# *Curriculum Vitae*



**OMER MOHAMED ABDALLA ELHAG**
***Ph. D., Molecular Medicine, Associate professor***

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## *BIODATA*

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| Date of Birth: 14/3/1962 | Place of Birth: Sudan | Nationality: Sudanese |
| Gender: Male | Marital Status: Single | Language: Arabic/English |

## *EDUCATION*

***Ph. D.* Molecular Medicine** (Jan., 2014)
Dr. Panjwani Center for Molecular Medicine and Drug Research (PCMD),
International Center for Chemical and Biological Sciences (ICCBS),
University of Karachi, Karachi, Pakistan
**Thesis title** "Immunomodulatory Effects of Natural Compounds on Cells that Mediate the Immune Response; Role in Graft Rejection Prevention"
**Supervisors**: **Dr. Muhammad A. Mesaik** (PCMD) and **Prof. Dr. Rafat Ali Siddiqui** (Cellular Biochemistry Laboratory, Methodist Research Institute, Indianapolis, USA).

***M. Sc.* Biochemistry** (May-1998).
Post Graduate College, University of Khartoum, **Sudan**.
**Thesis Title "**Production of Antisera and Development of Radioimmunoassays for Serum T3, T4, and Ferritin".

***B. Sc.* Biochemistry** (1986)
Faculty of Science, University of Alexandria, **Egypt**.

**Sudanese Higher Secondary School Certificate 1982:** Almutamar Higher Secondary School, Omdurman, Sudan

## *RESEARCH EXPERIENCE*

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| June, 2019-present | Director of the Research Coordination Unit, Sudan Atomic Energy Commission |
| June, 2014- June 2019 | Associate professor (Researcher)/Director, Institute of Nuclear Applications in Biological Sciences (NABSI) Sudan Atomic Energy Commission, Khartoum, Sudan. |
| 2007-June, 2014 | Assistant professor (Researcher), NABSI. |
| 2007-2013 | Ph. D. Research fellow, Molecular Immunology Laboratory, Dr. Panjwani Center for Molecular Medicine and Drug Research, ICCBS, University of Karachi, Pakistan. |

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| 2000-2007 | Research associate; Institute of Chemistry and Radioisotopes, Sudan Atomic Energy Commission, Khartoum, Sudan. |

## *TECHNICAL SKILLS:*

- Expert in production of polyclonal and monoclonal antibodies and in development of radio- and enzyme immunoassays.
- Well-trained in cell culture techniques. DNA extraction, PCR, Western blotting, various types of electrophoresis, ELISA and animal handling.
- Experienced in Linux, docking softwares (AutoDock3 & FlexX) and protein visualization softwares.
- Extensive experience in writing grant applications and research articles.
- Highly inquisitive, creative and resourceful.
- Excellent skills in communication and collaboration.

## *RESEARCH GRANTS*

1. Project No. SUD /6/023, (principal investigator), 2003-2005, International Atomic Energy Agency, Improving local radio immunodiagnostics capabilities in Sudan.
2. Production of Monoclonal Antibodies and Development of Immunoassay kits for Hormones and Trace Proteins. SAEC, Ministry of Science and Communications, Principal investigator, 6,500,000 SDG (**ongoing project**).

## *TEACHING EXPERIENCE*

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| 2015 upto present | Nile College, head department of Biochemistry and teaching different aspects of biochemistry. |
| 2015-present | International University of Africa, Fuculty of Medicine, post graduate programme, Department of Biochemistry |
| 2017-present | Sudan University for Science and Technology, Faculty of Radiation Science. Teaching nuclear medicine for post-graduate programme. |
| 2013-upto 2017 | Sudan Academy of sciences, Khartoum, Sudan. Teaching radiobiology course for M. Sc. students of Medical physics, |
| Sep. 2013 | Dr. Panjwani Center for Molecular Medicine and Drug Research, University of Karachi. Taught biochemistry for International GRE. |
| 2002-2004 | Science and Technology College (Sudan) Department of Biochemistry, Medical Laboratory programme (Part-time lecturer, biochemistry). |
| 2002-2004 | Al-Fashir University (Sudan), Faculty of Medicine (Part-time lecturer, biochemistry) |
| 2000-2002 | El-Neelain University (Sudan)., Faculty of Science as Part-time lecturer |
| 2000-2002 | Ahfad College for Women (Sudan), School of medicine. Part-time |

