**Curriculum Vitae**

Feyruz Virgilia Rassool, Ph.D.

Professor, Department of Radiation Oncology

University of Maryland School of Medicine

**Date** February 13, 2023

**Contact Information**

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Foreign Languages: Afrikaans (fluent), Dutch (working knowledge)

**Education**

1979 A Levels, Camden School for Girls, London, UK

1983 B.Sc., University College London, London, UK, Honors in Human Genetics

1990 Ph.D., Royal Post-Graduate Medical School, University of London, London, UK,

Biological Sciences

**Post-Graduate Education and Training**

1990-1994 Post-Doctoral Fellowship, Section of Hematology/Oncology, University of Chicago

Mentors: Professors Michelle Le Beau and Timothy McKeithan

**Employment History**

**Academic Appointments**

1994-1996 Research Associate, Section of Hematology/Oncology, University of Chicago

1996-1998 Research Associate - Assistant Professor, Section of Hematology/Oncology, University of Chicago

1998-2005 Lecturer, King’s College School of Medicine, Guy’s Campus, London, UK

1998-2005 Head, Genomic Instability Laboratory, King’s College School of Medicine, Guy’s Campus, London, UK

2005-present Associate Professor, Department of Radiation Oncology, UMSOM,

2005-present Member, Program in Oncology, UMSOM

2010-present Member, Center for Stem Cell Biology and Regenerative Medicine, UMSOM

2015-present Adjunct Associate Professor, VARI’s Center for Epigenetics, Van Andel Research Institute, Grand Rapids, Michigan

2015-present Member of VARI-SU2C Epigenetic Dream Team.

2016 Awarded Tenure, Department of Radiation Oncology, UMSOM

2019 Full Professor

**Administrative Appointments**

2011-2012 Interim Director of Radiobiology

2017 Co-leader of Experimental Therapeutics Program, UMGCCC

**Professional Society Memberships**

2002-2004 The Myelodysplastic Syndrome (MDS) Forum (UK)

2002-present The American Association for Cancer Research (AACR)

2002-present The Organization for Women in Cancer Research (WICR)

2006-present The American Society of Hematology (ASH)

**Honors and Awards**

1992-1995 Leukemia Society of America Fellow Award (LLS), The Molecular Basis for Fragile Sites in Cancer ($90,000)

1994 Lilly Visiting Scholar Award, Genetics, Ethics and Society, St. Xavier’s University, Chicago ($2,000)

2007 Nominated for “Woman of the Year”, Leukemia Lymphoma Society Maryland Chapter

2012 Inaugural Laura Ziskin Prize in Translational Cancer Research, Stand Up To Cancer (SU2C) ($250,000) <http://www.umgcc.org/news/laura-ziskin-prize.htm>

2015 Member - Stand Up To Cancer – Epigenetics Dream Team

2016 FOLZ Foundation, Philanthropic Award, Grand Rapids Community Foundation, Grand Rapids, Michigan, $50,000

Travel Awards

1992 Upjohn Travel Award from the American Association for Cancer Research

(AACR) for a meritorious abstract

1998 Elimination of Leukaemia Fund, UK Travel Award, AACR meeting on DNA Repair, Florida

2001 Elimination of Leukaemia Fund, UK Travel Award, AACR meeting, New Orleans

2002 Royal Society Travel Grant, Keystone Symposium on DNA Helicases and Cancer, Keystone, Colorado

2002 Elimination of Leukaemia, UK Travel Award, AACR meeting, San Francisco

2004 Royal Society Travel Award, AACR meeting, Orlando, Florida

2004 Elimination of Leukaemia Fund, UK Travel Award, American Society of Hematology (ASH), San Diego

2005 Elimination of Leukaemia Fund, UK Travel Award, to complete final reports for Myelodysplastic Syndrome (MDS) Projects

**Administrative Service**

Departmental Service – University of Maryland School of Medicine

2011-2012 Chair, Radiation Oncology Pilot Grant Committee

2011-2012 Member, Radiation Oncology Executive Leadership Committee

2011-2016 Member, Radiation Oncology Resident Admissions Committee

Institutional Service – University of Maryland School of Medicine

2006-2011 Reviewer, American Cancer Society (ACS) Institutional Review Grant (IRG), Pilot Project Grants at the University of Maryland Greenebaum Cancer Center (served 1x annually)

2007-present Member, Cancer Biology Curriculum Committee

2008-2013 Organizer, Free Radical Interest Group (FRIG) monthly seminars (year round)

2009-present Member, Graduate Program in Life Science (GPLS) Curriculum Committee

2009-present Member, Master’s Curriculum Committee

2009-2011 Member, School of Medicine Council

2011-present Member, T32 Cancer Biology Steering Committee

2012-present Member, Master’s Program in Translational Research, Core Course

2013-present Member, Translation Laboratory Sciences Advisory Committee

2013-present Reviewer, T32 Grants (1x annually)

2013 Reviewer, Seed Grant Program UMB and UMCP (served 1x)

2014 Reviewer, Dean’s Challenge Grant (served 1x)

2015 Reviewer, Graduate Application for Graduate Program in Toxicology (serve 1x)

2015 Reviewer, Graduate Application for Graduate Program in Biochemistry (serve 1x)

2015-present Member, Funding Submission Peer Review Committee, Radiation Oncology

2018-present Member of CIBR Advisory committee

2019 Member of MSTP T32 program Application

2019-present Interview committee member for UM Medical School

2019 Interview committee member for UM Graduate Program in Life Sciences

2021 Search committee for search for a new clinical cancer oncologist and a manager of the Translational Genomics Laboratory (TGL)

Local Service

2006 Chair Person, Baltimore Area Repair Symposium (BARS) – raised $15,000

(served 1x)

2008 Moderator, Myelodysplastic Syndromes: Pre-clinical and Translational Science,

Baltimore Area Repair Symposium (BARS) (served 1x)

2008 Chair, DNA Damage and Repair Session, American Society for Therapeutic

Radiology and Oncology (ASTRO) Meeting (served 1x)

2011 Moderator, Clinical Translation of Epigenetic in Cancer Therapy, San Diego, CA

(served 1x)

2011-present Reviewer, Nathan Schnaper Summer Intern Program candidates (serve 1x annually)

2012 Co-Organizer and Moderator, 5th Annual Maryland Stem Cell Research

Symposium, Annapolis, MD (served 1x)

2012 Speaker, Stem Cell Center Fund Raiser, Black Olive Inn, Maryland (served 1x)

2013 Moderator, Radiation Oncology Review Course, University of Maryland (served 1x)

2017 - present Co-Organizer of the ET Retreat and monthly seminar series, University of Maryland, September, 2017 (serve 1x annually)

2019-2020 Co-Organizer and Chair Person, Baltimore Area Repair Symposium (BARS) 2020– raised $3,000

(served 1x)

2020 Assembly at Springfield High School, MD

2020 LLS board meeting attendance

2021 LLS Man, woman of the year Gala

National/International Service

2005 Moderator, Chromosomes and Cancer: From Translocations to Targeted Therapies, University of Chicago (served 1x)

2014 Coordinator, American Society of Hematology (ASH) Abstract Review, Category 601: Chromosomal Rearrangements and DNA Repair, San Francisco (served 1x)

2014 Moderator, Category 601: Chromosomal Rearrangements and DNA Repair, American Society of Hematology (ASH), San Francisco (served 1x)

2015 Chair, Minisymposia , Cancer Epigenetics, American Association of Cancer Research (AACR) Annual Meeting, Philadelphia, PA (serve 1x)

2016 Chair, Special Lecture, 18th Annual John Goldman Conference on Chronic Myeloid Leukemia: Biology and Therapy, Houston Texas (served 1x)

2017 Chair DNA Repair Session, AACR New Frontiers in Cancer Research, Cape Town South Africa, (served 1x)

2021 NCI, Cancer Etiology Special study section

Committees

2016 Program Committee for the AACR New Frontiers in Cancer Research Conference on January 18-22, 2017 in Cape Town, South Africa (served 1x)

2016-present AACR Regional Advisory Subcommittee on Africa (served 2x)

2017 AACR-AstraZeneca Fellowship in Ovarian Cancer Research Committee (served 1x)

2018 Forbeck focus meeting on Epigenetic Therapy (serve 1x)

2019-present Member of the AACR Hematologic Malignancies Research Grants Scientific Review Committee (serve 1x)

2022-present Outstanding Achievement in Blood Cancer Research Committee (AACR) (1x)

2022-2025 Beginning Investigator Grant for Catalytic Research (BIG Cat) Scientific Review Committee (AACR)

Journal Reviewer

1990-present *Genes, Chromosomes & Cancer* (served 2-4x annually)

1992-present *Cytogenetics and Cell Genetics* (served 2-4x annually)

1998-present *Oncogene* (served 3-4x annually)

2002-present *British Journal of Haematology* (served 1-2x annually)

2003-present *Blood* (served 4-6x annually)

2003-present *British Journal of Cancer* (served 1-2x annually)

2003-present *Cancer Research* (served 4-6x annually)

2004-present *Expert Review of Molecular Diagnostics* (served 1x annually)

2007-present *Leukemia Research (served* 4-6x annually)

2007-present *Proceeding of the National Academy of Sciences (served* 1-2x annually)

2008-present *Nucleic Acids Research/NAR Cancer (served* 2-3x annually)

2008-present *DNA Repair (served* 1-2x annually)

2009-present *Molecular Cancer Research (served* 4-6x annually)

2012-present *Molecular Cancer and Therapy (served* 2-4x annually)

2015-present *The Journal of Pathology* (served 1x)

2016-present *Oncotarget* (served 2x)

2016-present *Leukemia and Lymphoma* (served 1x)

2017-present *Cell Reports* (served 1x)

2019-present *PNAS, USA* (served 2x)

2019 – present *Cancer Cell*

*2023-present Nature Communications*

Editorial Board Member

2003-2007 *Cancer Letters*

2009-2021 *Leukemia Research*

*2019-present Nucleic Acids Research Cancer*

Reviewer – Grants/Abstracts

2003-present Grants/Abstracts - Leukaemia Research Fund (serve 1x annually)

2003-present Grants – Kay Kendal Research Fund (serve 1x annually)

2004-2007 Grants/Abstracts - Italian Association for Cancer Research (served 1x annually)

2005 Abstracts - Beyond Translocations to New Targets, American Society of Hematology (ASH) (served 1x)

2005/2008/2010 Grants/Abstracts – American Society of Hematology (ASH) (served 1 x annually)

2010 Grants - Radiation Oncology Pilot Grant Program (served 1x)

2012 Grants - NIH Study Section, Ad Hoc (served 1x)

2013 Abstracts – Molecular Pharmacology Drug Resistance (ASH) (served 1x)

2014 Chair and Reviewer, Abstracts – Chromosomal Rearrangements & DNA Repair, ASH (served 1x)

2015 Grants – NCI Special Emphasis Panel (R21 & R03), Bethesda, MD (served 1x)

2016/2017 Review Committee for AACR Fellowships for Hematologic Malignancies Research Scientific (serve 1x annually)

2017 Reviewer for the [AACR Annual Meeting African Cancer Researchers Travel Awards](http://www.aacr.org/Meetings/PAGES/TRAVEL%20GRANTS/AFRICAN-CANCER-RESEARCHERS-TRAVEL-AWARDS.ASPX#.WG62V-9TFzk) (serve 1x)

2017 Review Committee of AACR Astra Zeneca Fellowship for Ovarian Cancer (serve 1x annually)

2018 Reviewer for the Global Scholar-in-Training Awards, AACR (serve 1x annually).

2019 Reviewer for LLS-TRP grants (serve 1x annually)

2019 Reviewer, BioMed, Morasha and Bikura Programs, Israel Science Foundation (ISF)

(serve 1x annually).

2020 India Alliance Wellcome Foundation

2021 Reviewer SKCCC (NYC) pilot grants

2020-present Reviewer of UMGCCC pilot grant program

Reviewer – Poster Discussion (served 1x)

2015 17th Annual John Goldman Conference on Chronic Myeloid Leukemia: Biology and Therapy, Estoril, Portugal

**Teaching**

1989 Organizer, Diploma of Clinical Pathology, Cancer Cytogenetics Practical Course, Royal Postgraduate Medical School, UK (served 1x)

1992 Lecturer, “Genetics and Cancer”, Path 301: Cellular Pathology Course, University of Chicago, 30-50 medical residents, 2 hrs/semester (served 1x)

1994-1997 Organizer, Hematology/Oncology Research Seminar Series, University of Chicago, 15-20 graduate students, post-doctoral fellows and faculty, 5 hrs/semester (served 1x annually)

1996 Organizer and Lecturer, Lilly Foundation Sponsored Lecture Series, Medical Science and Ethics, B.Sc. Course, St. Xavier’s University, Chicago, 30-50 undergraduates, graduate students and faculty, 3 hrs/semester (served 1x)

1998 Lecturer, *“Cancer Cytogenetic”*, Diploma in Clinical Pathology Course, King’s College, London, UK, 20 attendees (medical residents) 3 hrs/semester (served 1x)

1999 Lecturer, *“Genomic Instability in MDS”*, Diploma in Clinical Pathology Course, King’s College, London, UK, percent of course taught: 10% (served 1x)

2002 Lecturer, “Genomic Instability”, Regional Haematology Study Day, King’s College, London, UK, percent of course taught: 10% (served 1x)

2005-present Lecturer, Human Genetics (HGEN 601) *“Non-homologous end joining”*, University of Maryland, 10-15 graduate students, 1.5 hrs/semester (serve 1x annually)

2007-present Co-Course Master, (2007-2009) and Lecturer, Advanced Cancer Biology (GPLS 790) “*DNA Repair and Cancer”*, University of Maryland, 15-25 students, 1.5 hrs/semester (serve 1x annually)

2008-2010 Lecturer, Graduate Program in Life Sciences (GPLS Core Course), Radiation Oncology, *“Chromatin and Histones”*, University of Maryland, 50-60 students, 2.5 hrs/semester (serve 1x annually)

2009-2011 Course Master and Lecturer, Cancer Biology: Research to Clinic, (GPLS 665) 3-4.5 hrs/semester, (served 1x annually)

2009-2010, 2013 Course Master and Lecturer, Bench to Bedside: Steps in Translational Research (GPLS 791) 2 lecturers - *“Introduction to Course”* and *“Chromosomes and Cancer”*, University of Maryland, 3.5 hrs/semester, 7-10 students (served 3x)

2009-present Lecturer, Graduate Program in Life Sciences (GPLS Core Course), *“Cancer Genetics”*, University of Maryland, 50-60 students, 3 hrs/semester (serve 1x annually)

2012-2021 Lecturer, Oncopharmacology, (GPLS 624) *“DNA Repair and Cancer”*, University of Maryland, 10-15 students, 3 hrs/semester (serve 1x annually)

2012-2013 Co-Course Master and Lecturer, Cancer Biology: Research to Clinic (GPLS 665), 2 lectures - *“Leukemia – Biology I & II”*, University of Maryland, 13-14 students, 3 hrs/semester (served 1 x annually)

2014-present Co-Course Master and Lecturer, Cancer Biology: Research to Clinic (GPLS 665), *“Introduction to the Course”* and *“Leukemia Biology I and II”*, University of Maryland, 3-9 students, 4.5 hrs/semester (served 1x annually)

2016-present Lecturer, Human Genetics (GPLS 601), “*Genomic Instability”*, 1.5 hrs/semester, (serve 1x annually)

Radiobiology & Medical Physics Course – (University of Maryland) Resident Lectures (1x annually)

2006-2009 “*Normal Tissue Response 1 & 2”,* 4-6 students, 2.0 hrs/semester

2006-2012 “*Angiogenesis”*, 4-6 students, 1.0 hr/semester

2006-2018 *“Mechanisms of Cell Death”,* 4-6 students, 1.0 hr/semester

2006-2018 “Molecular *DNA Repair”*, 4-6 students, 1.0 hr/semester

2012-2018 “*Chromosome DNA Damage”,* 4-6 students, 1.0 hr/semester

Professors Rounds UMSOM (1x annually)

2007-present Ph. D., 0.5hr/semester

2011 – present MS Students, 0.5hr/semester

Annual Radiobiology & Medical Physics Review Course - (National) Lecturer (1x annually)

2007-2015 *“Apoptosis and Molecular Techniques”*

2016-2018 *“Cancer and molecular signaling”*

**Mentoring**

University of Chicago

1995-1997 Tiong Ong, M.D., Fellow

King’s College, London, UK

1998-2004 Terry Gaymes, Ph.D., Post-Doctoral Fellow

1999-2004 Anjala Pradhan, Ph.D., Graduate Student

2000-2002 Dilek Aktas, M.D., Clinical Fellow

2001-2004 Nicola Brady, Ph.D., Post-Doctoral Fellow

2001-2004 Manyee Cheng, Ph.D., Post-Doctoral Fellow

2002-2003 Anne Wooley, B.S., Undergraduate Student

2003-2004 Maria Baou, B.S., Undergraduate Student

2003-2005 Nada Brown, Ph.D., Graduate Student

University of Maryland

High School Summer students

2019 Joseph Badros

Undergraduates Nathan Schnaper Summer Program

2007 Alisa Thavikulwat, M.D., *Topic:* Role of ATM in Leukemia (1st project)

2008 Alisa Thavikulwat, M.D., *Topic:* Role of DNA Ligase III in Leukemia (2nd project)

2009 Christine Kositz, M.D., *Topic:* Role of Histone Deactylase Inhibitors (HDI) in

Leukemia

2010 Meridith Newton, M.D., *Topic:* Role of Ku70 in Repair Resulting from HDI Treatment

2011 Vishaili Purohit, M.D., *Topic:* Role of RAC/STAT5 in DNA Repair in Leukemia Cells

2013 Kelly Snead, B.S., *Topic:* Epigenetic Therapy Sensitizing Ovarian and MDS to PARP Inhibitors

2014 Rimsha Galees Afzal, B.S., *Topic:* Role of Myc in Genomic Integrity in Stem Cells

2015 Tyler Rutherford, B.S., *Topic*: PARP Trapping in Primary Cells from AML Patients

2018 Reena Ghoswami, B.S., PARP trapping in PARP inhibitor and DNMT inhibitor treated AML and lung cancer.

2019 Nicole Illesca B.S., DNA damage and repair studies in Cancer.

Post-Graduates

2005-2006 Dan Grosu, M.D., *Topic:* DNA Repair in Myeloid Leukemia

2005-2008 Annahita Sallmyr, Ph.D., *Topic*: DNA Repair in Chronic Myeloid Leukemia

2007-2011 Jinshui Fan, Ph.D., *Topic*: DNA Repair in FLT3/ITD Leukemias/Stem Cells

2008-2014 Carine Robert, Ph.D., *Topic*: Histone Deacetylase Inhibitors in Myeloid Leukemias

2011-2018 Pratik Nagaria, Ph.D., *Topic*: DNA Repair in Breast Cancer and Pluripotent Stem Cells. Continues in an adjunct capacity to the present.

