

# KHALED ADLY MOHAMED KHALED

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Mailing Address

New Beni Suf City, Beni-Suef University  
East Campus (310 Fad)

## Biography

A faculty member in the Department of Genetics. Director of the Central Laboratory and member of the Bioinformatics and Biological Database Unit (BBDU). Deputy Director of Quality Assurance and Accreditation Unit. Academic supervisor of FAO MODEL BSU, Faculty of Agriculture, Beni Suf University. He has distinguished research and teaching experiences and is familiar with advanced techniques in education and uses them skillfully. Has good computer skills and has knowledge of some programming languages such as R and Python. He has a good scientific background in the fields of tissue culture, genetics (cytogenetics, molecular genetics, population, and quantitative genetics), biostatistics, bioinformatics, and quantitative biology. He has published many scientific papers, as well as reviewed many manuscripts as a reviewer for many scientific journals. It has many records on GenBank databases such as NCBI and others. Participated in many workshops, courses, and conferences in many countries.

## EDUCATION

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<b>PhD</b>	Ain Shams University, Genetics	Dec 2005
<b>MS</b>	Ain Shams University, Biochemistry	Aug 1998
<b>BS</b>	Ain Shams University, Biochemistry	Jun 1990

## PROFESSIONAL EXPERIENCE

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	<b>From</b>	<b>To</b>
[1] Associate professor of Genetic, Faculty of Agriculture, Beni-Suef University	9/2020	present
[2] Faculty member of Genetic dept., Faculty of Agriculture, Beni-Suef University	10/2015	9/2020
[3] Associate Professor of Molecular Breeding & Genetics, Sugar Crops Research Institute ( <b>SCRI</b> ), Agriculture Research Centre ( <b>ARC</b> )	3/2011	9/ 2015
[4] Researcher, Research Institute ( <b>SCRI</b> ), <b>ARC</b>	12/2005	3/2011
[5] Researcher Assistant, Sugar Crops Research Institute ( <b>SCRI</b> )	3/2022	12/2005

## ADMINISTRATIVE EXPERIENCE

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	<b>From</b>	<b>To</b>
[1] Director of Central Laboratories, Faculty of Agriculture, Beni-Suef University	5/1/2022	Present
[2] Deputy Director of Quality Assurance and Accreditation Unit	1/4/2020	Present
[3] Academic supervisor of FAO MODEL BSU	15/3/2022	Present
[4] Director of laboratories Unit and Member of the Executive Council for central laboratory of the Beni-Suef university	10/5/2016	15/10/2020
[5] Director of Molecular Breeding Unit - Sugar Crops Institute, ARC	1/3/2011	30/9/2015

## **TEACHING EXPERIENCE**

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Some courses that I am teaching

**Beni-Suef University**, Faculty of Agriculture, Egypt Oct 2016 to present  
**Associate Professor**, Genetics

- Teaching Principles of Genetics, an undergraduate course averaging 650 students per semester, covering the following topics: Material basis of genetics, Mendelian genetics, cytogenetics, mutations. Linkage and crossing over, sex linkage and sex determination. Population and quantitative genetics, biochemical and molecular genetics, and human genetics.
- Teaching Cytogenetics, an undergraduate course averaging 270 students per semester, covering the following topics: Cell organelles; structure and function. Chromosomes and genetic materials. Mitosis and Meiosis. Chromosome staining and packaging. Chromosomal aberrations.
- Teaching Molecular Genetics, an undergraduate course averaging 150 students per semester, covering the following topics: The key concepts in molecular genetics. Nucleic acid structure and function, DNA replication, transcription, translation, regulation of gene expression in prokaryotes and eukaryotes. DNA isolation and structure synthesis and mRNA stability, RNA types. Electrophoresis and PCR application
- Teaching Mutation and Environmental mutagenesis, an undergraduate course averaging 150 students per semester, covering the following topics: Molecular basis of mutations. Types of mutations. Types of repair systems. Mutagens, and mode of actions of different mutagens. Mutagenicity and cancer testing in some organisms, genetic toxicity tests for predicting carcinogenicity.
- Teaching Cell and Tissue Culture, an undergraduate course averaging 150 students per semester, covering the following topics: Introduction, Media components and preparation. Aseptic techniques, Meristem culture and callus induction. Callus culture, Cell suspension culture. Protoplast culture, Plant regeneration. Haploid plant production, Somatic embryogenesis. Cryopreservation
- Teaching Bioinformatics, an undergraduate course averaging 150 students per semester, covering the following topics: Review of DNA structure and organization, bioinformatics: collection and assessing genome related data. Genome analysis and protein structure. Practical: how to use gene bank, public database, and available software packages. Sequences alignment identification similar sequences. Practical: analyzing sequences available software packages
- Developed quizzes, exams, and homework
- Revised the syllabus to meet accreditation standards
- Coordinated grading and labs with a team of 2 teaching assistants.