## *FELLOWSHIPS AND TRAINING WORKSHOPS*

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| **8-19 Nov 1997** | Radioimmunoassay (RIA) and related techniques. Sudan Atomic Energy Commission, Khartoum, **Sudan** |
| **5-9/7/1999** | Training workshop on methodological aspects of tumor markers CEA, CA15-3 and Thyroglobulin, Accra, **Ghana**. |
| **3-12/4/2000** | National training course on data processing and quality control in RIA. Department of Chemistry and Radioisotopes (SAEC), Khartoum, **Sudan**. |
| **6-10/11/2000** | Regional (AFRA) training course on production of basic reagents for RIA of tumor markers. Tunis, **Tunisia**. |
| **15-30/7/2001** | Lund University Diploma in Cytogenetics and molecular cytogenetics of cancer, Institute of endemic diseases, Khartoum, **Sudan**. |
| **9/2004-2/2005** | IAEA fellowship; Monoclonal Antibody Production. National Institute of Health, National Screening Programme, Bangkok, **Thailand** |

## *LIST OF PUBLICATIONS*

### Thesis

1. ***Omer M. Abdalla (2014).*** Immunomodulatory Effects of Natural Compounds on Cells that mediate the Immune Response; Role in Graft Rejection Prevention, (PhD. Thesis, Dr. Panjwani Center for Molecular Medicine and Drug Research (PCMD), University of Karachi, Karachi, Pakistan)
2. ***Omer M. Abdalla*** (**1998**). Production of Antisera and Development of Radioimmunoassay for Serum T3, T4, and Ferritin (M.Sc. Thesis, University of Khartoum, Sudan).

### Peer Reviewed Articles

1. Alkhansa S. Mahmoud, Nagi I. Ali, Nouf H. Abuhadi, Baha Eldin Atta, **Omer M. Abdalla**, Ammar M. E. Hassan, Hussain M.Almohiy, Nayef Mohammed Alasmari, Khalid H. Bakheit. Estrogens, insulin status and interrelated lifestyle factors on females with breast carcinomas. Oncology and Radiotherapy 1 (46) **2019**: 098-102
2. Amna Abdallah Ali, Mohammed Ahmed Abdalla, **Omer Mohamed Abdalla**. Protective Effects of Vitamin A on Paracetamol-Induced Hepatotoxicity in Rats. International Journal of Academic and Applied Research (IJAAR). 3 (**2019**), 19-24.
3. Amna Abdallah Ali, Khalda Awad Albdwai, Wafaa Ali Siddeg, **Omer Mohamed Abdalla.** Regulation of Trace Elements by Vitamin A in Paracetamol-induced Liver Toxicity in Rats. International Journal of Academic Multidisciplinary Research (IJAMR). 3 (**2019**), 21-24.
4. Khalid Mohammed Khan, Mohammad A. Mesaik, **Omer M. Abdalla**, Fazal Rahim, Samreen Soomro, Sobia A. Halim, Ghulam Mustafa, Nida Ambreen, Ahmad Shukralla

Khalid, Muhammad Taha, Shahnaz Perveen, Muhammad Tanveer Alam, Abdul Hameed, Zaheer Ul-Haq, Hayat Ullah, Zia Ur Rehman, Rafat Ali Siddiqui and Wolfgang Voelter. The immunomodulation potential of the synthetic derivatives of benzothiazoles: Implications in immune system disorders through *in vitro* and *in silico* studies. Bioorganic Chemistry 64 (**2016**) 21–28.