2017-present Rachel Abbotts, M.D./Ph.D., *Topic:* PARP and DNMT Inhibitors in Lung Cancer

2022 Anna Dellomo, PhD. ROS and STING signaling in TNBC

2022-present Kaushlendra Tripathi, PhD. Stem progenitors in TNBC

Mentoring Junior Faculty

2020-present Rachel Abbotts MD, PhD, Research Associate

2019-present Sandrine Nyongere, MD Clinical Fellow

2022-present Aaron Ciner: Pancreatic Cancer Translational Group

2022-present Sam Rosner: NSCLC Translational Group

Radiation Oncology Residents/Medical, Pre-Med and M.D./Ph.D. Students – Summer Program

2006 Matt Strickland, Medical Student, *Topic*: Levels of Gamma H2AX in Leukemia Cells

2008 Ali Reza Mirmiran, Resident, *Topic*: DNA Damage Response in Cancer Cells

2010 Vishal Duggal, Medical Student, *Topic*: Low Dose HDI and Demethylating Agents in Leukemia

2012 Daniel Eichberg, Medical Student, *Topic:* Precision Targeting of DNA Repair in Cancer (**note:** On 3/6/15, student won the Elijah Adams Biochemistry Prize, $300.00 for his Honors’ paper)

2013 Kelly Snead, *Topic*: Epigenetic Therapy Sensitizing Ovarian and MDS to PARP Inhibitors

2015 Katherine Coburn, M.D./Ph.D., *Topic*: The Investigation of PARP Inhibitors in Combination with DNMT Inhibitors for Therapy in Resistant ER/PR/HER+ Breast Cancers

Mentoring and Thesis Project Committee Member – M.S. Students

2008-2010 Dipika Gemani, B.S., *Topic*: NRF2 in Myeloid Leukemias

2008-2011 Lisa Tobin, M.S., *Topic*: DNA Repair in Myeloid Leukemias

2011-2012 Parth Sawhney, M.S., *Topic*: DNA Repair in Myeloid Leukemias

2011-2013 Nidal Muvarak, M.S., *Topic*: Role of c-MYC in the Regulation of Double-Strand Break Repair in Tyrosine Kinase–Activated Leukemias

2015-2016 Adeoluwa Adewuyi, B.S., *Topic*: DNA Repair in Ovarian Cancer

2015-2016 Christopher Biondi, B.S., *Topic*: Mechanisms Underlying Epigenetic Therapy in Lung Cancer

2016-2017 Bryan Pelkey, B.S., *Topic:* PARP inhibitors combined with DNA damaging agents increase alternative non homologous end joining in BRCA mutant and proficient cancer cells.

2016-2017 Daniel Fontaine, B.S., *Topic:* DNA Repair and Non-Small Cell Lung Cancer

2016-2018 Lora Stojanovic, B.S., *Topic:* DNA methyltransferase inhibitor and PARP inhibitor generate Synthetic lethality in BRCA proficient ovarian cancer

Mentoring and Thesis Project Committee Member – Ph.D. Students

2011-2015 Khadiza Chowdhury, B.S., *Topic*: DNA Repair in Breast Cancer

2014-2017 Nidal Muvarak, M.S., *Topic*: Novel mechanisms of therapies targeting poly ADP ribose polymerase and its role in an alternative form of non homologous end-joining DNA double strand break repair pathway in acute myeloid leukemia.

2015-2020 Lena McLaughlin, B.S., *Topic*: Inducing DNA Repair Deficiencies in Triple Negative Breast Cancers through Pharmacologic Stimulation of Innate Immune signaling.

2016-2021 Aksinijah Kogan, B.S., *Topic:* DNMTis sensitize acute myeloid leukemia cells to PARP inhibitors via immune modulation dependent promotion of homologous recombination deficiency

2017-2021 Anna Delomo, B.S., *Topic:* PARP inhibitor Resensitization of FLT3/ITD AML to TKIs

2019-present Lora Stojanovic Topic: Role of ROS in Pharmacologic Induction of Immune Signaling and Homologous Recombination Deficiency in ovarian cancer.

2019-2021 Julia Rutherford Topic: Pharmacologic Induction of Innate Immune Signaling Suppresses Metastasis in Triple-Negative Breast Cancer. *Changed labs due to lack of productivity.*

*2022 Garis Grant: AML and STING activation. Lab rotation*

*2022 Dereck Osario: NSCLC and TP53: Lab rotation*

*2023 Rebecca Marker: Lab rotation: AML and STING activation*

Thesis Project Committee Member (only) – Ph.D. Students

2005-2007 Sangeetha Vijakumar, Graduate Program in Life Sciences

2005-2008 Melissa Hefferin, Graduate Program in Life Sciences

2006-2009 Jocelyn Reader, Graduate Program in Life Sciences

2007-2011 Umut Aypar, Graduate Program in Life Sciences

2008-2011 Tiffany Scharadin, Graduate Program in Life Sciences/Biochemistry

2008-2012 Stephen Bowen, Graduate Program in Life Sciences

2010-2015 Patricia Buckley, Graduate Program in Life Sciences/Biochemistry

2014-2015 Haley Simpson, Graduate Program in Life Sciences/Medicine

2014-2017 Dhanraj Deshmukh, Graduate Program in Life Sciences/Toxicology

2014-2017 Kshama Doshi, Graduate Program in Life Sciences/Medicine

2014-2017 David McCarty, Graduate Program in Life Sciences/Medicine

2014-2020 Jin Xu, Graduate Program in Life Sciences/Biochemistry

2015-2016 Justine Yu, Molecular Medicine/Genome Biology (changed mentorship)

2015-2020 Rupa Guha, Graduate Program in Life Sciences/Pharmacology

2018-2021 Michael Creed, Graduate Program in Life Science/Pediatrics

2018-present Jonelle Lee, Graduate Program in Life Sciences

2019-2022 Selina Teh, Graduate program in Cancer Biology –-Johns Hopkins University

2021-present Kanwal Mahmood, Graduate Program in Life Sciences

2021-2022 Geraldine Ezeka, Graduate Program in Biochemistry and Molecular Biology

Thesis Qualifying Exam Committee Member (only) - PhD

2015-2016 William Fondrie, Molecular Medicine/Genome Biology

2015-2016 Nelson Chuang, Molecular Medicine/Medicine

2018 Jonelle Lee, Graduate Program in Life Sciences

2019 Diane Terry, Graduate Program in Molecular Medicine

2020 Geraldine Ezeka, Graduate Program in Biochemistry and Molecular Biology

2021 Kanwal Mahmood, Graduate Program in Molecular Medicine

2023 Emmanuel Bredu Asiedu

Thesis Project Committee Member (only) – M.S. Student

2009-2010 Eric Diss, Graduate Program in Life Sciences/Biochemistry

**Grant Support**

**Active Grants – University of Maryland**

10/01/19-9/30/23 (Co-inv., Rassool 10%; PI, S. Baylin, JHU) Renewed

*“Bringing Epigenetic Therapy to the Management of Ovarian and Other Cancers”*

Adelson Med. Res. Foundation: 2002469473

Annual Direct Costs: $100,000

Total Direct Costs: $300,000

Role: Investigate the role of PARP inhibitors and epigenetic drugs in ovarian cancer.

11/01/17-9/30/23 (PI Rassool, 10%)

*“Use of DNA Demethylating Agents and PARP Inhibitors in Lung cancer”*

Van Andel Research Institute-SU2C, Inc.

Annual Direct Costs: $50,000

Total Direct Costs: $150,000

Role: Investigate the role of PARP inhibitors and epigenetic drugs in lung cancer, including role in enhanced immune attraction.

08/1/21-07/31/26 PI Kevin Cullen (Rassool 8%)

NIH/NCI P30 CA134274

Cancer Center Support Grant

The Cancer Center Support Grant (CCSG) provides the resources and infrastructure to facilitate the coordination of interdisciplinary programs across a broad spectrum of research from basic laboratory research to clinical investigation to population science.

Role: Co–leader, Experimental Therapeutics Program

7/01/2019 – 6/31/24 MPI: Baylin, Rassool (10%), Easwaran

“*DNA methyl transferase gene expression in colon cancer”*

NIEHS (2R01ES011858)

Annual Direct Costs (Rassool): $100,00

Total Direct Costs (Rassool): $500,000

Role: Examine the role of DNMT and PARP in DNA damage and repair

10/1/19-11/30/22 (Co-Inv., 10%; PI Miller IU)

*“*A Phase II study of Guadecitabine and Talazoparib in patients with triple negative and hormone resistant metastatic breast cancer

Pfizer.

Clinical Trials: ~$1. Million

Rassool lab: $90,000

Role: Provide correlative studies for Phase 1 clinical trial.

7/1/21-6/30/25      PI Maria Baer (Co-Inv 3%)

Enhancing FLT3 inhibitor efficacy in acute myeloid leukemia with FLT3-ITD

Veterans Affairs Merit Review Award (1 I01 BX005120-01)

Annual direct Costs: $165,000 direct/yr

Total Costs: $668,494

7/1/21-6/30/25          MPI: Rassool, Nephew, Miller (10% effort)

Epigenetic Therapy – New Approaches

NCI/NIH Epigenetics SPORE (1P50CA254897-01A1**)**

Total Costs: $171,000

9/1/2022 – 8/31/2023 PI: Rassool

MDACC SPORE DRP 2022-2023

Activating STING and innate immune responses in TP53-mutated acute myeloid leukemia

Total Costs: $60,000

7/1/2022 – 6/30/2023 MPIs Baer and Rassool

UMGCCC Pilot grants

Phase 1 clinical trial of the STING agonist CRD3874 alone in relapsed/refractory AML and the DNA methyltransferase inhibitor decitabine in newly diagnosed TP53m AML

Total Costs: $156, 000

**Pending Grants – University of Maryland**

9/1/22-8/31/27 MPI, Rassool, Lin (10% effort)

NIH/NCI

Dual inhibition of PARP and IL-6 as a novel approach of preventive therapy for BRCA-mutated triple-negative breast cancer

Total Costs: $750,000

7/1/23-6/30/28 MPI Rassool and Baer

Activating STING and anti-leukemia immune responses in TP53-mutated AML

NIH/NCI

Total Costs: $3,803,159.77

9/1/23-8/31/26 MPI Rassool and Baer

Activating STING and anti-leukemia immune responses in TP53-mutated AML

NIH/NCI

Total Costs: $750

**Completed Grants – University of Chicago**

01/96-01/97 (PI, 10%)

#### *“The FHIT gene and FRA3B in Breast Cancer”*

#### NCI Breast Cancer Pilot Grant

#### Total Direct Costs: $35,000

01/97-01/98 (PI, 10%)

*“The FRA3B in Ductal Carcinoma of the Breast”*

Blowitz-Ridgeway Award, American Cancer Society (Illinois)

Total Direct Costs: $35,000

Completed Grants – King’s College, London, UK

09/98-09/01 (PI, 100%)

*“Genomic Instability in Myelodysplastic Syndromes (I)”*

Elimination of Leukaemia Fund, UK (Private Foundation)

Total Direct Costs: $699,090

09/98-09/01 (PI, 10%)

*“The Genetic Basis for Familial Acute Myeloid Leukaemia”*

Royal Society (Private Foundation)

Total Direct Costs: $16,000

04/99-02/02 (PI, 10%)

*“Identification and Characterization of Genes in Familial Myelodysplastic Syndromes”*

Joint Research Council Ph.D. Studentship, King’s College, London

Total Direct Costs: $63,960

09/01-09/04 (PI, 50%) **RENEWAL** (of above)

*“Genomic Instability in Myelodysplastic Syndromes (II)”*

Elimination of Leukaemia Fund, UK (Private Foundation)

Total Direct Costs: $327,750

09/01-09/04 (PI, 50%)

*“Does Therapy-Related Malignancy Result from an Inability to Repair DNA Damage”*

Elimination of Leukaemia Fund, UK (Private Foundation)

Total Direct Costs: $422,979

2002 (PI, 10%)

*“Analysis of Altered Non-Homologous End-Joining in CLL Using Cell-Free Extracts”*

Summer Grant, Burroughs Wellcome (Private Foundation)

Total Direct Costs: $1,856

Completed Grants – University of MD

06/05-06/06 (PI, 10%)

*“ROS and MDS”*

Intramural Grant (pilot), University of Maryland, Baltimore

Total Direct Costs: $30,000

06/06-06/07 (MPI, 10%) and Paul Shapiro

*“The Role of STAT5 and Rac1 in ROS Production*”

MSB Pilot Grant (pilot), University of Maryland, Baltimore

Total Direct Costs: $30,000

Role: Deriving mechanisms for the role of STAT5 and Rac1 in ROS production.

03/01/07-02/28/09 (PI, 5%)

*“The Role of ‘Back-up Repair’ in Genomic Instability in CML”*

Research Grant, DOD, contract number: W81XWH-07-1-0140

Annual Direct Costs: $100,000

Total Direct Costs: $100,000 (1 yr. no cost extension)

08/01/07-07/31/10 (Co-Inv., 10%), PI, S. Gore (at Johns Hopkins)

*“Mechanisms of Combined Epigenetic Therapy in Myeloid Malignancies”*

NIH grant number: R01CA125635; Sub award number: 2000364532

Annual Direct Costs: $70,092

Total Direct Costs: $213,940

Role: Deriving pre-clinical data for mechanisms of combined epigenetic therapy in myeloid malignancies.

07/01/08-06/30/11 (MPI, 10%); MPI, S. Baylin

*“Dissecting the Genetic and Epigenetic Origins Underlying Tumorigenic Potential of Human Embryonic and Adult Stem Cells”*

TEDCO (Maryland) Grant Number: 08072925

Annual Direct Costs: $500,000

Total Direct Costs: $1,500,000

Role: DNA & repair studies in stem cells.

#### 10/01/08-09/30/10 (PI, 20%) (extended to 2010)

#### *“The Role of WRN/Ligase III/XRCC1 in Genomic Instability in CML”*

#### Leukemia & Lymphoma Society, Translational Award, grant number: 6085-07

Annual Direct Costs: $180,018

Total Direct Costs: $540,054

11/01/09-10/31/12 (PI, 20%)

*“DNA Repair Inhibitors in Leukemia”*

V Foundation (Private Foundation)

Annual Direct Costs: $181,818

Total Direct Costs: $600,000

09/30/10-05/31/13 (Co-Inv. 10%; PI Roghmann)

Clinical Research Curriculum Award

NIH/NCRR

Grant Number: 5K30R022682-05

Annual Direct Costs: $274,882

Total Direct Costs: $858,616

Role: Created Translational Research Program & GPLS 791 course.

