

Curriculum Vitea

1- Biodata

Name: Eisa Ibrahim El Gaali

Date of birth: 4//101958

Place of birth: Omdurman, Sudan

Nationality: Sudanese.

Marital Status: Married with two children

Current Address: El Riyadh, block 18, House No 29 Khartoum, Sudan

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Languages

- Arabic (mother tongue).
- English (very good).
- Japanese (good).
- German (basics).

2-Qualifications

2.1. Education

- **B.Sc. Agriculture:** August 1977- November **1982**
Dept. of Agricultural Biochemistry, Faculty of Agriculture
University of Khartoum, P. C. 13314. Khartoum North, Sudan.
- **Master of Science in Botany:** August 1985-October 1987
Department of Botany, Faculty of Science, University of
Khartoum. P.O. Box 321, P. C. 11115, Khartoum, Sudan.
- **Japanese Studies:** April 1991- September **1991** Osaka
University for Foreign Studies, Minoh, Osaka 562, Japan

- **Research Student:** October 1991-March 1992
Tottori University, United Graduate School of Agricultural Sciences, Minami 4-101, Koyama chu, Tottori 680, Japan
- **PhD. :** April 1992-March 1996
Tottori University, United Graduate School of Agricultural Sciences, Minami 4-101, Koyama chu, Tottori 680, Japan.
- **Post Doctor:** May 1997- May 1999
Department of Plant Physiology
National Institute of Agrobiological Resources
Kannondai 2-1-2, Tsukuba, Ibaraki 305, Japan.

2-2. Training

- First training workshop on the use of the central portal of Biosafety Clearance House, Khartoum, Sudan , June 24-29, 2007.
- International workshop for Increasing Tolerance to Abiotic stress in Plant, Santiago, Chili, 19-21, June 2006.
- Workshop on "Phytochemical Analysis and Determination of Markers in Medicinal Plants", IMR, Kuala Lumpur, Malaysia, 16-20 February 2004.
- Workshop of Biosafety in Agricultural Biotechnology, Damascus Syrian Arab Republic 30-August September 2003.
- Inoculants Production and Quality Control, Microbiological Resource Center, Faculty of Agriculture, Ain Shams University, Cairo, Egypt Oct -December 1986.
- Advanced Soil and Plant Analysis, International Institute for Tropical Agriculture (IITA) Ibadan, Nigeria, January. - Feb. 1991.
- Safe Handling and Use of Radioisotopes
MAFF-Tokyo Nuclear Services Corporation
Tsukuba, Ibaraki Japan, May 1997.

Training and workshops:

- Biosafety Clearance House, Khartoum, Sudan , June 24-29, 2007..
- International workshop for Increasing Tolerance to Abiotic stress in Plant, Santiago, Chile, June 19-21 2006.
- Workshop on "Phytochemical Analysis and Determination of Markers in Medicinal Plants", IMR, Kuala Lumpur , Malaysia 16-20 February 2004.
- Inoculants Production and Quality Control, Microbiological Resource Center, Faculty of Agriculture, Ain Shams University, Cairo, Egypt Oct -Dec. 1986.
- Advanced Soil and Plant Analysis, International Institute for Tropical Agriculture (IITA) Ibadan, Nigeria, Jan. - Feb. 1991.
- Safe Handling and Use of Radioisotopes
MAFF-Tokyo Nuclear Services Corporation
Tsukuba, Ibaraki Japan, May 1997.

Conference and Workshops Organizing

1. Principles of Biosafety Research for the Release of Genetically Engineered Crops 4 - 9 February 2007 Khartoum, Sudan Principal Organizer in Collaboration with International center for genetic engineering and Biotechnology (ICGEB)
2. The 7th Scientific Conference Biotechnology and Future Prospects. 13-15 December 2005 Sudan Khartoum. (Chairman of the Scientific Committee)
3. National Workshop on Biotechnology and Applications for Sustainable Development Khartoum, Sudan, 11 – 16 April 2005. In Collaboration with the COMSTECH-ISESCO (Principal Organizer)
4. 2nd National Workshop on Plant Cell and Tissue Culture 7-9 September 2003 Khartoum Sudan (Principal Organizer)

