

Colleen Jackson-Cook, PhD



Professor, Pathology, Human & Molecular Genetics, and OB/GYN
Director, Molecular Cytogenetics Lab
Division of Molecular Diagnostics
Department of Pathology
Virginia Commonwealth University 1985-present
Program Director, LGG Fellowship Training Program
Virginia Commonwealth University 2015-present
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Licenses & Certifications

Board Certifications

American Board of Medical Genetics Clinical Cytogeneticist
American Board of Medical Genetics PhD Medical Geneticist

Education

Postdoctoral Education

Fellowship in Clinical Cytogenetics and Medical Genetics
Virginia Commonwealth University, Richmond, VA 1985-1988

Graduate Education

PhD, Human Genetics
Virginia Commonwealth University Richmond, VA 1980-1985

MS, Biology
West Virginia University Morgantown, WV 1978-1980

BS, Biology and Education University of Charleston Charleston, WV 1974-1978

Awards

1999 - 2003, 2005, 2007 - 2015, 2017, 2019	Excellence in Teaching MI Students (High Evaluations)
2004, 2006, 2017, 2018, 2020	Outstanding Teacher Award for Best Teacher, M1 Human Genetics Course
2000, 2004, 2013, 2017, 2018, 2019	Outstanding Teacher Award, Department of Human Genetics
2005	Virginia Commonwealth University Alumni Star Award (Humanitarian Activities)
1992	University of Charleston, Founding Fellow Gallery of Outstanding Alumni Achievement
1985	American Society of Human Genetics Predoctoral Research Award
1985	National Outstanding Ph.D. Dissertation Competition, Finalist
1984	Roscoe D. Hughes Award for Excellence in Human Genetics

Virginia Commonwealth University and Medical Center Appointments

Professor of Pathology, Human & Molecular Genetics, and Obstetrics & Gynecology

Director Molecular Cytogenetics Lab

Recent VCU Service

Chair 2021	VCU Promotion and Tenure Appeal Committee
2019 - 2021	VCU Promotion and Tenure Appeal Committee
2018	Promotion Committee for Azeddine Atfi
2018	Promotion Committee for Adele Kraft
2017	Promotion Committee for Steven Smith
2014	Promotion Committee for Michael Idowu
2016	Promotion Committee for Catherine Dumur
2014	Promotion Committee for Kellie Archer
2014	Tenure and Promotion Committee for Timothy P York
2013	Tenure Committee for Charles Clevenger
2012	Promotion Committee for Devan and Sarkar
2011 - 2012	Pathology Chair Search Committee
2011	Promotion Committee for Lynne Elmore
	Genetics Departmental Curriculum Committee Genetics
	Departmental M1 Steering Committee Genetics Departmental
	Dental Education Committee
	Genetics ABMG Diagnostic Lab PhD Fellowship Committee
	Pathology Molecular Diagnostics Fellowship Committee

National Service

2019	ACGME LGG Milestones Committee
2021	ACGME LGG Milestone Evaluation Committee
2019 - 2020	NIH INCLUDE Down Syndrome Minimal Common Dataset Working Group
2019 - 2020	NIH INCLUDE Down Syndrome Community Outreach Working Group
2019 - 2020	NIH INCLUDE Down Syndrome Existing Cohorts Working Group
2019 - 2020	NIH INCLUDE Down Syndrome Biobanking & Specimen Collection Working Group

Professional Organizations

2010 - present	Affiliate Member of the Center for Biobehavioral Clinical Research
1993 - present	American College of Medical Genetics, Founding Fellow
1981 - present	American Society of Human Genetics
2017 - present	European Society of Human Genetics
1985 - present	American Cytogenomics Conference
2015 - present	Down Syndrome Medical Interest Group
2016 - present	T21RS (Trisomy 21 Research Society)
2012 - present	Cancer Cytogenomics Consortium