07/01/10-6/30/14 (PI 15%)

“*Efficacy of remodeling the DNA damage response in induced pluripotent stem cells engineered by different methods”*

Continuation of previous TEDCO

TEDCO (Maryland) Grant Number: N/A

Annual Direct Costs: $200,000

Total Direct Costs: $600,000

07/01/12-06/30/14 (Co-Inv., 10%; PI Scheibner)

*“Regulation of DNA double strand break repair in human hematopoietic stem cells by microRNAs”*

Exploratory Grant TEDCO (Maryland)

Annual Direct Costs: $100,000

Total Direct Costs: $200,000

Role: DNA damage repair in hematopoietic stem cells.

06/01/14-09/30/14 (Co-Inv., 10%; PI - S. Baylin (JHU)

*“Bringing Epigenetic Therapy to the Management of Ovarian and Other Cancers”*

Adelson Foundation (Pilot)

Annual Direct Costs: $20,000

Total Direct Costs: $20,000

Role: To investigate the role of PARP inhibitors and epigenetic drugs in ovarian cancer.

07/01/14-06/31/16 (PI 10%)

*“Efficiently reprogramed cells with a MYC signature display high fidelity repair of DNA damage”*

TEDCO Maryland Stem Cell Fund

Annual Direct Costs: $100,000

Total Direct Costs: $200,000

07/01/15-06/30/17 (PI, 10%)

“*Mechanisms for sensitivity to PARP inhibitors in cancer involving ALT NHEJ”*

NIH - R21 5R21CA186974-02

Annual Direct Costs: $150,000

###### Total Direct Costs: $375,000

10/01/14-09/30/16 (Co-Inv., 10%; PI - S. Baylin (JHU)

*“Bringing Epigenetic Therapy to the Management of Ovarian and Other Cancers”*

Adelson Foundation (Pilot)

Annual Direct Costs: $100,000

Total Direct Costs: $200,000

Role: To investigate the role of PARP inhibitors and epigenetic drugs in ovarian cancer.

11/01/14-10/30/17 (Co-Inv., 10%); PI - S. Baylin (JHU)

*“Use of DNA Demethylating Agents for Cancer Therapy”*

Van Andel-SU2C, Inc.

Annual Direct Costs: $100,000

Total Direct Costs: $300,000

Role: To investigate the role of PARP inhibitors and epigenetic drugs in lung cancer.

07/01/14-06/30/18 (Co-Inv., 5%; PI - M. Baer)

*“Inhibition of Pim Kinases in Acute Myeloid Leukemia”*

VA Merit Review Award

Annual Direct Costs: $200,000

Total Direct Costs: $600,000

Role: To investigate role of Pim kinase inhibitors in DNA repair in leukemia.

10/1/15-9/30/19 (PI, 10%) NCE

*“DNA Demethylating Agent and PARP Inhibitor Therapy Targeting Aberrant DNA Repair in Acute Myeloid Leukemia (AML)”*

Leukemia & Lymphoma Society (LLS): P-TRP-5885-15

Annual Direct Costs: $200,000

Total Direct Costs: $600,000

Role: Investigate the role of PARP inhibitors and epigenetic drugs in AML.

12/1/15-11/30/19 (Co-Inv., 10%; PI Baer)

*“*Multicenter phase 1/2 study of combination therapy with the DNA methyltransferase inhibitor decitabine and the poly   
ADP ribose polymerase (PARP) inhibitor talazoparib (BMN 673) for untreated acute myeloid leukemia (AML) in adult patients unfit for cytotoxic chemotherapy or relapsed/refractory AML

Van Andel-SU2C, Inc.

Clinical Trials: ~$1.390M

Rassool lab **$156,342.0**

Role: Provide correlative studies for Phase 1 clinical trial.

07/01/17-4/30/20 (PI Rassool, 10%) NCE

“*Mechanisms for sensitivity to HDAC inhibitors involving PARP trapping in leukemias”*

NIH - 1R21 CA208937-01A1

Annual Direct Costs: $150,000

###### Total Direct Costs: $375,000

Role: Investigate the role of PARP inhibitors and HDACi in AML.

12/01/2017 – 11/30/19 (PI Rassool (0%)

“ Additional Funds to continue to explore the role of

Talazoparib and DNA methyl transferase inhibitors in

enhancing anti-tumor immune responses in AML”

Van Andel Research Institute-SU2C, Inc.

Annual direct costs: $50,000

Total direct costs: $100,000

Role: Study the immune response with PARPi/DNMTi combination therapy

7/1/18-6/30/20 (PI Rassool, 10%) Renewed

*“DNA Demethylating Agent and PARP Inhibitor Therapy Targeting Aberrant DNA Repair in Acute Myeloid Leukemia (AML)”*

Leukemia & Lymphoma Society (LLS): P-TRP-5885-15 R

Annual Direct Costs: $300,000

Total Direct Costs: $600,000

Role: Test DAC/Talazoparib drug combination in phase 2 clinical trial in AML with correlative studies

**Patents, Inventions and Copyrights**

1. Co-Inventor on patent with Alan Tomkinson (STC Ref No. 2012-0250).

Diagnostic Biomarkers to Identify Breast Cancer Patients Whose Disease Will Respond to a Combination of DNA Ligase and PARP Inhibitors

**US Patent Number 9,132,120 issued on September 15, 2015**; to expire July 27, 2033

Patent application jointly owned with the University of New Mexico.

2. Patent application applied for inventors: Rassool, Robert and Baylin

Invention Disclosure: FR-2013-075

Sensitizing Leukemias to PARP Inhibitors via Low Dose Epigenetic Therapy

July 30, 2015 – Patent Cooperation Treaty – International Bureau published under

No. WO 2015/112598

3. US Continuation Patent Application Number:  15/254,716

Title: “Therapy Regimen and Methods to Sensitize Cancer Cells Treated with Epigenetic Therapy to PARP Inhibitors in Ovarian Cancer”

UMB Docket Number: FR-2013-075 (US CON 2)

Johns Hopkins Ref:  C12345

4 US Continuation Patent Application Number:  15/254,738

Title: “Therapy Regimen and Methods to Sensitize Cancer Cells Treated with Epigenetic Therapy to PARP Inhibitors in Lung Cancer”

UMB Docket Number: FR-2013-075 (US CON)

Johns Hopkins Ref:  C12345

5 **European Patent Number 3 102 199** issued on July 22, 2020

Title: "Therapy Regimen and Methods to Sensitize Cancer Cells Treated with Epigenetic Therapy to PARP Inhibitors to Ovarian Cancer"

**Publications**

Peer-Reviewed Journal Articles

1. McCarthy DM, **Rassool FV**, Goldman JM, Graham SV, Birnie, GD. Genomic alterations involving the c-myc proto-oncogene locus during the evolution of a case of chronic granulocytic

leukaemia. Lancet 1984: 2(8416):1362-5. PMID: 6150366. *(determined genetic alterations, performed analysis, provided interpretation and participated in writing manuscript)*

2. Parreira L, Kearney L, **Rassool F**, Babapulle VB, Matutes E, Parreira A, Tavares de Castro J, Goldman JM, Catovsky D. Correlation between chromosomal abnormalities and blast phenotype in blast crisis of Ph-positive CGL. Cancer Genet Cytogenet 1986:22(1):29-34. PMID: 3456825. *(performed cytogenetic analysis, provided interpretation and participated in writing manuscript)*

3. Apperley JF, **Rassool F**, Parreira A, Geary CG, Harrison C, Stansfield D, Goldman JM. Philadelphia-positive metaphases in the marrow after bone marrow transplantation for chronic granulocytic leukaemia. Am J Hematol 1986:22(2):199-204. PMID: 3518418. *(performed cytogenetic analysis, provided interpretation and participated in writing manuscript)*

4. Alevizaki M, Shiraishi A, **Rassool FV**, Ferrier GJ, MacIntyre I, Legon S. The calcitonin-like sequence of the beta CGRP gene. FEBS Lett 1986:206(1):47-52. PMID: 3489641. *(determined genetic alterations, performed analysis, provided interpretation and participated in writing manuscript)*

5. Ganesan TS, **Rassool F**, Guo AP, T'h’ng KH, Dowding C, Hibbin JA, Young BD, White H, Kumaran TO, Galton DA, Goldman JM. Rearrangement of the bcr gene in Philadelphia chromosome-negative chronic myeloid leukemia. Blood 1986:68(4):957-960. PMID: 2875753. *(determined genetic alterations, performed analysis, provided interpretation and participated in writing manuscript)*

*6.* Brito-Babapulle F, Apperley JF, **Rassool F**, Guo AP, Dowding C, Goldman JM. Complete remission after autografting for chronic myeloid leukemia. Leuk Res 1987:11(12):1115-7. PMID: 2891879. *(performed cytogenetic analysis, provided interpretation and participated in writing manuscript)*

7. Ganesan TS, **Rassool F**, Guo AP, Young BD, Galton DA, Goldman JM. Rearrangement of the bcr gene in Philadelphia-chromosome-negative chronic myeloid leukaemia. Haematol Blood Transfus 1987:31:153-9. PMID: 3481750. *(determined genetic alterations, performed analysis, provided interpretation and participated in writing manuscript)*

8. T'h’ng KH, Garewal G, Kearney L, **Rassool F**, Melo JV, White H, Catovsky D, Foroni L, Luzzatto L, Goldman JM. Establishment and characterization of three new malignant lymphoid cell lines. Int J Cancer 1987:39(1):89-93. PMID: 3098690. *(performed cytogenetic analysis, provided interpretation and participated in writing manuscript)*

9. Dreazen O, Klisak I, **Rassool F**, Goldman JM, Sparkes R, Gale RP. Do oncogenes determine the clinical features in chronic myeloid leukaemia? Lancet 1987:1(8547):1402-1405. PMID: 2884497. *(performed cytogenetic analysis, provided interpretation and participated in writing manuscript)*

10. Dreazen O, Klisak I, **Rassool F**, Goldman JM, Sparkes RS, Gale RP. The bcr gene is joined to c-abl in Ph1 chromosome negative chronic myelogenous leukemia. Oncogene Res 1988:2(2):167-175. PMID: 3217110. *(determined genetic alterations, performed analysis, provided interpretation and participated in writing manuscript)*

11. Arthur CK, Apperley JF, Guo AP, **Rassool F**, Gao LM, Goldman JM. Cytogenetic events after bone marrow transplantation for chronic myeloid leukemia in chronic phase. Blood 1988:71(5):1179-86. PMID: 3282566. *(determined genetic alterations, performed analysis, provided interpretation and participated in writing manuscript)*

12. **Rassool F**, Foroni L, Rahemtulla A, Dreazen O, Wiedeman L, Guo AP, Legon S, Catovsky D, Luzzatto L, Goldman J. The genomic breakpoint in a patient with Philadelphia-positive acute leukemia is 5' of the breakpoint cluster region. Cancer Genet Cytogenet 1988:32(2):217-27. PMID: 3259155.

13. Price CM\*, **Rassool F\***, Shivji MK, Gow J, Tew CJ, Haworth C, Goldman JM, Wiedeman LM. Rearrangement of the breakpoint cluster region and expression of P210 BCR-ABL in a "masked"

Philadelphia chromosome-positive acute myeloid leukemia. Blood 1988:72(5):1829-32. PMID: 3179449.

14. Martiat, P Ifrah N, **Rassool F**, Morgan G, Giles F, Gow J, Goldman JM. Molecular analysis of Philadelphia positive essential thrombocythemia. Leukemia 1989:3(8):563-5. PMID: 2747291. *(determined genetic alterations, performed analysis, provided interpretation and participated in writing manuscript)*

15. Brito-Babapulle F, Bowcock S, Marcus R, Apperley J, T'hng KH, Dowding C, **Rassool F**, Guo AP, Catovsky D, Galton D and Goldman JM. Autografting for patients with chronic myeloid leukaemia in chronic phase: peripheral blood stem cells may have a finite capacity for haemopoiesis. Br J Hematol 1989:73(1):76-81. PMID: 2572271. *(performed cytogenetic analysis, provided interpretation and participated in writing manuscript)*

16. Zaccaria A, Testoni N, Celso B, **Rassool F**, Saglio G, Guerrasio A, Rosti G and Tura S. Cytogenetic and molecular studies in patients with chronic myeloid leukemia and variant Philadelphia translocations. Cancer Genet Cytogenet 1989:42(2):191-201. PMID: 2790754. *(performed genetic and cytogenetic analysis, provided interpretation and participated in writing manuscript)*

17. Hughes TP, Economou K, Mackinnon S, Vlitos M, Arthur CK, Guo AP, **Rassool F**, Apperley JF, Hows J, Goldman JM. Slow evolution of chronic myeloid leukaemia relapsing after BMT with T-cell depleted donor marrow. Br J Haematol 1989:73(4):462-467. PMID: 2611134. *(performed cytogenetic analysis, provided interpretation and participated in writing manuscript)*

18. **Rassool F**, Martiat P, Taj A, Klisak I, Goldman J. Interstitial insertion of varying amounts of ABL-containing genetic material into chromosome 22 in Ph-negative CML. Leukemia 1990:4(4):273-7. PMID: 2164119.

19. **Rassool FV**, McKeithan TW, Neilly ME, van Melle E, Espinosa R 3rd, Le Beau MM. Preferential integration of marker DNA into the chromosomal fragile site at 3p14: an approach to cloning fragile sites. Proc Natl Acad Sci USA 1991:88(15):6657-61. PMID: 1862089.

20. **Rassool FV**, Le Beau MM, Neilly ME, van Mell E, Espinosa R 3rd, McKeithan TW. Increased genetic instability of the common fragile site at 3p14 after integration of exogenous DNA. Am J Hum Genet 1992:50(6):1243-51. PMID: 1317992.

21. **Rassool FV**, Neilly ME, McGuire KL, McKeithan TW, Le Beau MM. Localization of the Chinese hamster MHC locus to chromosome 1q17- ->q18. Cytogenet Cell Genet 1995:71(1):62-3. PMID: 7606930.

22. **Rassool FV**, Le Beau MM, Shen ML, Neilly ME, Espinosa R 3rd, Ong ST, Boldog F, Drabkin H, McCarroll R, McKeithan TW. Direct cloning of DNA sequences from the common fragile site at chromosome band 3p14.2. Genomics 1996:35:109-117. PMID: 8661111.

23. Fong KM, Biesterveld EJ, Virmini A, Wistuba I, Sekido Y, Bader SA, Ahmadian M, Ong ST, **Rassool FV**, Zimmerman PV, Giaccone G, Gazdar AF, Minna JD. FHIT and FRA3B 3p14.2

allele loss are common in lung cancer and preneoplastic bronchial lesions and are associated with cancer-related FHIT cDNA splicing aberrations. Cancer Res 1997:57(11): 2256-67. PMID: 9187130. *(determined genetic alterations, performed analysis, provided interpretation and participated in writing manuscript)*

24. Ong ST, Fong KM, Bader SA, Minna JD, LeBeau MM, McKeithan TW, **Rassool FV**. Precise localization of the FHIT gene to the common fragile site at 3p14.2 (FRA3B) and characterization

of homozygous deletions within FRA3B that affect FHIT transcription in tumor cell lines. Genes Chromosomes Cancer 1997:20(1):16-23. PMID: 9290946.

25. Le Beau MM, Drabkin H, Glover TW, Gemmill R, **Rassool FV**, McKeithan TW, Smith DI. An FHIT tumor suppressor gene? Genes Chromosomes Cancer 1998:21(4):281-9. PMID: 9559339. *(determined genetic alterations, performed analysis, provided interpretation and participated in writing manuscript)*

26. Le Beau MM, **Rassool FV**, Neilly ME, Espinosa R 3rd, Glover TW, Smith DI, McKeithan TW. Replication of the common fragile site, FRA3B, occurs in late S phase and is delayed further upon induction: implications for the mechanism of fragile site induction. Hum Mol Genet 1998:7(4):755-61. PMID: 9499431. *(determined genetic alterations, performed analysis, provided interpretation and participated in writing manuscript)*

27. Peters UR, Hasse U, Oppliger E, Tschan M, Ong ST, **Rassool FV**, Borisch B, Tobler A, Fey MF. Aberrant FHIT mrRNA transcripts are present in malignant and normal haematopoiesis, but absence of FHIT protein is restricted to leukaemia. Oncogene 1999:18(1):79-85. PMID: 9926922. *(determined genetic alterations, performed analysis, provided interpretation and participated in writing manuscript)*

28. **Rassool F**. Inherited susceptibility to cancer: clinical, predictive and ethical perspectives. BMJ 1999:318(7197):1563. PMID: 10356041.

