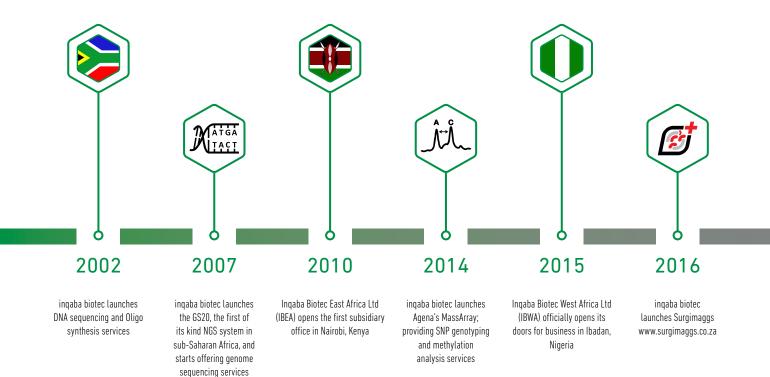


THE EVOLUTION OF INQABA BIOTEC



inqaba biotec group

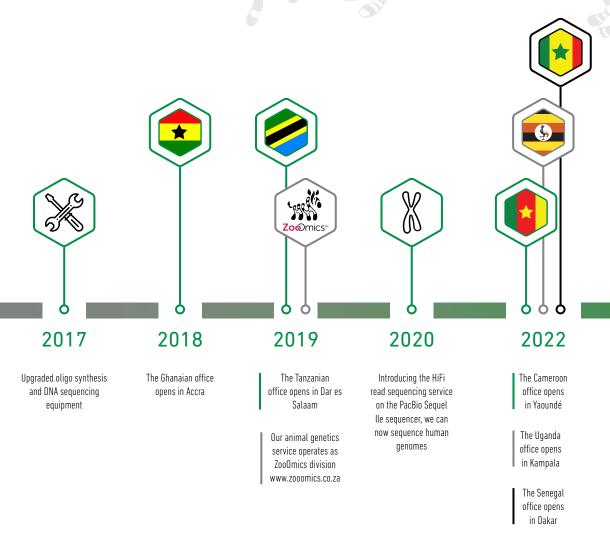
'I am proud that inqaba biotec has grown to a respected company in a team effort over the past 20 years and operates as a technology company with a reputable customer service and integrity in the emerging market of sub-Saharan Africa.' - Dr Oliver Preisig, executive director and co-founder.

inqaba biotec is turning 20 years old in 2022 and it all started on a bus ride from Sunnyside to the University of Pretoria in 2000. Due to the habit of taking the same bus in the morning, the two future co-founders Dr Joaquim de Gama (at that time still a law student) and Dr Oliver Preisig (a molecular biology researcher at the university) got into regular conversations. Then one day Joaquim asked Oliver if they should not start a business to grow mushrooms. Oliver was enticed about the idea of a business but thought his experience could be more

applicable for a company that offers DNA sequencing services and produces oligos. Such companies developed in many places in the 90s but none in South Africa or anywhere in Africa, so the idea was born.

Oliver shared the idea with some friends back home in Switzerland and Germany, and surprisingly the venture team of 5 was born with the addition of Prof Michael Göttfert, Dr Christoph Beck, and Dr Sandra Neumann. Of course, the four scientists and one lawyer had not much





experience in writing a business plan and the first draft was a thick document that needed an astronomic amount of funds and guidance.

We were then lucky to come across the Swiss Organisation to Facilitate Investments in the developing world (SOFI) and there we got support from a consultant, Mr Andre Calame, who coached us and assisted in the write-up of a concise and thorough business plan. He really was instrumental in the success of the company to get started as he took ownership of the project. With his advice, we applied for the Start-Up Fund of the Swiss State Secretariat for Economic Affairs (seco) for business developments in developing countries in 2001. Luckily a pat-situation of the fund committee turned in our favour and we got a credit facility for CHF 250 000 despite the committee's worries that we have no

