

THE MULTIPLIER EFFECT

A Decade of Scientific Capacity Building, Leadership Development
and Agricultural Innovation Across Africa

2015-2026 Impact Report



330+

Scientists
Trained In-Person

45,000+

Digital Learners
Reached

700+

Farmers & Extension
Professionals Engaged

25+

African
Countries

The **story** begins
on the next page.

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Founder's Message



A Decade of Opportunity. A Future of Possibility.

When I founded JR Biotek Foundation, I was motivated by a simple but deeply personal conviction:

“Talent is everywhere but opportunity is not.”

As a scientist from Nigeria pursuing my academic journey across multiple institutions and countries, I experienced first-hand how access to training, mentorship, networks, and supportive communities can transform lives and careers.

I also witnessed the extraordinary talent that exists across Africa - scientists with the passion, creativity, and determination to solve some of the continent's most pressing challenges, yet often without access to the opportunities needed to fully realise their potential. Over the past decade, JR Biotek Foundation has sought to help bridge that gap.

What began as a small initiative focused on scientific training has grown into a vibrant network of scientists, educators, innovators, mentors, institutions, farmers, and community leaders spanning more than 25 countries and over 100 institutions.

Together, we have trained more than 330 scientists through hands-on programmes, engaged tens of thousands of learners through digital platforms, supported emerging leaders, strengthened international collaborations, and created opportunities that continue to ripple outward through classrooms, laboratories, communities, and institutions across Africa.

Yet the most important lesson of the past decade is that impact rarely ends where a programme ends. Scientists become educators. Educators train students. Students become researchers. Researchers become innovators. Innovators strengthen institutions. Institutions support communities. Communities shape new research questions. And the cycle continues. This is what we call **The Multiplier Effect**.

The impact documented in this report belongs not only to JR Biotek Foundation, but also to the thousands of individuals and organisations who have contributed their time, expertise, resources, encouragement, and partnership over the years.

As we look ahead, we do so with renewed ambition. Through the **Agri-Innovation & Impact Platform (AGRIIP)**, we aim to build upon a decade of learning and partnership to connect scientists, farmers, innovators, institutions, and communities around locally led solutions for climate resilience, food security, indigenous crop revitalisation, and sustainable development.

Our vision is bold. By 2036, we hope to contribute to the development of 10,000 Africa-based scientists, reach and support 10 million farmers through partnerships and innovation ecosystems, boost indigenous crop systems across Africa, and help build a more resilient future for generations to come. The first decade demonstrated what is possible. The next decade is about scale.

To every participant, volunteer, partner, mentor, donor, collaborator, farmer, student, and supporter who has been part of this journey: Thank you. This report is your story too.