Professional Service

2022 - present	Board of Director for the American Board of Medical Genetics and Genomics
2013 - present	NIH/NICHD-Sponsored Down Syndrome Consortium, Invited Member
2013 - 2016	Down Syndrome Association of Greater Richmond Board of Directors
2000 - present	International Mosaic Down Syndrome Society, Scientific Advisor
2016-17, 2019-20	National Institute of Nursing Research Ad hoc Reviewer
2013	National Institute on Aging Special Emphasis Panel Ad hoc Reviewer
2013	Alzheimers and Related Diseases Research Award Fund Ad hoc Reviewer
2011	NIH Program Project Ad hoc Reviewer
2011	NIH RFA Ad hoc Reviewer
2010	NIH Program Project Ad hoc Reviewer
2010	Alzheimers and Related Diseases Research Award Fund (ARDRAF) Ad hoc Reviewer
2009	NIH Challenge Grant Reviewer
2006	Jeffress Research Grant Reviewer (Thomas F and Kate Miller Jeffress Memorial Trust)
2005	Alzheimers and Related Diseases Research Award Fund (ARDRAF) Ad hoc Reviewer
2004	Alzheimers and Related Diseases Research Award Fund (ARDRAF) Ad hoc Reviewer
1999	NIH Site Visitor for Program Project
1997	NIH Site Visitor for Program Project

Recent Grants

R03HD092640 Generation of isogenic trisomy 21 iPSC resource, Bhattacharyya A and Jackson-Cook C, Multi-PIs, 04/01/2018 – 02/31/2021, 0.6 calendar.

The primary aim of this proposal is to generate isogenic trisomy 21 and euploid iPSCs from somatic cells of individuals with mosaic DS and to make these cells readily available to other researchers who wish to better understand biological changes related to Down syndrome.

K08 HD092610 Depression, Stress, and Down Syndrome. A Multimethod Approach to Assessment. Ruth Brown (PI), Amstadter and Jackson-Cook (co-mentors), 04/01/2018 – 03/31/2023, \$746,444 total costs.

The primary research aim of this trainee application is to develop new tools for assessing depressive symptoms in people with intellectual disability, with a focus on people with Down syndrome. A secondary aim is to determine if epigenetic biomarkers can be identified that will assist with the recognition of depression in people with Down syndrome

Commonwealth Health Research Board. A new approach for detecting IGH translocations in hematologic malignancies, Jason Reed (PI), 07/01/2019-06/30/2020, 0.12 calendar.

The primary aim of this pilot project is to use nanosequencing technology to develop a new test to improve the efficiency of identifying rearrangements involving the IGH gene in patients with hematologic cancers.

Center for Innovative Technology. A nanotechnology approach for streamlining detection of prognostic translocations in multiple myeloma (MM). Jason Reed (PI), 06/20/2019 – 06/30/2020, 0.24 calendar.

The primary goal of this grant is to develop nanotechnology to improve the efficiency (reduced specimen use; cost; time) of identifying translocations in patients with multiple myeloma.

1R01AG037986-01 Epigenetic, Telomere & Chromosome Changes in Adult Twins Having Child Adversity, Jackson-Cook and York (Co-PIs), NIH/NIA, 9/1/10 – 8/31/2016, \$500,000 total costs, Co-PI, 0.36 calendar

The primary aim of this study is to determine if there are differences in the frequency and genomic location of DNA-based changes (chromosomal and/or epigenetic) that are present in adult twins (ages 40-55) who have a history of childhood sexual abuse, when compared to their genetically identical co-twins, who were not abused.

RNR0112667A Epigenetics and Psychoneurologic Symptoms in Women with Breast Cancer, Jackson-Cook and Lyon (Co-PIs), NIH/NINR, 9/29/10 - 7/31/16, \$3,368,295 total costs, Co-PI, 1.8 calendar

The primary aims of this proposal are to quantify the frequency of acquired chromosomal and epigenetic changes that arise during and following chemotherapy treatment and to determine if there is a relationship between the acquisition and/or persistence of fully characterized psychoneurologic symptoms with the acquisition/retention of genetic/epigenetic changes.

Feasibility of Extending Epigenetic Studies Beyond Lymphocytes For Elucidating The Biological Basis Of Psychoneurologic Symptoms in Women With Breast Cancer, Elmore (PI), Co-Investigator, VCU Presidential Research Incentive Program, \$50,000, 6/14/2011-6/13/2012.

Production and Distribution of a documentary Film to Inform Parents, Service Providers and Students about Down Syndrome, Jackson-Cook and Waters-Freyer (Co-PIs), Community Engagement Grant, VCU, 07/01/13-06/30/14, \$16,940, Co-PI.

