cotter, TG; Green, Douglas R. Collapse of the inner mitochondrial transmembrane potential is not required for apoptosis of HL60 cells. **(1999)** *Experimental Cell Research* 251:1. 166-174

NW42) Finucane, DM; Bossy-Wetzel, E; **Waterhouse, NJ**; Cotter, TG; Green, DR. Bax-induced caspase activation and apoptosis via cytochromec release from mitochondria is inhibitable by Bcl-xL. **(1999)** *Journal of Biological Chemistry* 274:4. 2225-2233

NW43) Harvey, KF; Harvey, NL; Michael, JM; Parasivam, G; **Waterhouse, N**; Alnemri, ES; Watters, D; Kumar, S. Caspase-mediated cleavage of the ubiquitin-protein ligase Nedd4 during apoptosis. **(1998)** *Journal of Biological Chemistry* 273:22. 13524-13530

NW44) **Waterhouse, NJ**; Finucane, DM; Green, DR; Elce, JS; Kumar, S; Alnemri, ES; Litwack, G; Khanna, KK; Lavin, MF; Watters, DJ. Calpain activation is upstream of caspases in radiation-induced apoptosis. **(1998)** *Cell Death & Differentiation* 5:12. 1051-1061

NW45) **Waterhouse, N**; Kumar, S; Song, Q; Strike, P; Sparrow, L; Dreyfuss, G; Alnemri, ES; Litwack, G; Lavin, M; Watters, D. Heteronuclear ribonucleoproteins C1 and C2, components of the spliceosome, are specific targets of interleukin 1β-converting enzyme-like proteases in apoptosis. **(1996)** *Journal of Biological Chemistry* 271:46. 29335-29341

### REVIEWS AND COMMENTARIES:

NW46) Shakya, R; Nguyen, TH; **Waterhouse, N;** Khanna, R. Immune contexture analysis in immuno-oncology: applications and challenges of multiplex Fuorescent immunohistochemistry. **(2020)** *Clinical & Translational Immunology 9*:e1183. 1-26

NW47) Christensen, ME; Wong, W WL; Waibel, M; Johnstone, RW; Waterhouse, NJ. Cell death research, on an island girt by sea. **(2012)** *Cell Death & Differentiation* 19:(6). 1090-1091

NW48) Baran, Katherine; Voskoboinik, Ilia; **Waterhouse, NJ**; Sutton, VR; Trapani, Joseph A. Cytotoxic Granules House Potent Proapoptotic Toxins Critical for Antiviral Responses and Immune Homeostasis. **(2011)** *Apoptosis: Physiology and Pathology*. 106

NW49) **Waterhouse, NJ**; Susanto, Olivia; Sedelies, Karin A; Trapani, Joseph A. Immunity, Granzymes and Cell Killing. **(2010)** *eLS*.

NW50) Christensen, ME; **Waterhouse, NJ**. A reactive response to granzyme B. **(2010)** *Immunology and cell biology* 88:5. 500

NW51) Susanto, O; Sedelles, K; Trapani, J; **Waterhouse, N**. Movement of mitochondria during CTL-mediated killing Response. **(2009)** *BLOOD* 113:7. 1611-1612

NW52) Susanto, O; Sedelies, K; Trapani, J; **Waterhouse, N.** Granule-mediated death by cytotoxic lymphocytes does not require mitochondrial polarization toward the immunologic synapse in target cells. **(2009)** *Blood, The Journal of the American Society of Hematology* 113:7. 1609-1611

NW53) **Waterhouse, NJ**; and Trapani, JA. H is for helper: granzyme H helps granzyme B kill adenovirus-infected cells. **(2007)** *Trends in immunology* 28:(9). 373-375

NW54) **Waterhouse, NJ**; Pinkoski, MJ. Calreticulin: raising awareness of apoptosis. **(2007)** *Apoptosis* 12:4. 631-634