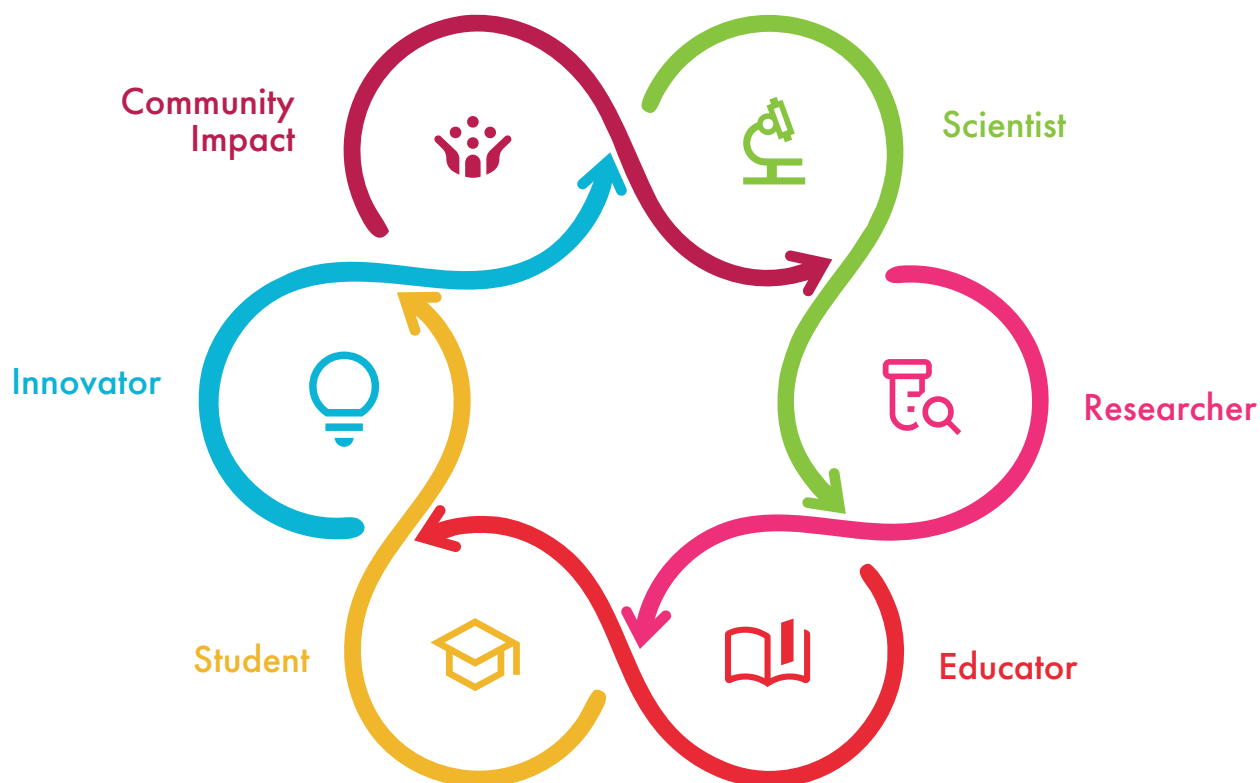
Dr Carol N. Ibe

A handwritten signature in black ink, appearing to read 'Carol N. Ibe'.

Founder & Executive Director JR Biotek Foundation

The Multiplier Effect

Investing in one scientist creates opportunities that multiply.



330+

Scientists Trained
In-Person

25+

Countries
Reached

100+

Institutions
Represented

JR Biotek Foundation's experience over the past decade has shown that investing in scientists creates a multiplier effect. Through training, mentorship, leadership development, and strategic partnerships, one scientist can become an educator, mentor, researcher, innovator, entrepreneur, or change-maker whose impact extends to students, institutions, farmers, communities, and future generations



Plant Molecular Bio-Lab Training, Nigeria 2026

About JR Biotek Foundation

JR Biotek Foundation is a US-registered non-profit organisation (501c3) dedicated to strengthening scientific capacity, innovation, leadership, and agricultural transformation across Africa.

Founded in 2015, the Foundation works with universities, research institutes, scientists, students, farmers, entrepreneurs, and community stakeholders to create pathways from scientific knowledge to real-world impact.

Our work focuses on:



Scientific
Education &
Leadership
Development



AGRIIP –
Indigenous
Crops,
Innovation &
Farmer
Engagement



Innovation,
Entrepreneurship
& Fellowship
Programmes



Partnerships,
Mentorship &
Community
Impact



Plant Molecular Bio-Lab Training, Nigeria 2026



Vision

An Africa where scientific talent, innovation, and local knowledge drive resilient food systems, sustainable development, and flourishing communities.



Mission

To equip scientists, strengthen institutions, foster innovation, and connect research to real-world impact across Africa.

Through partnerships across Africa and beyond, JR Biotek Foundation seeks to empower scientists and strengthen systems capable of addressing food security, climate resilience, biodiversity conservation, and sustainable development challenges.



Plant Molecular Bio-Lab Training, Cambridge 2017

About this Report

This report documents the first decade of JR Biotek Foundation's work from 2015 to 2026. It presents evidence of impact across scientific training, mentorship, innovation, leadership development, community engagement, and agricultural transformation initiatives delivered through partnerships across Africa and beyond.

The report draws upon:



Programme records



Application data



Alumni Surveys



Digital Analytics



Partner Contributions



Community Engagement

Where possible, impact figures are presented conservatively to minimise duplication and ensure transparency.

The report's central theme, **The Multiplier Effect**, reflects the Foundation's belief that investments in people create impacts that continue expanding long after individual programmes have ended.