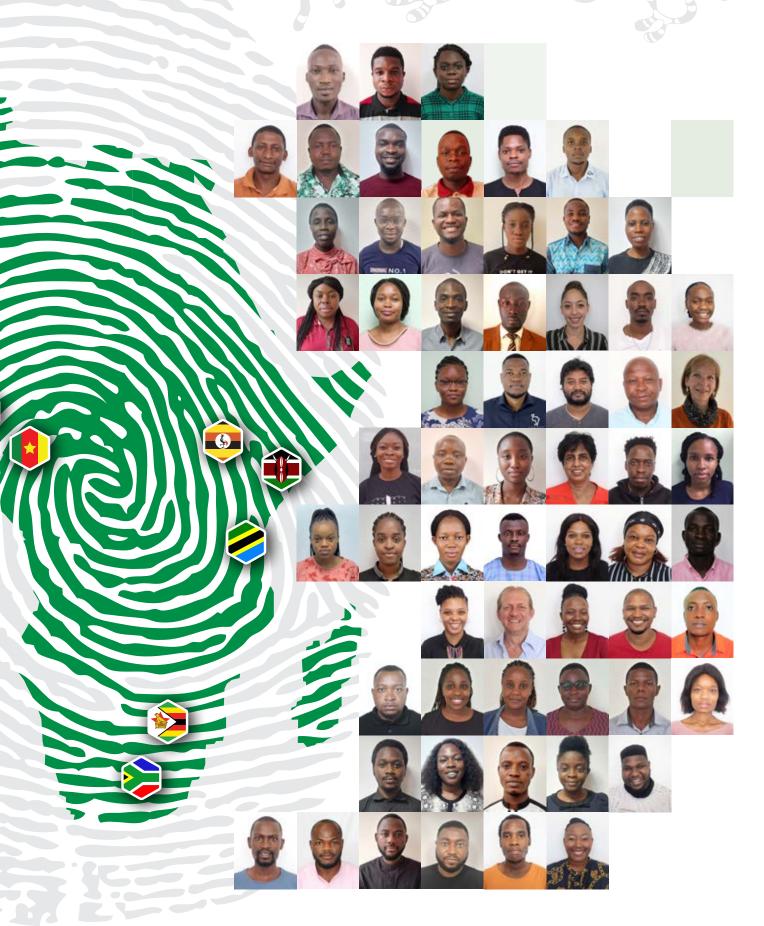
experience in marketing. With the credit letter from the Swiss Government, Standard Bank was willing to get us a lease funding for the lab equipment worth R4 Million. As we know, banks only extend you a loan when you have collaterals somewhere.

In April 2002 we started occupying our first facility opposite the Sunnyside Police Station, where we even shared the floor with police detectives. In the first few months, we got everything installed, worked on the production of oligonucleotides and the optimisation of our Sanger sequencer. On August the 1st of 2002, we were ready to launch ingaba biotec with a very unique name that we found with the help of a Xhosa friend as we wanted to have a name with a click and of course a good meaning as well and this is how Africa's Genomics company started.

OUR UNIQUE STAFF







CORE SERVICES

DNA SYNTHESIS (PRIMERS & PROBES)



Using Bioautomation® MerMade 192E we can produce over 1000 custom oligonucleotides per day in Pretoria. Our standard and modified oligonucleotides are quality controlled and normally dispatched within 24 hours or 96 hours respectively, so that our clients can enjoy the full benefit of locally produced oligonucleotides.

SANGER DNA SEQUENCING



Our Sanger DNA sequencing facility offers DNA sequencing from various templates using one ABI3500XL and one ABI3730XL sequencer. We strive to deliver a flexible service to serve most needs. We are able to offer primer design and production, template purification and amplification, cloning, data analysis, fungal and bacterial ID and much more. Our Nigerian subsidiary also started offering DNA sequencing services from the Ibadan Lab with a ABI3500XL.

BIOINFORMATICS SOLUTIONS



Our customized bioinformatics analysis services will allow you to make sense of your Next Generation Sequencing data sets. Small to large data sets, we will assist you in answering your scientific question. From analysis solutions to bioinformatics training, we cover it all.

NEXT GENERATION SEQUENCING (NGS)



We offer NGS project design input, a rigorous quality controlled library preparation and sequencing workflow, fast turn-around times and support in data analysis and interpretation. We prepare DNA or RNA samples for a "start to finish" NGS Service using the Illumina® MiSeq, NextSeq and PacBio Sequel IIe.







qPCR ANALYSIS

Real-time PCR (qPCR) assay is an extremely sensitive method that is used to study gene expression in any organism. inqaba biotec offers reliable qPCR services, including gene expression, SNP genotyping and absolute quantification. To complement our qPCR services, we also offer RNA extraction and perform quality check of RNA samples before qPCR analysis.



ANIMAL GENETICS BY ZooOmics

Our Animal Genetics service includes a wide variety of genetic tests mainly for dogs, cats, cattle and wildlife species. Tests offered include parentage verification, genetic disease screening and subspecies verification. The department is ever expanding the test portfolio. Please visit www.zooomics.co.za for more info.



INSTRUMENT SERVICE, REPAIR AND MAINTENANCE

inqaba biotec offers services to repair and maintain laboratory instruments. This supports many laboratories in sub-Saharan Africa to run their research and diagnostics activities with little interruption. The services include the repairs and calibrations of pipettes (all brands), centrifuges and concentrators (Eppendorf), thermocyclers (Eppendorf), shakers, incubators and freezers, epMotion automated liquid handling systems, nanodrop and many more.



