



UNIVERSITY OF HAWAII

CANCER CENTER

Thoracic Oncology Seminar

**" Sequence-specific minor groove binders for the
diagnosis and treatment of cancer:
application in mutant DNA enrichment for liquid biopsy,
fluorescent probes and genome DNA targeted therapy"**



Hiroki Nagase, M.D., Ph.D.

Director, Chiba Cancer Center Research Institute,
Division leader, Cancer Genetics, Japan

Adjunctive Professor, Nihon University, School of Medicine, Tokyo, Japan
Adjunctive Professor, Chiba University School of Medicine, Chiba, Japan

Friday, February 8, 2019

12:00 - 1:00 p.m.

University of Hawaii Cancer Center

701 Ilalo Street
(Sullivan Conference Center)

Light refreshments to follow

CURRICULUM VITAE

Up-to-date CV

NAME: **Hiroki Nagase, M.D., Ph.D.**

OFFICE ADDRESS: Director, Chiba Cancer Center Research Institute
666-2 Nitona-Cho, Chuo-Ku, Chiba 260-8717 Japan
Tel: 81-43-264-5431 Fax: 81-43-263-8175
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EDUCATION:

M.D. Kumamoto University School of Medicine	1987
Resident, Department of Surgery Kumamoto University School of Medicine	1987-1989
Medical Research Fellow Second Department of Surgery Kumamoto University School of Medicine	1989-1991
Ph.D. Kumamoto University School of Medicine Kumamoto, Japan	1999

EMPLOYMENT HISTORY:

Resident Kumamoto University Hospital	1987-1988
Resident Kumamoto Municipal Hospital	1988-1989
Staff Surgeon Kumamoto University Hospital	1989-1991
Staff Scientist Department of Biochemistry, Cancer Institute, Tokyo, Japan.	1991-1993
Staff Scientist Beatson Institute for Cancer Research, Glasgow, Scotland.	1993-1997
Scientist, Project Leader, Cancer Genomics Program, ONYX Pharmaceuticals, California, USA	1997-1999
Visiting Professor Department of Molecular Oncology University of California, San Francisco Cancer Research Institute, San Francisco, California	1998-2000
Staff Scientist Institute of Medical Science, The University of Tokyo, Tokyo, Japan	1999-2000

Contract Researcher RIKEN Institute, Tsukuba, Japan	2000-2001
Adjunctive Assistant Professor University California, San Francisco, Comprehensive Cancer Center San Francisco, California	2000-2001
Associate Professor of Oncology Department of Cancer Genetics Roswell Park Cancer Institute, Buffalo, New York	2001-2010
Research Associate Professor Cellular and Molecular Biology Roswell Park Division, State University of New York at Buffalo, Buffalo, New York	2003-2010
Professor Advanced Research Institute for the Science and Humanities, Nihon University, Tokyo, Japan	2005-2010
Professor Division of Cancer Genetics, Advanced Medical Research Center, Nihon University, School of Medicine, Tokyo, Japan	2005-2010

CURRENT APPOINTMENT:

Director Chiba Cancer Center Research Institute Chiba, Japan	2010-present
Division leader Cancer Genetics Chiba Cancer Center Research Institute Chiba, Japan	2010-present
Adjunctive Professor Department of Medicine Nihon University, School of Medicine Tokyo, Japan	2010-present
Adjunctive Professor Department of Molecular Biology and Oncology Graduate School of Chiba University School of Medicine, Chiba, Japan	2012- Present

PROFESSIONAL ORGANIZATION

American Association for the Advancement of Science

International Mammalian Genome Society

American Association for Cancer Research

American Society of Gene and Cell Therapy

American Chemical Society

The International Society of Paediatric Oncology

Japanese Association for Cancer Research

Japanese Association for Molecular Biology

Japanese Society of Clinical Oncology

Japanese Association for Laboratory Animal Science

Japanese Association of Pediatric Oncology

Japanese Society of strategies for Cancer Research and Therapy (JSCT)

Japanese Association of Medical Artificial Intelligence

INVITED SEMINAR/LECTURER

April 3, 1998

Universita Degli Study Di Milano. Milano, Italy.

Epistatic Effect and QTL involved in Susceptibility to Mouse Chemically induced Skin Tumour Development.

June 26, 1998

Riken, Tsukuba, Japan.

Cancer Predisposition in Mice: Application of Saturation Random Mutagenesis.