**Beni-Suef University**, Faculty of Veterinary, Egypt Feb 2017 to present

- Teaching Genetics and Genetic Engineering, an undergraduate course averaging 420 students per semester, covering the following topics: Function of genetic material, Protein synthesis, Regulation of gene expression, Extrachromosomal inheritance, Differentiation and Development, Restriction enzymes, cloning vectors, Types of natural plasmids, Cloning process

**Beni-Suef University**, Faculty of Computer Science, Egypt Feb 2020 to present

- Teaching Genomics course, an undergraduate course averaging 60 students per semester, covering the following topics: Introduces genes and genetics, and their role in the genetic basis of

human health and disease. Explores the current status of gene editing and gene therapy technologies both in the context of therapeutics and as tools in the life sciences. A large focus of the class centers on the impact of CRISPR on these technologies

- Teaching Biostatistics, an undergraduate course averaging 60 students per semester, covering the following topics: Biostatistics using R and/or Python. Probability distributions random sampling. Testing for normality distribution of genetic data, Determination of optimum sample size.

**Mansoura University**, Faculty of Agriculture, Egypt  
**Associate Professor**, Genetics

Oct 2018 to May 2020

- Teaching Bioinformatics, an undergraduate course averaging 150 students per semester, covering the following topics: Review of DNA structure and organization, bioinformatics: collection and assessing genome related data. Genome analysis and protein structure. Practical: how to use gene bank, public database, and available software packages. Sequences alignment identification similar sequences. Practical: analyzing sequences available software packages

## **PUBLICATIONS**

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### ***Journal Publications***

1. Khaled, K. A. M., Habiba, R. M. M., Bashasha, J. A., & El-Aziz, M. H. A. (2022). Identification and mapping of QTL associated with some traits related for drought tolerance in wheat using SSR markers. *Beni-Suef University Journal of Basic and Applied Sciences*, 11(1), 1-13.
2. Khaled, K., Sultan, F., & Azzam, C. (2022). Gamma-Rays and Microwave Irradiation Influence On Guar (*Cyamopsis Tetragonoloba*): I-Markers Assisted Selection For Responding To Mutagenic Agents. *SABRAO Journal of Breeding and Genetics*, 54(2), 331-349.
3. Abou-Sreea, A. I., Azzam, C. R., Al-Taweel, S. K., Abdel-Aziz, R. M., Belal, H. E., Rady, M. M., ... & Khaled, K. A. (2021). Natural biostimulant attenuates salinity stress effects in chili pepper by remodeling antioxidant, ion, and phytohormone balances, and augments gene expression. *Plants*, 10(11), 2316.
4. Hala A. Salah, Hanan A. Temerk, Nivin A. Salah, Saeed Rafa Zara Alshehri, Jazi A. Al-Harbi, Asmaa M.M. Mawad, Khaled A. M. Khaled, Abd El-Latif Hesham and Karam A. Amein. Optimization of Xylanase and  $\alpha$ -Amylase from Non-Saccharomyces Yeasts (*Pichia membranifaciens*). *Pure Appl Microbiol.* 2021; 15 (1): 452-461. doi: 10.22207/JPAM. 15.1. 43.
5. Al,Taweel, S. K.; Azzam, C. R.; Khaled, K. A.; Abdel,Aziz, R. M. Improvement of stevia (*stevia rebaudiana* Bertoni) and steviol glycoside through traditional breeding and biotechnological approaches. *SABRAO Journal of Breeding and Genetics* 2021, 53, 1, 88,111
6. Al-Taweel SK, Abdel-Aziz RM, Rabea KM, Khaled KAM (2019). Studying cDNA SCoT in response to salinity stress in *Stevia rebaudiana* Bertoni. *SABRAO J. Breed. Genet.* 51: 281-294.
7. Khaled A. M. Khaled, Mohamed H. Abd El-Aziz and Omnia A. Badr (2018) Cloned Amylase Gene from *Bacillus stearothermophilus* and *Bacillus licheniformis* Inoculated in Growth Medium Contains Sugar Crops. *J. Agric. Chem. and Biotechn., Mansoura Univ. Vol. 9(12): 311 – 317*
8. Khaled AM Khaled, Nagwa El-Arabi, Nevien M Sabry and Sheren El-Sherbiny (2018) Assessment of sugarcane genotypes under drought condition using AFLP. *Biotechnology* 17(3): 120-127.

