



**Bringing Scientific and Technical Resources to the African Continent**

**QPCR AND RT-PCR OPERATION, TROUBLE SHOOTING, SERVICE & MAINTENANCE TRAINING – KISUMU KENYA (5 Days) 23<sup>rd</sup> – 27<sup>th</sup> OCTOBER 2023**

<b>Day 1</b> <b>23/10/2023</b>	08.30 – 9.00	➤ Registration
	09.00 – 10.00	➤ Basic PCR & real time PCR theory Applications & possibilities of qPCR vs traditional endpoint PCR
	10.00 – 10.30	Health Break (Tea/ Snacks)
	10.30 – 13.00	➤ Review of different of availability detection technologies (SYBR) Green I Taqman, Molecular Beacons
	13.00 - 14.00	Health Break (Lunch)
	14.00 - 16.30	➤ Review of different instrument platforms and their typical uses. Experiments demonstrating basic quantification strategy
<b>Day 2</b> <b>24/10/2023</b>	09.00 – 10.00	➤ Optimization of PCR
	10.00 – 10.30	Health Break (Tea/Snacks)
	10.30 – 13.00	➤ Primer design
	13.00 – 14.00	Health Break (Lunch)
	14.00- 16.30	➤ The primer-dimer problem and how to minimize it • Probe design of TaqMan and Molecular Beacons • Experimental design
<b>Day 3</b> <b>25/10/2023</b>	09.00 - 10.00	➤ Basic data analysis
	10.00 – 10.30	Health Break (Tea/Snacks)

	10.30 – 13.00	<ul style="list-style-type: none"> <li>➤ Relative Quantification &amp; Normalization</li> <li>➤ Introduction to quantification of qPCR results</li> <li>➤ Quantification strategies, their applications and limitations</li> </ul>
	13.00 – 14.00	<b>Health Break (Lunch)</b>
	14.00- 16.30	<ul style="list-style-type: none"> <li>➤ Example calculations using different relative quantification methods</li> <li>➤ Strategies for normalization of qPCR data</li> </ul>
<b>Day 4 26/10/2023</b>	09.00 - 10.00	<ul style="list-style-type: none"> <li>➤ In situ calibration for compensation of PCR inhibition in test samples</li> </ul>
	10.00 – 10.30	<b>Health Break (Tea/Snacks)</b>
	10.30 – 13.00	<ul style="list-style-type: none"> <li>➤ Reverse Transcription &amp; Sample preparation</li> <li>➤ Basics and principles of reverse transcription (RT)</li> </ul>
	13.00 – 14.00	<b>Health Break (Lunch)</b>
	13.00 – 16.00	<ul style="list-style-type: none"> <li>➤ RT priming methods</li> <li>➤ Which enzymes are preferred for different applications?</li> </ul>
<b>Day 5 27/10/2023</b>	09.00 – 10.00	<ul style="list-style-type: none"> <li>➤ Sample preparation (extraction of RNA and DNA)</li> </ul>
	10.00 – 10.30	<b>Health Break (Tea/Snacks)</b>
	10.00 – 13.00	<ul style="list-style-type: none"> <li>➤ Multiplexing and SNP analysis</li> </ul>
	13.00 – 14.00	<b>Health Break (Lunch)</b>
	14.00- 15.00	Closing Ceremony and Issue of Certification
<b>23<sup>rd</sup> – 27<sup>th</sup> October 2023</b> <b>Deadline for Registration</b> <b>11<sup>th</sup> October 2023</b>	<b>VENUE:</b> <b>KISUMU</b>	<b>COST KENYA SHILLINGS 81,200.00 OR \$ 812.00</b> <b>Registration to be send to <a href="mailto:c.oyugi@chromafrica.co.ke">c.oyugi@chromafrica.co.ke</a> and <a href="mailto:info@chromafrica.co.ke">info@chromafrica.co.ke</a></b>

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