February 2-3, 1999.

Genetic Variance and Cancer: New Approach. Ministry of Education, Research for Cancer (A), Keidan-Ren Kaikan, Tokyo, Japan.

February 5, 1999

Genetic Variance and Cancer: New Approach. Kumamoto University School of Medicine. Kumamoto University School of Medicine, Kumamoto, Japan.

January 31, 2000

Genetic Basis of Cancer Predisposition in Mice. The Second ORCS International Symposium Ribosome Engineering in Tokyo International Forum, Tokyo, Japan.

April 10, 2000

The Genetic Basis of Cancer Predisposition in Mice. The Jackson Laboratory, Bar Harbor, Maine.

INVITED SEMINAR/LECTURER (Con't)

June 21, 2000

Clinical Trials Of ONYX-015: Trans Arterial Administration of Adenovirus; ONYX-015, to Liver Multiple Metastatic Lesion of Colorectal Cancer. The Third Symposium of Tohoku Gastro-Intestinal Cancer Research Association. Sendai, Japan.

November 10, 2000

Genetic Modifiers of Cancer Susceptibility in Mouse Models of Human Cancer. The Human Science Foundation Symposium (JHSF), Yokohama, Japan.

November 17, 2000

Genetic Modifiers of Cancer Susceptibility in Mouse Models of Human Cancer. National Cancer Center, Tsukizi, Tokyo, Japan.

February 14, 2001

Genetic Control of Tumor Predisposition and Progression in Mouse. North Carolina State University, Raleigh, North Carolina.

February 15, 2001

Genetic Modifiers of Cancer Susceptibility in The Mouse; Multi-Directional Approaches to Identify Genetic Factors. University of North Carolina, Chapel Hill, North Carolina.

March 29, 2001

Genetic Modifiers of Cancer Susceptibility in the Mouse; Approaches to Identify Genetic Factors. Roswell Park Cancer Institute, Buffalo, New York.

July 13, 2001

Identification and Analysis of Cancer Modifier Genes. Fred Hutchinson Cancer Research Center, Seattle, Washington.

May 15, 2002

Identification and Analysis of Cancer Modifier Genes. Buffalo-Niagara Post-Genomics Research Conference, University at Buffalo, Buffalo, NY.

May 17, 2002

Dominant screening using HIB (Heavy Ion Beam) mutagenesis combined with large backcross studies. The International Complex Trait Consortium, Memphis, TN.

Dec 11-13 2002

Cancer Susceptibility Genes in Human and Model Organisms. NCI MMHCC-sponsored Workshop, Newport Beach, California

May 15 2003

Genetic and Epigenetic Cancer Susceptibility in the Mouse Model. M.D. Anderson Cancer Center, Spring Seminar Series at the Center for Research on Environmental Disease (CRED), Smithville TX.

INVITED SEMINAR/LECTURER (Con't)

May 19 2003

Genetic and epigenetic alterations in normal and abnormal development; a lesson from the mouse study. Choju Medical Institute, Seminar Series Toyohashi, Japan.

March 2 2004

Genetic and epigenetic basis of cancer susceptibility from mice to human. Science decade lecture series 2K4 Buffalo, NY.

Jun 8 2004

Genetic and epigenetic basis of cancer susceptibility from mice to human. North Shore LIJ research institute, Longisland, NY.

Oct 14-16 2004

A 'Low-penetrance type' cancer susceptibility gene identified from a mouse model of human cancer. 9th World Congress on Advances in Oncology and 7th International Symposium on Molecular medicine, Hersonissos, Crete, Greece.

Feb 3 2005

Recent advance of cancer susceptibility and molecular drug discovery in lung cancers. Clinical Lung Cancer Symposium 2005, Kumamoto, Japan

Feb 4 2005

Cancer susceptibility gene "AURKA ". Internal seminar Kumamoto University medical school 2005 , Kumamoto, Japan

Feb 10 2005

Tissue-specific differentially methylated region (TDMR) Special seminar, National Cancer Institute, Japan 2005, Tokyo, Japan

Nov 7 2005

IMGC 2005 "A draft methylation map at 4000 *NotI* sites in the C57BL/6J genome"

Nov 9 2005

"Genetic and epigenetic factors of complex cancer susceptibility" Beatson Institute for Cancer Research Glasgow UK

Dec 6-8 2005

NCI funding opportunity meeting "Predictive Models of Cancer Susceptibility: Integrated Strategies" *Newport Beach, CA December 6-8, 2005*

