



Sertifikat



Diberikan kepada

Dessy Arisanty

Atas partisipasinya sebagai

PEMAKALAH ORAL

Pada acara



National Seminar on Application of Sciences and Clinical Pharmacy

“ Implementation of Stem Cell in Health and Life Sciences ”

Ikatan Alumni Farmasi Universitas Andalas dan Ikatan Apoteker Indonesia Sumatera Barat


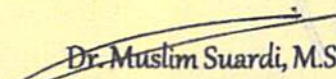
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Ketua Pelaksana



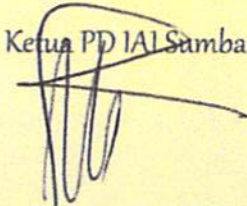
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Morphologic sequence of apoptotic cell death

(Hall et al. 1998)

Apoptosis : Apoptosis is often referred to as a program cell death

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Myc protein is a transcription factor that activates expression of many genes through binding on consensus sequencing [Enhancer Box sequences (E-boxes)] and recruiting HATs

Myc is a very strong proto-oncogene. Found over expression in many type of concealing breast cancer

(Domiguez-Sola, 2007)

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- A plant from Meliaceae family.
- A Neem tree is native to India and Burma
- Local name of neem in the many location :
 - "Nim" in Bengali,
 - "Vapa" in Tamil,
 - "Limba" in Sanskrit,
 - "Margosa tree" in English,
 - "Limba" in Indonesia
 - "Semambu" in Malaysia.

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How the apoptotic mechanism happens cellularly and apoptotic characterization ???

Agarwal, 2000; Radhakrishnan and Upadhyay, 2004

breast cancer cell lines which detect by TUNEL Assay

A. indica effective as agent to suppress cancer growth in vivo and induced apoptosis in MDA-MB231.

Lacox, 2004

effect of potential drug seilioli and also molecular target.

MDA-MB231 cell lines represent as a model study the effect of potential drug seilioli and also molecular target.

Decrohn and valene, 2011

Using cultured cell lines showed its widespread development into an important experimental tool in cancer research.

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DESSY ARISANTY

Medical Faculty of Andalas University
 Biomedical Department, Medical and Health Sciences of UPM
 2015

Azadirachta indica L juss extract effect to C-myc gen expression and induced Apoptosis on Breast Cancer Cells Lines

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BACKGROUND

Natural product is an attractive source of new therapeutic candidate compound or sources of new drugs

Adriana et al., 2001

About 25% of the drugs prescribed worldwide come from plants. 121 such as active compound being in current use.

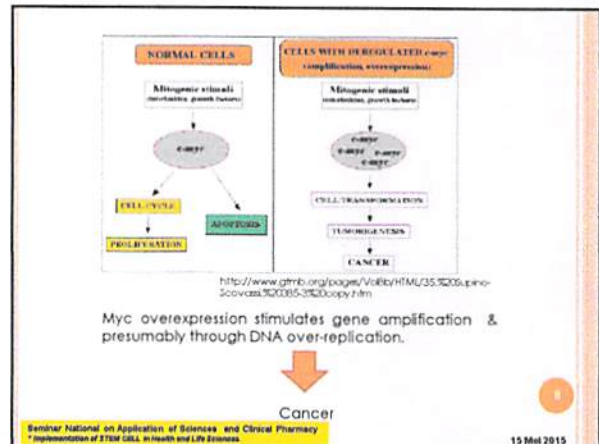
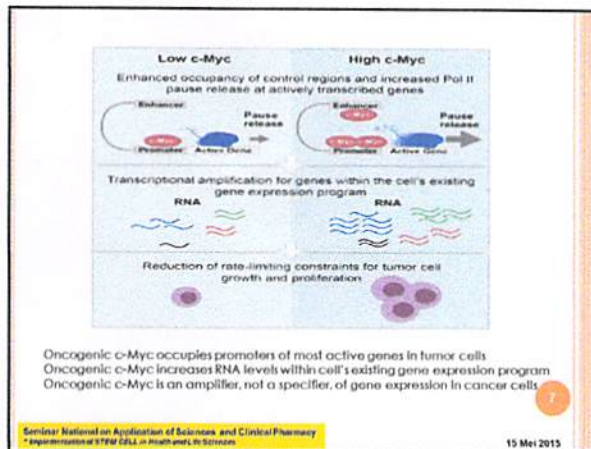
Rates, 2001