9. Shereen K.M. Khaled; F.M. Abdel-Tawab; Eman M. Fahmy; E.A.M. Amer; K.A. Khaled (2018) The siRNA Efficacy of soluble acid invertase down-regulation in sugarcane (*Saccharum* spp). *Arab Universities Journal of Agricultural Sciences*, 26 Special Issue, 4 (2C), 2018, 2011-2017. doi: 10.21608/ajs.2018.31668.
10. Khaled A.M. Khaled, Sheren E. E. El sherbeny and Naglaa, A. Abdallah (2017) Simple Sequence Repeats (SSRs) and morphological parameters Associated with drought tolerance in Sugarcane (*Saccharum* Spp.). *J.Agric.Chem.and Biotechn.*, Mansoura Univ.Vol. 8(2): 85 - 89, 2017
11. Khaled, K. A. M.; Kawther S. Kash; M. H Abd El-Aziz and Omnia A. Badr (2017) Genetically Modified Bacillus Species for Amylases Production using Sugar Crops Wastes as Growth Media. *J.Agric.Chem.and Biotechn.*, Mansoura Univ.Vol. 8 (6): 173-176
12. Khaled A.M. Khaled ,Sheren E. E. El sherbeny and A. A. Abdelhadi (2017) R-ISSR as Marker Assisted selection for drought tolerance in sugarcane. *J.Agric.Chem.and Biotechn.*, Mansoura Univ.Vol. 8(2): 91 - 97, 2017.
13. Khaled A. M. Khaled and Rania A. Aziz. (2017) *Stevia* Rebaudiana Bertoni; Rapid Micropropagation, Stevioside Accumulation and Genetic Fidelity using ISSR Markers. *J.Agric.Chem.and Biotechn.*, Mansoura Univ.Vol. 8 (12): 295 – 301 Page 3 of 5
14. Khaled, K. A. M.; E. A. M. Amer and A.B.A. El- Taib (2016) Genetic Diversity of Sugarcane Progenitors from the SCRI Germplasm Using SSR. *J.Agric.Chem.and Biotechn.*, Mansoura Univ.Vol. 7 (5): 135- 139.
15. Khaled, K. A. M. and E. A. M. Amer (2016) Estimate Genetic bases of Salt Tolerance in Sugarbeet (*Beta vulgaris*, L.) in Egypt. 1st international Conference of Genetics and its role in Life science Development, Alexandria 19-22 April.
16. Khaled, K. A. M.; I.S. El-Demardash, E.A.M. Amer (2015) Genetic Polymorphism among Some Sugarcane Germplasm Collections as revealed by RAPD and ISSR analyses. *Life Science Journal*,12(3), 159-167
17. Khaled, K.A.M; E.A.M. Amer and A. El-Bakry (2014) Genetic Variability and Performance of Ten Sweet Sorghum Genotypes (*Sorghum bicolor* (L) Moench). *Egypt. J. of Appl. Sci.*, 29 (12B), 731-742.
18. Khaled, K. A. M.; M. S. Saleh, E.A.M. Amer (2013) Estimation of genetic Variance and Broad Sense Heritability for Sugarcane. *Alexandria Sciences Exchange Journal* vol 34 (2013), p 121 127
19. Khaled A M Khaled (2010) Molecular characterization and genetic similarity of three sugarcane genotypes. *Egypt. J. Genet. Cytol.* 39:229-257, July, 2010.
20. Khaled, Khaled A M and Jaime A. Teixeira da Silva (2010). Molecular Profiling Using Protein Markers for Salt Tolerant in Sugarcane. *GSP2010, UK, Dynamic Biochemistry, Process Biotechnology and Molecular Biology* 4 (Special Issue 1), 100-103.
21. Khaled, Khaled A M and Fathalla, M. Abd-El-Kareem (2010). Molecular Profiling and Genetic Diversity in Sugarcane Using RAPD Technique.*GSP2010, UK. Dynamic Biochemistry, Process Biotechnology and Molecular Biology* 4 (Special Issue 1), 104-106.
22. S. A. A. M. Enan, El-Sheikh S. R. E and K. A. M. Khaled (2009) Evaluation of Some Sugarbeet Varieties Under Different Levels of Nitrogen and Molybdenum Fertilization. *J. Biol. Chem. Environ. Sci.*, Vol. 4(1): 345-362 (<http://www.acepsag.org>).
23. El-Sheikh S. R. E, K. A. M. Khaled and S. A. A. M. Enan (2009) Evaluation of Some Sugarbeet Varieties Under Three Harvesting Dates. *J. Agric. Sci., Mansoura Univ.*, 34(3): 1559-1567.