March 5 2006

"Genetic factors involved in Breast Cancer: Breast Cancer Susceptibility Gene" 8th Annual Meeting of Japan Society of Gynecologic Breast Cancer Tokyo Japan

INVITED SEMINAR/LECTURER (Con't)

September 15-16 2006

“Epigenetic Studies for Cancer Research” Genome Chemistry Symposium Koriyama, Japan

Oct 31, 2006

“Drug Discovery and Development for the Treatment and Prevention of Cancer” The Nihon University First Meeting of the Academic Frontier Project on Drug Discovery and Development for the Treatment and Prevention of Cancer Meeting Organizer

Dec 1 2006

“Mouse Models of Complex genetic trait diseasea” 23rd meeting of The Japanese Society of Animal Model for Human Disease Ikaho , *Japan*

Dec 8 2006

“Genetic analysis for liver diseases” 36rd meeting of The Japanese society of Liver Disease Tokyo, *Japan*

Sept 17 2007

UCSF cancer center invited seminar “Genetic and epigenetic basis of two-stage mouse skin carcinogenesis.” San Francisco, Ca

Sept 28-29 2007

8rd Japanese and China Joint Society meeting of The Cellular Pathology “Analysis of tissue-specific differentially methylated regions (T-DMRs).” Kofu, Japan

Oct 29 2008

67th annual meeting of Japanese Association of Cancer Research “Pre transcriptional gene regulation for molecular targeting cancer therapy” Hiroki Nagase, Makoto Kimura, Jun Igarashi, Hiroyuki Kawashima, Xiaofei Wang Nagoya, Japan

Oct 31 2008

46th annual meeting of Japan Society of Clinical Oncology “Pre transcriptional gene regulation for molecular targeting cancer therapy” Hiroki Nagase Nagoya, Japan

Feb 21 2009

5th Miyazaki Science Camp, Molecular Science and Translational Medicine: Quest for New Paradigm “Pre-transcriptional Gene Regulation for Molecular Targeting Therapy” Hiroki Nagase Miyazaki, Japan

Nov 28 2009

25th annual meeting of Japanese Society of Pediatric Oncology “Development of DNA binding molecules against pediatric solid tumors” Hiroki Nagase Tokyo, Japan

INVITED SEMINAR/LECTURER (Con't)

March 11 2010

“Development of New Therapeutic Agents using DNA binding molecule” Hiroki Nagase 73th connective tissue disease and rheumatoid arthritis clinical conference Tokyo

March 19 2010

“Development of Nucleic Acid Binding Molecule as Candidate Drug for Childhood Cancer” Hiroki Nagase 111th Pediatric Hematology Oncology Clinical Conference, Tokyo

March 27 2010

“Development of Drug Targeting Nucleic Acid for Neuroblastoma patients” Hiroki Nagase 1st Pediatric Oncology Conference, Tokyo

July 16 2010

“Development of new therapeutic drugs for bone and soft tissue tumors” Hiroki Nagase The 43rd Annual Musculoskeletal Tumor Meeting of the Japanese Orthopaedic Association, Tokyo

September 20 2010

“Sequence specific DNA binding molecule for transcriptional therapy and histonemodification” Hiroki Nagase 82nd Annual Meeting of the genetics society of Japan Sapporo

September 23 2010

“EMT regulation by using DNA binding molecule” Symposium“EMT” Hiroki Nagase 69th Annual Meeting of the Japanese Cancer Association Osaka

Oct 29 2010

“Epigenetic regulation in a specific genomic region: PI polyamide and SAHA conjugate” Hiroki Nagase The 48th Annual Meeting of Japan Society of Clinical Oncology, Kyoto

Dec 19 2010

“Evaluation of PI polyamide and its conjugates for molecular target therapy in in vivo models” Hiroki Nagase Molecular Recognition of DNA: Biological applications 7-Biological Chemistry PACIFICHEM Hawaii

May 19th-20th 2011

“Cell permeable synthetic chemicals targeting a specific DNA sequence to modify the mammalian genome regulation.” 1st China-Japan Symposium on Cancer Research, Shenzhen China

June 24 2011

“Novel E-box binding PI polyamides inhibiting MYC-driven cell-proliferation” 15th Annual Meeting of The Japanese Association for Molecular Target Therapy of Cancer, Tokyo

