Faculty of Medicine
Universitas Padjadjaran

Certificate of Completion

This certificate is awarded to

Dr. Aisyah Elliyanti,dr.SpKN.,Mkes

has Successfully participated as

PARTICIPANT

in The 4th Bandung International Biomolecular Medicine Conference
in Conjunction With
2nd Asean Congress on Medical Biotechnology and Molecular Biosciences

Bandung, Indonesia
5-6 September 2016

Prof. Ramdan Panigoro, dr, Msc, PhD
Chairman of BIBMC and ACMM 2016

8 SKP

Dr. Yoni Fuadah Syukriani, dr., Sp.F., M.Si., DFM.
Dean of Faculty of Medicine
Universitas Padjadjaran

IDI Accreditation No.818/SK/SM/IDI. WIL/JAB/X/2016

Advances in Biomolecular Medicine

Proceedings of the 4th BIBMC (Bandung International Biomolecular Medicine Conference) 2016 and the 2nd ACMM (ASEAN Congress on Medical Biotechnology and Molecular Biosciences), October 4-6, 2016, Bandung, West Java, Indonesia

Edited By Robert Hofstra, Noriyuki Koibuchi, Suthat Fucharoen

Edition	1st Edition
First Published	2017
eBook Published	27 March 2017
Pub. location	London
Imprint	CRC Press
DOI	https://doi.org/10.1201/9781315208619 (https://doi.org/10.1201/9781315208619)
Pages	136 pages
eBook ISBN	9781315208619
Subjects	Bioscience, Medicine, Dentistry, Nursing & Allied Health

Advances in Biomolecular Medicine contains the selected papers presented at the 4th BIBMC (Bandung International Biomolecular Medicine Conference) and the 2nd ACMM (ASEAN Congress on Medical Biotechnology and Molecular Biosciences), hosted by the Faculty of Medicine, Padjadjaran University, Bandung, West Java, Indonesia, 4-6 October 2016. In line with the United Nations Sustainable Development Goals, the theme of the joint scientific meeting is 'Medical innovation & translational research to ensure healthy lives & promote well-being for all at all ages'.

Authors include scientists, academics, practitioners, regulators and other key individuals with expertise and experience relevant to biomolecular medicine, medical biotechnology and molecular biosciences. Topics of the papers cover various aspects of infection, oncology, tuberculosis, genetics, thalassemia, nutrition, cardiovascular, wound healing and endocrinology. This book is essential reading for academics, scientist, practitioners and regulators involved in the area of biomolecular medicine, medical biotechnology and molecular biosciences.

RELATED BOOKS

Retinoids in Dermatolo

Edited By Ayse Serap Karadag, Berna Aksoy, Lawrence Charles Parish, MD

(/books/9780429456732)

Textbook of Clinical Neuropsychiatry and Behavioral Neuroscienc

By David Moore, Basant Puri

(/books/9780429253003)

TABLE OF CONTENTS

Scopus | ORCID

1 | Select profiles 2 | Select profile name 3 | Review publications 4 | Review profile 5 | Send Author ID 6 | Send publications

Select your Scopus profiles

Please select all profiles that contain publications authored by you and click the next button to continue

You searched for: Authorname (**Elliyanti, Aisyah**) | edit

Sort by Relevancy

	All	Authors	Documents	Subject area	Affiliation	City	Country
1		**Elliyanti, Aisyah** Elliyanti, A.	2	Biochemistry, Genetics and Molecular Biology, Medicine	Universitas Andalas	Padang	Indonesia

Hide recent documents

Epidermal growth factor and adenosine triphosphate induce natrium iodide symporter expression in breast cancer cell lines (2019)
Open Access Macedonian Journal of Medical Sciences

Correlation between natrium iodide symporter and c-fos expressions in breast cancer cell lines (2017)
Advances in Biomolecular Medicine - Proceedings of the 4th BIBMC (Bandung International Biomolecular Medicine Conference) 2016 and the 2nd ACMM (ASEAN Congress on Medical Biotechnology and Molecular Biosciences) 2016

back | Next

Bandung 2016

The Correlation between Natrium Iodide Symporter (NIS) with C-Fos Expressions in Breast Cancer Cell Lines

Aisyah Elliyanti[1], Noormartany[2],Yunia Sribudiani[3], Ani Melani[3], JohanS.Masjhur[4], Tri Hanggono Achmad[3]

[1] Medical physics and Radiology Department of Faculty of Medicine Universitas Andalas/ RS.Dr.M.Djamil Padang
[2] Department of Clinical pathology of Medical Faculty of Universitas Padjadjaran
[3] Departement of Biochemistry of Medical Faculty of Universitas Padjadjaran
[4] Departement of Nuclear Medicine of Medical Faculty of Universitas Padjadjaran /RS Hasan sadikin Bandung

1

Background

- Radioiodine has been used for more than 60 years as adjuvant therapy of well-differentiated thyroid cancer.
- Iodine transport into thyroid follicular cells is mediated by Natrium iodide symporter (NIS).
- Natrium iodide symporter (NIS) plays a role as an iodine co-transporter.
- The expression of NIS was found majority in an invasive breast cancer disease.
- It is related to a malignant transformation process.