Conferences and Symposia:

- Project coordination meeting (Quality control), Accra Ghana
11-15 October 2010
- The 7th International Forum for Science and Technology in society, October 3-5, 2010, Kyoto, Japan
- KOAFEC Ministerial conference 14-17 9/ 2010 Seoul, Korea
- The 2^{ed} Roundtable Meeting African Japan Ministers of Science and Technology 2 -10-2010 Japan
- The 2^{ed} Symposium in Advanced Biotechnology and Bioengineering Beijing 4-7 July China.
- The 6th International Forum for Science and Technology in society, October 2-4, 2009, Kyoto, Japan
- The workshop on: Presidential Initiatives on Reform of the Science and Technology System In Sudan 5-6 2009 Khartoum, Sudan.
- Elexander von Humboldt Stiftung Foundation, New Trends in Science and Technology to Enhance Sustainable Development in Africa. 23-26 November , Khartoum Sudan.
- International Forum for Science and Technology in society, October 3-5, 2008, Kyoto,
- The 1st Japan African Meeting of Minster of Science and Technology
6 October-Tokyo Japan.
- International Forum for Science and Technology in society, October 7-9, 2007, Kyoto, Japan.
- AAAID Organized the Third Seminar on Biotechnology and its Applications in Arab Agricultural Investment, Amman, Jordan, 21-24 May 2007.
- First Egyptian –Jordanian Conference on Biotech and Sustainable Development: Current Status and Future Scenarios Cairo, Egypt 11-14 December 2006

- International Forum for Science and Technology in society, September 4-7, 2006, Kyoto, Japan
- International Forum for Science and Technology in society, September 9-11, 2005, Kyoto, Japan
- The Second Tissue Culture Workshop, June 12 - 14, 2005, Al Ain University , United Arab Emirates
- Inter-ministerial Meeting of the Organization of Islamic Conference (OIC) Standing Committee on Biotechnological Cooperation COMSTECH December 7-8, 2004 Islamabad Pakistan.
- International Forum for Science and Technology, November 14-16, 2004, Kyoto, Japan
- International Center for genetic Engineering (ICGEB Liaison) Officers' Meeting, 2 –4 June 2004 Trieste , Italy
- Inter Islamic Network for Genetic Engineering & Biotechnology (CMSTECH-IDB-INPGE) Workshop on Genetically Modified Organisms Guide lines for Biosafety in Handling, 22 –24 June 2004 Ismailieye, Egypt>
- CMSTECH-INTROM-IMR Workshop on Herbal Medicine 16 –20 February 2004 Kuala Lumpur, Malaysia.
- Eleventh Meeting of the Organization of Islamic Conference (OIC) Standing Committee on Scientific and Technological Cooperation COMSTECH December 25-27, 2003 Islamabad Pakistan.
- Workshop of Bio-safety in Agricultural Biotechnology 30 August– 1 September 2003, Damascus Syria
- A High Level Conference on Science and Technology (Group 77), Dubai, United Arab Emirates 27-30 October 2002.

- 20th Meeting of Committee of Experts of Intergovernmental Authority on Development (IGAD) 18- 20 November 2000, Khartoum, Republic of Sudan.
- 20th Annual Meeting of the Japanese Society of Plant Physiologists. 28-30 March 1999, Sendai, Japan.
- International Conference of Plant Microbe Interaction, 7-9 July, 1999, Amsterdam, Netherlands
- 8th Annual Meeting for the Japanese Society of Plant-Microbe Interactions, 25-26 September 1998, Mie, Japan.
- 205th Annual Meeting of the Japanese Society of Crop Science. 2-3 April 1998, Tsukuba, Japan.
- 7th Annual Meeting for the Japanese Society of Plant Microbe Interaction 21-23 September 1997, Obihiro, Japan
- The Second Conference for African Association of Biological Nitrogen Fixation, 15-18 December 1986, Cairo Egypt.
- 2ed Meeting African Association of Plant and Soil Analysis Laboratories. 2 – 4 February, 1991, Ibadan, Nigeria.