The primary goal of this community-partnered project is to develop a documentary that will illustrate the spectrum of abilities seen in people with Down syndrome and provide answers to questions regarding their needs/aspirations. This project will bring about improvements in knowledge/service access for a diverse group of people, including parents or service providers, and students who will be future leaders in service fields.

Research Mentor:

Robert Wood Johnson Foundation, 2013-2016, Fellow, Candace Burton, Research project, "Biobehavioral Study of Teen Dating Violence".

The purpose of this fellowship is to train future nursing scientists who are skilled in clinical, academic, and research settings.

Recent Invited Presentations

"Mosaic Down Syndrome: An Overview for Parents and Research Update", International Mosaic Down Syndrome Research Retreat, Quarryville, PA, July 16, 2021.

"A new isogenic trisomy 21 iPSC resource", American Cytogenetics Conference, Hilton Head, SC, May 2021.

"Mosaics Down Syndrome 101", International Mosaic Down Syndrome Research and Retreat, Mason, Ohio, August 10, 2018.

"Reproductive senescence in Turner syndrome as a model of aging", Turner Resource Network Symposium "Turner Science in the 21st Century", Arlington, Virginia, July 15-17, 2018.

"Comparisons of Biological Patterns in the Trisomic and Disomic Cells from People with Mosaic Down Syndrome Unmask Cellular Differences Associated with

Trisomy 21", invited presentation, International Mosaic Down Syndrome Association Research Conference, June 2017.

"Increased Frequencies of Age-Related, Trisomy 21-Associated Somatic Chromosomal Instability and Epigenetic Alterations Unmasked Using an Isogenic Trisomic/Disomic Mosaic Model System", selected for short talk (platform) presentation, Keystone Symposia, Biology of Down Syndrome: Impacts Across the Biological Spectrum, January 2016.

"The genetic and epigenetic impact of trisomy 21: Insight from studies of people with mosaicism", The International Mosaic Down Syndrome Association Research Conference, October 2014.

"The cellular effects of trisomy 21: Knowledge gained from studies of individuals with mosaicism", The 3 21 e conference, March 2014.

"Mosaic Down Syndrome: Meeting the needs of **all** your families through research and support", Down Syndrome Affiliates in Action, Washington, DC, March 2014.

"Genetic and Epigenetic Alterations in People with Mosaicism for Trisomy 21/Down Syndrome", International Mosaic Down Syndrome Association Conference, San Antonio, Texas, July 12-14, 2013.

"What Are Biobanks And Are They A Worthy Investment?", International Mosaic Down Syndrome Association Conference, San Antonio, Texas, July 2013.

"Adult Identical Twins Discordant for a History of Childhood Sexual Abuse Show Higher Frequencies of Acquired Chromosomal Changes in the Abused Twins", American Cytogenetic Conference, San Antonio, Texas, April 2012.

"Research Studies on Mosaicism for Down Syndrome", International Society of Mosaic Down Syndrome Conference, Orlando, FL, July 2011.

Recent Publications

Peer Reviewed Publications

Rafferty K, Archer KJ, Turner K, Brown R, Jackson-Cook C. Trisomy 21-associated increases in chromosomal instability are unmasked by comparing isogenic trisomic/disomic leukocytes from people with mosaic Down syndrome. PLoS One. Jul 20;16(7):e0254806, 2021.

Lancaster EE, Lapato DM, Jackson-Cook C, Strauss JF 3rd, Roberson-Nay R, York TP. Maternal biological age assessed in early pregnancy is associated with gestational age at birth. *Sci Rep*. Jul 29;11(1):15440, 2021.

Saadeh-Jackson S, King K, Al Saif H, Jackson-Cook C, Schleede J, Couser NL. Eye, Ocular Adnexa, and Facial Manifestations of Tetrasomy 18p. *J Pediatr Ophthalmol Strabismus*. Nov-Dec;58(6):e44-e48, 2021.

Alhareeri AA, Archer, KJ, Fu H, PhD; Lyon DE, Elswick RK, Kelly DL, Starkweather AR, Elmore LW, **Jackson-Cook CK**. Telomere lengths in women treated for breast cancer show associations with chemotherapy, pain symptoms, and cognitive domain measures: A longitudinal study. *Breast Cancer Res*. 2020 Dec 4;22(1):137, 2020.