However the potential use of higher plants as a source of new drugs is still poorly explored deeply. There was less advance research to investigate molecularly

Payne et al., 2006

One of medicinal plant in Malaysia is *Azadirachta indica*, A.juss (Neem). Numerous scientific researches reported that potential properties of *A. indica*

Sai Ram, 2000



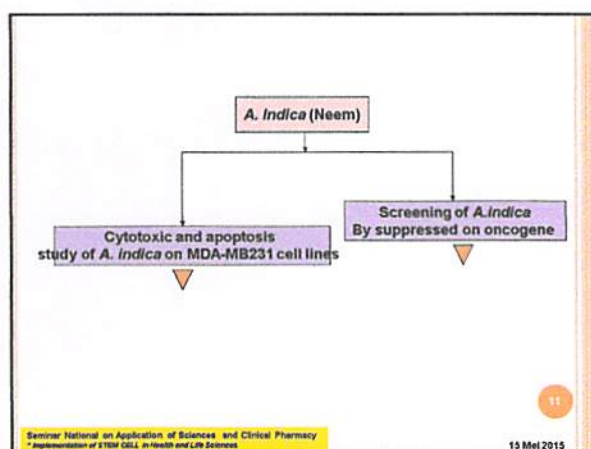
Objective of study

1. To determine the cytotoxic property of Neem on breast cancer cell lines (MDA-MB 231)
2. To observe the morphological changes during apoptosis induced by neem on breast cancer cell lines (MDA-MB231).
3. To determine the effect of neem extract on the C-myc cancer-causing genes.

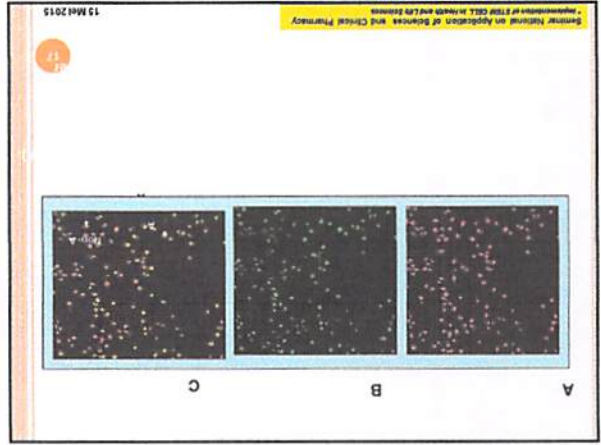
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MATERIAL & METHODS

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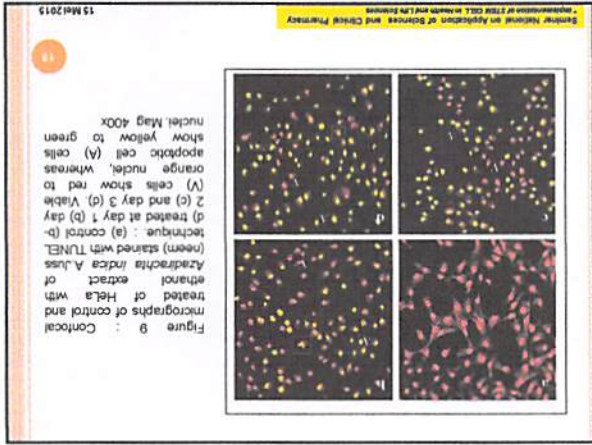
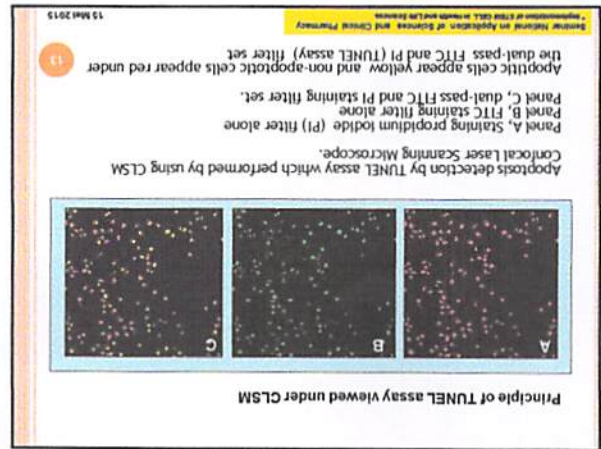
- ### Cytotoxic and apoptosis study of *A. Indica* on MDA-MB231 cell lines
- Breast cancer cell culture (MDA-MB231)
 - Cytotoxic assay
 - IC₅₀ value
 - Apoptosis study
 - Apoptosis cellular mechanism
 - TUNEL assay and SEM
 - Apoptotic DNA laddering
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RESULT & CONCLUSION