Plant Molecular Bio-Lab Training, Cambridge 2018

Acknowledgements

A Decade of Shared Impact

The achievements documented in this report reflect the contributions of hundreds of individuals and organisations who have supported JR Biotek Foundation's journey over the past decade.

What began as a vision to expand opportunities for African scientists has evolved into a growing network of researchers, educators, innovators, institutions, farmers, volunteers, funders, and community partners working together to strengthen scientific capacity, agricultural innovation, and food systems across Africa.

We are deeply grateful to all those who have contributed their time, expertise, resources, encouragement, and partnership to this mission.

Partners in Impact

The achievements documented in this report were made possible through the contributions of funding partners, institutional collaborators, technical organisations, volunteers, mentors, and supporters who shared our commitment to advancing scientific capacity and agricultural innovation across Africa. Some of these organisations provided financial support, programme resources, sponsorship, or project-specific support for activities aligned with JR Biotek Foundation's mission.



People Behind the Mission

Board of Directors

Dr Rebekah Sacher - Global Project Head, Sanofi

Dr Ngozi Elumogo - Clinical Director & Consultant (NHS) & Senior Research Fellow, Quadram Institute, UK

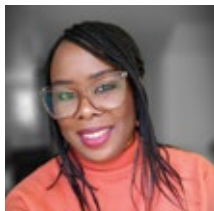
Dr Cy Tamanaha - Bioengineer & Head of Product Development, Theia Scientific, USA

Eva Abel - Chief Investment Officer, Oryx Investment Ltd.

Dr Paul Adams - Director, Kwantlen Polytechnic University, Applied Genomics Centre (AGC)

Dr Carol Ibe - Plant Scientist, Founder & Executive Director of JR Biotek Foundation

Our Team



Dr Carol Ibe
Plant Scientist, Founder & Executive Director

AGRIIP Research & Entrepreneurship Fellowship



Mainda Kiwelu
Director, AGRIIP Research & Entrepreneurship Fellowship



Olanrewaju Babalola
Lead, AGRIIP
Entrepreneurship Fellowship



Christianah Oseni
Co-Lead, AGRIIP Research
Fellowship



Ogechi Ihuoma
Co-Lead, AGRIIP
Research Fellowship

JR Biotek-AGRIIP Farmer Systems & Indigenous Crops (Nigeria) Team



Dr Olaide Ogunsanya

Plant Pathologist



Dr Flora Asibe

Agri-biotechnologist & Business Development Officer



Moses Terngu Igyuve

Plant Breeder



Dr Binta Sani Ibrahim

Plant Biotechnologist & Lecturer



Faith Mohammed

Plant Pathologist & Microbiologist



Precious Nwogwugwu

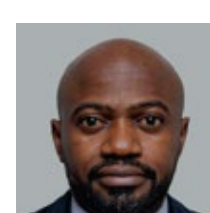
Plant Breeder & Research Fellow

JR Biotek Education & Scientific Capacity Development Team



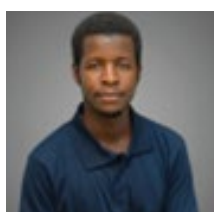
Dr Velma Okaron

Plant Breeder & Researcher



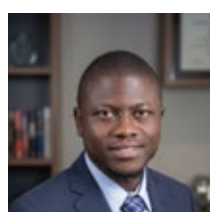
Dr Ekemini Obok

Associate Professor of Crop Improvement



Harun Kellu

Research Scientist & Lecturer,



Mujeeb Adaraloye

Plant Scientist,

50+ Volunteers Across Africa & Beyond

The Multiplier Effect at A Glance

A Decade of Investing in African Scientists.

The first decade of JR Biotek Foundation demonstrates the power of investing in people, partnerships, and opportunity.

What began as a small initiative focused on scientific capacity building has grown into a network of scientists, educators, innovators, institutions, and communities working across Africa and beyond. Together, these investments have strengthened scientific capacity, fostered collaboration, supported innovation, and created a multiplier effect that extends far beyond those reached directly.