3- Research Experience:

- 3-1-** Researcher fellow, reading for M Sc. August, 1985 -October 1987.
- 3.2-** Senior Assistant Researcher: 1987-1991 National Council for Research, Agricultural research council, Sudan.
- 3.2.** Research fellow, reading for PhD April 1992-March 1996
Tottori University Japan
- 3-3.** Scientific researcher May 1996- April1997 National Center for Research. Environment and Natural Resources Research Institute

3.4. .Research Fellow, for post doctorate. April 1997-april 1999,
National Institute of Agro-biological Resources, Japan.

3-5. Project leader for the following research programs.

- Nitrogen Fixation, National Council for Research Agricultural Research Council, 1987-1990
- Economically Important Microorganism, National Center for Research, Commission for Biotechnology and genetic Engineering. 2002-2009.
- Insulin from camelspancreatic cells. National Center for Research, Commission for Biotechnology and genetic Engineering. 2002-2009.
- Molecular Studies on Sudanese varieties of date palm trees (*Phoenix dactylifera*) 2003-2007.

3-5. Project member for the following research programs.

- Genome Map of *Lotus Japonicus*. National Institute of Agrobiological Resources, Tsukuba Japan, 1997-1999.
- Synthesis *In vitro* production of novel bioactive compound from local plant materials that specific to Sudan 2003-up-to-date.
- Marker Assistant for some important Sudanese Plant 2003- up-to-date.
- Effective better utilization of Nile Valley. Medicinal Plants: biodiversity and bio-industry. 2007 up-to-date. (cooperative Egypt Sudan and Pakistan)

3-6. Supervising: the following students reading for B Sc.

Graduation project:

- Fatima Ahmed El Bakri, Department of Botany Faculty of Science University of Khartoum. **2002.**
- Aymen Ibrahim Abbas, Department of Microbiology, Faculty of Applied Science International University of Africa, **2002.**

- Khalid Haj Majid, Department of Microbiology, Faculty of Applied Science International University of Africa, **2002**.
- Omima Ahmed Abdulla, Department of Biotechnology, Faculty of Science, University of Juba, **2003**.

3-7. Supervising: the following students reading for M Sc.

- Aalaa Hasan , Sudan Academy of Science, (main supervisor of Amel Arabi, (main supervisor), M.Sc Degree Program, Plant Enzymes Biotechnology. Sudan Academy of Science.
- Badawi Fadel El Mowla 2011 Biotechnology of Plant Secondary metabolites. 2010.
- Aalaa Hasan , Sudan Academy of Science, (main supervisor for.). Extraction Potential of Metabolites With Nutritional And Functional Properties From Lactic Acid Bacteria **2008**.
- Afaf Adam, Sudan Academy of Science, (Co- supervisor for M.Sc.) Potentials production of diabetic's regenerative medicine from camel pancreatic cells **2008-**
- Nahid Misbah, University of Khartoum, Faculty of Science, Master Degree Program in Botany (CO-Supervisor) , Characterization of Some Yeasts Isolates from Indigenous Sudanese Fermented Foods and Drinks. **2005-2007**.
- Hanaa Abelaziz, Elatyp (CO-Supervisor) Sudan Academy of Science, Master Degree Program on Extraction and purification of Insulin from camel's pancreatic cells **2005-2007**.
- Ibtihag Mukhtar, Sudan Academy of Science, Master Degree Program on Extraction of Anti biotic Secondary Metabolite of *Azadirachita indica*.2005-2007.

- Aymen Ibrahim Ashmaig, Sudan Academy of Science, master degree Isolation and Molecular Characterization of bacteria used in camel milk products. 2006.
- Rami Sir Elkhatim, Master degree., Sudan Academy of Science Optimization of Technological Properties of Gum Arabic 2005-2007.
- Mona Satti, (Main Supervisor MSc.) Faculty animal production, Sudan University of Technology., Bred biodiversity of Sudanese goats 2006-2008.