Gheghiani L, Wang L, Zhang Y, Moore X, Zhang J, Smith SC, Tian Y, Wang L, Turner K, **Jackson-Cook C**, Mukhopadhyay N, Fu Z: PLK1 induces chromosomal instability and overrides cell cycle checkpoints to drive tumorigenesis. *Cancer Res*. 2021 Mar 1;81(5):1293-1307.

Berg SH, Massoud CM, **Jackson-Cook C**, Boikos SA, Smith SC, Mochel MC. A Reappraisal of Superficial Pleomorphic Liposarcoma. *Am J Clin Pathol*. Jun 11:PMID: 32525520, 2020.

York TP, Latendresse SJ, **Jackson-Cook C**, Lapato DM, Moyer S, Wolen AR, Roberson-Nay R, Do EK, Murphy SK, Hoyo C, Fuemmeler BF, Strauss JF. Replicated umbilical cord blood DNA methylation loci associated with gestational age at birth. *Epigenetics*. May 24:1-16. PMID: 32448018, 2020.

Stingl CS, **Jackson-Cook C**, Couser NL. Ocular Findings in the 16p11.2 Microdeletion Syndrome: A Case Report and Literature Review. *Case Rep Pediatr*. Apr 20;2020:2031701. PMID: 32373379, 2020.

Yang GS, Mi X, **Jackson-Cook CK**, Starkweather AR, Lynch Kelly D, Archer KJ, Zou F, Lyon DE. Differential DNA methylation following chemotherapy for breast cancer is associated with lack of memory improvement at one year. *Epigenetics*. May;15(5):499-510. PMID: 31793401, 2020.

Cohen RA, Gullett JM, Woods AJ, Porges EC, Starkweather A, **Jackson-Cook CK**, Lynch-Kelly DL, Lyon DE. Cytokine-associated fatigue prior to, during, and post-

chemotherapy for breast cancer. *J Neuroimmunol.* Sep 15;334:577001, 2019.

Dorsey SG; Renn CL, Griffioen M; Lassiter CB; Zhu S; Huot-Creasy H; McCracken C; Mahurkar A; Shetty AC; **Jackson-Cook CK**; Kim H-S; Henderson WA; Saligan L; Gill J; Colloca L; Lyon DE; Starkweather AR: Whole blood transcriptomic profiles can differentiate vulnerability to chronic low back pain, *PLoS One.* May 16;14(5):e0216539, 2019

Jackson-Cook C: A Hypothesis: Could telomere length and/or epigenetic alterations contribute to infertility in females with Turner syndrome? *Am J Med Genet C Semin Med Genet.* Feb 11, 2019.

Gullett JM, Cohen RA, Yang GS, Menzies VS, Fieo R, Kelly DL, Starkweather AR, **Jackson-Cook CK**, Lyon DE: Relationship of Fatigue with Cognitive Performance in Women with Early-Stage Breast Cancer over Two Years. *Psychooncology.* Feb 14, 2019.

Sosnowski D, Kliwer WK, York TP, Amstadter A, **Jackson-Cook C**, Winter MA: Familial Support Following Childhood Sexual Abuse is associated with Longer Telomere Length in Adult Females, *J Behavioral Medicine,* Jan 22, 2019.

Dorsey SG, Griffioen MA, Renn CL, Cashion AK, Colloca L, **Jackson-Cook C**, Gill J, Henderson W, Kim H, Saligan L, Starkweather A, Lyon D: Working together to advance symptom science in the precision medicine era, *Nursing Research* Mar/Apr;68(2):86-90, 2019.

Cohen RA, Gullett JM, Fieo R, Kelly D, Starkweather A, **Jackson-Cook C**, Lyon DE: Fatigue among Women with Breast Cancer: Longitudinal Relationship to Cognitive Performance, Chemotherapy and other Clinical Factors, *J Cancer Research and Treatment* doi: 10.12691/jcrt-6-x-x, 2018.

Lapato D, Wagner S, Olivares E, Amstadter A, Kinser PA, Latendresse S, **Jackson-Cook C**, Roberson-Nay R, Strauss JF 3rd, York TP: Prospective longitudinal study of the pregnancy DNA methylome: the US Pregnancy, Race, Environment, Genes (PREG) study. *BMJ Open.* 8(5):e019721, 2018.