The figures below provide a snapshot of the Foundation's reach, contribution, and mission-aligned resources mobilised between 2015 and 2026.

£325,000+

Mission-Aligned
Resources Mobilised

330+

Scientists Trained
In-Person

45,000+

Digital Learners
Reached

700+

Farmers & Extension
Professionals Engaged

50+

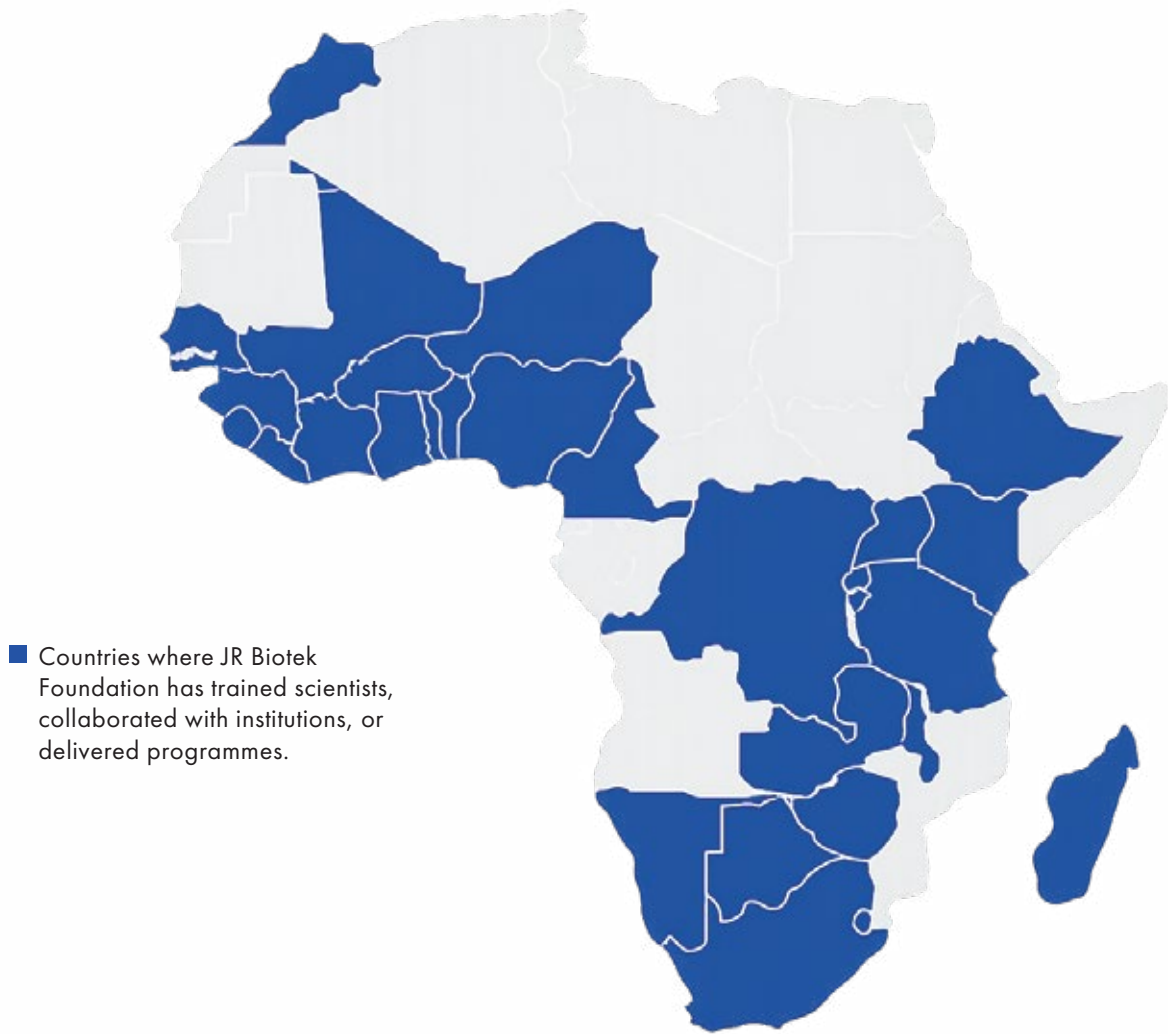
Volunteers Supporting
Impact

25+

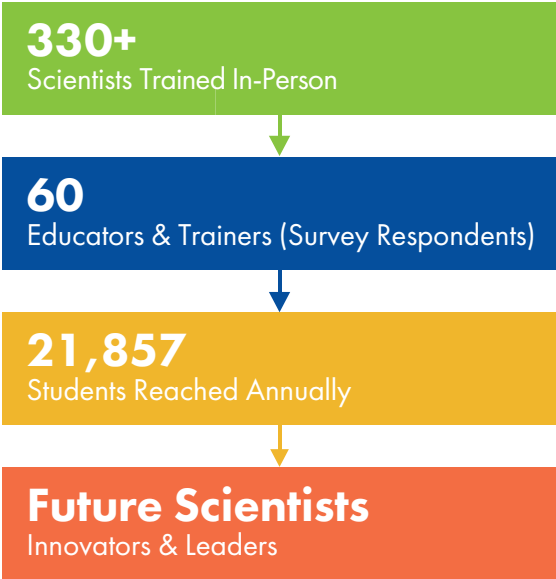
African Countries

A Continental Network of Scientific Talent

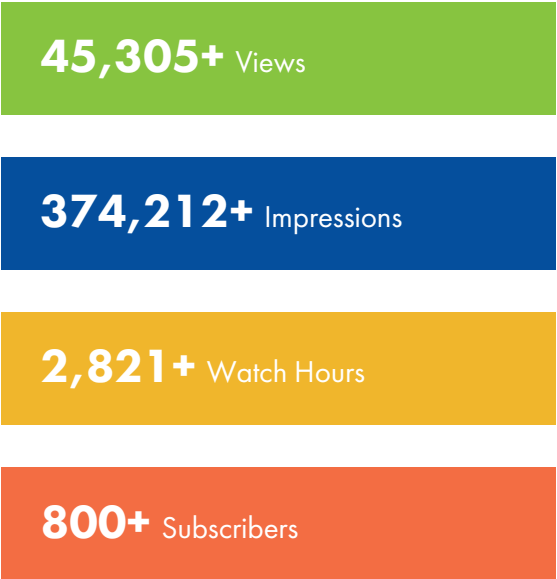
Since 2015, JR Biotek Foundation programmes have attracted scientists, educators, researchers and innovators from 25+ African countries, creating a growing network of leaders advancing agricultural research, education, innovation and community impact across the continent.



Alumni Survey Impact



Digital Training Impact



From laboratory training and mentorship programmes to innovation, education and leadership development, JR Biotek Foundation's alumni and participants are contributing to research, teaching, entrepreneurship and agricultural transformation across Africa.

PART I

Building Scientific Capacity Across Africa

A Decade of Investing in African Scientists

Since 2014, JR Biotek Foundation has been strengthening scientific capacity in African agriculture by expanding access to high-quality training, mentorship, and international collaboration. Established to help address gaps in practical skills, research infrastructure, and professional networks, the Foundation has delivered scientific training, mentorship, innovation challenges, conferences, and collaborative learning programmes that have attracted over 8,000 applicants and directly trained more than 330 agricultural scientists and researchers from 100+ research institutions across 25+ African countries. Together, these efforts have helped build a growing pan-African community of scientists, educators, innovators, and research leaders.

A Decade of Programmes

Timeline of Growth (2014–2026)

2014 JR Biotek's First Molecular Biotechnology Training Workshop

International Institute of Tropical Agriculture (IITA), Nigeria

JR Biotek's journey unofficially began in 2014 with its first molecular biotechnology training workshop at the International Institute of Tropical Agriculture (IITA), Ibadan, Nigeria. The programme brought together early-career scientists from four African countries for hands-on training in modern molecular biology techniques and their applications in agricultural research. It marked the beginning of what would become JR Biotek Foundation, formally established as a non-profit organisation in 2015, and its decade-long commitment to strengthening scientific capacity, leadership, and innovation across Africa.



Dr Carol Ibe with participants of JR Biotek's inaugural molecular biotechnology training workshop at IITA, Ibadan, Nigeria (2014).