3-8. Supervising: the following students reading for PhD.

- Nahid Misbah, (main supervisor), Doctor Degree Program, microbial Biotechnology. Sudan Academy of Science Khartoum. 2011.
- Suzan Makawi, (Co-supervisor), Doctor Degree Program, Biochemistry Biotechnology. Sudan Academy of Science. 2011.
- Amel Ahmed Amin , Faculty, Doctor Degree Program of Agriculture, University of Khartoum , (Co- Supervisor) , Novel Proteins fro *Bacillus therongeneis*
- Yasir Ahmed Mohamed , (Main Supervisor) Doctor Degree Program, Plant Biotechnology. Faculty of Agriculture, Jazira University 2006-.
- Fatima Misbah Abbas, (Co-supervisor), Doctor Degree Program, Plant Biotechnology. Faculty of Science university of Khartoum. 2007.

3.9. External Examiner for the following M Sc. Students

- **Samah Mahjoob Hasan Saad**, Institute of Endemic Disease , Faculty of Medicine, University of Khartoum, 2007.

- **Yasir Abdella**, Sudan Academy of Science, Agricultural Research Corporation, 2008.
- **Nisreen Ahmed Kamal**, Sudan Academy of Science, Agricultural Research Corporation, 2009.
- **Zahra Mohammed Ibrahim**, Department of Botany, Faculty of Science University of Khartoum, 2009.
- **Ilham Ibrahim Mahmoud**: Department of Biological Science, Faculty of Engineering and technology, University of Gazira, 2009.
- **Shaza Ahmed**. Department of Biological Science, Faculty of Engineering and technology, University of Gazira, 2011.

4- Promotion Status

- Senior Research Assistant: November 1987- March 1991 Agricultural. Research Council, National Council for Research Khartoum, Sudan.
- Post Doctor Researcher: May 1997 - May, 1999, Dept. of Plant Physiology, National Institute of Aerobiological Resource, National Center for Research. Tsukuba, Japan.
- Associate Professor, 1999-2002, Environment and Natural Resource Research Institute, National Center for Research, Ministry of Science and Technology, Khartoum, Sudan.
- Director of the Commission for Biotechnology and Genetic Engineering July 2002. June 2007 up to date. National Center for Research, Ministry of Science and Technology, Khartoum, Sudan.
- Senior Research Scientist (Associate Professor) National Center for Research National Center for Research, Ministry of Science and Technology, Khartoum, Sudan. June 2007- February 2010.

- **Director Central Laboratory (Professor):** Ministry of Science and Technology March 2010-2011.

Current Occupation: Vice director Sudan Academy of Science March 2011.

5- Research Institution Management:

- **Director Commission for biotechnology and Genetic Engineering,** National Center for Research, Ministry of Science and Technology 2002-2007.
- **Director Central Laboratory:** Ministry of Science and Technology 2010 up-to-date.

6- Teaching Experience:

- **Teaching assistant** University of Khartoum, Faculty of Science, Dept. Of Botany, 1983-1991; (General Microbiology, Mycology, Bacteriology, Plant Pathology and Plant Diseases).
- **Teaching Assistant:** University of Juba, Faculty of Natural Resources Dept. Of Botany, 1990; (General Microbiology).
- **Teaching Assistant:** The Military College, 1986; (Applied Microbiology).
- **External Examiner:** University of Juba, Faculty of Science 2004.
- **Lecturer:** University of Juba, Faculty of Science, Department of Biotechnology 2005.
- **Sudan Academy of Science,** Post Graduate Advisor (Supervisor) 2004 up to date.