29. Gaymes TJ, North PS, Brady N, Hickson ID, Mufti GJ, **Rassool FV**. Increased error-prone non- homologous DNA end-joining--a proposed mechanism of chromosomal instability in Bloom's syndrome. Oncogene 2002:21(16):2525-33. PMID: 11971187.

30. Gaymes TJ, Mufti GJ, **Rassool FV**. Myeloid leukemias have increased activity of the non-homologous end-joining pathway and concomitant DNA misrepair that is dependent on the Ku70/86 heterodimer. Cancer Res 2002:62(10): 2791-7. PMID: 12019155.

31. Cameron E, Mijovic A, Herman JG, Baylin SB, Pradhan A, Mufti GJ, **Rassool FV**. P15INK4B is not mutated in adult familial myelodysplastic syndromes. Br J Haematol 2002:119(1):277-9. PMID: 12358941.

32. Aktas D, Arno MJ, **Rassool F\***, Mufti GJ\*. Analysis of CHK2 in patients with myelodysplastic syndromes. Leuk Res 2002:26(11): 985-7. PMID: 12363465.

33. **Rassool FV**. DNA double strand breaks (DSB) and non-homologous end joining (NHEJ) pathways in human leukemia. Cancer Lett 2003; 193(1):1-9. PMID: 12691817 (review).

34. **Rassool FV**. Genetic rearrangements beget genomic instability. Blood 2004:104: 3424-3425. (review)  http://dx.doi.org/10.1182/blood-2004-09-3404.

35. Brady N, Gaymes TJ, Cheung M, Mufti GJ, **Rassool FV**. Increased error-prone NHEJ activity in myeloid leukemias is associated with DNA damage at sites that recruit key non-homologous end-joining proteins. Cancer Res 2003:63(8):1798-1805. PMID: 12702565.

36. **Rassool FV**, NorthPS, MuftiGJ, Hickson ID. Constitutive DNA damage is linked to DNA replication abnormalities in Bloom’s syndrome cells. Oncogene 2003:22(54):8749-57. PMID: 14647470.

37. PradhanA, Mijovic A, Mills K, Cumber P, Westwood N,MuftiGJ, **Rassool FV**. Differentially expressed genes in adult familial myelodysplastic syndromes. Leukemia 2004:18(3):449-59. PMID: 14737073.

38. Wei Y, Lin-Lee YC, Yang X, Dai W, Zhao S, **Rassool FV**, Elgart GW, Feun L, Savaraj N, Kuo MT. Molecular cloning of Chinese hamster 1q31 chromosomal fragile site DNA that is important to mdr1 gene amplification reveals a novel gene whose expression is associated with spermatocyte and adipocyte differentiation. Gene 2006:372:44-52. PMID: 16545529. *(determined genetic alterations, provided interpretation and participated in writing manuscript)*

39. Gaymes TJ, Padua RA, Pla M, Orr S, Omidvar N, Chomienne C, Mufti GJ, **Rassool FV**. Histone deacetylase inhibitors (HDI) cause DNA damage in leukemia cells: a mechanism for leukemia-specific HDI-dependent apoptosis? Mol Cancer Res 2006:4(8)563-73. PMID: 16877702.

40. **Rassool FV**, Gaymes TJ, Omidvar N, Brady N, Beurlet S, Pla M, Reboul M, Lea N, Chomienne C, Thomas NS, Mufti GJ, Padua RA. Reactive oxygen species, DNA damage, and error-prone repair: a model for genomic instability with progression in myeloid leukemia? Ca Res 2007:67(18):8762-71. PMID: 17875717.

41. Sallmyr A, Fan J, Datta K, Kim KT, Grosu D, Shapiro P, Small D, **Rassool F**. Internal tandem duplication of FLT3 (FLT3/ITD) induces increased ROS production, DNA damage, and misrepair: implications for poor prognosis in AML. Blood 2008:111(6): 3173-82. doi: 10.1182/blood-2007-05-092510. PMID: 18192505.

42. Sallmyr A, Fan J, **Rassool FV**. Genomic instability in myeloid malignancies: increased reactive oxygen species (ROS), DNA double strand breaks (DSBs) and error-prone repair. Cancer Lett 2008: 270(1):1-9. doi: 10.1016/j.canlet.2008.03.036. PMID: 18467025. (review)

43. Ranuncolo SM, Wang L, Polo JM, Dell'Oso T, Dierov J, Gaymes TJ, **Rassool F**, Carroll M, Melnick A. BCL6-mediated attenuation of DNA damage sensing triggers growth arrest and senescence through a p53-dependent pathway in a cell context-dependent manner. J Biol Chem 2008:283(33):22565-72. doi: 10.1074/jbc.M803490200. PMID: 18524763. *(determined genetic alterations, provided interpretation and participated in writing manuscript)*

44. Sallmyr A, Tomkinson AE, **Rassool FV**. Up-regulation of WRN and DNA ligase IIIalpha in chronic myeloid leukemia: consequences for the repair of DNA double-strand breaks. Blood 2008:112(4):1413-23. doi: 10.1182/blood-2007-07-104257. PMID: 18524993.

45. Reader JC, Leng Q, **Rassool FV**, Ning Y. Regulation of differentiation by a PHD domain in the NUP98-PHF23 fusion protein. Leuk Res 2010:34(8):1094-7. doi: 10.1016/j/leukres/2010.02.015. PMID: 20219246. *(determined genetic alterations, provided interpretation and participated in writing manuscript)*

46. **Rassool FV**, Tomkinson AE. Targeting Abnormal DNA double strand break repair in cancer. Cell Mol Life Sci 2010:67(21):3699-710. doi: 10.1007/s00018.010-0493-5. PMID: 20697770. (review)

47. Fan J, Li L, Small D, **Rassool F**. Cells expressing FLT3/ITD mutations exhibit elevated repair errors generated through alternative NHEJ pathways: implications for genomic instability and therapy. Blood 2010:116(24):5298-305. doi: 10.1182/blood-2010-03-272591. PMID: 20807885.

48. Ohm JE, Mali P, Van Neste L, Berman DM, Liang L, Pandiyan K, Briggs KJ, Zhang W, Argani P, Simons B, Yu W, Matsui W, Van Criekinge W, **Rassool FV**, Zambidis E, Schuebel KE, Cope L, Yen J, Mohammad HP, Cheng L, Baylin SB. Cancer-related epigenome changes associated with reprogramming to induced pluripotent stem cells. Cancer Res 2010:70(19):7662-73. doi:

10.1158/0008-5472.CAN-10-1361. PMID: 20841480. *(provided interpretation and participated in writing manuscript)*

49. Li L, Zhang L, Fan J, Greenberg K, Desiderio S, **Rassool FV\***, Small D\*. Defective non-homolo-

gous end-joining blocks B-cell development in FLT3/ITD mice. Blood 2011:117(11):3131-9. doi:10.1182/blood-2010-05-286070. PMID: 21228325.

50. Karp JE\*, **Rassool FV\***. KLFs and ATRA-induced differentiations: new pathways for exploitation. Leuk Res 2011:35(7):846-7. doi: 10.101j.leukres.2011.04.002. PMID: 21543117.

51. Fan J, Robert C, Jang YY, Liu H, Sharkis S, Baylin SB, **Rassool FV**. Human induced pluripotent cells resemble embryonic stem cells demonstrating enhanced levels of DNA repair and efficacy of non-homologous end-joining. Mutat Res. 2011:713(1-2):8-17. doi: 10.10180/j.mrfmmm.2011.

05.018. PMID: 21718709.

52. Tobin LA, Robert C, Nagaria P, Chumsri S, Twaddell W, Ioffe OB, Greco GE, Brodie AH, Tomkinson AE, **Rassool FV**. [Targeting abnormal DNA repair in therapy-resistant breast cancers.](http://www.ncbi.nlm.nih.gov/pubmed/22112941) Mol Cancer Res 2012:10(1):96-107. doi: 10.1158/1541-7786.MCR-11-0255. PMID: 22112941.

53. Muvarak N, Nagaria P, **Rassool FV**. Genomic instability in chronic myeloid leukemia: targets for therapy? Curr Hematol Malig Rep. 2012:7(2):94-102, doi: 10.1007/s11899-012-0119-0. PMID: 22427031.

54. Tsai HC, Li H, Van Neste L, Cai Y, Robert C, **Rassool FV**, Shin JJ, Harbom KM, Beaty R, Pappou E, Harris J, Yen RW, Ahuja N, Brock MV, Stearns V, Feller-Kopman D, Yarmus LB, Lin YC, Welm AL, Issa JP, Minn I, Matsui W, Jang YY, Sharkis SJ, Baylin SB, Zahnow CA. Transient low doses of DNA-demethylating agents exert durable antitumor effects on hematological and epithelial tumor cells. Cancer Cell 2012:21(3):430-46. doi: 10.1016/j.ccr.

2011.12.029. PMID: 22439938. *(determined DNA damage analysis, provided interpretation and participated in writing manuscript)*

55. Nagaria P, Robert C, **Rassool FV**. DNA double-strand break response in stem cells: mechanisms to maintain genomic integrity. Biochim Biophys Acta 2013:1830(2):2345-53. doi: 10.1016/j.bbgan.2012.09.001. PMID: 222995214. (review)

56. Tobin LA, Robert C, Rapoport AP, Gojo I, Baer MR, Tomkinson AE, **Rassool FV**. [Targeting abnormal DNA double-strand break repair in tyrosine kinase inhibitor-resistant chronic myeloid leukemias.](http://www.ncbi.nlm.nih.gov/pubmed/22641215) Oncogene 2013:32(14):1784-93. doi: 10.1038/onc.2012.203. PMID: 22641215.

57. Robert C and **Rassool FV**. HDAC inhibitors: roles of DNA damage and repair. Adv Cancer Res. 2012:116:87-129. doi: 10.1016/B978-0-12-394387-3.00003-3. PMID: 23088869. (review)

58. Cramer-Morales,K, Nieborowska-Skorska,M, Scheibner, K, Padget, M, Irvine, D, Sliwinski, T, Haas,K, Lee,J, Roy,D, Slupianek,A, **Rassool,****FV**, Wasik,M, Childers,W, Copland,M , Muschen,M, Civin,C, and Skorski,T\*. RAD52-dependent personalized synthetic lethality in tumors identified by genetic and epigenetic profiling. Blood 2013:122(7):1293-304. doi: 10.1182/

blood-2013-05-501072. PMID: 23836560. *(provided interpretation, analysis and participated in writing manuscript)*

59. Chung YJ, Robert C, Gough SM, **Rassool FV**, Aplan PD. [Oxidative stress leads to increased mutation frequency in a murine model of myelodysplastic syndrome.](http://www.ncbi.nlm.nih.gov/pubmed/23958061) Leuk Res. 2014:38(1):95-102. doi: 10.1016/j.leukres.2013.07.008. PMID: 23958061. *(provided interpretation, analysis and participated in writing manuscript)*

60. Park TS, Bhutto I, Zimmerlin L, Huo JS, Nagaria P, Miller D, Rufaihah AJ, Talbot C, Aguilar J, Grebe R, Merges C, Reijo-Pera R, Feldman RA, **Rassool F**, Cooke J, Lutty G, Zambidis ET. Peer-

[Vascular progenitors from cord blood-derived induced pluripotent stem cells possess augmented capacity for regenerating ischemic retinal vasculature.](http://www.ncbi.nlm.nih.gov/pubmed/24163065) Circulation. 2014:129(3):359-72. doi:

10.1161/CIRCULATIONAHA.113.003000. PMID: 24163065. *(provided interpretation, analysis and participated in writing manuscript)*

61. Gourdin TS, Zou Y, Ning Y, Emadi A, Duong VH, Tidwell ML, Chen C, **Rassool FV**, Baer MR. High frequency of rare cytogenetic abnormalities at relapse of cytogenetically normal acute myeloid leukemia with FLT3 internal tandem duplication. Cancer Genet. 2014:207(10-12):467-73. doi: 10.1016/j.cancergen.2014.09.001. Epub 2014 Sep 16. PMID: 25441683. *(provided interpretation, analysis and participated in writing manuscript)*

62. Muvarak N, Kelley S, Robert C, Baer MR, Perrotti D, Gambacorti-Passarini C, Civin C, Scheibner K, **Rassool FV**. Role of C-MYC in DSB repair in tyrosine kinase activated leukemias. Mol Cancer Res. 2015 Apr;13(4):699-712. doi: 10.1158/1541-7786.MCR-14-0422. Epub 2015 Mar 31. PMID:25828893.

63. **Rassool FV\*** and PerrottiD. A “RANning” leap with “XPOrt” into the microenvironment in BCR-ABL-independent resistance to TKI therapy? Blood. 2015 Mar 12;125(11):1686-8. doi: 10.1182/blood-2015-01-622217. PMID: 25766563.

64. Khatri R, Shah P, Guha R, **Rassool FV**, Tomkinson AE, Brodie A, Jaiswal AK [Aromatase Inhibitor-Mediated Down Regulation of INrf2 (Keap1) Leads to Increased Nrf2 and Resistance in Breast Cancer.](http://www.ncbi.nlm.nih.gov/pubmed/25976679) Mol Cancer Ther. 2015 May 14. pii: molcanther.0672.2014. [Epub ahead of print] PMID: 25976679. *(provided data, interpretation, analysis and participated in writing manuscript)*

65. Rena G.  Lapidus, Brandon A.  Carter-Cooper, Mariola  Sadowska, Eun

Yong  Choi, Omasiri  Wonodi, Nidal  Muvarak, Karthika  Natarajan, Lakshmi S.

Pidugu, Anil  Jaiswal, Eric A.  Toth, **Feyruz V**.**Rassool**, Arash  Etemadi,

Edward A.  Sausville, Maria R.  Baer, Ashkan  Emadi \* Hydroxylated dimeric naphthoquinones increase generation of reactive oxygen species, induce apoptosis of acute myeloid leukemia cells and are not substrates of the multidrug resistance proteins ABCB1 and ABCG2

Pharmaceuticals (Basel). 2016 Jan 19;9(1). pii: E4. doi: 10.3390/ph9010004.

*(provided data, interpretation, analysis and participated in writing manuscript)*

66. Robert C, Nagaria P, Gojo I, Meyers DJ, Cole P, **Rassool FV**.  Histone deacetylase inhibitors promote persistent binding of PARP-1 to DNA double strand breaks in chromatin, thus decreasing repair via non-homologous end joining. Leukemia Research 2016: 45: 14-23.

67. Doshi KA, Trotta R, Natarajan K, **Rassool FV**, Tron AE, Huszar D, Perrotti D, Baer MR. Pim kinase inhibition sensitizes FLT3-ITD acute myeloid leukemia cells to topoisomerase 2 inhibitors through increased DNA damage and oxidative stress. In press, Oncotarget. Oncotarget. 2016 Jun 21. doi: 10.18632/oncotarget.10209. [Epub ahead of print] PMID: 27374090 *(provided data, interpretation, analysis and participated in writing manuscript).*

68. Muvarak N\*, Chowdhury K\*, Xia L, Robert C, YongE, Cai Y, Bellani M, Zou Y, Singh ZN, DuongVH, Rutherford T, Nagaria P, Bentzen SM, Seidman MM, Baer MR, Lapidus RG, BaylinSB, **Rassool FV**. Enhancing the Cytotoxic Effects of PARP Inhibitors with DNA Demethylating Agents – A Potential Therapy for Cancer, Cancer Cell. 2016 Oct 10;30(4):637-650. doi: 10.1016/j.ccell.2016.09.002.PMID: 27728808.

69. RobertC,Nagaria P,Park TS, HuoJS, ZambidisES, **RassoolFV**. Efficiently reprogrammed cells display high-fidelity DNA end-joining capacity.Stem Cells Int. 2016;2016:3826249. doi: 10.1155/2016/3826249. PMID: 2768877570.

70. Xia L, Huang W, Bellani M, Seidman MM, Wu K, Fan D, Nie Y, Cai Y, Zhang WY, Yu L-R, Li H, Zahnow CA, Xie W, Chiu Yen R-W, **Rassool FV\***, Baylin SB\* CHD4 Acts As An Oncogene With A Driver Role For Initiating And Maintaining Epigenetic Suppression of Multiple Tumor Suppressor Genes. Cancer Cell. 2017 May 8;31(5):653-668.e7. doi: 10.1016/j.ccell.2017.04.005.PMID:2848610.