INVITED SEMINAR/LECTURER (Con't)

July 8-9 2011

“Generate a change in phenotype of mouse model of human disease by using DNA binding molecule” 25th Molossinus conference Niigata

August 19 2011

“Synthetic DNA binding molecule for iPS generation and disease therapy” 87th Genetic engineering and model of human disease conference Tokyo

Sep17-20. 2011

“Cell permeable synthetic chemicals targeting a specific DNA sequence to modify the mammalian genome regulation” Japanese-German Cancer Workshop Hiroshima, JAPAN

Oct 4 2011

“Genome sequence specific histone modification to regulate cell fate” Symposia ”Cancer epigenetics: Breakthroughs in basic research and clinical applications” Hiroki Nagase 70th Annual Meeting of the Japanese Cancer Association Nagoya

Oct 25-29 2011 “Novel E-box Binding PI polyamides Inhibiting MYC Driven Cell Proliferation” International Society of Paediatric Oncology, Auckland, NewZealand

Dec 10 2011 “Molecular recognition of DNA: application of Pyrrole Imidazole polyamides for anti-inflammation and anti- cancer invasion.” The 16 th Japan-Korea Cancer Research Workshop

April 21-24 2012 MYCN TENSRIPTION SILENCER BY USING SYNTHETIC PYRROLE-IMIDAZOLE POLYAMIDE MOLECULE IN NEUROBLASTOMA CELLS Takahiro Watanabe, Hiroki Nagase 7th INTERNATIONAL SOCIETY OF PEDIATRIC ONCOLOGY ASIA CONGRESS Yogyakarta Indonesia

May 3rd and 4th, 2012

Collaborative projects to solve the problems of Chernobyl and Fukushima The Japan-Russia Far East Forum 2012 Vladivosrtok, Russia

Aug 25 2012

DNA binding molecules : Chemical Genetic Switch to Regulate Cell Fate. Hiroki Nagase The 8th Hebei Province Conference on Oncology, CangZhou China.

Apr 6-10 2013

Automatic synthesis of efficient transcription inhibitors as anticancer agents designing sequence-specific DNA-banding molecules. Hiroki Nagase, Nobuko Koshikawa, Takayoshi Watanabe AACR American Association for Cancer Research AAUAL MEETING 2013 Washington DC USA

Feb 24-27 2013

A novel alkylating pyrrole - imidazole polyamide specifically targeting KRAS codon12 mutations preferentially suppresses the malignant phenotypes in colon cancer cells bearing G12D or G12V mutation. Hiroki Nagase, Kiriko Hiraoka, Takahiro Inoue, Toshinori Ozaki, Takayoshi Watanabe, Ken-ichi Shinohara, Nobuko Koshokawa An AACR Special Conference on RAS ONCOGENES:FROM BIOLOGY TO THERAPY Orlando FL USA

Nov 29 2013

DNA hypomethylation at the ZNF206-exon 5 CpG island associated with neuronal differentiation in mice and development of neuroblastoma in humans H. Kawashima, K Sugito, S. Yoshizawa, S. Uekusa, T. Furuya, T. Ikeda, T. Koshinaga, Y. Shinojima, R. Hasegawa, R. Mishra, J. Igarashi, M. Kimura, X. Wang, K. Fujiwara, S. Gosh, H. Nagase 55th Annual Meeting of the Japanese Society of Pediatric Hematology/Oncology. Fukukoka Japan

April 5-9 2014

“KRAS G12D and G12V Specific Alkylating Agent (KR12) inhibits growth of colon cancer with those KRA mutations in vitro as well as in vivo.” Hiroki Nagase, Kiriko Hiraoka, Takahiro Inoue, Takayoshi Watanabe, Ken-Ichi Shinohara, Nobuko Koshikawa, Ozaki Toshinori. AACR American Association for Cancer Research ANUAL MEETING 2014 San Diego CA USA

Aug 30 2014

Hiroki Nagase, Kiriko Hiraoka, Takahiro Inoue, Nobuko Koshikawa, Takayoshi Watanabe “A novel anti-cancer agent of DNA-alkylating Pyrrole-Imidazole polyamide conjugate targeting KRAS Codon 12 Mutant DNA” 52st JSCO 2014 International Session Anti cancer agent Yokohama Japan