5. Jihan Mohammed Mohieldin1, Badr Eddin H. Elabeid and **Omer Mohamed Abdalla.** Assessment of Hypogonadism in Sudanese Males with Type 2 Diabetes and its Association with Obesity. Journal of Global Diabetes & Clinical Metabolism. Volume 1, Issue 1, **(2016)**, 003.
6. Jihan Mohammed Mohieldin, Noon Babiker, **Omer Mohamed Abdalla**. Effect of Type2 Diabetes Mellitus on Sudanese Male Fertility. Sch. J. App. Med. Sci.; 4 (6E): (**2016)** 2216 -2223
7. Hamid Ali, Syed Ghulam Musharraf, Naveed Iqbal, Achyut Adhikari, **Omer Mohamed Abdalla**, M. Ahmed Mesaika, Nurul Kabir. Immunosuppressive and hepatoprotective potential of Sarcococca saligna and its biomarker components. International Immunopharmacology, 28 (**2015**) 235–243
8. M. Ahmed Mesaik, Khalid Mohammed Khan, Fazal Rahim, Muhammad Taha, Syed Moazzam Haider, Shahnaz Perveen, Ahmed Shukralla Khalid, **Omer M. Abdalla**, Samreen Soomro, Wolfgang Voelter. Synthetic indole Mannich bases: Their ability to modulate *in vitro* cellular immunity. Bioorganic Chemistry, Volume 60, June (**2015)**, 118–122.
9. Ehssan. H. O. Moglad, **Omer. M. Abdalla**, Haider Abd Algadir, W. S. Koko and A. M. Saadabi. *In Vitro* Antimicrobial Activity and Cytotoxicity of *Maerua oblongifolia.* International Journal of Medicine and Medical Sciences, 1(3), (**2014**), 32-37.
10. Ehssan. H. O. Moglad, **Omer. M. Abdalla**, W. S. Koko, A. M. Saadabi. *In vitro* Anticancer Activity and Cytotoxicity of *Solanium nigrum* on Cancers and Normal Cell lines. International Journal of Cancer Research, 10 (2), (**2014)**, 74-80.
11. Nadir Abuzeid, Sadaf Kalsum, Richin John Koshy, Marie Larsson, Mikaela Glader, Henrik Andersson, Johanna Raffetseder, Elsje Pienaar, Daniel Eklund, Muddathir S. Alhassan, Haidar A. AlGadir, Waleed S. Koko, Thomas Schön, M. Ahmed Mesaik, **Omer M. Abdalla**, Asaad Khalid, Maria Lerm. Antimycobacterial activity of selected medicinal plants traditionally used in Sudan to treat infectious diseases. Journal of Ethnopharmacology 157 (**2014**), 134–139
12. Sobia Ahsan Halim, **Omer Mohamed Abdalla**, Mohammed Ahmed Mesaik, Abdul Wadood, Zaheer-ul-Haq, and Maria Kontoyianni. Identification of Novel Interleukin-2 Inhibitors through Computational Approaches. Molecular Diversity, (**2013**) DOI 10.1007/s11030-013-9431-4)
13. Saima Kalsoom, Umer Rashid, M. Ahmad Mesaik, **Omer Mohamed Abdalla**, Khalida Hussain, Waqasuddin Khan, Fatima Iftikhar, Awais Shaukat, Zaheer-ul-Haq and Farzana Latif Ansari. In vitro and in silico exploration of IL-2 inhibition by small drug-like molecules. Medicinal Chemistry Research, (**2013**) DOI 10.1007/s00044-013-0564-x.

14. Mohsen Shahlaei, Syed Mustafa Ghanadian, Abdul Majid Ayatollahi, M. Ahmed Mesaik, **Omer Mohamed Abdalla**, Suleiman Afsharypour, Mohammed Rabbani. Molecular modeling, structure activity relationship and immunomodulatory 138 properties of some lupeol derivatives. Medicinal Chemistry Research. **(2013)**, DOI10.1007/s 00044-012-0183

15. Syed Mustafa Ghanadian, Abdul Majid Ayatollahi, M. Ahmed Mesaik & **Omer Mohamed Abdalla**: New immunosuppressive cyclomyrsinol diterpenes from Euphorbia kopetdaghi Prokh, Natural Product Research: Formerly Natural Product Letters, (**2012**), DOI: 10.1080/14786419. 2012. 671318.

16. Sayed Mustafa Ghanadian, Abdul Majid Ayatollahi, Suleiman Afsharypour, Sumaira Hareem, **Omer Mohamed Abdalla** and Jean Jules Kezetas Bankeu. Flavonol Glycosides from *Euphorbia microsciadia* Bioss. with their Immunomodulatory Activities. Iranian Journal of Pharmaceutical Research (**2012**), 11 (3): 925-930.