24. K. A. Khaled and A. Z. Ahmed (2009) Detection of Genetic Similarity of Sugarcane Genotypes. *Gene Conserve, an electronic journal, Issue No. 31-Jan/March, p.686* (<http://www.geneconserve.pro.br/artigos09.htm>)
25. K. A. Khaled and A. Z. Ahmed (2008). Marker Assisted Selection for Yield and Some Quality Traits of Sugarcane Genotypes under Different Row Spacing. *Minia J. of Agric. Res. & Develop. Vol (28) No.4 pp 585 -606.*
26. K. A. M. Khaled, S.R. E. El-Sheikh and Yusreya H. Tawfik (2008). Assessment of Genetic Diversity among Eleven Sweet Sorghum Cultivars (*Sorghum bicolor* L.) Under Salt Stress. *Plant Breed. 12(1):75-85 (2008).*
27. K. A. Khaled, N.M.S. Sbalaby and S. K. A. Ismail (2007) Molecular Genetics Characterization of QTLs Controlling Some Quality Traits in Some Sweet Sorghum Genotypes (*Sorghum bicolor* (L.) Moench). *The fifth conference of plant breeding, May 2007, 259-270.*
28. M. A. Rashed, A. Abo-Doma, H. EL-Rashidy and K. Khaled (2006). Molecular Genetics Characterization for Some Loci Controlling Salt Tolerance in *Sorghum bicolor* (L). *Egypt. J. Genet. Cytol. 35: 145-155, Cairo, Egypt.*

#### **Journal Papers Accepted**

- 1- Clara R. Azzam, F.M. Sultan, M.R.I. Sayed, K.A.M. Khaled (2022). Gamma-Rays and Microwaves Irradiation Influence On Guar (*Cyamopsis Tetragonoloba*): II – Proteomic Analysis Linked To Plant Height And Crude Proteins. *SABRAO Journal of Breeding and Genetics*

#### **Journal Papers in Review**

- 1- K.A.M. KHALED, R.M.M. HABIBA, J.A. BASHASHA, C.R. AZZAM, M.H. ABD EL-AZIZ (2022) Insilco and Genetic Analysis Related To Tillering Ability In Maize. *SABRAO Journal of Breeding and Genetics*