71. Pulliam N, Fang F, Ozes A, TangJ, **Rassool FV**, Keer H, LyonsJ, MateiD, Nakshatri H, Miller KD and Kenneth P. Nephew1,2,9\*An Effective Epigenetic-PARP inhibitor Combination Therapy for Ovarian and Breast Cancers Independent of BRCA-mutations**.** [Clin Cancer Res.](https://www.ncbi.nlm.nih.gov/pubmed/?term=rassool+and+nephew) 2018 Jul 1;24(13):3163-3175. doi: 10.1158/1078-0432.CCR-18-0204. Epub 2018 Apr 3.

*(provided data, interpretation, analysis and participated in writing manuscript).*

# 72. Kogan AA, Lapidus RG, Baer MR, **Rassool FV**. Exploiting epigenetically mediated changes: Acute myeloid leukemia, leukemia stem cells and the bone marrow microenvironment. Adv Cancer Res. 2019;141:213-253. doi: 10.1016/bs.acr.2018.12.005. Epub 2019 Jan 21. PMID:30691684).

73. Dellomo A, Baer M, **Rassool FV**. Role of PARP inhibitors in therapy for FLT3-ITD AML [Cancer Lett.](https://www.ncbi.nlm.nih.gov/pubmed/?term=dellomo+and+Rassool) 2019 Jul 10;454:171-178. doi: 10.1016/j.canlet.2019.03.048. Epub 2019 Apr 4.

74. Abbotts R, Topper MJ, Biondi C,Fontaine D, Goswami R, StojanovicL, Choi E-Y, McLaughlin L, XiaL, Lapidus R, Mahmood J, BaylinSB, **Rassool FV**. DNA methyltransferase inhibitors induce a BRCAness phenotype that sensitizes NSCLC to PARP inhibitor and ionizing radiation. Proc Natl Acad Sci U S A. 2019 Nov 5;116(45):22609-22618. doi: 10.1073/pnas.1903765116. Epub 2019 Oct 7.

[75. Fan L, Xu S, Zhang F, Cui X, Fazli L, Gleave M, Clark DJ, Yang A, Hussain A, **Rassool F**, Qi J. Histone demethylase JMJD1A promotes expression of DNA repair factors and radio-resistance of prostate cancer cells.](https://pubmed.ncbi.nlm.nih.gov/32238799/) Cell Death Dis. 2020 Apr 1;11(4):214.

76. McLaughlin L1,5,6, Stojanovic L, Shamah A1,5,6, Choi E-Y2,5, Xia L3,Zou Y4, Baer MR,Lapidus RG2,5, Baylin SB3, Topper M3\*, **Rassool FV1**,5\*#. Pharmacologic Induction of Innate Immune Signaling Directly Drives Homologous Recombination Deficiency, Proc Natl Acad Sci U S A. 2020 Jul 28;117(30):17785-17795. doi: 10.1073/pnas.2003499117. Epub 2020 Jul 10.

77. Puts G, Jarrett S, Leonard M, Matsangos N, Snyder D, Wang Y, Vincent R, Portney B, Abbotts R, McLaughlin L, Zalzman M, **Rassool F**, Kaetzel D. [Metastasis Suppressor NME1 Modulates Choice of Double-Strand Break Repair Pathways in Melanoma Cells by Enhancing Alternative NHEJ while Inhibiting NHEJ and HR.](https://pubmed.ncbi.nlm.nih.gov/32824412/) Int J Mol Sci, 2020 Aug 17;21(16):5896

78. [Heather M O'Hagan](https://pubmed.ncbi.nlm.nih.gov/?term=O%27Hagan+HM&cauthor_id=33822747)[1](https://pubmed.ncbi.nlm.nih.gov/33822747/#affiliation-1)[2](https://pubmed.ncbi.nlm.nih.gov/33822747/#affiliation-2), [Feyruz V Rassool](https://pubmed.ncbi.nlm.nih.gov/?term=Rassool+FV&cauthor_id=33822747)[3](https://pubmed.ncbi.nlm.nih.gov/33822747/#affiliation-3), [Kenneth P Nephew](https://pubmed.ncbi.nlm.nih.gov/?term=Nephew+KP&cauthor_id=33822747)[1](https://pubmed.ncbi.nlm.nih.gov/33822747/#affiliation-1)[2](https://pubmed.ncbi.nlm.nih.gov/33822747/#affiliation-2)

### How Epigenetic Therapy Beats Adverse Genetics in Monosomy Karyotype AML. Cancer Res, 2021 Feb 15;81(4):813-815. doi: 10.1158/0008-5472.CAN-20-4108. PMID: **33822747**

79. Dellomo AJ, Abbotts R, Eberly CL, Karbowski M, Baer MR, Kingsbury TJ, **Rassool FV.** [PARP1 PARylates and stabilizes STAT5 in FLT3-ITD acute myeloid leukemia and other STAT5-activated cancers.](https://pubmed.ncbi.nlm.nih.gov/34808460/) Transl Oncol. 2022 Jan;15(1):101283. doi: 10.1016/j.tranon.2021.101283. Epub 2021 Nov 19.PMID: 34808460.

80.Baer MR, Kogan AA, Bentzen SM, Mi T,Saum GEA, Lapidus RG,Emadi A, Duong VH, Niyongere S, O’Connell CL, Youngblood BA,BaylinSB and RassoolFV. Phase I clinical trial of DNA methyltransferase inhibitor decitabine and poly (ADP-ribose) polymerase inhibitor talazoparib combination therapy in adults with relapsed/refractory acute myeloid leukemia*.* Clin Cancer Res. 2022 Apr 1;28(7):1313-1322.

81. Kogan AA, Topper MJ, Stojanovic L, McLaughlin LJ, Creed TM, Eberly CL, Kingsbury TJ, Baer MR, Kessler MD, Baylin SB, **Rassool FV.**Activating STING-dependent immune signaling in *TP53* mutant and wild-type acute myeloid leukemia. PNAS, July 7, 2022.

82. Abbotts R, Dellomo AJ, Rassool FV. Pharmacologic induction of BRCAness in BRCA-proficient cancers: expanding PARP inhibitor use. Cancers 2022, 14, 2640.

83. Pan L, Chen X, **Rassool FV**, Li C, Lin J.  [LLL12B, a Novel Small-Molecule STAT3 Inhibitor, Induces Apoptosis and Suppresses Cell Migration and Tumor Growth in Triple-Negative Breast Cancer Cells.](https://pubmed.ncbi.nlm.nih.gov/36009550/) Biomedicines. 2022 Aug 18;10(8):2003. doi: 10.3390/biomedicines10082003.PMID: 36009550

Asterisk \*: co-senior author

Book Chapters

1. Li L, Robert C, **Rassool FV**. The Role of Error-Prone Alternative Non-Homologous End-Joining in Genomic Instability in Cancer, DNA Repair and Human Health, Edited by Sonya Vengrova, Croatia, In Tech Open Access Publisher, 2011. ISBN: 978-953-307-612-6.

2. Nagaria P and **Rassool F**. The Alternative End-Joining Pathway in Targeting the DNA Damage Response for Anti-Cancer Therapy, Edited by Beverly Teicher, published by Springer, 2017.

Abstracts and/or Proceedings

1. **Rassool FV**, McKeithan TW, Neilly ME, van Melle E, Espinosa R 3rd, Le Beau MM. Preferential integration of marker DNA into chromosomal fragile site at 3p14: A novel approach to cloning fragile sites. Keystone Symposium: Genome Instability and Cancer, Taos, CO, 1991.

2. **Rassool FV**, McKeithan TW, Neilly ME, van Melle E, Espinosa R 3rd, Le Beau MM. Exogenous DNA preferentially integrates into the common fragile site at 3p14 and increases the genetic instability. International Congress of Human Genetics, San Diego, CA, 1991.

3. Bohlander SK, **Rassool FV**, Espinosa R 3rd, Le Beau MM, Rowley JD, Diaz MO. A method for rapid sequence independent amplification of microdissected chromosome material. International Congress of Human Genetics, San Diego, CA, 1991.

4. **Rassool FV**, Le Beau MM, Shen ML, Neilly ME, Espinosa R 3rd, McKeithan TW. Isolation of the fragile site at 3p14 by direct cloning. International Congress of Human Genetics (ICHG), San Diego, CA, 1993.

5. **Rassool FV**, Le Beau MM, Shen ML, Neilly ME, Boldog F, Drabkin H, McKeithan TW. Direct cloning of the common fragile site at 3p14.2: A large region. Fifth International Chromosome 3 Workshop, Ann Arbor, MI, 1994.

6. **Rassool FV**, Le Beau MM, Shen ML, Neilly ME, Espinosa R 3rd, McKeithan TW. The 1330 kb YAC (850A6) containing the common fragile site at 3p14.2 (FRA3B), transfected into mammalian cells, shows breakage when treated with aphidicolin. Keystone Symposium, Keystone, CO, 1997.

7. Pradhan AV, Mijovic A, Cumber P, Mufti GJ, **Rassool FV**. No evidence for microsatellite instability in familial myelodysplastic syndromes. International Congress for MDS, Prague, 1999.

#### 8. Pradhan AV, Mufti GJ, Rassool FV. The nucleoplosminene (NPM) is down-regulated in myeloid malignancies. Proc Amer Assoc Cancer Res 2002;43:1465. AACR, San Francisco, CA, 2002.

9. Pradhan AV, Mufti GJ, **Rassool FV**. Differentially expressed genes in familial myelodysplastic syndromes (MDS) identified by microarray analysis. British Society of Haematology (BSH), Brighton, Sussex, UK, 2002.

10. Gaymes TJ, North P, Hickson I, Mufti G, **Rassool FV**. Increased constitutive replication-associated DNA damage in Bloom’s syndrome is associated with increased infidelity of non-homologous end-joining, a possible mechanism for chromosomal instability. Proc Amer Assoc Cancer Res 2002;43:839. AACR, San Francisco, CA, 2002.

11. Brady N, Gaymes TJ, Mufti GJ, **Rassool FV**. The Werner’s syndrome protein plays a complex role in NHEJ-related genomic instability. Proc Amer Assoc Cancer Res 2004;45:526. AACR, Orlando, FL, 2004.

12. Gaymes TJ, Mufti GJ, **Rassool FV**. Histone deacetylase inhibitors mimic the double strand break DNA repair response to irradiation *in vitro*. Proc Amer Assoc Cancer Res 2004;45:330. AACR, Orlando, FL, 2004.

# 13. **Rassool F**, Gaymes T, Omidvar N, Pla M, Reboul M, Chomienne C, Mufti GJ, Padua RA. ROS, DNA damage and error-prone repair: A model for genomic instability in mice with myeloid leukaemia disease progression. Proc Amer Assoc Cancer Research 2006;47:599. AACR, Washington, DC, 2006.

14. GaymesT, PaduaR, Pla M, OrrS, OmidvarN, Chomienne C, MuftiG, **Rassool FV**. Histone deacetylase inhibitors (HDI) cause DNA damage in leukemia cells: A mechanism for leukemia-specific HDI dependent apoptosis? International Congress of Differentiation Therapy (ICDT), Versailles, France, 2006.

15. Sallmyr A, **Rassool F**. Down regulation of artemis and aberrant DSB repair in chronic myeloid leukemia (CML). Proc Amer Assoc Cancer Res 2007;48:464. AACR, Los Angeles, CA, 2007.

16. Datta K, Kim KT, Grosu D, Shapiro P, Small D, **Rassool F**. Internal tandem duplication of FLT3 induces increased ROS production, DNA damage and misrepair: implications for RAC1-STAT5 function in genomic instability in myeloid malignancies. Proc Amer Assoc Cancer Res 2007; 48:1244. AACR, Los Angeles, CA, 2007.

17. Datta K, Kim KT, Grosu D, Shapiro P, Small D, **Rassool F**. Internal tandem duplication of FLT3 induces increased ROS production, DNA damage and misrepair: implications for RAC1-STAT5 function in genomic instability in myeloid malignancies. Ca Res 2007;67:5260. AACR, Los Angeles, CA, May 1, 2007.

18. Sallmyr A, Tomkinson A, **Rassool F**. Up-regulation of DNA ligase IIIα and WRN in CML, implications for double strand break repair (poster), ASH, Atlanta, GA, 2007.

19. Sallmyr A, **Rassool FV**. Up-regulated WRN and DNA ligase IIIα are involved in alternative NHEJ repair pathway of DNA double strand breaks (DSB) in chronic myeloid leukemia (CML). ASH Annual Meeting Abstracts 2007; #1016, 110(11):308a. Atlanta, GA, 2007.

20. Fan JS, Sallmyr A, Kim KT, Datta K, Shapiro P, Small D, **Rassool FV**. Internal tandem duplications of FLT3 induces increased ROS production, DNA damage and misrepair: implications for genomic instability and disease resistance in myeloid malignancies. ASH Annual Meeting Abstracts 2007; #17, 110(11):13a. Atlanta, GA, 2007.

21. Fan JS, Sallmyr A, Datta K, Kim KT, Shapiro P, Small D, **Rassool F**. Internal tandem duplications of FLT3 induces increased ROS production, DNA damage and misrepair:

Implications for genomic instability and disease progression in myeloid malignancies (oral presentation), ASH, San Francisco, CA, 2008.

22. Sallmyr A, Tobin L, Tomkinson AE, **Rassool FV**. Inhabiting alternative non-homologous end-joining (NHEJ) pathways: therapeutic targets in chronic myeloid leukemia (CML). ASH Annual Meeting Abstracts 2008; #112(11)39, abstract # 1088. San Francisco, CA, Dec. 6-9, 2008.

23. Fan J, Li L, Small D, **Rassool F**. Cells bearing FLT3/ITD mutations exhibit elevated repair errors generated through alternative DNA double strand break repair pathways: implications for genomic instability and therapy (oral presentation), AACR Denver, CO, 2008.

24. Ohm J, Mali P, Van Neste L, Briggs K, Pandiyan K, Zhang W, Yu W, Ahuja N, Schuebel K, Ota E, Cope L, **Rassool F**, Sharkis S, Cheng L, Baylin S. Incomplete reprogramming of iPS cells creates a center-related epigenome, Proc Am Assoc Cancer Res 2009; vol 50, Abstract nr LB-116. Apr 18-22, 2009, Denver, CO. Philadelhia (PA): AACR; 2009.

25. Tobin L, Sallmyr A, Rapoport A, Tomkinson AE, **Rassool F**. DNA Ligase and PARP inhibitors are therapeutic targets in TKI resistant chronic myeloid leukemia. Proc Am Assoc Cancer Res; 2009 Apr 18-22; Denver, CO. Philadelphia (PA): AACR; 2009, vol 50, Abstract nr 4532.

26. Fan J, Li L, Small D, **Rassool F**. Cells bearing FLT3/ITD mutations exhibit elevated repair errors generated through alternative DNA double strand break repair pathways: implications for genomic instability and therapy. Proc Am Assoc Cancer Res; 2009 Apr 18-22; Denver, CO. Philadelphia (PA): AACR; 2009, vol 50, Abstract nr 5620.

27. Fan J, Li L, Small, D, **Rassool F**. Cell lines and “knock-in” mice bearing FLT3/ITD mutations exhibit elevated repair errors generated through alternative DNA double strand break repair pathways: implications for genomic instability (poster). ASH, New Orleans, LA, 2009.

28. Fan J, Li L, Small D, **Rassool FV**. Cell lines and “knock-in” mice bearing FLT3/ITD mutations exhibit elevated repair errors generated through alternative DNA double strand break repair pathways: implications for genomic instability. ASH 2009, Annual Meeting Abstracts #3237, 114(22):1254, New Orleans, LA, 2009.

29. Li L, Zhang L, Fan J, Greenberg K, Desiderio S, **Rassool F**, Small D. B-lymphocyte development is impaired by FLT3/ITD signaling in knock-in mice because of defective non-homologous end-joining. ASH, (oral presentation), New Orleans, LA, 2009.

30. Li L, Zhang L, Fan J, Greenberg K, Desiderio S, **Rassool F**, Small D. B-lymphocyte development is impaired by FLT3/ITD signaling in knock-in mice because of defective non-homologous end-joining, ASH 2009, Annual Meeting Abstracts #184, 114(22):81. New Orleans, LA, 2009.

31. Robert C, Gojo I, **Rassool FV**. Histone deacetylase inhibitors promote abnormal binding of DNA repair proteins to DNA double strand breaks: Consequences for DNA repair and genomic instability? (oral presentation), ASH, New Orleans, LA, 2009.