17. M. Ghanadian, A. Akhavan, A. Ayatollahi, **Omer M. Abdalla**. Triterpenes from *Euphorbia spinidens* with their immounomodulatry activity. Research in Pharmaceutical Sciences, (**2012**), 8(3).

18. Mustafa Ghanadiana, M. Iqbal Choudhary, Abdul Majid Ayatollahi, M. Ahmad Mesaik, **Omer Mohamed Abdalla** and Suleiman Afsharypour. New Cyclomyrsinol Diterpenes from *Euphorbia aelenii* with their immunomodulatory effects. Journal of Asian Natural Products Research. iFirst article, (**2012**),1–8

19. El Ashry, E.S.H., Amer, M.R. **Abdalla, O.M**., Aly, A.A., Soomro, S., Jabeen, A., Halim, S.A., Ahmed Mesaik, M., Ul-Haq, Z.. Synthesis, biological evaluation, and molecular docking studies of Benzyl, Alkyl and Glycosyl[2-(arylamino)-4,4-dimethyl-6-oxo-cyclohex-1-ene]carbodithioates, as Potential Immunomodulatory and Immunosuppressive Agents, Bioorganic & Medicinal Chemistry, 20: (9), (**2012**), 3000–3008.

20. M Ghanadian, A M Ayatollahi, M A Mesaik, S Afsharypuor, **O M Abdalla**, F Kobarfard. New tigliane-type diterpenoids from *Euphorbia aellenii* Rech. f. with immunomodulatory activity. Research in pharmaceutical sciences 6 (1): (**2011**), 35-41.

21. Abdul Majid Ayatollahi, Mustafa Ghanadian, Suleiman Afsharypour, **Omer Mohamed Abdalla**, Mehdi Mirzai and Gholamreza Askari. Pentacyclic Triterpenes in *Euphorbia microsciadia* with Their T-Cell Proliferation Activity. Iranian Journal of Pharmaceutical Research, 10 (2): (**2011**), 287-294.

22. El Sayed H. El Ashry, El Sayed H. El Tamany, Mohy El Din Abd El Fattah, Mohamed R. E. Aly, Ahmed T. A. Boraei, M. Ahmed Mesaik, **Omer M. Abdalla**, Beenish Fatima, Almas Jabeen, Ahmed Shukrulla, Samreen Soomro. Immunomodulatory properties of *S*- and *N*-alkylated 5-(1*H*-indol-2-yl)-1,3,4-oxadiazole-2(3*H*)-thione. Journal of Enzyme Inhibition and Medicinal Chemistry. (**2011**), 1-8.

23. Abdul Majid Ayatollahi, Mustafa Ghanadian, Suleiman Afsharypuor, M. Ahmad Mesaik, **Omer Mohamed Abdalla**, Mohsen Shahlaei, Gholamhossein Farzandi and Hamid Mostafavi. Cycloartanes from *Euphorbia aellenii* Rech. f. and their Antiproliferative Activity. Iranian Journal of Pharmaceutical Research, 10 (1): (**2010**), 105-112

24. Abdul Majid Ayatollahi, Mustafa Ghanadian, M Ahmed Mesaik, **Omer Mohamed Abdalla**, Suleiman Afsharypuor, Farzad Kobarfard, Marjan Mirza-Taheri. New myrsinane-type diterpenoids from *Euphorbia aellenii* Rech. f. with their immunomodulatory activity. Journal of Asian natural products research, 12 (12): (**2010**), 1020-5
25. **Omer M. Abdalla,** M. Gamal, Eltayeb Ahmed Eltayeb. Production of sheep anti-Triiodothyronine (T3) antisera for development of T3 RIA kit. Sudan Journal for basic sciences. (**2007**)
26. An anthraquinone and an enamine thiocarbazate inhibited T-cell proliferation by down-regulating the phosphorylation of signaling proteins. (In preparation)