April 18-22

“Tumor accumulation of a novel alkylating pyrrole-imidazole polyamide (KR12) targeting KRAS codon 12 mutations in murine xenograft models of human colon cancer” Takahiro Inoue, Kiriko Hiraoka, Yusei Suzuki, Hiroyuki Yoda, Takayoshi Watanabe, Atsushi Takatori, Nobuko Koshikawa, Toshinori Ozaki, Hiroki Nagase. AACR American Association for Cancer Research ANUAL MEETING 2015 Mini Symposium “Exploiting the MAPK pathway in cancer” Philadelphia PA USA

“A novel alkylating pyrrole-imidazole polyamide, KR12, specifically recognizes mutant KRAS genes and potently induces cell death” Kiriko Hiraoka, Takahiro Inoue, Hiroyuki Yoda, Atsushi Takatori, Takayoshi Watanabe, Nobuko Koshikawa, Toshinori Ozaki, Hiroki Nagase. AACR American Association for Cancer Research ANUAL MEETING 2015 Mini Symposium “Exploiting the MAPK pathway in cancer” Philadelphia PA USA

Oct 29 2015

Inhibition of KRAS mutant colon cancer using a novel DNA-alkylating Pyrrole-Imidazole polyamide conjugate targeting KRAS Codon12 Mutant DNA Hiroki Nagase, Kiriko Hiraoka, Takahiro Inoue, Takayoshi Watanabe, Ken-Ichi Shinohara, Nobuko Koshikawa, Ozaki Toshinori. 3rd International Conference of Federation of Asian Clinical Oncology(FACO) Kyoto, Japan

Nov 12 2015

Chemical genomics approaches to modify biological processes and pathological state Hiroki Nagase International Mouse Phenotyping Consortium (IMPC2015) Yokohama Japan

Dec 15-16 2015

Inhibition of cancer cell growth using a novel DNA-alkylating Pyrrole-Imidazole polyamide conjugate targeting mutated DNAs in the KRAS gene (G12D and G12V) . Hiroki Nagase, Kiriko Hiraoka, Takahiro Inoue, Takayoshi Watanabe, Nobuko Koshikawa, Atsushi Takatori. RAS initiative Fredrick MD USA.

April 15 2016

Target epigenetic regulation using Pyrrole-Imidazole polyamide conjugates Hiroki Nagase California Institute of Technology. Research Seminar Pasadena, CA USA

Sept 25 2016

Pyrrole-Imidazole polyamide conjugates targeting the cancer genome Hiroki Nagase, Atsushi Takatori Takayoshi Watanabe, Nobuko Koshikawa, Kiriko Hiraoka, Takahiro Inoue, Hiroyuki Yoda, Jason Lin, Yoshinao Shinozaki Krishnamurthy Sakthisri, Nina Matsuo, Asuka Hattori The 89th Annual Meeting of the Japanese Biochemical Society Secretariat Development of molecularly targeted cancer drugs by fusion of different fields Sendai Japan

Feb 17 2017

Target epigenetic regulation using Pyrrole-imidazole polyamide conjugates Hiroki Nagase RIKEN Epigenetics in Tsukuba Recent Advances in Epigenetic Engineering Tsukuba Japan

Feb 24 2017

Pyrrole-imidazole polyamide conjugates targeting the cancer genome. Hiroki Nagase Nihon University International symposium New frontier of medical therapy using PI polyamide. Tokyo Japan

April 5 2017

A pyrrole-imidazole polyamide conjugate targeting KRAS oncogenic mutations is a promising approach against KRAS mutated colorectal and pancreatic cancers Hiroki Nagase, Atsushi Takatori, Takayoshi Watanabe, Nobuko Koshikawa, Jason Lin. AACR Annual Meeting 2017. Washington, D.C. USA

June 23 2017

Forced epigenetic regulation at the target genome using PI polyamide drug conjugates. Hiroki Nagase 30th Annual meeting of Morosinus research Aso Kumamoto Japan

Oct 21 2017

Overcoming cancer as a Japanese National Disease. Hiroki Nagase Seminar at Kazusa DNA Research Institute Chiba Japan.