NW55) **Waterhouse, NJ**; Oliaro, J; Pinkoski, MJ. A'polarized'look at [alpha]-tubulin cleavage by granzyme B. **(2006)** *Cell death and differentiation* 13:11. 1839

NW56) Pinkoski, MJ; Waterhouse, NJ; Green, DR. Mitochondria, apoptosis and autoimmunity. **(2006)** *Apoptosis and Its Relevance to Autoimmunity* 9. 55-73

NW57) Oliaro, J; Waterhouse, NJ; Russell, SM. A role for CD46 in immunological synapse formation and lymphocyte function. **(2005)** *Tissue Antigens* 66:5. 505-506

NW58) Waterhouse, NJ; Sedelies, KA; Clarke, CJP. Granzyme B; the chalk-mark of a cytotoxic lymphocyte. **(2004)** *Journal of translational medicine* 2:1. 36

NW59) Waterhouse, NJ; Clarke, CJP; Sedelies, KA; Teng, MW; Trapani, JA. Cytotoxic lymphocytes; instigators of dramatic target cell death. **(2004)** *Biochemical pharmacology* 68:6. 1033-1040

NW60) Waterhouse, NJ; Ricci, J-E; Beere, HM; Trapani, JA; Green, DR. Mitochondrial outer-membrane permeabilization in apoptosis. **(2003)** *Cell Proliferation and Apoptosis.* 185-200

NW61) Waterhouse, NJ. The cellular energy crisis: mitochondria and cell death. **(2003)** *Medicine and science in sports and exercise* 35:1. 105-110

NW62) Ricci, JE; Waterhouse, N; Green, DR. Mitochondrial functions during cell death, a complex (IV) dilemma. **(2003)** *Cell Death & Differentiation* 10:5. 488-492

NW63) Waterhouse, NJ; Trapani, JA. CTL: Caspases Terminate Life, but that's not the whole story. **(2002)** *Tissue antigens* 59:3. 175-183

NW64) Waterhouse, NJ; Ricci, J-E; Green, DR. And all of a sudden it's over: mitochondrial outer-membrane permeabilization in apoptosis. **(2002)** *Biochimie* 84:2-3. 113-121

NW65) Waterhouse, N; MacFarlane, M. A Dead Cool Meeting in Keystone 2001. **(2001)**8:11. 1125-1130

NW66) Waterhouse, NJ; Goldstein, JC; Kluck, RM; Newmeyer, DD; Green, DR. The (Holey) study of mitochondria in apoptosis. **(2001)** *Methods in cell biology* 66. 365-391

NW67) Von Ahsen, O; Waterhouse, NJ; Kuwana, T; Newmeyer, DD; Green, DR. The ‘harmless’ release of cytochrome c. **(2000)** *Cell Death & Differentiation* 7:12. 1192-1199

NW68) Waterhouse, NJ; Green, DR. Mitochondria and apoptosis: HQ or high-security prison? **(1999)** *Journal of clinical immunology* 19:6. 378-387

NW69) Watters, D; Waterhouse, N. Proteolytic targets in cell death. **(1998)** *Apoptosis: Mechanisms and Role in Disease*. 25-44

### METHODS AND PROTOCOLS

NW70) Crowley, LC; Marfell, BJ; Scott, AP; Boughaba, JA; Chojnowski, G; Christensen, ME; **Waterhouse, NJ.** Dead cert: Measuring cell death. **(2016)** *Cold Spring Harbor Protocols* (12). pdb. top070318

NW71) Crowley, LC; Christensen, ME; **Waterhouse, NJ**. Measuring mitochondrial transmembrane potential by TMRE staining. **(2016)** *Cold Spring Harbor Protocols* (12). pdb. prot087361

NW72) Crowley, LC; Marfell, BJ; Scott, AP; **Waterhouse, NJ.** Analysis of cytochrome c release by immunocytochemistry. **(2016)** *Cold Spring Harbor Protocols* (12). pdb. prot087338