2017

Plant Molecular Biology & Bioinformatics Training

University of Cambridge, United Kingdom

In 2017, JR Biotek Foundation launched its first Plant Molecular Biology & Bioinformatics Training Workshop in Cambridge, bringing together African scientists for immersive training in plant molecular biology, bioinformatics, and related laboratory techniques. Combining practical learning with mentorship and peer exchange, the programme marked an important step in JR Biotek Foundation's commitment to equipping African scientists with the skills, confidence, and networks needed to thrive in modern bioscience research.



Participants in JR Biotek Foundation's 2017 Plant Molecular Biology & Bioinformatics Training at the University of Cambridge.

2017

African Diaspora Biotech Summit

University of Cambridge, United Kingdom

In 2017, JR Biotek convened the **African Diaspora Biotech Summit** in Cambridge to explore how African scientists in the diaspora could contribute more intentionally to scientific development, innovation, and training across the continent. The summit brought together 100+ researchers, professionals, and emerging scientists to discuss collaboration, mentorship, entrepreneurship, and the future of African-led biotechnology. It helped position JR Biotek not only as a training organisation, but also as a convener of ideas, networks, and shared ambition.



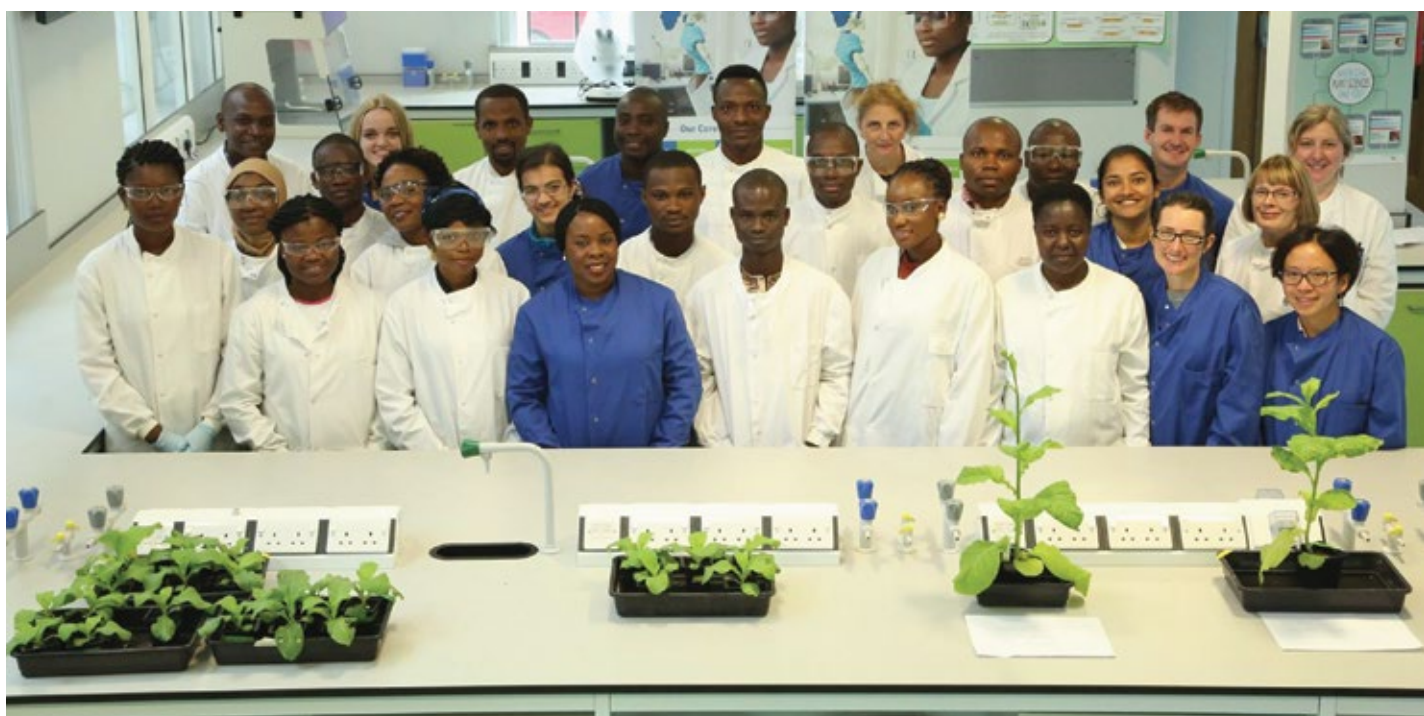
Delegates and speakers at JR Biotek Foundation's inaugural African Diaspora Biotech Summit, Cambridge (2017)