7- Organizing: the following Workshops and Conferences

5. International Conference in Applied Biotechnology, Africa City of Technology, Khartoum Sudan. 29-30 September 2009.
(**Member of the editorial committee**).
6. Principles of Biosafety Research for the Release of Genetically Engineered Crops 4-9 February 2007 Khartoum, Sudan
Principal Organizer in Collaboration with (ICGEB) International center for genetic engineering and Biotechnology (**Principal organizer**).
7. The 7th Scientific Conference Biotechnology and Future Prospects. 13-15 December 2005 Sudan Khartoum. (**Chairman of the Scientific Committee**)
8. National Workshop on Biotechnology and Applications for Sustainable Development Khartoum, Sudan, 11 – 16 April 2005.
In Collaboration with the COMSTECH-ISESCO (**Principal Organizer**)
9. 2^{ed} National Workshop on Plant Cell and Tissue Culture 7-9 September 2003 Khartoum Sudan (**Principal Organizer**).

8- Member of Expertise Committee

- **National Coordinator:** of the Sudanese Plant and Soil Analysis Laboratories, April 1990- April 1991.
- Intergovernmental Authority of Development (IGAD) 23-24 November 2000.
- Lesion officer for the International Center for Genetic Engineering and Biotechnology (ICGEB) in Sudan,. July 2002 up to date.
- Lesion officer for the Inter-Islamic Network on Genetic Engineering and Biotechnology (INOGE) in Sudan, March 2002 up to date.

- Sudan National Biosafety Committee 2003 up-to-date
- Sudan National Consumer protection Committee **2008-**uptodate.
- National Committee for evaluation Risks and Hazards Associated With Genetically Modified Foods Sudanese Standardization and Metrology Organization **2005 up-to-date,**
- National Committee for Scientific Equipment **2010.**
- National Committee for Total Technological Restoration **2010.**
- National Committee for Biotechnology **2010.**

9- Practical Experience and Skills:

- DNA isolation, purification, digestion, restriction, ligation and PCR amplification techniques.
- DNA markers Assistance Techniques (RAPD, AFLP, SSR).
- Microbial isolation, purification, biochemical characterization and Molecular Identification Biotechnology and Pollution Bioremediation.
- Molecular Signs Plant-Microbe Interactions.
- Induction of mutation, gene marking by antibiotic resistance, Auxotrophic markers, and *gusA* marking.
- Microbial and plant protoplast formation, regeneration and cell fusion.
- Plant cell and tissue culture
- Extraction purification Plant Secondary Metabolites
- Computer skills: Windows and Macintosh operations: Type writing, statistical analysis, graphics, chemical drawing and power point for slide making and presentation.
- Computer analysis of genetic relatedness
- Laboratory management and writing of progress reports and annual reports.

10- On Going Research:

- Synthesis *In vitro* production of novel bioactive compound from local plant materials that specific to Sudan
- Isolation and Characterization of novel enzymes and their production at low cost from microorganisms.
- Molecular Studies on Sudanese varieties of date palm trees (*Phoenix dactylifera*).
- Purification & characterization of antimicrobial substance – Saponins, from *in vivo* and *in vitro* grown plant
- Studies on local breeds of Sudanese goats under molecular bases.
- Utilization of microorganisms for bioremediation of industrial and oil product and Polychlorinated biphenyls.
- Optimization of Technological Properties of Gum Arabic.
- Improvement of Lactic Acid Bacteria of the Sudanese Traditional Dairy Products.
- Genetic Engineering Studies on Sudanese Yeast Cultures isolated from traditional food products.
- Effect of ion bean mutagenesis on some famous varieties of *Hibiscus sabdarifa* (*Karakde*).

11- Professional Affiliation:

- African Association of Biological Nitrogen Fixation.
- African Association of Soil and Plant Analytical Laboratories.
- African Association of plant biotechnology
- Japanese Society of Crop Sciences.
- Japanese Society of Plant-Microbe Interaction.
- Japanese Society of Plant Cell Physiologist.
- International Association of Molecular Plant-microbe Interaction.