Lyon DE, Starkweather A, Yao Y, Garrett T, Kelly DL, Menzies V, Dereziński P, Datta S, Kumar S, **Jackson-Cook C**: Pilot Study of Metabolomics and Psychoneurological Symptoms in Women With Early Stage Breast Cancer. *Biol Res Nurs.* 20(2):227-236, 2018.

Martin EE, Mehra R, **Jackson-Cook C**, Smith SC: Renal Cell Carcinoma With TFEB Translocation Versus Unclassified Renal Cell Carcinoma With TFEB Amplification. *American Journal of Surgical Pathology: Reviews & Reports* 2017 22 (6): 305-312.

Modi BP, Washington S, Walsh SW, **Jackson-Cook C**, Archer KJ, Strauss JF 3rd. Expression patterns of the chromosome 21 MicroRNA cluster (miR-99a, miR-125b and let-7c) in chorioamniotic membranes. *Placenta*. 2017 Jan;49:1-9.

Lyon DE, Cohen R, Chen H, Kelly DL, McCain NL, Starkweather A, Ahn H, Sturgill J, **Jackson-Cook CK**. Relationship of systemic cytokine concentrations to cognitive function over two years in women with early stage breast cancer. *J Neuroimmunol*. 2016 Dec 15;301:74-82.

Starkweather A, Kelly DL, Thacker L, Wright ML, **Jackson-Cook CK**, Lyon DE. Relationships among psychoneurological symptoms and levels of C-reactive protein over 2 years in women with early-stage breast cancer. *Support Care Cancer*. 2017 Jan;25(1):167-176.

Wright ML, Dozmorov MG, Wolen AR, **Jackson-Cook C**, Starkweather AR, Lyon DE, York TP. Establishing an analytic pipeline for genome-wide DNA methylation. *Clin Epigenetics*. 2016 Apr 27;8:45.

Lyon DE, Cohen R, Chen H, Kelly DL, Starkweather A, Ahn B, **Jackson-Cook CK**. The Relationship of Cognitive Performance to Concurrent Symptoms, Cancer and Cancer-treatment Related Variables in Women with Early Stage Breast Cancer: A Two-Year Longitudinal Study, *Journal of Cancer Research and Clinical Oncology* 142(7): 1461-74, 2016.

Aboalela N, Lyon D, Elswick RK, Jr, Kelly DL, Brumelle J, Bear HD, **Jackson-Cook C**: Perceived Stress Levels, Chemotherapy, Radiation Treatment and Tumor Characteristics Are Associated with a Persistent Increased Frequency of Somatic Chromosomal Instability in Women Diagnosed with Breast Cancer: A One Year Longitudinal Study, *Plos One*, Jul 15;10(7):e0133380. doi: 10.1371/journal.pone.0133380. eCollection 2015. PMID: 26177092, 2015.

Zhou Q, Lyon D, **Jackson-Cook C**, Perera R, Archer K: Identifying molecular features associated with psychoneurological symptoms in women with breast cancer using multivariate mixed models, *Cancer Inform*. 7;14(Suppl 2):139-45, PMID: 25983548, 2015.

Gentry AE, Lyon ED, **Jackson-Cook CK**, Archer K: Penalized Ordinal Regression

Methods for Predicting Stage of Cancer in High-Dimensional Covariate Spaces, *Cancer Inform.* 27;14(Suppl 2):201-8, PMID: 26052223, 2015.

Papavassiliou P, Charalsawadi C, Rafferty K, **Jackson-Cook C**: Mosaicism for Trisomy 21: A Review, *Am J Med Genet*, 167A(1):26-39, 2015.

Montpetit AJ, Alhareeri AA, Montpetit M, Starkweather AR, Elmore LW, Filler K, Mohanraj L, Burton, CW, Menzies VS, Lyon DE, **Jackson-Cook CK**: Telomere Length: A Review of Methods for Measurement, *Nurs Res Biology Series*, in press, 2014.

Starkweather AR, Alhaeri AA, Montpetit A, Brumelle J, Filler K, Montpetit M, Mohanraj L, Lyon DE, **Jackson-Cook CK**: An integrative review of factors associated with telomere length and implications for biobehavioral research, *Nurs Res* Jan-Feb;63(1):36-50. doi: 10.1097 (PMID 243359), 2014.