#### **Conference Papers**

- 1- Shereen K. M. Khaled, F M Abdel-Tawab, Eman M Fahmy and K. A. M. Khaled (2011) Marker-Assisted Selection Associated with Sugar Content in Sugarcane (*Saccharum* Spp.). *Proceeding of The Third International Conference of Genetic Engineering and its Applications. Sharm EL Sheikh City, South Sinai, Egypt, October 5-8, 2011: 1-13.*
- 2- Khaled, K. A. M. (2009) Marker Assisted Selection for Salt Tolerance in Sugarcane Using Protein Markers. The Second International Conference for Applications of Biotechnology, 17 th-18<sup>th</sup> October, 2009, MSA-Egypt, pp57.
- 3- Khaled, K. A. M. (2009) Identification of Polymorphism and Genetic Diversity in Sugarcane Based on Biotechnological Tools. The Second International Conference for Applications of Biotechnology, 17 th-18th October, 2009, MSA-Egypt, pp50.
- 4- K. A. Khaled and A. Z. Ahmed (2008). Estimation of Genetic Variability and Broad Sense Heritability of Sugarcane under Nitrogen Fertilization. 3rd International Conference IS-2008 “Meeting the Challenges of Sugar Crops & Integrated Industries in Developing Countries” organizing by International Association of Professionals in Sugar & Integrated Technologies (IAPSIT) Egypt from 11th - 14th September, 2008, pp s57-s67.
- 5- K. A. Khaled and A. M. H. Esh (2008). High Quality Genomic DNA Impurities-Free from Sugar Crops and Other Plant Tissues. 3rd International Conference IS-2008 “Meeting the Challenges of Sugar Crops & Integrated Industries in Developing Countries” organizing by International Association of Professionals in Sugar & Integrated Technologies (IAPSIT) Egypt from 11th - 14<sup>th</sup> September, 2008, pp 330-332.

### **Books**

1. Khaled, Khaled (2010) Molecular markers for salt tolerance in poacea: Yield related traits and marker assisted selection for salt tolerance. LAP Lambert Academic Publishing 2010, ISBN-NR.: 978-3-8433-8819-1. Available online (<https://www.morebooks.de/store/gb/book/molecular-markers-for-salt-tolerancein-poacea/isbn/978-3-8433-8819-1>)

### **DATABASE RECORDS**

GenBank Accession: 19 Organism isolates, and 8 sequences related gene  
19 Organism isolates

	<b>Organism isolates</b>	<b>GenBank Access. No</b>
[1]	Pythium ultimum isolate LT8340	MG910455.1
[2]	Phytophthora nicotianae isolate LT8341	MG932083.1
[3]	Pythium aphanidermatum isolate LT8343	MG953326.1
[4]	Phytophthora nicotianae isolate LT8342	MG954358.1
[5]	Pythium aphanidermatum isolate LT8344	MG984069.1
[6]	Pythium diclinum isolate LT8352	MG984585.1
[7]	Pythium oligandrum isolate LT8354	MG984586.1
[8]	Pythium aphanidermatum strain Janakleas	MG984588.1
[9]	Pythium perplexum strain Delengat City	MH035999.1
[10]	Pythium perplexum strain Rashid, North of Delta	MH036001.1
[11]	Pythium aphanidermatum isolate LT8346	MH040802.1
[12]	Pythium aphanidermatum isolate LT8347	MH043606.1
[13]	Pythium sp. isolate LT8360	MH043607.1
[14]	Pythium ultimum isolate LT8348	MH043608.1
[15]	Pythium sp. isolate LT8361	MH043609.1
[16]	Pythium ultimum isolate LT8355	MH043610.1
[17]	Pythium sp. isolate LT8359	MH043622.1
[18]	Pythium ultimum strain LT8357	MH090921.1
[19]	Geobacillus stearothermophilus strain Egy1 isolate	MN900606.1

The 8 sequences related gene

	<b>Sequences</b>	<b>GenBank Access. No</b>
[1]	Geobacillus stearothermophilus gene for alpha amylase	LC259133.1
[2]	Cyamopsis tetragonoloba DNA, possibly height responsive gene.	LC681484.1
[3]	Zea mays gene for protein DWARF AND LOW-TILLERING	LC713218.1
[4]	Zea mays tb1 gene for teosinte branched	LC713219.1
[5]	Zea mays T1-H tb1 gene for teosinte branched 1	LC739767.1
[6]	Zea mays T1-L gene for protein DWARF AND LOW-TILLERING	LC739768.1
[7]	Cyamopsis tetragonoloba isolate GuarEgy1P hypothetical protein	OK617330.1
[8]	Cyamopsis tetragonoloba isolate CyEgy1 hypothetical protein	OK617331.1