12- Publications

Scientific Journals

- 1- Fatima Musbah, Bushra El Nur, Normahd Noor, Eisa El Gaali Zainon Ali and Roohadiia Othman (2010). Effective Protocol for Callus Induction from *Solanum dubium* Seeds and its Properties to Milk Clotting Activity. Journal of Science Malaysia (accepted for publication).
- 2- Rami S. Habiballa and Eisa I. El Gaali (2009). Phylogenetic relationship in *Acacia senegal* populations across the Gum Arabic belt in Sudan. African Journal for Biotechnology . Vol. 8 (19) 4817-4823.,
- 3- Abdelhalim A. Hamza, Eisa I. El Gaali and Ahmed A. Mahdi (2009). Use of the RAPD-PCR fingerprinting and API system for clustering lactic acid bacteria isolated from traditional Sudanese sour milk (Roab). African Journal of Biotechnology Vol. 8 (15), 3399-3404
- 4- Eisa El Gaali and Mona Satti (2009). Genetic characterization of two Sudanese goat breeds (*Capra hircus*) using RAPD molecular markers African Journal of Biotechnology Vol. 8 (10), 2083-2087.
- 5- Aymen Ashmaig, Alaa Hasan and Eisa E.L Gaali (2009) Identification of lactic acid bacteria isolated from traditional Sudanese fermented camel's milk (*Gariss*) African Journal of Microbiology Research. Vol. 3 (7) 451-457.
- 6- El Gaali Eisa and Ibthaj Mukhtar (2009). *In vitro* Assay of The Inhibitory Effect of Neem Callus and Leaf Extracts on Some Phytopathogenes . El Buhooth. 12 (1) :1-11.
- 7- El Gaali Eisa and Ibthaj Mukhtar (2007). Antimicrobial Activity of Neem

(*Azadirachta indica*) Callus and Leaf Extracts. El Buhooth 11: 53-61.

- 8- Mutasim Mohamed Khalafalla **Eisa Ibraheem El Gaali**, Magda Mohamed Ahmed (2007). In vitro Multiple Shoot Regeneration from Nodal Explants of *Vernonia amygdalina* -An important medicinal plant. The Event–Proceeding papers of the 8th African Crop Science Society Conference. African Crop Science Journal: 8: 747-752.
- 9- Mutasim M. Khalafalla, **Eisa I. El Gaali**, Fatima M. Abbas and Hind A. A Babiker (2007) Neem (*Azadirachta Indica* A. Juss) callus induction and its larvaecidal activity against *Anopheles* mosquito. International Journal of Biotechnology and Biochemistry 3 (1):85-94.
- 10- **El Gaali Eisa** and Fatima El Bakri (2003). Assessment of Endophytic Bacteria Isolated from Sugarcane for their efficiency to Fix Nitrogen with Sorghum plants. Journal of Science and Technology 4:98-107.
- 11- **El Gaali Eisa**, and Yutaka Kitamoto (2002), A Note in Extending the Host Specificity of *Bradyrhizobium japonicum* and *Rhizobium leguminosarum* through Inter-Generic Protoplast Fusion, University of Khartoum. Journal of Agricultural Science 10: 131-135.
- 12- Vladimir Tchebotar, Yasuji Nakayama, Ui Gum Kang, **EL Gaali Eisa** and Shoichiro Akao, (1999), The Use of Reporter *Gus*-Gene to Study the Colonization of Rice Roots by *Azospirillum lipoferum*, Soil Microorganisms. 53:13-18.
- 13- **El Gaali Eisa**, Masayoshi Kawaguchi, Shoichiro Akao, and Shiji Kawasaki, 1998 Comparison of AFLP (Amplified Fragment Length Polymorphism) Patterns of Among 8 Japanese Ecotypes of *Lotus japonicus* and *L. fillicaulis* Journal of Crop Science 67:164-165.
- 14- **El Gaali Eisa**, Kazihiko Maeta, Nobuhiro Mori and Yutaka Kitamoto, (1996), Factor Affecting Nodulation of Soybean by Rhizobia in Axenic Culture (in Japanese) Japanese Journal of Crop Science 65: 141-142.
- 15- **El Gaali Eisa**, Kazihiko Maeta, Nobuhiro Mori and Yutaka Kitamoto, (1995), Enhanced Nitrogen Fixation Capabilities of Soybean Rhizobia by Intra- and

Inter-specific Cell Fusion, Japanese Journal of Crop Science, vol. 64: 2273-2280.

