



**Entomology Department  
Faculty of Science  
Ain Shams University**

**SANDFLY VECTORS AND RODENT RESERVOIRS  
RESPONSIBLE FOR LEISHMANIASIS TRANSMISSION IN A  
REMOTE AREA OF NORTH-SINAI (EGYPT).**

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**Dedication:**

*I am pleased to dedicate this work to my beloved, parents, brother, and all my friends.*

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## ABBREVIATIONS:

<b>ACL</b>	American cutaneous leishmaniasis
<b>6-FAM</b>	6-carboxy-fluorescein
<b>TAMRA</b>	6-carboxy-tetramethyl-rhodamine
<b>6-PGDH</b>	6-phospho-D-gluconate Dehydrogenase
<b>AMG</b>	Anterior midgut
<b>BLAST</b>	Basic Local Alignment Search Tool
<b>CAE</b>	cellulose acetate electrophoresis
<b>CDC</b>	Center for Disease Control and Prevention
<b>CL</b>	cutaneous leishmaniasis
<b>C<sub>t</sub></b>	Cycler threshold
<b>DNA</b>	Deoxyribonucleic acid
<b>ELIZA</b>	Enzyme-linked immunosorbent assay
<b>EF</b>	Excreted factor
<b>G.</b>	<i>Gerbillus</i>
<b>GPI</b>	glucose phosphate isomerase
<b>G-6-PDH</b>	Glucose-6-phosphate Dehydrogenase
<b>GOT</b>	Glutamic oxaloacetic transaminase
<b>ITS-1</b>	Internal transcribed spacer-1
<b>IDH</b>	Isocitrate Dehydrogenase
<b>kDNA</b>	Kinetoplastid deoxyribonucleic acid
<b>L.</b>	<i>Leishmania</i>
<b>LST</b>	Leishmanin skin test
<b>LCL</b>	Localized cutaneous leishmaniasis
<b>LON</b>	London
<b>Lu.</b>	<i>Lutzomyia</i>
<b>ME</b>	Malic enzyme
<b>MDH</b>	Mannitol Dehydrogenase
<b>M.</b>	<i>Meriones</i>
<b>MON</b>	Montpellier
<b>MFO</b>	Multinational Force and Observers
<b>HEPES</b>	N-2-Hydroxyethylpiperazine-N'-2-ethanesulfonic acid
<b>NNN</b>	Novy-MacNeal-Nicolle
<b>PHAR</b>	Pharynx
<b>P.</b>	<i>Phlebotomus</i>

<b>PBS</b>	Phosphate buffer solution
<b>PGM</b>	Phosphoglucomutase
<b>PGI</b>	phosphoglucose Isomerase
<b>PCR</b>	Polymerase chain reaction
<b>PMG</b>	Posterior midgut
<b>PROB</b>	Proboscis
<b>QT-NASBA</b>	quantitative nucleic acid sequence based amplification
<b>RFLPs</b>	Restriction fragment length polymorphisms
<b>rDNA</b>	Ribosomal deoxyribonucleic acid
<b>rRNA</b>	ribosomal ribonucleic acid
<b>RPMI</b>	Roswell Park Memorial Institute
<b>S.</b>	<i>Sergentomyia</i>
<b>SSU rRNA</b>	Small- subunit ribosomal ribonucleic acid
<b>SV</b>	Stomodaeal valve
<b>SYBR</b>	Synergy Brands
<b>VL</b>	visceral leishmaniasis
<b>ZCL</b>	zoonotic cutaneous leishmaniasis

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