SNP GENOTYPING AND METHYLATION ANALYSIS

Our SNP genotyping service using Agena Bioscience's MassARRAY allows you to custom design your genotyping assay to fit your research needs. The ease of analysis is afforded by the accompanying software, making it detailed and basic enough to understand. A high plex capability, sensitivity and good turn-around time make the MassARRAY the genotyping technology of choice for the analysis of 10s to 100s of SNPs. A range of panels are offered upon request to address different spheres of research such as oncology, human identification, methylation and genes associated with drug metabolism.

PRODUCTS

MOLECULAR BIOLOGY

- DNA/RNA Isolation Solutions
- DNA/RNA Stabilisation & Storage
- PCR Reagents
- qPCR Reagents
- Isothermal Amplification
- RNA Analysis and Modification
- Library Preparation for NGS
- Restriction Enzymes
- · Modifying Enzymes
- Cloning Solutions
- Electrophoresis

INSTRUMENTS

- PacBio Sequencing Technology
- NanoDrop Spectrophotometers
- 4D Microscope
- Conventional PCR machines (Thermal Cyclers)
- Gel Electrophoresis Equipment
- Gel Imaging Systems
- qPCR Instruments
- Vortexes
- Shakers
- Transilluminators
- Pipettes (Manual & Automated)
- Pipette Controllers & Stands
- Vacuum Concentrators
- Centrifuges
- Incubators
- Fridges/freezers
- Laminar Flows / Biosafety Cabinets
- Grinders
- Balances
- Scales
- pH Meters

PROTEOMICS

- Protein Expression
- Chemiluminescence
- Fluorescent Labelling
- Protein Analysis

PLASTIC CONSUMABLES

- Plates (PCR & Storage)
- Individual Tubes & Strips
- Adhesive Seals
- Pipette Tips
- Centrifuge Tubes

- Cuvettes
- Conical Tubes
- Tube Racks
- Cell Culture (Dishes, Flasks & Plates)

BIOCHEMICALS

- Antibiotics
- Buffers
- Carbohydrates
- Chelating Agents
- Biological Compounds
- Media
- Phenols/Organics

CELL BIOLOGY

- Drug Discovery
- Transfection Reagents
- Cellular Analysis
- Primary Cells Lines
- · Stem Cells
- Culture Media
- Growth Factors
- Epigenetics
- RNA Interference
- Electroporation
- CRISPR-Cas9
- Cell Imaging Consumables (Slides)

MOLECULAR DIAGNOSTICS

- Multiplex PCR & qPCR Diagnostics
- Prenatal Diagnostics
- Genetic Testing
- Non-Invasive Prenatal Testing

SOFTWARE

- Bioinformatics
- Phylogenetics
- DNA Sequence Analysis
- Primer Design
- Protein Modelling

FOOD TESTING

- GMO
- Food & Feed Safety Products
- Allergen Testing ELISA
- Allergen Testing qPCR
- Bioprocessing



LIFE SCIENCE CONSUMABLES



Molecular biology reagents



Tubes, tips and plates



DNA and RNA isolation kits



Plastic lab consumables



Laboratory chemicals, specialty chemicals and clinical diagnostic reagents



DNA Sequencing reagents



Biochemicals



Culture media and solutions



Consumables for liquid handling



RNAi, gene expression and gene editing



Cell lines & cell cultures



ELISA kits, Gene and Peptide Synthesis as well as Biochemicals



Transfection reagents



Growth factors and recombinant proteins



Drug discovery



Microbiome analysis



Biotechnology education



Chemicals, microbiology culture media and glassware

INSTRUMENTS

eppendorf

Pipettes, centrifuges, thermal cyclers, incubators & -86°C freezers



Single Molecule, Real-Time (SMRT) sequencing technology



Gel documentation & chemiluminiscence



Laminar flow cabinets



NanoDrop spectrophotometers



Weighing solutions



Cryogenic storage



Laboratory refrigerators & freezers



Cell imaging



Magnetic stirrers, shakers & block heaters



Digital microscopes and scanners



Gel electrophoresis systems

SOFTWARE



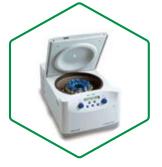
Advanced Variant and Pathway Analysis Platform for NGS data



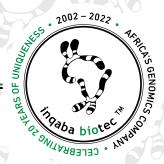
Desktop bioinformatics software from Sanger to NGS











MOLECULAR DIAGNOSTIC SOLUTIONS



Molecular diagnostic kits

Genetic testing kits: prenatal/ reproductive/ oncology



Culture-independent, rapid molecular testing of pathogens



HLA high resolution genotyping



GMO, food pathogens & allergen qPCR test kits



Plant pathogen detection



Enzyme Immuno kits and Rapid detection Kits



Infectious disease reagents (not available in RSA)



Solutions for clinical chemistry, immunology and haematology



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E-mail: nangadef@inqababiotec.africa

EAST AFRICA - KENYA

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E-mail: info@inqababiotec.co.ke

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