32. Robert C, Gojo I, **Rassool FV**. Histone deacetylase inhibitors promote abnormal binding of DNA repair proteins to DNA double strand breaks: Consequences for DNA repair and genomic instability? ASH 2009, Annual Meeting Abstracts #186, 114(22):82, New Orleans, LA, 2009.

33. Tobin L, Rapoport A, Gojo I, Baer M, Tomkinson AE, **Rassool F**. DNA ligase III alpha and poly ADP ribose polymerase: therapeutic targets in imatinib resistant chronic myeloid leukemia (CML). (oral presentation) ASH 2009, New Orleans, LA, 2009.

34. Tobin LA, Rapoport AP, Gojo I, Baer MR, Tomkinson AE, **Rassool FV**. DNA ligase III alpha and (poly-ADP) ribose polymerase (PARP1): are therapeutic targets in imatinib-resistant (IR)

chronic myeloid leukemia (CML). ASH 2009, Annual Meeting Abstracts #853, 114(22):351, New Orleans, LA, 2009.

35. Gemani D, Tobin L, Singh A, Baer MR, Biswal S, **Rassool F**. The dark side of NRF2: Upregulation of NRF2 as a mechanism for resistance to imatinib in CML (poster). ASH, Orlando, FL, 2010.

36. Gemani D, Tobin LA, Singh A, Baer MR, Biswal S, **Rassool F**. The dark side of NRF2: Upregulation of NRF2 as a mechanism for resistance to imatinib in CML. ASH 2010, Annual Meeting Abstract #3401, 116(21):1392, Washington, DC, 2010.

37. Robert C, Gojo I, Cole P, **Rassool FV**. Histone deacetylase inhibitors acetylate Ku70 and PARP-1, leading to decreased NHEJ repair. 4th Baltimore Area Repair Symposium (BARS), Baltimore, MD, March 18, 2010.

38. Robert C, Gojo I, **Rassool F**. Acetylation of poly-ADP-ribose polymerase and Ku70 by histone deacetylase inhibitors promote abnormal binding to DNA double strand breaks and decrease repair efficiency in leukemia cells. Proceedings of the 101st Annual Meeting of the American Association for Cancer Research; Apr 17-21, 2010; Washington, DC. Philadelphia (PA): AACR; Cancer Res 2010;70(8 Suppl):Abstract nr 688.

39. Tsai H-C, Van Neste L, Li H, CaiY, Robert, C, Shin JJ, Pappou E, Yen R-W, Minn I, Ahuja N, Brock MV, **Rassool FV**, Jany Y-Y, Harkis SJ, Matsui W, Zahow CA, Baylin SB. Transient exposure to low-dose decitabine and azacytidine reprograms cancer cells to produce a prolonged antitumor response. Proceedings of the 101st Annual Meeting of the American Association for Cancer Research; 2010 Apr 17-21; Washington, DC. Philadelphia (PA): AACR; Cancer Res 2010;70(8 Suppl):Abstract nr LB-88.

40. Tobin LA, Chumsri S, Staats P, Brodie A, Tomkinson A, **Rassool F**. ALT NHEJ is a therapeutic target in hormone therapy resistant ER/PR/HER+ and ER/PR/HER- breast cancers.

Proceedings of the 102nd Annual Meeting of the American Association for Cancer Research; 2011 Apr 2-6; Orlando, FL. Philadelphia (PA): AACR; Cancer Res 2011;71(8 Suppl):Abstract nr 5495. doi:10.1158/1538-7445.AM2011-5495.

41. Tobin LA, Chumsri S, Staats P, Brodie A, Tomkinson A, **Rassool F**. ALT NHEJ is a therapeutic target in hormone therapy resistant ER/PR/HER+ and ER/PR/HER- breast cancers.

Safeway Breast Cancer Symposium, Mount Washington Baltimore MD, 2012.

42. Fan J, Robert C, Nagaria P, Park, TS, Jang YY, LiuH, SharkisS, Baylin S, Zambidis E, **Rassool F**. Human iPSC resemble ESC demonstrating enhanced efficacy of non-homologous end-joining. Maryland Stem Cell Symposium; Abstract #A-1, Towson University, Baltimore, MD, 2011.

43. Chung Y, Robert C, Gough SM, **Rassool FV**. Aplan PD. Increased Mutation Frequency induced by Oxidative Stress in the *NUP98-HOXD13* MDS mouse model. 53rd ASH annual meeting, San Diego, CA, December 9-13, 2011.

44. Robert C, Nagaria P, Park TS, Huo JS, Zambidis ET, **Rassool FV**. DNA double strand break repair capacity is not completely reprogrammed in induced pluripotent stem cells irrespective of cell of origin. 5th Baltimore Area Repair Symposium (BARS), Baltimore, MD, March 14, 2012.

45. Muvarak N and **Rassool FV**. The role of c-Myc in the regulation of double-strand break repair in tyrosine kinase-activated leukemias. Baltimore Area Repair Symposium (BARS), Baltimore, MD, 2012.

46. Muvarak N and **Rassool FV**. The role of c-Myc in the regulation of double-strand break repair in

tyrosine kinase-activated leukemias. University of Maryland Baltimore Third Annual Cancer

Biology Research Retreat, University of Maryland Baltimore, Baltimore, MD, 2012.

47. Chowdhury K, Nagaria P, **Rassool FV**. Mechanisms for resistance to PARP inhibitors in BRCA1

breast cancers. Baltimore Area Repair Symposium (BARS), Baltimore, MD, 2012.

48. Chowdhury K, Nagaria P, **Rassool FV**. Mechanisms for resistance to PARP inhibitors in BRCA1 breast cancers. University of Maryland Baltimore, Third Annual Cancer Biology Research Retreat, Baltimore, MD, 2012.

49. Sawhney P, Wu X, Sukumar S, **Rassool FV**. The role of HOXB7 homeodomain protein in abnormal DNA repair in ER/PR- breast cancers. Thirty-fourth Annual University of Maryland Baltimore Graduate Research Conference, Baltimore, MD, 2012.

50. Sawhney P, Wu X, Sukumar S, **Rassool FV**. The Role of HOXB7 homeodomain protein in abnormal DNA repair in ER/PR- breast cancers. Third Annual Cancer Biology Research Retreat, University of Maryland Baltimore, Baltimore, MD, 2012.

51. Muvarak N, Scheibner K, Civin C and **Rassool FV**. C-Myc and c-MYC-regulated micro RNAs increase error-prone repair in tyrosine kinase-activated leukemias. ASH/EHA September, Baltimore, MD, 2012.

52. Muvarak N, Scheibner K, Civin C and **Rassool FV**. C-Myc and c-MYC-regulated micro RNAs increase error-prone repair in Tyrosine Kinase-Activated Leukemias. Cancer Retreat, University of Maryland Baltimore, Baltimore, MD, 2012.

53. Robert C, Nagaria P, Park TS, Huo JS, Liu H, Zambidis ET, Rassool FV. Efficacy of remodeling the DNA damage response in induced pluripotent stem cells engineered by different methods. 5th Annual Maryland Stem Cell Symposium, Baltimore, MD, October 4, 2012.

54. Nagaria P, Chowdhury K, Brodie A, **Rassool F**. C-MYC plays a novel role in driving the error-prone double-strand break repair in triple negative breast cancers. AACR, Washington DC, April 2013.

55. Nagaria P, Chowdhury K, Brodie A, **Rassool F**. C-MYC plays a novel role in driving the error-prone double-strand break repair in triple negative breast cancers. Cancer Retreat, University of Maryland Baltimore, Baltimore, MD, 2013.

56. Gourdin TS, Ning Y, **Rassool FV**, Tidwell ML, Duong VH, Emadi A, Baer MR. Acute myeloid leukemia (AML) with FLT3 internal tandem duplication (ITD) and normal karyotype at diagnosis

has a high frequency of rare cytogenetic abnormalities at relapse, providing evidence for genomic instability, ASCO, Chicago, IL, 2013.

57. Robert C, Muvarak NE, Duong VH, Baer MR, Baylin SB, **Rassool FV**. Demethylating agents reprogram myelodysplastic syndrome and leukemia cells, sensitizing them to poly-(ADP)-ribose polymerase inhibitors. 55th American Society of Hematology(ASH) Annual Meeting, New Orleans, LA, December 7-10, 2013.

58. Muvarak N, Kelley S, Robert C, Baer MR, Perrotti D, Gambacorti-Passarini C, Civin C, Scheibner K, **Rassool F**. C-MYC and c-MYC regulated miRNAs amplify transcription of LIG3 and PARP1, increasing ALT NHEJ in tyrosine kinase-activated leukemias. 55th American Society of Hematology(ASH) Annual Meeting, New Orleans, LA, December 7-10, 2013.

59. Muvarak N, Kelley S, Robert C, Baer MR, Perrotti D, Gambacorti-Passarini C, Civin C, Scheibner K, **Rassool F**. C-MYC and c-MYC regulated miRNAs amplify transcription of LIG3 and PARP1, increasing ALT NHEJ in tyrosine kinase-activated leukemias. 6th Baltimore Area Repair

Symposium (BARS), Baltimore, MD, March 7, 2014.

60. Nagaria PK, Robert C, Park TS, Huo JS, Zamdidis ET, **Rassool FV**. Cord blood IPSCs reprogrammed with high efficiency and a MYC-transcript signature display high efficacy of DNA repair and more closely resembles hESCs. 6th Baltimore Area Repair Symposium (BARS), Baltimore, MD, March 7, 2014.

61. Robert C, Duong VH, Baer MR, Baylin SB, **Rassool FV**. Low doses of demethylating agents reprogram AML cells sensitizing them to PARP inhibition. 6th Baltimore Area Repair Symposium (BARS), Baltimore, MD, March 7, 2014.

62. Muvarak N, Kelley S, Robert C, Baer MR, Perrotti D, Gambacorti-Passarini C, Civin C, Scheibner K, **Rassool F**. C-MYC and c-MYC regulated miRNAs amplify transcription of LIG3 and PARP1, increasing ALT NHEJ in tyrosine kinase-activated leukemias. European Hematology Association, Philadelphia, PA, September 2014.

63. Chowdhury K, Yong E, Choi E, Lapidus R, Baylin SB, **Rassool FV**. Combination treatment of PARP inhibitor, BMN 673 and DNMT inhibitor, Azacytidine: a potential therapy for BRCA negative and positive, triple negative breast cancers? AACR, Philadelphia, PA, April 18-22, 2015.

64. Robert C, Nagaria P, Gojo I, Meyers DJ, Cole P, **Rassool FV**.  Histone deacetylase inhibitors promote persistent binding of PARP-1 to DNA double strand breaks in chromatin, thus decreasing repair via non-homologous end joining. AACR, Philadelphia, PA, April 18-22, 2015.

65. Robert C, Muvarak N, YongE, DuongVH, EmadiA, LapidusR, BaerMR, BaylinSB, **Rassool FV**. Combination of DNA methyltransferase and PARP inhibitors as a novel therapy strategy for poor prognosis acute myeloid leukemia. AACR, Philadelphia, PA., April 18-22, 2015.

66. Chowdhury K, Yong E, Choi E, Lapidus R, Baylin, SB, **Rassool FV**. Combination treatment of PARP inhibitor, BMN 673 and DNMT inhibitor, Azacytidine: a potential therapy for BRCA negative and positive, triple negative breast cancers? Sixth Annual Cancer Biology Research Retreat, 2015.

67. Robert C, Muvarak N, YongE, DuongVH, EmadiA, LapidusR, BaerMR, BaylinSB, **Rassool FV**. Combination of DNA methyltransferase and PARP inhibitors as a novel therapy strategy for poor prognosis acute myeloid leukemia. Sixth Annual Cancer Biology Research Retreat, 2015.

68. Nagaria P,  Robert C, Pawar N, Adewuyi A, Gojo I, Meyers DJ, Cole PA, **RassoolFV**. BARS, Baltimore , March AACR, 2016. Histone deacetylase inhibitors decrease NHEJ both by acetylation

of repair factors and trapping of PARP1 at DNA double-strand breaks in chromatin. BARS, Baltimore, March, 2016.

69. Muvarak N, Chowdhury K, Xia L, Robert L, ChoiEY, Cai Y, BellaniM,   ZouY, SinghZN, Duong VH, Rutherford T, Bentzen SM, SeidmanMM, BaerMR, Lapidus RG, BaylinSB, **Feyruz V. Rassool**. Combination of DNA methyltransferase and PARP inhibitors as a novel therapy strategy for poor prognosis acute myeloid leukemia and triple negative breast cancers. BARS, Baltimore, March, 2016.

70. MuvarakN, ChowdhuryK, XiaL, RobertC, ChoiEY, CaiY, BellaniM, ZouY, SinghZN, DuongVH, RutherfordT, BentzenSM, SeidmanMM, BaerMR, LapidusRG, Baylin SB, **Rassool FV**. Combination of DNA methyltransferase and PARP inhibitors as a novel therapy strategy for poor

prognosis acute myeloid leukemia and triple negative breast cancers. AACR April, 2016 (late breaking poster presentation)

71. McLaughlin L, Chowdhury K, Muvarak N, Li H, Lapidus RG, Zahnow CA, **Rassool FV**. Low Doses of DNA Demethylating Agents Induce a “BRCAness” Phenotype, in Multiple Breast Cancers: A Rationale for Combination with Poly (ADP-ribose) Polymerase Inhibitors in Hormone-Resistant Breast Cancers. Sixth Annual Cancer Biology Research Retreat, 2016.

72. Muvarak N, Chowdhury K, Xia L, Robert C, Choi EY, Cai Y, Bellani M,   Zou Y, Singh ZN, Duong VH, Rutherford T, Bentzen SM, Seidman MM, Baer MR, Rena G. Lapidus, Stephen B. Baylin, **Rassool FV**. Combination of DNA methyltransferase and PARP inhibitors as a novel therapy strategy for poor prognosis acute myeloid leukemia and triple negative breast cancers. Sixth Annual Cancer Biology Research Retreat, 2016.

73. Nagaria P, Robert C, Pawar N, Gojo I, Meyers DJ, Cole PA, **Rassool FV**. Histone deacetylase inhibitors decrease NHEJ both by acetylation of repair factors and trapping of PARP1 at DNA double-strand breaks in chromatin. European Society of Haematology, Houston Texas, 2016

74. Nagaria P, Robert C, Park TS, Huo JS, Zambidis ET, **Rassool FV**. Differing roles of MYC and PARP1 in efficacious DNA repair in pluripotent stem cells vs cancer cells. MSCRF Annual meeting, 2016.

75.Pelkey, B, Nagaria P, **Rassool FV.** Role of PARP Trapping in Regulation of DSB Repair and PARP Inhibitor Sensitivity in Cancers. B.M. Pelkey. 56th Annual Meeting and ToxExpo. March, 2017.

76. Pelkey B, Nagaria P, **Rassool FV**. PARP trapping by PARP inhibitors have distinct effects on HR and ALT NHEJ DSB repair, potentially impacting its therapeutic efficacy in breast cancers. AACR, Washington DC, April, 2017.

77. McLaughlin L, Li H, Pelkey, B, Nagaria P, Baylin SB, Zahnow CA, **Rassool FV**. Decreased Fanconi anemia gene expression contributes to efficacy of PARP and DNMT inhibitor combination therapy in triple negative breast cancer. AACR, Washington DC, April, 2017.

78. Biondi C, Fontaine D, Stojanovic L, Nagaria P, Yong Choi E, Lapidus R, Mahmood J, Baylin SB, and **Rassool FV**. Enhancing the Therapeutic Effects of PARP Inhibitors in Combination DNA methyl transferase inhibitors, using Low Doses of Ionizing Radiation in Non Small Cell Lung Cancers. AACR, Washington DC, April, 2017.

79. AbbottsRM, FontaineD, TopperM, LapidusRG, BaylinSB, **RassoolFV**.Modulation of DNA Double Strand Break Repair: Towards a Mechanistic Understanding of DMNTi/PARPi Treatment Efficacy. UMGCCC Research Day, Baltimore MD, September 19, 2017.

80. Shamah AA, Muvarak N, TopperM, KingsburyT, CivinC, BaylinSB, BaerMR, **RassoolFV.** Mechanisms underlying the efficacy of PARP and DNMT inhibitor combination therapy in Acute Myeloid Leukemia. UMGCCC Research Day, Baltimore MD, September 19, 2017.