**Symposia paper presentations**

27. Production of Antisera and Development of Radioimmuno assay for serum progesterone (**Nov. 2000).** Fifth Arab Conference on the Peaceful Uses of Atomic Energy, Beirut. (P 341-356)
28. Determination of the Normal Range of Thyroid Hormones in Sudanese using Locally Produced Reagent (**Nov. 2000)**. Fifth Arab Conference on the Peaceful Uses of Atomic Energy, Beirut. (P 275-289)
29. The behavior of two tumor markers (Carcino embryonic antigen 'CEA' and alpha fetoprotein 'AFP') in smokers and Toombak users (**Dec. 2002)**. Sixth Arab Conference on the Peaceful Uses of Atomic Energy, Cairo, Egypt.
30. Preparation of ferritin immunogen and raising of antiserum for immunoradiometric assay (**Dec. 2003)**. 2nd International conference on chemistry and its applications. Doha, Qatar
31. Human Chorionic Gonadotropin (HCG) and Alpha feto-protein (AFP) in Sudanese Pregnant Women Using Immunoradiometric Assay (**Dec. 2004)**. 7th Arab conference on the Peaceful uses of Atomic Energy. Sanaa, Yemen
32. Reproductive Hormones Disorders of Sudanese females (**Dec. 2004)**. 7th Arab Conference on the Peaceful uses of Atomic Energy Sanaa, Yemen.
33. Local Production of Luteinizing Hormone Antisera to be used in Radioimmunoassay Technique (**12/2004)**. 7th Arab Conference on the Peaceful uses of Atomic Energy Sanaa Yemen.
34. Evaluation of hollow fiber and miniPERM bioreactors as an alternative to murine ascites for small scale monoclonal antibody production (**Dec. 2006)**. Eighth Arab Conference on the Peaceful uses of Atomic Energy, Amman, Jordan.
35. Investigations on natural and synthetic compounds as immunosuppressive agents; role in transplant control (**Jan. 2011**). Department of Chemistry Jinnah University for Women, Karachi Pakistan.

**Poster Presentations**

36. Investigations on natural and synthetic compounds as immunosuppressive agents; their role in transplantation control. 3rd international symposium-cum-training course on molecular medicine and drug research. Dr. Panjwani Center for Molecular Medicine and

Drug Research, Karachi, January 3-6 3011.

37. An anthraquinone and an enamine thiocarbazate inhibited T-cell proliferation by down-regulating the phosphorylation of signaling proteins. 14th Asian Symposium on Medicinal Plants, Spices and Other Natural Products (ASOMPS). H. E. J. Research Institute of Chemistry, University of Karachi, Dec., 9-2, 2013.

## *SYMPOSIA, CONFERENCES AND WORKSHOPS ATTENDED*

1. International Workshop on Modern Techniques in Structural Biology (October 1-7.2011). PCMD, University of Karachi and COMSTECH Pakistan
2. Third International Symposium-cum-Training Course on Molecular Medicine and Drug Research (Jan. 3-6, 2011). PCMD, University of Karachi, Pakistan
3. International Symposium on Nanomedicine, Past, Present and Future Prospects (December 20-22, 2010). ICCBS, University of Karachi, Pakistan.
4. Second International Symposium-cum-Training Course on Molecular Medicine and Drug Research (Jan. 12-15, 2009). PCMD, University of Karachi, Pakistan.
5. 11th international symposium on Natural Product Chemistry (29th October-1st November, 2008). ICCBS, University of Karachi, Pakistan.

## *MEMBERSHIP OF SCIENTIFIC COMMITTEES:*

6. 12th Arab Conference on the Peaceful uses of Atomic Energy, Sharm-Elsheikh, Egypt (May, 2015). A member of the scientific committee.
7. 13th Arab Conference on the Peaceful uses of Atomic, Alhammamat, Tunisia, (Dec., 2016). A member of the scientific committee
8. 14th Arab Conference on the Peaceful uses of Atomic, Sharm Elsheihk, Egypt, (Dec., 2018). A member of the scientific committee

## *BOOKS*

1. Review of radiobiology: in preparation
2. Biochemistry for Medical Sciences: in preparation

## *CURRENT RESEARCH ACTIVITIES*

1. Studies on biodosimetry for radiation exposure.
2. Production and evaluation of antibodies for use in immunoassays.
3. Studies on cancer signaling.
4. Studies on fat-soluble vitamins as hepatoprotective agents.

## *SUPERVISION FOR ACADEMIC DEGREE*

**Ph.D. degree**

1. ***Research Title:*** *Assessment of Plasma Sex Hormones in Sudanese Men with Type2 Diabetes Mellitus in Relation to Glycaemic Control, Body Mass Index and Duration of Diabetes,* ***Jihan Mohammed Mohieldin Mohammed****, University of Science and*

*Technology, College of Graduate Studies*, Clinical Chemistry (completed in 2017).