Dec 8th 2017

Treatment of pathogenic mitochondrial DNA mutation with PI polyamide. ConBio2017. Kobe Japan

Dec 13th 2017

Targeting the Achilles' heel of cancer: sequence specific alkylation at KRAS driver gene DNA mutations. Hiroki Nagase The 22nd JFCR-ISCC New Antitumor Agents under Development in the US, Europe and Japan Tokyo Japan

Jan 23 2018

New therapeutic strategy by using targeted epigenetic modification. Hiroki Nagase 13th translational Workshop, Japanese Association for Molecular Target Therapy of Cancer Tokyo, Japan

Feb 21 2018

Think Cancer using Scientific Scope. Hiroki Nagase Ochanomizu Academia Symposium, Tokyo Japan

April 14-19

Development of a new innovative multifunctional immune checkpoint inhibitor. H. Nagase, K. Fukushima, A. Hattori, M. Shinohara, A. Takatori, T. Watanabe, N. Koshikawa, T. Inoue, J. Lin, Y. Shinozaki AACR2018 Chicago IL USA

July 11th 2018

Targeting the RAS Gene Against Cancer H.Nagase The 6th JCA-AACR Special Joint Conference, Kyoto Japan

Grant reviewer

- Cancer Research Foundation in the Netherland .1999 to 2002
- NCI grant review participation:
- The special emphasis panels: PAR03-010 Small Grants Programs for Cancer Epidemiology 2005
- PAR-04-147 Cancer Prevention Research Small Grant Program 2005
- MRC (Medical Research Council) Project grant 2007
- JSPC Research Fellowships for Young Scientists 2015-2017

Journal review

Cancer Research
Oncogene
Carcinogenesis
Molecular carcinogenesis
Cancer Letter
Cancer
Electrophoresis
Cancer Science

GRANT SUPPORT: Active

Principal Investigator:

SOURCE: Japanese Agency for Medical Research and Development, Japan

GRANT: Project Focused on Developing Key Technology for Discovering and Manufacturing Drugs for Next-Generation Treatment and Diagnosis

TITLE: Development of designable bioactive molecules, capable of sequence-specific DNA binding

AMOUNT: Japanese Yen 45,000,000 4/1/2018- 3/31/2021

Principal Investigator:

SOURCE: The Ministry of Education, Culture, Sports, Science and Technology, Japan

GRANT: Kiban B

TITLE: Nobel Therapeutic Strategy against Cancer using genome specific alkylation

AMOUNT: Japanese Yen 12,000,000 4/1/2017- 3/31/2020

Previous Grant Support

Principal Investigator:

SOURCE: The Ministry of Education, Culture, Sports, Science and Technology, Japan

GRANT: Kiban B

TITLE: Drug Development for the Treatment of Cancer using genome specific histone acetylation

AMOUNT: Japanese Yen 10,700,000 4/1/2011 - 3/31/2012

The major goals of this project are identification of drug target and develop drugs using a conjugate of HDAC inhibitor and PI polyamide to modify histone acetylation and up-regulate targeted genes in a specific genomic region.

SOURCE: Japan Science and Technology Agency

GRANT: A-Step

TITLE: TGF-beta and MMP9 inhibitors for eye disease

AMOUNT: Japanese Yen 6,000,000 10/1/2011 - 9/31/2012

The major goals of this project are development of an eye drop to cure eye diseases.

SOURCE: National Institute of Health (NIH)/ National Institute of Environmental Health Science (NIEHS)

GRANT: 1 R01 ES012249-01A1

TITLE: Analysis and identification of skin cancer susceptibility in mice

AMOUNT: \$2,025,384 5/1/2004 - 3/31/2010

The major goals of this project are identification of skin cancer susceptibility genes of previously mapped 12 loci and analysis of candidate genes identified.

SOURCE: The Ministry of Education, Culture, Sports, Science and Technology, Japan

GRANT: H18 Academic Frontier Project

TITLE: Drug Discovery and Development for the Treatment and Prevention of Cancer

AMOUNT: \$8,000,000 4/1/2006 - 3/31/2011

The major goals of this project are identification of drug target and develop drugs using a new designable small molecule to recognize a minor groove of double stranded DNA in sequence specific manner. Targeted genes are down regulated by transcription inhibition.

SOURCE: NYS Department of Health

GRANT: Wadsworth Center Extramural Grants NY Stem grant

TITLE: A novel mouse breast cancer model using de-differentiated fat cells (DFAT) stem cell like cells.

AMOUNT: \$180,000 4/1/08-3/31/09

The major goals of this project are to establish a model of breast cancer stem cells to differentiated cancer cells by using a genetically-engineered fat tissue derived stem cells conditionally overexpressing tumor associated gene(s) during breast epithelial transition.