2

Con't

- Furthermore, c-fos is a proto-oncogen, It has a role in response to proliferative signals.
- It is used as a marker of proliferation.
- The aim of this study is to investigate the correlation between NIS with c-fos expressions in breast cancer cell lines as a basic for radioiodine treatment.

3

Materials and Methods

- A study → at Faculty of Medicine, Padjadjaran Universitas. September to December 2014.
- SKBR-3 cell line represents HER2 subtype and MCF-7 represents luminal subtype.
- A rabbit polyclonal antibody anti-c fos (ab7963) and a rabbit polyclonal antibody NIS (ab83816) were used as primer antibody.
- A goat polyclonal antibody to rabbit IgG is used as secondary-antibody (ab6716).
- The expressions of NIS and c-fos mRNA were analyzed by one step real-time quantitative PCR.
- The proteins were detected by immunocytofluoresence.

4

The Correlation between Natrium Iodide Symporter (NIS) with C-Fos Expressions in Breast Cancer Cell Lines

Aisyah Elliyanti, [illegible]
[illegible]
[illegible]

[illegible]

- [illegible] has been used for more than 60 years [illegible] therapy of well differentiated [illegible]
- [illegible] transport into thyroid follicular cells is mediated by [illegible] iodide symporter (NIS)
- Natrium iodide symporter (NIS) plays a role as an iodine co-transporter.
- The expression of NIS was found majority in an invasive breast cancer disease
- It is related to a malignant transformation process.

- Furthermore, c-fos is a proto-oncogen, it has a role in response to proliferative signals.
- It is used as a marker of proliferation.
- The aim of this study is to investigate the correlation between NIS with c-fos expressions in breast cancer cell lines as a basic for radioiodine treatment.

- [illegible] September to December 2016.
- [illegible] represents HER2 subtype [illegible] luminal [illegible]
- [illegible] monoclonal antibody c-fos [illegible] polyclonal antibody NIS [illegible] primary antibody [illegible]
- [illegible] antibody [illegible] used as secondary antibody [illegible]
- The expressions of NIS and c-fos mRNA were analyzed [illegible] real time quantitative PCR
- The proteins were detected [illegible] immunocytochemistry.

Results: Protein and mRNA NIS

- Protein and mRNA NIS are found in SKBR-3, but are not found in MCF-7 cells.
- The protein is expressed in cytoplasm and membrane of cells.
- The copy number of mRNA NIS is 0.7 ± 0.01.

5

Results: Protein and mRNA c-Fos

- Protein and mRNA c-fos are found in MCF-7, but are not found in SKBR-3 cells.
- The copy number of mRNA c-fos is 1.13 ± 0.02.
- We find an inverse correlation between NIS with c-fos expressions

6

Discussion

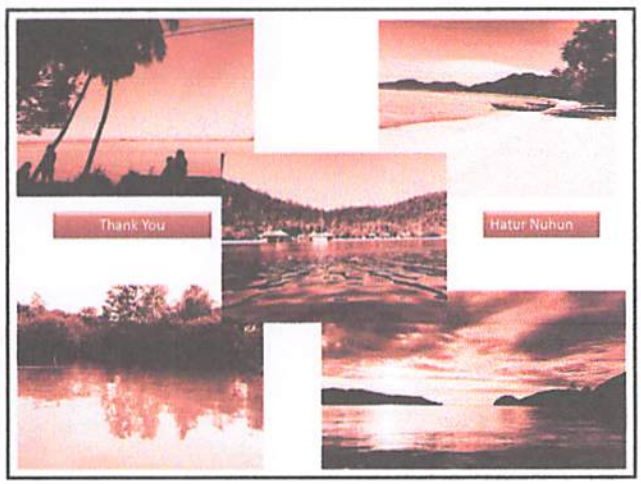
- HER2 subtype is a progressive type of breast cancer compare to luminal type
- NIS expression endogen is found in HER2 type, but not in MCF-7
- So far, Mostly studies used MCF7 cell line
- NIS transfection to breast cancer cells → for radioiodine treatment
- Need selection subtype of breast cancer for radioiodine treatment → Further studies are need to investigate the response of radioiodine in breast cancer.

7

Conclusions

- An inverse correlation of expressions between NIS with c-fos.
- A SKBR-3 cell line which it represents HER2 subtype seems to be suitable to receive radioiodine.
- The c-fos is expressed in MCF-7 instead of in SKBR-3 cells.
- This finding has raise an assumption that c-fos may not appropriate as a marker of proliferation in breast cancer.

8



9