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Apoptosis study

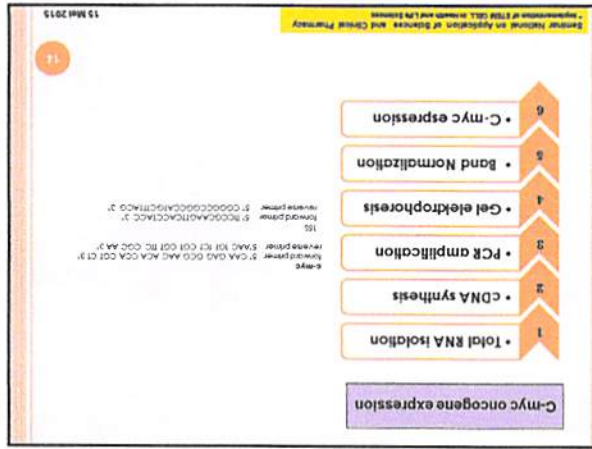
Terminal deoxynucleotidyl transferase-mediated dUTP-biotin nick end-labeling (TUNEL) is a method for detecting apoptotic cells that exhibit DNA fragmentation.

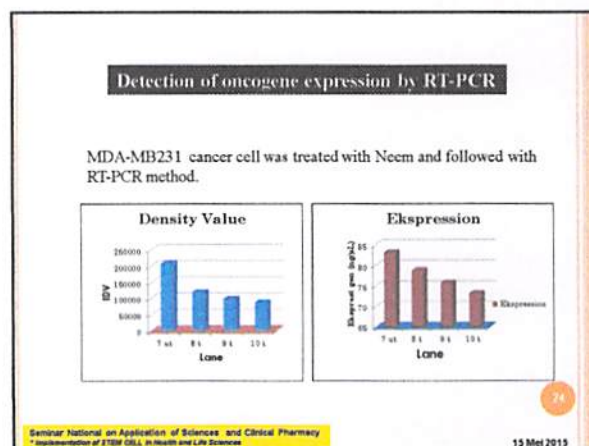
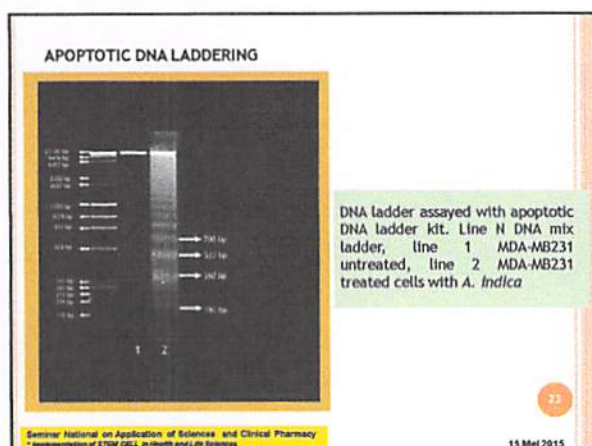
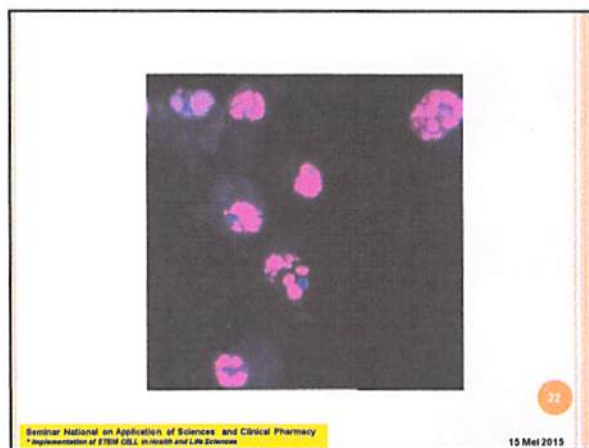
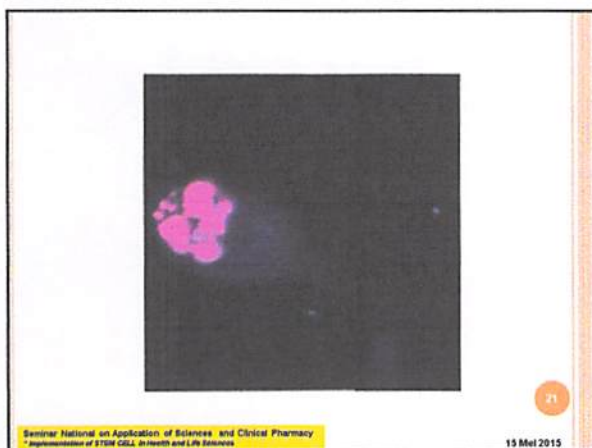
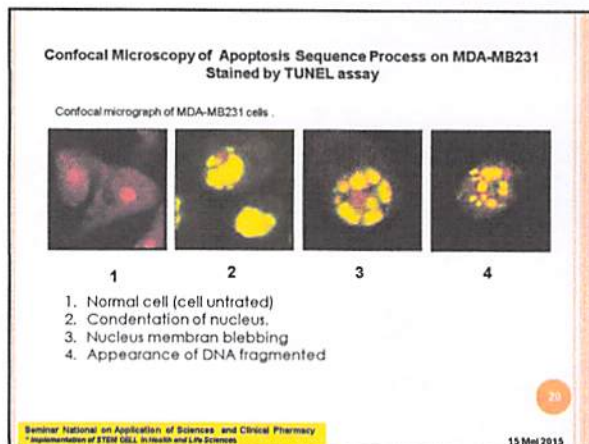
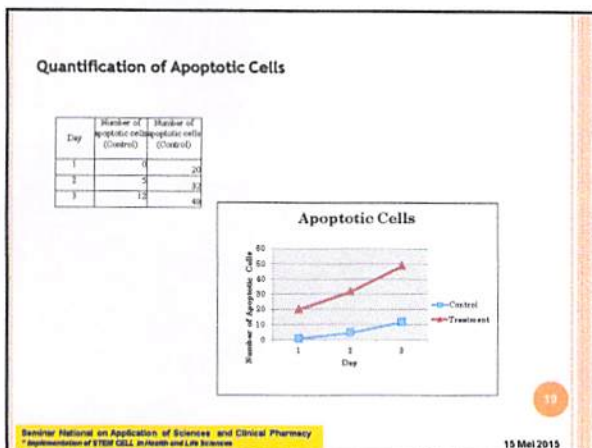
The dead-end fluorometric TUNEL : specific detection and quantification of apoptotic cells

TUNEL assay method viewed under Confocal Laser Scanning Microscope CLSM

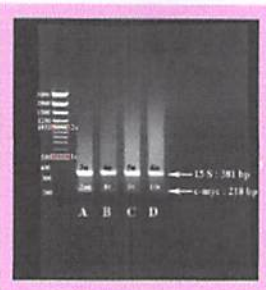
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Expression of c-myc oncogenes MDA-MB231 cell lines after 72 hours post-treatment



Effect of *A.indica* (neem) on the expression of c-myc gene in MDA-MB231 cell line. PCR products were analyzed on a 1.5% agarose gel. M, 100 bp plus DNA ladder marker; lane A, MDA-MB231 control (untreated); lane B, treated with 10 mg/ml; lane C, treated with 30 mg/ml and lane D treated with 50 mg/ml EtOH extract of neem. Note: s is standard, n is normal control (housekeeping genes), ut is untreated and t is treated

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Conclusion

- Neem extract could induced apoptosis on the MDA-MB231 and gave characterization of apoptosis
- Neem extract supress the c-myc oncogene on MDA-MB231 breast cancer cell

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THANK YOU

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