GRANT SUPPORT: (Con't)

Co-Principal Investigator:

SOURCE: NIH/NCI
GRANT: 1R01 CA102423-01 (P.I. Held, W)
TITLE: Genomic sites of developmental and tissue specific DNA methylation
AMOUNT: \$1,300,858 4/1/2004 - 3/31/2008

The major goals of this project are identification of genomic sites of developmental and tissue specific DNA methylation in mouse genome using global methylation search and analysis of possible downstream mechanisms.

Co-Investigator:

SOURCE: NIH/NCI
GRANT: 2R01 Ca068612-08A2 (P.I. Held, W)
TITLE: Restriction Landmark Genomic Analysis of Cancer
AMOUNT: \$1, 504,554 7/1/2003 - 6/30/2008

The major goals of this project are identification of genomic sites of colon cancer specific DNA methylation in human genome using global methylation search and analysis of possible downstream mechanisms.

SOURCE: NIH / NIEHS
GRANT: Supplement of R01 ES012249-01A1
TITLE: Analysis and identification of skin cancer susceptibility in mice
AMOUNT: \$5000. 5/1/2004 - 3/31/2010

The grant supports a college student and is supplement to the R01 grant

SOURCE: Nihon University Alliance Foundation, Japan
GRANT: Academic Research Grant
TITLE: Mechanisms of DNA methylation in development and stem cell differentiation
AMOUNT: \$200,000 4/1/2006 - 3/31/2008

The major goals of this project are identification of genomic DNA methylation in specific genomic regions during mammalian development and stem cell differentiation.

SOURCE: Mitsui Life Insurance Company, Japan
GRANT: Medical Research Fund
TITLE: New approach for colorectal cancer treatment
AMOUNT: \$10,000 9/7/2006 - 3/31/2007

The major goals of this project are development of risk protein specific down regulation approach for colorectal cancer.

GRANT SUPPORT: (Con't)

SOURCE: Grant in Aid for Scientific Research, Special Research Fields (C)
GRANT: No. 13204091
TITLE: Approaches to Identify Genetic Factors in Complex Genetic Disease from Animal Model
AMOUNT: 2,200,000 Japanese Yen 4/2001-3/2002

SOURCE: Grant in Aid for Biogenic Resource Center Research
GRANT: No. 34059702
TITLE: Functional Genomic Approach using Experimental Animal in Biogenic Resource Center
AMOUNT: 9,450,000 Japanese Yen 11/2000-3/2001

SOURCE: Grant in Aid for Scientific Research, Special Research Fields (C)
GRANT: No. 12213039
TITLE: Carcinogenesis and Cancer Prevention. The Genetic Basis of Skin Cancer Predisposition.
AMOUNT: 4,500,000 Japanese Yen 4/2000-3/2001

PUBLICATION LIST

Total IF: 510.922

Total 3,181 times cited (Web of Science)