Menzies V, Lyon DE, Archer KJ, Zhou Q, Brumelle J, Jones KH, Gao G, York TP, **Jackson-Cook C**: Epigenetic alterations and an increased frequency of micronuclei in women with fibromyalgia. *Nurs Res Pract*;2013:795784. doi: 10.1155/2013/795784. Epub 2013 (PMID: 24058735), Aug 22, 2013.

Jallo N, Lyon DE, Kinser PA, Kelly DL, Menzies V, **Jackson-Cook C**: Recruiting for epigenetic research: facilitating the informed consent process. *Nurs Res Pract* 935740 PMID 23840949, 2013.

York TP, Brumelle J, Juusola J, Kendler KS, Eaves LJ, Amstadter AB, Ferreira-Gonzalez A, **Jackson-Cook C**: Increased frequency of micronuclei in adults with a history of childhood sexual abuse: A discordant monozygotic twin study, *PloS One* 8 (1) e55337 (PMID: 23383158), 2013.

Lyon DE, Elmore LW, Aboalela N, Schools J, Elswick RK, McCain N, **Jackson-Cook C**: Potential Epigenetic Mechanisms Associated With the Persistence of Psychoneurological Symptoms in Women Receiving Chemotherapy for Breast Cancer: A Hypothesis, *Biol Res Nurs* Apr 11 (PMID 235855573), 2013.

Dragoescu E, **Jackson-Cook C**, Domson G, Massey HD, Foster W: Small cell osteosarcoma with Ewing sarcoma breakpoint region 1 gene rearrangement detected by interphase fluorescence in situ hybridization, *Ann Diagn Path* S1092-9134 (PMID 22971270), 2013.

Jones KH, York TP, **Jackson-Cook C**. Mechanisms leading to the formation of micronuclei containing sex chromosomes differ with age. *Mutat Res* May 18 (PMID 22613870), 2012.

Huddle LN, Fuller C, Powell T, Hiemenga JA, Yan J, Deuell B, Lyders EM, Bodurtha JN, Papenhausen PR, **Jackson-Cook CK**, Pandya A, Jaworski M, Tye GW, Ritter AM: [Intraventricular twin fetuses in fetu](#). *J Neurosurg Pediatr*. Jan 9(1):17-23 (PMID:22208315) 2012.

Jones KH, York TP, Juusola J, Ferreira-Gonzalez A, Maes HH, **Jackson-Cook C**: Genetic and environmental influences on spontaneous micronuclei frequencies in children and adults: a twin study. *Mutagenesis* Jul 15 (PMID 21765037), 2011.

Diehl MC, Idowu MO, Kimmelshue K, York T, **Jackson-Cook C**, Turner K, Holt SE, Elmore LW: Elevated TRF2 in advanced breast cancers with short telomeres. *Breast Cancer Res Treat* Jun 127(3): 623-30, (PMID 20625812), 2011.

Rehder C, Corey L, York T, Jett AC, Riley B, **Jackson-Cook C**: Chromosome-specific and tissue-specific differences in acquired somatic aneuploidy frequencies in uncultured lymphocytes and buccal mucosa cells: A twin study (submitted), 2011.

Jia W, **Jackson-Cook C**, Graf MR: Tumor-infiltrating, myeloid-derived suppressor cells inhibit T cell activity by nitric oxide production in an intracranial rat glioma vaccination model. *J Neuroimmunol* 223(1-2):20-30, 2010.

Yoo BK, Emdad L, Gredler R, Fuller C, Dumur CI, Jones KH, **Jackson-Cook C**, Su ZZ, Chen D, Saxena UH, Hansen U, Fisher PB, Sarkar D: Transcription factor Late SV40 Factor (LSF) functions as an oncogene in hepatocellular carcinoma. *Proc Natl Acad Sci USA* 107(18): 8357-8362, 2010.

Recent Books/Chapters

Jackson-Cook C, Ponnala S: Application of Chromosomal Microarrays in Molecular Oncology Testing for Solid Tumors: A Pragmatic Approach, eds. Idowu, MO, Dumur CI, Garrett C, Springer, New York, pp. 181-217, 2015.

Jackson-Cook C: Constitutional and acquired autosomal aneuploidy, *Clin Lab Med* Dec 31(4):481-511 (PMID 22118733), 2011.

Recent Educational Material

International Mosaic Down Syndrome Association, Information for Families and Professionals, 2021.

S Waters-Freyer, **C Jackson-Cook**, Documentary "The Next Step: Life after Diagnosis", 2015.