NW73) Crowley, LC; Marfell, BJ; Scott, AP; **Waterhouse, NJ**. Quantitation of apoptosis and necrosis by annexin V binding, propidium iodide uptake, and flow cytometry. **(2016)** *Cold Spring Harbor Protocols* (11). pdb. prot087288

NW74) Crowley, LC; **Waterhouse, NJ.** Detecting cleaved caspase-3 in apoptotic cells by flow cytometry. **(2016)** *Cold Spring Harbor Protocols* (11). pdb. prot087312

NW75) Crowley, LC; Marfell, BJ; **Waterhouse, NJ.** Detection of DNA fragmentation in apoptotic cells by TUNEL. **(2016)** *Cold Spring Harbor Protocols* 2016:(10). pdb. prot087221

NW76) Crowley, LC; Chojnowski, G; **Waterhouse, NJ.** Measuring the DNA content of cells in apoptosis and at different cell-cycle stages by propidium iodide staining and flow cytometry. **(2016)** *Cold Spring Harbor Protocols* 2016:(10). pdb. prot087247

NW77) Crowley, LC; Scott, AP; Marfell, BJ; Boughaba, JA; Chojnowski, G; **Waterhouse, NJ**. Measuring cell death by propidium iodide uptake and flow cytometry. **(2016)** *Cold Spring Harbor protocols* (7). pdb. prot087163

NW78) Crowley, LC; Marfell, BJ; **Waterhouse, NJ.** Morphological analysis of cell death by cytospinning followed by rapid staining. **(2016)** *Cold Spring Harbor Protocols* 2016:(9). pdb. prot087197

NW79) Crowley, LC; Marfell, BJ; Waterhouse, NJ. Analyzing cell death by nuclear staining with Hoechst 33342. **(2016)** *Cold Spring Harbor Protocols* 2016:(9). pdb. prot087205

NW80) Crowley, LC; Christensen, ME; Waterhouse, NJ. Measuring survival of adherent cells with the colony-forming assay. **(2016)** *Cold Spring Harbor Protocols* 2016:(8). pdb. prot087171

NW81) Crowley, LC; Waterhouse, NJ. Measuring survival of hematopoietic cancer cells with the colony-forming assay in soft agar. **(2016)** *Cold Spring Harbor Protocols* 2016:(8). pdb. prot087189

NW82) Crowley, LC; Marfell, BJ; Christensen, ME; Waterhouse, NJ. Measuring cell death by trypan blue uptake and light microscopy. **(2016)** *Cold Spring Harbor Protocols* 2016:(7). pdb. prot087155

NW83) Crowley, LC; Marfell, BJ; Scott, AP; Waterhouse, NJ. Triggering apoptosis in hematopoietic cells with cytotoxic drugs. **(2016)** *Cold Spring Harbor Protocols* 2016:(7). pdb. prot087130

NW84) Crowley, LC; Waterhouse, NJ. Triggering death of adherent cells with ultraviolet radiation. **(2016)** *Cold Spring Harbor Protocols* 2016:(7). pdb. prot087148

NW85) Christensen, ME; Jansen, ES; Sanchez, W; **Waterhouse, NJ**. Flow cytometry based assays for the measurement of apoptosis-associated mitochondrial membrane depolarisation and cytochrome c release. **(2013)** *Methods* 61:2. 138-145

NW86) Sutton, VR; **Waterhouse, NJ**; Baran, K; Browne, K; Voskoboinik, I; Trapani, JA. Measuring cell death mediated by cytotoxic lymphocytes or their granule effector molecules. **(2008)** *Methods* 44:(3). 241-249

NW87) **Waterhouse, NJ**; Steel, R; Kluck, R; Trapani, JA. Assaying cytochrome C translocation during apoptosis. **(2004)** *Signal Transduction Protocols*. 307-313

NW88) **Waterhouse, NJ**; Trapani, JA. A new quantitative assay for cytochrome c release in apoptotic cells. **(2003)** *Cell Death & Differentiation* 10:7. 853-855