1. Sera Y, Kako H, Mori K, Yamaguchi Y, **Nagase H**, Ikeda S, Yamamoto Y, Yoshinaka I, Makino Y, Uji Y, Teraoka A, Strong RW, Lynch SV, Ong TH and Matsunami H. Clinical Experience of Liver Transplanted Patients. *Japan. J. Pediatric. Surg.*, 22(10): 959-965, 1990.
2. Horii A, Nakatsuru S, Miyoshi Y, Ichii S, **Nagase H**, Ando H, Yanagisawa A, Tsuchiya E, Kato Y and Nakamura Y. Frequent somatic mutations of the APC gene in human pancreatic cancer. *Cancer Res* 52: 6696-6698, 1992. (IF : 7.514) (184 times cited)
3. Miyoshi Y, **Nagase H**, Ando H, Horii A, Ichii S, Nakatsuru S, Aoki T, Miki Y, Mori T and Nakamura Y. Somatic mutations of the APC gene in colorectal tumors: mutation cluster region in the APC gene. *Hum Mol Gen* 4: 229-233, 1992. (IF:7.249)
4. Miyoshi Y, Ando H, **Nagase H**, Nishisho I, Horii A, Miki Y, Mori T, Utsunomiya J, Baba S, Petersen G, Hamilton SR, Kinzler KW, Vogelstein B and Nakamura Y. Germ-line mutations of the APC gene in 53 familial adenomatous polyposis patients. *Proc Natl Acad Sci USA* 89: 4452-4456, 1992. (IF : 9.380) (410 times cited)
5. Horii A, Nakatsuru Y, Miyoshi Y, Ichii S, **Nagase H**, Kato Y, Yanagisawa A and Nakamura Y. The APC gene, responsible for familial adenomatous polyposis is mutated in human gastric cancer. *Cancer Res* 52: 3231-3233, 1992. (IF : 7.514) (181 times cited)
6. **Nagase H**, Miyoshi Y, Horii A, Aoki T, Petersen G, Vogelstein B, Mahar E, Ogawa M, Maruyama M, Utsunomiya J, Baba S, and Nakamura Y. Screening for germ-line mutations in familial adenomatous polyposis (FAP) patients: 61 new patients and a summary of 150 unrelated patients. *Human Mutation* 1: 467-473, 1992. (IF : 7.033) (87 Times Cited)
7. **Nagase H**, Miyoshi Y, Horii S, Aoki T, Ogawa M, Utsunomiya J, Baba S, Sasazuki T and Nakamura Y. Correlation between the location of germ-line mutations in the *APC* gene and the number of colorectal polyps in familial adenomatous polyposis patients. *Cancer Res* 52: 4055-4057, 1992. (IF : 7.514) (231 times cited)
8. Nakamura Y, Miyoshi Y, Nishisho I, Horii A, Ando H and **Nagase H**. Isolation of the APC gene and its mutation in familial and sporadic colorectal cancers. (in Japanese) *CRC* 1(2): 114-122, 1992.
9. Nakamura Y, Nishisho I, Kinzler KW, Vogelstein B, Miyoshi Y, Miki Y, Ando H, Horii A and **Nagase H**. Mutations of the adenomatous polyposis coli gene in familial polyposis coli patients and sporadic colorectal tumours. *Multistage carcinogenesis*, C. C. Harris et al. (EDS.), Japan Sci. Soc. Press, Tokyo/Crc Press, Boca Raton, PP. 285-292, 1992.

PUBLICATION LIST (Con't)

10. **Nagase H**, Yamaguchi Y, Morinaga H, Sera Y and Ogawa M. Multicentric infantile myofibromatosis with spontaneous regression. *Pediatric Surgery International* 8:84-86, 1993. (IF : 0.964) (0 times cited)
11. Horii A, Nakatsuru S, Ichii S, **Nagase H** and Nakamura Y. Multiple forms of the *APC* gene transcripts and their tissue-specific expression. *Human Molecular Genetics* 2(3): 283-387, 1993. (IF : 7.249) (91 times cited)
12. Ando H, Miyoshi Y, **Nagase H**, Baba S and Nakamura Y. Detection of 12 germ-line mutations in the adenomatous polyposis coli (*APC*) gene by polymerase chain reaction. *Gastroenterology* 104: 989-993, 1993. (IF : 12.591) (27 times cited)
13. Mori T, **Nagase H**, Aoki T, Arakawa H, Nishihira T, Mori S and Nakamura Y. The *APC* (Adenomatous polyposis coli) gene: A novel mutation in the FAP patient and a DdeI polymorphism in the 5' noncoding region. *Human Mutation* 2(3): 240-243, 1993. (IF : IF : 7.033) (6 times cited)
14. Ichii S, **Nagase H**, Mori T, Baba S and Nakamura Y. A novel mutation of the *APC* (adenomatous polyposis coli) gene in a familial adenomatous polyposis (FAP) patient and presymptomatic diagnosis using PCR. *Human Molecular Genetics* 2(5): 597, 1993. (IF : 7.249) (3 times cited)
15. Maher ER, Barton DE, Slatter R, Koch DJ, Jones MH, **Nagase H**, Payne SJ, Charles SJ, Moores AT, Nakamura Y and Ferguson-Smith MA. Evaluation of molecular genetic diagnosis in the management of familial adenomatous polyposis coli: a population based study. *Journal of Medical Genetics* 30(8): 675-678, 1993. (IF : 5.714) (29 times cited)
16. Ikeda S, Sera Y, Yamamoto H, Yamashita S, **Nagase H** and Ogawa M. Leiomyosarcoma of the colon in a newborn: a case report and review of the literature. *Nippon Geka Hokan - Archiv fur Japanische Chirurgie* 62(3): 166-171, 1993.
17. **Nagase H** and Nakamura Y. Mutations of the *APC* (Adenomatous polyposis coli) gene. *Human Mutation*. 2: 425-434, 1993. (IF : IF : 7.033) (268 times cited)
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