2. ***Research Title:*** Evaluation of the Protective Effect of Vitamin A and *Cymbopogonschoenanthus (L.) Spreng*. On Paracetamol-Induced Hepatotoxicity in Wistar Albino Rats. ***Amna Abdalla Ali,*** *Sudan Academy of Sciences (completed, Dec. 2019).*

3. ***Research Title:*** The Inhibitory Effects of Some Natural Products on Cancer Cells. Amna Abdalla Babiker. *National Ribat University*.

***M. Sc.* degree**

*a.* ***Research Title*:** The effect of Marijuana (Bango) Use on Glucose, Insulin, and Insulin Resistance among Sudanese Adicts. **Amar Awad El Khdidir,** *Sudan Academy of sciences.(completed 2019)*

*b.* ***Research Title:*** Renal Functions in patients with Thyroid Abnormalities in Sudan. **Hanady Mohammed Elfaki Mochtar,** *Sudan Academy of sciences (completed 2017).*

c. ***Research Title****:* Comparative Study to Evaluate the Antibody against the Antigenic Detection Tests which are in use for Diagnosis of Enteric Fever in Khartoum State-Sudan. **Faisal Omer Abbaker**, *Sudan Academy of Sciences* (ongoing)

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## *THESIS EXAMINER*

- **Master's Thesis:**

1. ***Research Title*** Effect of Watermelon Juice Supplementation on Sudanese Hypertensive Patients. **Amna Abdalla Babiker Ali Babiker.** Sudan Academy of Science (SAS)
2. ***Research Title****:* Assessment of nutritional status of hemodialysis patients in Kassala locality-Sudan. **Mogahed Salah Ahmed Ali**. University of Gezira, Faculty of Medicine, Department of Biochemistry and Nutrioton.
3. ***Research Title****:* Prothrombin time in type II diabetic patients using low dose asprin. **Ahmed Mohammed Osman Hassan.** University of Gezira, Faculty of Medicine, Department of Biochemistry and Nutrition.
4. ***Research Title*:** The association between Chronic Hepatitis C Virus (HCV) and Celiac Disease at Khartoum state. **Habab Aisa Mohammed.** International University of Africa.
5. ***Research Title*:** The association between Diabetes Type1 in Children and Celiac Disease at Khartoum state. **Nousiba Abdallah Bader Eldien**, International University of Africa.
6. ***Research Title****:* Prospective and Therapeutic Effect of *Ocimum basilicum* (Basil) Ethanolic Extract on Chlorpromazine Induced Hepatic Cholestasis in Wistar Albino Rats. **Sara Mohamed Eisa Ali**. The Graduate College, *Faculty of Veterinary Medicine*, University of Khartoum

- **PhD Thesis**

1. ***Research Title***: Relation between Cytotoxic T-lymphocyte Antigen-4 +49A/G Polymorphism and Type-1 Diabetes in Sudanese Children in Gezira State. **Suzan Nasraden Abdalkarim Mustafa,** University of Gezira, Faculty of Medicine, Department of Biochemistry and Nutrioton.
2. ***Research Title*:** Levels of Essential Elements and heavy toxic metals in scalp hair and their association with metal regulatory transcription factor-1 (MTF1)gene polymorphism (rs28583821) in Sudanese autistic children. **Bahga Suliman Edrees Ahmed.** University of Gezira, Faculty of Medicine, Department of Biochemistry and Nutrioton.
3. ***Research Title***: Helicobacter Pylori, anemia, iron deficiency and thrombocytopenia among pregnant women in Khartoum, Sudan. **Nahla Mobarak Mohammed Ibrahim.** Sudan Academy of Science (SAS).
4. ***Research Title***: Antioxidants and Oxidative Stress Status in Sudanese Patients Suffering Diabetes Mellitus Type 2. **Selma Mohammed Osman Mahmoud Yousif.** Sudan Academy of Science (SAS).
5. ***Research Title*:** Expression of extracellular matrix and cytoskeleton proteins in Sudanese breast cancer patients. **Nuha Muha Elhassan.** Sudan Academy of Science (SAS).