## PROFESSIONAL TRAINING

### Some selected workshop and training courses

Title	Organizer	from	To
Novel vector control strategies: From research to acceptance and implementation	The Pan-African Mosquito Control Association (PAMCA), Kigali Convention Centre - Rwanda	23/9	25/9/2022
The 8th PAMCA Annual Conference and Exhibition	PAMCA, Kigali Convention Centre - Rwanda	26/9	28/9/2022
Applying for PRIMA Research Grants	Academy of Scientific Research & Technology (ASRT)	4/11/ 2018	5/11/2018
Effective Cooperation in Teams	DAAD Kairo Akademia	24/7/2018	24/7/2018
Debating and discussing: How to formulate and structure arguments	DAAD Kairo Akademia	27/5/217	27/5/217
Research Management	DAAD Kairo Akademia	9/5/ 2017	9/5/ 2017
International Networking	DAAD Kairo Akademia	18/12/2016	18/12/2016
Competitive Research Proposal Writing	DAAD Kairo Akademia	3/11/ 2016	3/11/ 2016
Project Management	DAAD Kairo Akademia	27/3/ 2013	27/3/ 2013
Use of Molecular Markers in Plant Breeding	CRAG, Barcelona -Spain	20/2/ 2012	2/3/ 2012
New Tools in Molecular Breeding	ILRI, Nairobi - Kenya	15/11/ 2011	18/11/ 2011
Enhanced Production of Recombinant Biomolecules of Commercial Importance	KIBGE-University of Karachi- Pakistan	6/7/ 2009	10/7/ 2009
Molecular Biotechnology Protocol for Continuous Medical Education	Faculty of medicine, Ain Shams Univ. in cooperation with Rosalind Franklin University	27/4/ 2004	29/4/ 2004
<b><u>B- National training</u></b>			
An Introduction to Bioinformatics and its Applications	Beni-Suef University	26/4/ 2017	
How to use and activate the activities of the Egyptian Knowledge Bank portal	Beni-Suef University	8/3/ 2017	9/3/ 2017
How to prepare a strategic plan?	Beni-Suef University	26/5/2017	
Organizing scientific conferences	Beni-Suef University	9/9/ 2015	10/9/ 2015
Financial and legal aspects of university work	Beni-Suef University	1/9/ 2015	2/9/ 2015

## PROFESSIONAL AFFILIATIONS

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Affiliations	From - To
Associate Professor, Genetic dept., Faculty of Agriculture, Beni Suef University	3/2019-present
Faculty member of Genetic dept., Faculty of Agriculture, Beni Suef University	8/2015 – 3/2019
Associate Professor of Breeding & Genetics, Sugar Crops Research Institute ( <b>SCRI</b> ), Agriculture Research Centre ( <b>ARC</b> )	1/2011–9/ 2015
Researcher (Assistant professor) of Breeding & Genetics, Sugar Crops Research Institute ( <b>SCRI</b> ), Agriculture Research Centre ( <b>ARC</b> )	12/2005–1/ 2011
Researcher Assistant of Breeding & Genetics, Sugar Crops Research Institute ( <b>SCRI</b> ), Agriculture Research Centre ( <b>ARC</b> )	3/2002 – 12/ 2005

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## COMMUNITY SERVICE

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- [1] Supervisor of the FAO simulation model at the Faculty of Agriculture from 4/2022 to date
- [2] Working with Resala Charity Association since 2005 until now
- [3] Working with the Hadayek al-Birr and Taqwa Association in Hadayek al-Ahram since 2011 until now
- [4] Member of the Board of Directors of Al-Hussein Bin Ali Mosque in Hadayek Al-Ahram from 2016 to date
- [5] The work is an online memorizer of the Qur'an through Telegram from 2018 until now

## LANGUAGES

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**Arabic:** Native Language

**English:** Intermediate Listener, Novice Speaker, Advanced Reading and Writing

## COMPUTER SKILLS

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**Programming:** R, Python

**Applications:** Microsoft Office, SPSS statistical software, and many application used for Bioinformatics

**Platforms:** Windows11, Linux Ubuntu

## REFERENCES

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***Documented References*** : Furnished upon request