81. Doshi KA, Kapoor S, Zou Y, Li X, Goloubeva OG, Scarpa M, Nagaria PK, Muvarak N, Tron AE, Bieberich CJ, **Rassool FV**, Baer MR. Concurrent treatment with Pim kinase inhibitor downregulates alternative non-homologous end-joining repair and decreases genomic instability in FLT3-ITD cells treated with topoisomerase 2 inhibitors. American Society of Hematology, Atlanta GA, Dec 9-12, 2017.

82. Shamah AA, Muvarak N, TopperM, KingsburyT, CivinC, BaylinSB, BaerMR, **RassoolFV**. DNA Demethylating Agents Generate a Brcaness Effect in Multiple Sporadic Tumor Types: Prediction for Sensitivity to PARP Inhibitors in AML. American Society of Hematology, Atlanta GA, Dec 9-12, 2017.

83. McLaughlin L, Stojanovic L, Lapidus R, Choi E-Y, Zou Y, Waters E, Baylin SB, **Rassool FV**. Impaired homologous recombination by DNA Methyltransferase Inhibitors induces synthetic lethality in BRCA-Proficient Ovarian and Triple Negative Breast Cancers. BARS March, 2018.

84. Abbotts R, Topper M, Fontaine D, Biondi C, Stojanovic L, Mahmood J, Lapidus R, Baylin S, **Rassool, F**.DNA methyltransferase inhibitors sensitize NSCLC cells to PARP inhibitors by induction of a double strand break repair defect. AACR 2018, BARS 2018.

85. Kogan A, Mclaughlin L, Topper M, Nidal Muvarak1,2, Stojanovic L, Creed M, Soren Bentzen S, Civin C, Baer MR, Kingsbury T, Baylin S, Abbotts R, **Rassool FV**. DNA Demethylating Agents Generate a BRCAness Effect: Prediction for sensitivity to PARP inhibitors in AML. BARS 2018, Cancer Center Retreat 2018.

86. Dellomo A, Baer MR, Lapidus R, and **Rassool FV**,'FLT3-ITD. A Potential Target for PARP Inhibitor Induced Synthetic Lethality' BARS 2018, Cancer Center Retreat 2018.

87. Kogan A, Mclaughlin L, Topper M, Shissler S, Lee M, Bolino D, Choi EY, Lapidus R, Li L, Small D, Baer MR, Webb T, Baylin S, Abbotts R, **Rassool FV**. The combination of PARP inhibitors and DNMT inhibitors modulates immune activity and suggests a role for immune therapy in AML. ASH December 2018, GRC Retreat 2019 (accepted for an oral presentation).

88. McLaughlin L, Kogan A, Lapidus R, Choi E-Y, Zou Y, Baylin SB, Topper M, **Rassool FV**. DNMT and PARP inhibitor combination therapy induces and interferon-driven homologous recombination defect in triple negative breast cancers and acute myeloid leukemia AACR Atlanta 2019 (oral presentation).

89. Stojanovic L, Mclaughlin L, Zou Y, Baylin SB, **Rassool FV**. DNA Methyltransferase Inhibitors in Combination with PARP inhibitors Generate Synthetic Lethality in BRCA-proficient Ovarian Cancer. GRC Retreat 2019.

90. Dellomo A, Baer MR, **Rassool FV**. PARP Inhibitor Resensitization of FLT3 Inhibitor-Resistant AML GRC Retreat 2019 (oral presentation).

91.Kogan A, McLaughlin L, Baer MR, Baylin SB, Topper M, **Rassool FV**. DNA methyltransferase inhibitors promote homologous recombination deficiency through induction of immune signaling, sensitizing acute myeloid leukemia cells to PARP inhibitors, GRC Retreat 2019.

92. Dellomo A, Abbotts R, Karbowski M, Kingsbury T, Baer MR, **Rassool FV**. PARP inhibitor resensitizes TKI-resistant AML to TKI. AACR 2021 -virtual.

93. Rutherford J, **Rassool FV**. Pharmacologic induction of innate immune signaling drives metastasis suppression in triple-negative breast cancer GRC 2021, poster presentation and prize winner.

94. Abbotts R, Topper M, Baylin S, Rassool, FV. DNMT inhibitor induces NSCLC inflammasome signaling and mitochondrial dysfunction, producing to DSB repair defects and PARP inhibitor sensitivity AACR 2022.

95.Kogan A, McLaughlin L, Baer MR, Baylin SB, Topper M, **Rassool FV**. DNA methyltransferase inhibitors increase ERV reactivation and STING-dependent interferon/inflammasome signaling in TP53 mutant AML AACR 2022.

**Other Brief Communications**

1. **Rassool FV** and Gatti R. Chromosome Aberrations, eds. G Obe and AT Natarajan. Trends in Genet. 7:1, 1992.

2. **Rassool F**. Inherited susceptibility to cancer: clinical, predictive and ethical perspectives. BMJ 318(7197):1563, 1999. PMID: 10356041.

**Major Invited Speeches**

Local

1. **Rassool F**. Eugenics, Mellon Continuing Education Lecture, University of Chicago, IL, 1994.

2. **Rassool F**. Direct Cloning of the Common Fragile Site at 3p14.2: A Large Region, Chromosome 3 Workshop, University of Michigan, MI, 1994.

3. **Rassool F**. Altered Double Strand Break Repair in Myeloid Malignancies and Pre-Leukaemic Syndromes, Radiation Oncology, University of Maryland Baltimore, Baltimore, MD, 2003.

4. **Rassool F**. DNA Damage and Repair in Leukaemogenisis: Scenarios for Chromosomal Instability, Medicine, University of Maryland Baltimore, Baltimore, MD, 2004.

5. **Rassool F**. DNA Damage and Repair in Leukaemogenesis: Implications for the Action of Histone Deacetylase Inhibitors, Medicine, Johns Hopkins University, 2004.

6. **Rassool F**. Genomic Instability in Myeloid Malignancies, Radiation/Oncology Research Seminar, University of Maryland Baltimore, Baltimore, MD, 2005.

7. **Rassool F**. Genomic Instability in Myeloid Malignancies, Johns Hopkins Seminar Series, Baltimore, MD, 2005.

8. **Rassool F**. Chromosomal Instability and Myeloid Malignancies: Underlying Mechanisms, Fragile Site Group, NIDDK, Bethesda, MD, 2006.

9. **Rassool F**. DNA Damage and Repair Infidelity: A Model for Genomic Instability in Myeloid Malignancies? Baltimore Area Repair Symposium (BARS), Baltimore, MD, 2006.

10. **Rassool F**. ROS, DNA Damage and Alternative NHEJ Repair: Pathways for Genomic Instability in Myeloid Malignancies, Translational Research Seminar Series, Johns Hopkins University, Baltimore, MD, 2009.

11. **Rassool F**. Increased ROS in FLT3/ITD “knock-in” Mice, Free Radical Interest Group (FRIG), University of Maryland Baltimore, Baltimore, MD, 2009.

12. **Rassool F**. Characterization and Targeting of Abnormal Double Strand Break Repair in Leukemias and Breast Cancer, National Institute of Aging Baltimore, DNA Repair Network, Baltimore, MD, 2010.

13. **Rassool F**. Can Abnormal DNA Repair in Myeloid Malignancies Be A Therapeutic Target? Toxicology Seminar, Program in Toxicology, University of Maryland Baltimore, Baltimore, MD, 2010.

14. **Rassool F**. FLT3/ITD Mutations Exhibit Elevated Repair Errors Generated Through Alternative DNA Double Strand Break Repair Pathways: Implications for Genomic Instability, Baltimore Area Research Symposium (BARS), Baltimore, MD, 2010.

15. **Rassool F**. Efficacy of Remodeling the DNA Damage Response in Induced Pluripotent Stem Cells Engineered by Different Methods, Free Radical Interest Group (FRIG), University of Maryland Baltimore, Baltimore, MD, 2011.

16. **Rassool F**. Efficacy of Remodeling the DNA Damage Response in Induced Pluripotent Stem Cells Engineered by Different Methods,Maryland Stem Cell Symposium, Towson University, Towson, MD, 2011.

17. **Rassool F**. Characterization and Targeting of Abnormal Double Strand Break Repair in Breast Cancer, Breast Cancer Seminar, Johns Hopkins University, Baltimore, MD, 2012.

18. **Rassool F**. Targeting Abnormal DNA Repair in Therapy-Resistant Breast Cancers, Shepherd Pratt Hospital, Baltimore Area Research Symposium (BARS), Baltimore, MD, 2012.

19. **Rassool, F**. DNA Double Strand Break Repair Response in Induced Pluripotent Cells (IPSCs): Role of Cell of Origin, Plenary session I, Maryland Stem Cell Symposium, Annapolis, MD, 2012.

20. **Rassool F**. Targeting of Abnormal DNA Repair to Overcome Resistance to Therapy in Cancer and

Leukemia, MRS Seminar, Johns Hopkins University, Baltimore, MD, 2012.

21. **Rassool F**. Targeting of Abnormal DNA Repair to Overcome Resistance to Therapy in Cancer and

Leukemia, Grand Rounds, Johns Hopkins University, Baltimore MD, 2012.

22. **Rassool F**. Characterizing and Targeting for Therapy, Abnormal DNA Repair in Cancer, School of Medicine Council, University of Maryland Baltimore, Baltimore, MD, 2013.

23. **Rassool F**. Role of C-MYC and c-MYC-Regulated MiRNAs Increasing ALT NHEJ Activity in Tyrosine Kinase-Activated Leukemias, Baltimore Area Research Symposium (BARS), Baltimore, MD, March, 2014.

24. **Rassool F**. Abnormal Double Strand Break Repair in Cancer and Leukemias: Regulation and Targets for Therapy, Molecular and Structural Biology (MSB) Retreat, University of Maryland Greenebaum Cancer Center, Baltimore, MD, June 2014.

25. **Rassool F**. Schnaper Lecture: Introduction to Translational Research, University of Maryland Baltimore, Baltimore, MD, July, 2014.

26. **Rassool F**. Professors Rounds, Schnaper Summer Program, Rassool Lab Research, University of Maryland Baltimore, Baltimore, MD, July, 2014.

27. **Rassool F**. Combining PARP Inhibitors with DNA Demethylating Agents – A Potent Anti-Leukemia, Strategy Toxicology Seminar, University of Maryland Baltimore, Baltimore, MD, Nov 18, 2014.

28. **Rassool F**. Exploiting the Roles of PARP in Anti-Cancer Therapeutic Strategies, Biochemistry Seminar, University of Maryland Baltimore, Baltimore, MD, Nov. 24, 2014.

29. **Rassool F**. Exploiting the Roles of PARP in Anti-Cancer Therapeutic Strategies, Molecular and Structural Biology (MSB) Meeting University of Maryland Baltimore, Baltimore, MD, Nov 24, 2014.

30. **Rassool F**. Exploiting the Roles of PARP in Anti-Cancer Therapeutic Strategies, Translational Sciences Seminar Series, Sidney Kimmel Cancer Center, Johns Hopkins University, Baltimore, MD, February 2015.

31. **Rassool F**. Exploiting the Roles of PARP in Anti-Cancer Therapeutic Strategies, Translational BARS, Baltimore, MD, February 2015.

32. **Rassool F**. Epigenetic therapy and PARP inhibitors: preclinical studies in lung cancer. Pre-Clinical Translational Research Retreat, JHU 2016.

33. **Rassool F**. Festival of Science“Cancer Research: Translational Discoveries to Next Generation Treatments”, November, 2016.

34. **Rassool F**. LLS Maryland Chapter breakfast, May, 2017

35. **Rassool F.** Reprograming the DNA Repair Response: Creating Opportunities for Therapy in Non Small cell Lung Cancer BARS, Baltimore, March, 2018.

36. **Rassool F.** The role of PARP inhibitors and DNA methyl transferase inhibitors in enhancing anti-tumor immune responses in multiple tumor types. DTRS, December 10, 2018.

37. **Rassool. F.** Linking immune responses to DNA repair in AML. UMGCCC Experimental therapeutics retreat, September 26, 2019.

38. **Rassool. F.** Therapeutic strategies linking immune signaling to DNA repair in cancer. UMGCCC Experimental Molecular and Structural Biology Program, January 23, 2020.

39. **Rassool. F.** Activating immune signaling in AML. UMGCCC Experimental Molecular and Structural Biology Program, January 23, 2021.

40. **Rassool. F.** Expanding PARP inhibitors beyond BRCA mutations: Linking DNA damage to immune signaling. DTRS Retreat, September 14, 2021.

41. **Rassool. F**. Translation of STING-dependent immune responses to a Phase I clinical trial of epigenetic and immunotherapy combinations in NSCLC. UMGCCC translational therapy seminar, February, 2022.

National

42. **Rassool F**. Combination of DNA methyltransferase and PARP inhibitors as a novel therapy strategy in non-small cell lung cancer? Thoracic Oncology Research Retreat, JHU June 25.

43. **Rassool F.** Combining PARP inhibitors with DNA methyltransferase inhibitors: underlying

mechanisms ET Retreat, University of Maryland, September, 2017.

44. **Rassool F**. Cloning of the FRA3B Region at Chromosome 3p14.2, American Association of Human Genetics, San Diego, CA, 1995.

45. **Rassool F**. A series of three lectures: Ethics and Human Genetics Medical Science and Ethics Lectures, Annual Lecture Series, St. Xavier’s University, Chicago, IL, 1996.

46. **Rassool F**. The Non-Homologous End-Joining (NHEJ) DNA Repair Pathway is Aberrant in Myeloid Leukaemia: Evidence That Ku86 is Required for Increased Frequency and Size of Deletions (oral presentation), AACR, New Orleans, LA, 2001.

47. **Rassool F**. Increased Activity and Infidelity of Non-Homologous End-Joining (NHEJ) in Bloom's Syndrome and Myeloid Leukaemias: Evidence That Ku86 is Required for Increased Frequency

and Size of Deletion (oral presentation), American Society of Haematology (ASH), Orlando, FL, 2001.

48. **Rassool F**. Increased Constitutive Replication-Associated DNA Damage in Bloom's Syndrome (BS) is Associated with Increased Infidelity of Non-Homologous End-Joining (NHEJ): Implication for Chromosomal Instability in BS? (oral presentation), AACR, San Francisco, CA, 2002.

49. **Rassool F**. Increased Constitutive Replication-Associated DNA Damage in Bloom's Syndrome (BS) is Associated with Increased Infidelity of Non-Homologous End-Joining (NHEJ): Implication for Chromosomal Instability in BS? Oral Presentation Keystone Symposium: DNA Helicases and Cancer, Lake Tahoe, NV, 2002.

50. **Rassool F**. Histone Deacetylase Inhibitors Mimic the Double Strand Break Repair Response to Irradiation in vitro, AACR, Orlando, FL, 2004.

51. **Rassool F**. The Werner’s Syndrome Protein Plays a Complex Role in NHEJ-Related Genomic Instability, AACR, Orlando, FL, 2004.

52. **Rassool F**. Increased DNA Damage and Error-Prone Repair in Myeloproliferative/Myelo-

dysplastic Mice with Disease Progression: Key Indicators for Increased Genomic Instability, ASH, San Diego, CA, 2004.

53. **Rassool F**. HDAC Inhibitors as DNA Damaging Agents, Workshop on Clinical Translation of Epigenetics in Cancer Therapeutics, Charleston, SC, 2005.

54. **Rassool F**. DNA Damage and Repair Infidelity: Mechanisms for Genomic Instability in Myeloid Malignancies, Lovelace Biomedical and Environmental Research Institute, Albuquerque, NM, 2006.

55. **Rassool F**. FLT3 Mutations and Genomic Instability, ASH, San Francisco, CA, 2007.

56. **Rassool F**. DNA Damage as a Target of HDAC Inhibition, Epigenetics Workshop, Phoenix, AZ, 2007.

57. **Rassool F**. ROS, DNA Damage and Error-Prone Repair: Model for Genomic Instability in MDS, MDS Symposium, AACR, San Diego, CA, 2008.

58. **Rassool F**. The Role of a New and Up-Regulated DNA Repair Protein Complex Containing DNA Ligase III and WRN, in Genomic Instability in CML, Leukemia Lymphoma Society Translational Research Program Progress Review Meeting, New York, 2008.

59. **Rassool F**. Error-Prone Repair of DSB by “Back-Up” Non-Homologous End-Joining: a Model for Creating Genomic Instability in CML? MDS Symposium, M.D. Anderson, Houston, TX, 2008.

60. **Rassool F**. DNA Damage and Repair, Key Molecular Pathways in Myeloid Malignancies, Grand Rounds, M.D. Anderson, Houston, TX, 2008.

61. **Rassool F**. Histone Deacetylase Inhibitors (HDi) Decrease Repair Using Alternative Non-Homologous End-Joining (NHEJ) in Acute Leukemia Cells, Epigenetics in Cancer Therapy, Coral Gables, FL, 2009.