Papers in Conferences

- 16- El Gaali Eisa, (2007).** Application of Biotechnology for Conservation and Improvement Medicinal Plants. Proceedings of Third Seminar on Biotechnology and its Applications in Arab Agricultural Investment, Amman, Jordan, 22-24 May 2007.
- 17- EL Gaali Eisa (2006).** Current status of Biotechnology in Sudan.. Proceeding of the first Jordanian Egyptian Biotechnology workshop Cairo Egypt Nov 4- Nov 9 2006. 71-73.
- 18- El Gaali Eisa (2005),** Biotechnology for Developing Countries, Proceedings of the first Workshop on application of Biotechnology in Agricultural Research, Doha, Qatar 12-22 march 2005.
- 19- Eisa Ibrahim El Gaali (2005),** Future prospects for Biotechnology in Africa., 2005 proceeding of The African Universities Khartoum, Sudan pp 202-207.
- 20- El Gaali Eisa and Elham A. Hassan (2005),** Current Status of biotechnology in Sudan, Proceeding of the 7 Scientific Conference, Khartoum, Sudan.
- 21- Eisa Ibrahim El Gaali: (2005),** Business and Investment in Biotechnology. Proceeding of the second workshop of Tissue culture and applications in agricultural investment in Arabic countries. Al Ain UAE 12-14-June 2005.
- 22- Eisa Ibrahim El Gaali (2006):** Biotechnological approaches for improvement of date palm (*Phoenix dactylifera* L.) Proceeding of the International workshop on plant tolerance to abiotic stress. Santiago Chilli. 2006.
- 23- El Gaali Eisa, Masayoshi Kawaguchi, Shoichiro Akao, and Shiji Kawasaki, (1998)** Genetic Differentiation of Comparison of Japanese Ecotypes of *Lotus japonicus* Reveled by AFLP Markers, Abstract of the Annual Meeting For Plant-Microbe Interactions 96-98.

2.2- Scientific Reports

- 24- Eisa El Gaali** Aimmen Ashmaig and Khalid Haj Majid, **(2002)**, Improved Medium for Survival and Efficiency of Rhizobia by Using Molass as a Carbon Source. Annual Scientific Report of the Environment and Natural Resources Research Institute, The Sudan. National Center for Research. 2001.
- 25-** Randa El Salahi and **Eisa El Gaali, (2002)**, Studies on Effect of Inoculation of Chikpea with Rhizobia. Annual Scientific Report of the Environment and Natural Resources Research Institute, The Sudan. National Center for Research. 2001: page 11.
- 26-** Migdam Abdelgani, Awad Galal, **Eisa El Gaali** and Randa El Salahi **2000**. Production of Rhizobial Inoculants Using Sterilized Carrier. Annual Scientific Report of the Environment and Natural Resources Research Institute, The Sudan. National Center for Research. 2000 79-83.
- 27- Eisa Ibrahim El Gaali and Fatima Ahmed El Bakri: 2001**, Studies in and characterization of Intracellular bacteria that live in symbiotic relation with sugarcane and its potentials to fix nitrogen in sorghum. Annual Scientific Report of the Environment and Natural Resources Research Institute, The Sudan National Center for Research. **2001**: 44-51.
- 28-** Report on Risks and Hazards Associated With Genetically Modified Foods **2007**, Sudanese Standardization and Metrology Organization.
- 29-** Genetically Modified Organisms, A series in the information and news Pamphlet of the Ministry of Science and Technology.

2.2- Others

- 30- El Gaali Eisa, 1998**, Housing Styles in Sudan, JISTEC Communication, No19, page 7.
- 31- El Gaali Eisa, 1990**, Small Scale Investment in Agricultural Businesses, In A Guide to Small Scale Investment in Agriculture, Industry and Services (Arabic). Ed. National Council for Research (Sudan).

32- El Gaali Eisa, (2004), Debates of Genetically Modified Organisms In Sudan,
Proceedings of the Work shop on GMOs Guidelines for Biosafety.