62. **Rassool F**. NRF2 in Imatinib Resistance, Chronic Myeloid Leukemia - Biological Basis of Therapy, Washington, DC, 2010.

63. **Rassool F**. Epigenetic Drugs as Modifiers of NHEJ Repair, 41st EMS Symposium, Fort Worth, TX, 2010.

64. **Rassool F**. Targeting of Abnormal DNA Repair to Overcome Resistance to Therapy in Cancer and Leukemia, MRS Seminar, Johns Hopkins University, Baltimore, MD, 2012.

65. **Rassool F**. Targeting of Abnormal DNA Repair to Overcome Resistance to Therapy in Cancer and

Leukemia, Grand Rounds, Johns Hopkins University, Baltimore, MD, 2012.

66. **Rassool F**. Characterization, Targeting and Regulation of DSB Repair in Embryonic Stem Cells,

Cancers and Leukemias, University of New Mexico, Albuquerque, NM, 2012.

67. **Rassool F**. DNA Repair and Cell Signaling, Radiation Oncology, National Review Course, University of Maryland Baltimore, Baltimore, MD, 2012.

68. R**assool F**. **Plenary session talk:**  Double Strand Break Repair: Role of Cell of Origin, Maryland Stem Cell Fund, Annapolis, MD, 2012.

69. **Rassool F**. Clinical Translation of Epigenetics in Cancer Therapy: Targeting Abnormal DNA Repair and Epigenetic Inhibitors in Myeloid Malignancies: Strategies for Therapy, Asheville, NC, 2013.

70. **Rassool F**. DNA Repair and Cell Signaling, Radiation Oncology National Review Course, University of Maryland, Baltimore, MD, 2013.

71. **Rassool F**. C-MYC and c-MYC-Regulated MiRNAs Amplify Transcription of LIG3 and PARP1,

Increasing ALT NHEJ in Tyrosine Kinase-Activated Leukemias, ASH, New Orleans, LA, 2013.

72. **Rassool F**. Demethylating Agents Reprogram FLT3/ITD-Positive Leukemias, Sensitizing Them to Poly-(ADP)-Ribose Polymerase Inhibitors POST, ASH, New Orleans, New Orleans, LA, 2013.

73. **Rassool F** and Baylin S.Ziskin Award Presentation, Stand Up to Cancer, Los Angeles, CA, January, 2014.

74. **Rassool F**. Abnormal Double Strand Break Repair in Cancer and Leukemias: Regulation and Targets for Therapy, Van Andel Research Institute, Grand Rapids, MI, 2014.

75. **Rassool F**. Abnormal Double Strand Break Repair in Cancer and Leukemias: Regulation and Targets for Therapy Presentation to Biomarin Pharmaceutical Company, AACR, San Diego, CA, 2014.

76. **Rassool F**. Abnormal Double Strand Break Repair in Cancer and Leukemias: Regulation and Targets for Therapy, Fells Institute, Philadelphia, PA, 2014.

77. **Rassool F**. Combining PARP Inhibitors with DNA Demethylating Agents – A Potent Anti-Leukemia Strategy and Rationale for a Clinical Trial, Van Andel Research Institute, Stand-up To Cancer, Grand Rapids, MI, October, 2014.

78. **Rassool F**. Combining PARP Inhibitors with DNA Demethylating Agents – A Potent Anti-Leukemia Strategy, Myeloid Leukemia Workshop, ASH, San Francisco, CA, 2014.

79. **Rassool F**. Chairperson, Minisymposium, Cancer Epigenetics, AACR Annual Meeting, Philadelphia, PA, April 18-22, 2015.

80. **Rassool F**. Exploiting the Functions of PARP in Cancer Therapy, Emory University School of Medicine, Winship Cancer Institute of Emory University, Atlanta, GA, May 28, 2015.

81. **Rassool F**. Exploiting the Functions of PARP in Cancer Therapy, Beckman Research Institute (BMI) of City of Hope Seminar Series, Duarte, CA, June 3, 2015.

82. **Rassool F**. (4 talks) **1)** Acute Myeloid Leukemia Project (SGI-110 + Talazoparib PARPi), **2)** PARP Concept (SGI-110 + PARPi), **3)** Acute Myeloid Leukemia Project (SGI-110 + Talazoparib), **4)** PARP Concept, Annual Meeting and SU2C-AACR Progress Review Team Visit, Van Andel Research Institute, Grand Rapids, Michigan, August 26-28, 2015.

83. **Rassool F**. Exploiting the Functions of PARP in Cancer Therapy, University of Indiana, Bloomington, IN, Nov 9, 2015.

84. **Rassool F**. Chalk Talk SU2C. VARI Scientific Retreat, Crystal Mountain, Michigan June 2016.

85. **Rassool F**. Combination of DNA methyltransferase and PARP inhibitors as a novel therapy strategy for multiple cancers: key results in AML and triple negative breast cancer.

Targeting Epigenetics and Genome Regulation to Improve Urologic Health

AUA Headquarters | Linthicum, MD. July 16-17, 2016.

86. **Rassool F**. Exploiting the Functions of PARP in Cancer Therapy, Temple University, Philadelphia, PA, August, 2016.

87. **Rassool F**. Invited speaker Leukemia Lymphoma Society, New York City, October 2017

88. **Rassool F**. Invited speaker American Society of Hematology DNA damage response, Atlanta December 2017

89. **Rassool F**. AML Project update and new proposals, SU2C Annual meeting, August 15-17, 2017.

90. **Rassool F**. Invited speaker, Science Symposium: “Leveraging Epigenetics to Enhance Cancer Therapeutics” University of Southern California, CA, August 15, 2017.

91. **Rassool F**. Invited speaker. “Translating Combination DNA Methyl Transferase and PARP inhibitor Therapies: Emerging Mechanisms”. Forbeck Meeting, Lake Geneva, Wisconsin, October 5-6, 2018.

92. **Rassool F.** AACR Educational Session: Rewiring of the tumor Microenvironment Epigenome for Cancer Therapy, April 24-29, 2020 (Virtual).

93. **Rassool F.** Expanding PARP inhibitors beyond BRCA mutations: Linking DNA damage to immune signaling. Basser Center for BRCA Symposium on May 12-13, 2020 (postponed til May, 2021).

94. **Rassool F.** Adelson meeting presentation of our mitochondrial studies in Ovarian and Lung cancer. January, April, 2021.

95. **Rassool F**. Role of immune signaling in AML in the setting of mutant TP53. VAI-SU2C Annual meeting in Grand Rapids Michigan, August 10-12, 2021.

96. **Rassool F.** Epigenetic therapy in breast cancer August 2nd, Oregan Health Sciences University.

97. **Rassool F.** “Combining DNA methyltransferase inhibitors with PARP inhibitors: Mechanistic and clinical studies” Big Ten CRC Grand Rounds, September 23, 2021.

98. **Rassool F.** Drug-induction of viral mimicry, the inflammasome and DNA repair defects in cancer. Microenvironment and Metastasis Program of the Indiana University Simon Comprehensive Cancer Center, Seminar Series, January 2022.

99. **Rassool F.** “Linking drug-induction of viral mimicry, the inflammasome and DNA repair defects in Ovarian Cancer”  Asilomar, Monterey, CA, March 2022.

100. **Rassool F.** “Mimicking anti-pathogen responses is in the power of the “STING”VAI Retreat, June 9-10, 2022.

101 **Rassool F:** Linking epigenetic-therapy induction of inflammasome signaling to generation of a BRCAness phenotype: a novel therapy approach combining DNMTi with PARP inhibitors, SPORE Retreat, PA 8-26-22.

International

102. **Rassool F**. The FRA3B and FHIT in Cancer, Weatherall Institute of Molecular Medicine, Oxford, UK, 1998.

103. **Rassool F**. Philadelphia Negative, BCR-ABL-Positive CML, Leukaemia Research Fund Young Scientist of the Year, one-day symposium, London, UK, 1998.

104. **Rassool F**.  Deletions within the FRA3B and Cancer, Department of Haematology, Bournemouth Hospital, Dorset, UK, 1998.

105. **Rassool F**. Human Fragile Sites and Cancer, 18th International Congress of Genetics Beijing, China, 1998.

106. **Rassool F**. The Basis for Genomic Instability in Myelodysplastic Syndromes, Genomic Instability at Fragile Sites, Nottingham, UK, 1998.

107. **Rassool F**. Familial Myelodysplastic Syndrome Is Not Associated With Microsatellite Instability: Study of a Family Users and Markers, International MDS Meeting, Prague, Poland, 1999.

108. **Rassool F**.The Uses of FISH Techniques in Studying Cancer, Workshop for Head and Neck Cancer, Guy’s King’s Thomas’s School of Medicine, London, UK, 2001.

109. **Rassool F**. Increased Infidelity of Non-Homologous End-Joining (NHEJ) in Bloom's Syndrome and Myeloid Leukaemias: Evidence that Ku70 and/or 86 Are Required for Increased Frequency and Size of Deletions, British Society of Haematology, Brighton, UK, 2002.

110. **Rassool F**. Altered Double Strand Break Repair in Myeloid Malignancies and Preleukaemic Syndromes. Imperial College of Science and Technology Hammersmith Hospital, London, UK, 2002.

111. **Rassool F**. Double Strand Breaks and NHEJ Pathways in Leukaemia, Guy’s Hospital, London, UK, 2002.

112. **Rassool F**. Non-Homologous End-Joining and Genomic Instability in Cancer, Edinburgh University, Edinburgh, UK, 2003.

113. **Rassool F**. Altered Double Strand Break Repair in Myeloid Malignancies and Pre-Leukemic Syndromes, Inaugural Meeting of MDS Forum, London, UK 2003.

114. **Rassool F**. The Role of Double Strand Break Repair in Myeloid Malignancies, The Royal Free Hospital, London, UK, 2003.

115. **Rassool F**. Mechanisms for Genomic Instability in MDS and AML, 7th International MDS Symposium, Paris, France, 2003.

116. **Rassool F**. and Pradhan, A. (PhD student) Differentially Expressed Genes in Familial MDS, 7th International MDS Symposium, (prize for best abstract), Paris, France, 2003.

117. **Rassool F**. Increased Error-Prone NHEJ in Myeloid Leukaemias, Salisbury Regional Genetics Laboratories, Salisbury, UK, 2003.

118. **Rassool F**. DNA Damage and Error-Prone Repair in MDS Mice, European Haematology Association, Stockholm, Germany, 2005.

119. **Rassool F**.DNA Damage and Repair Infidelity: A Model for Genomic instability in myeloid malignancies? CML Workshop, Genoa, Italy, 2005.

120. **Rassool F**. Histone Deacetylase Inhibitors (HDI) Cause DNA Damage in Leukemia Cells: A Mechanism for Leukemia-Specific HDI Dependent Apoptosis? The Seventh International Congress of Differentiation, Therapy Versailles, France, 2006.

121. **Rassool F**. How Does DNA Damage and Unfaithful DNA Repair Contribute to Genomic Instability and Disease Progression? CML Workshop, Bermuda, 2006.

122. **Rassool F**. Error-Prone Repair of DSBS: A Model in Genomic Instability in Cancer, Recent Progress in Cancer Biology and Therapeutics Symposium, Argentina, 2007.

123. **Rassool F**. Error-Prone Repair of Double Strand Breaks by “back-up” Non-Homologous End-Joining (NHEJ): A Model for Creating Genomic Instability in CML? ESH/EHA Mandelieu, France, 2007.

124. **Rassool F**. ROS, DNA Damage and Error-Prone Repair in FLT3/ITD Leukemias, Inserm Seminar, Paris, France, 2007.

125 **Rassool F**. Error-Prone Repair of DSB by “Back-Up” Non-Homologous End-Joining: A Model for Creating Genomic Instability in CML? Myeloproliferative Disease Workshop, San Juan, Puerto Rico, 2007.

126. **Rassool F**. ROS, DNA Damage and Error-Prone Repair, Cancer Biology Seminar, Munich, Germany, 2008.

127. **Rassool F**. Inhibiting Double Strand Break Repair and Alternative Non-Homologous End-Joining: Potential Therapeutic Targets in chronic Myeloid Leukemia with Resistance to Imatinib, Cancer Therapeutics Meeting, Bangkok, Thailand, 2008.

126. **Rassool F**. ROS, DNA Damage and Repair in Leukemic Stem Cells, Stem Cell Workshop, ESH/EHA, Mandelieu, France, 2009.

128. **Rassool F**. Alternative Non-Homologous End-Joining is a Novel Therapeutic Target in a Subset of Imatinib Resistant Chronic Myeloid Leukemias, Eleventh International Chronic Myeloid Leukemia – Biological Basis of Therapy, Bordeaux, France, 2009.

129. **Rassool F**.Therapeutic Targeting of Abnormal Repair of Double Strand Breaks in Leukemias, Frankfurt Symposium, Molecular Pathogenesis of Leukemia: Insights and Challenges, Frankfurt, Germany, 2010.

130. **Rassool F**. FLT3/ITD Mutations Exhibit Elevated Repair Errors Generated Through Alternative DNA Double Strand Break Repair Pathways, Impairing B Lymphocyte Development in FLT3/ITD “knock-in” Mice: Implications for Genomic Instability,EHA/ESH Workshop, Barcelona, Spain, 2010.

131. **Rassool F**. FLT3/ITD Mutations Regulate DNA Double Strand Break Repair: Implications for Genomic Instability, EHA/ESH: Acute Myeloid Leukemia “Molecular”, Mandelieu, France, 2011.

132. **Rassool F**. Targeting of Abnormal DNA Repair to Overcome Resistance to Therapy in Cancer and Leukemia, Jean Bernard Seminar on Leukemia and Tumor Biology, Hospital Saint-Louis Paris France, 2012.

133. **Rassool F**. DNA Ligase and PARP Inhibitors: Therapeutic Targets in Imatinib Resistant CML. 14th International Conference on Chronic Myeloid Leukemia: Biology and Therapy, Baltimore, MD, 2012.

134. **Rassool F**. **Keynote Speaker:** Genomic Instability. Genomic Instability Pathways in Chronic Myeloid Leukemia: Drivers of Disease Progression and Resistance, but Also Targets for Therapy?15th International Conference on Chronic Myeloid Leukemia: Biology and Therapy. Estoril, Portugal, September 2013.

135. **Rassool F**. Combination DNA Methyltransferase and PARP Inhibitors as a Novel Therapy Strategy for Poor Prognosis Acute Myelogenous Leukemia, Gordon Research Conference: Cancer Genetics & Epigenetics, Lucca, Italy, April 12-17, 2015.

136. **Rassool F.** Exploiting the functions of PARP for cancer therapy. Hospital Saint Louis, Paris, May, 2016.

137. **Rassool F.** Exploiting the functions of PARP for cancer therapy, Tumorigenesis through Dysregulation, IAAO2016 Symposium, Tokyo, Japan, July 22 & 23, 2016.

138. **Rassool F.** Combination of DNA methyltransferase and PARP inhibitors as a novel therapy strategy for multiple cancers: Key data in AML and triple negative breast cancer. AACR New Frontiers in Cancer Research, Cape Town South Africa, January 18-22, 2017.

139. **Rassool F**. Abnormal DNA repair, genomic instability and opportunities for therapy in leukemia and cancer. University of Cape Town, January 25, 2017.

140. **Rassool F**. Abnormal DNA repair, genomic instability and opportunities for therapy in leukemia and cancer. University of Auckland, New Zealand, October 25, 2017.

141. **Rassool F**. Combining PARP inhibitors with DNA Methyl Transferase Inhibitors: underlying mechanisms. Garvan Research Institute, Sydney Australia, October 27, 2017.

142. **Rassool F**. Reprograming the DNA Repair Response: Creating Opportunities for Therapy in Non Small cell Lung Cancer Naples, July 2018.

143. **Rassool F.** Abnormal DNA repair, genomic instability and opportunities for therapy in leukemia and cancer. Frontiers in Cancer Science, Singapore November 2018.

144. **Rassool F.** Abnormal DNA repair, genomic instability and opportunities for therapy in leukemia and cancer. Taipei, Taiwan, November 2018.

145. **Rassool F.** Marrying Drug-induction of viral mimicry, the inflammasome and DNA repair defects in cancer. Gordon Conference Cancer Genetics and Epigenetics April, 2019, Renaissance Tuscany Il Ciocco in Lucca (Barga) Italy.

146. **Rassool F**. Role for targeting DNA repair in AML. Educational session, EHA, Amsterdam, Netherlands, June 13-16, 2019.