2018

Plant Molecular Biology & Bioinformatics Training

University of Cambridge, United Kingdom

Building on the success of its earlier training programmes, JR Biotek Foundation continued its successful partnership with the Department of Plant Sciences, University of Cambridge in 2018 for another **Plant Molecular Biology & Bioinformatics Training Workshop**. The programme continued to strengthen technical capacity among another cohort of 17 African researchers from six countries, through hands-on laboratory training, computational exposure, and scientific exchange. It also deepened JR Biotek's growing alumni network and reinforced the Foundation's belief that access to high-quality training and mentorship can help unlock scientific excellence across Africa.



JR Biotek Foundation's 2018 cohort of early-career crop scientists during hands-on training at the University of Cambridge.

“The training experience was transformative both professionally and socially. The workshop will long remain a high point of my life as it offered me the opportunity to practice, for the first time, theoretical and laboratory procedures that I had been reading about for years. It has indeed bridged the gap between theory and practice. The avenue to meet and interact with fellow scholars and distinguished professionals was very rewarding. Networks and relationships have been forged through which lasting partnerships and collaborative research is expected to emerge.” -**Dr Kwabena Darkwa, Ghana.**

2018 UK–Africa Food Security Symposium

University of Cambridge, United Kingdom

In 2018, JR Biotek hosted the UK–Africa Food Security Symposium, bringing together researchers, students, and professionals to discuss pressing challenges and opportunities at the intersection of agriculture, science, and food systems in Africa. The symposium created a platform for interdisciplinary dialogue around food security, crop resilience, agricultural biotechnology, and innovation, while strengthening relationships between African scientists and UK-based institutions. It reflected JR Biotek’s growing role in convening conversations that connect research to real-world agricultural challenges



Participants and speakers at JR Biotek Foundation’s UK–Africa Food Security Symposium, University of Cambridge (2018).

University of Abomey-Calavi, Benin Republic

In 2019, JR Biotek Foundation delivered one of its largest programmes, the African Plant Breeders' Molecular Biotechnology Training, in partnership with the University of Cambridge and the University of Abomey-Calavi, Benin Republic. Designed to strengthen molecular breeding capacity across Africa, the programme attracted 916 exceptional interest from across the continent and trained 100 outstanding early-career plant breeders and crop scientists from 19 African countries, demonstrating both the demand for advanced scientific training and the power of strategic partnerships in advancing agricultural innovation.

Legacy

Many alumni from the Benin programme have since become researchers, lecturers, mentors, collaborators, and contributors to subsequent Foundation programmes.

“I developed a joint proposal with one of the instructors, and this training helped me secure research partners in the United Kingdom.” –Eric Agoyi, Laboratory of Applied Ecology, University of Abomey-Calavi, Benin Republic

“The lectures provided insights that helped shape a well-organised research programme using plant breeding to address major health challenges.” –Esosa Abraham Omere, University of Benin, Nigeria



Participants in JR Biotek Foundation's 2019 African Plant Breeders' Molecular Biotechnology Training, Benin Republic

From Bio-Innovation to Research & Entrepreneurship

Building pathways from scientific training to real-world solutions

JR Biotek Foundation developed the Africa Bio-Innovation Pitch Challenge to complement its scientific training programmes by encouraging early-career scientists to translate research into practical, locally relevant solutions. From 2017 to 2021, the Challenge evolved alongside training programmes in Cambridge, Benin Republic, and virtual multi-country settings, fostering innovation, teamwork, and entrepreneurial thinking.

In 2026, this approach was further strengthened through the JR Biotek Research & Innovation Challenge, delivered as part of the Integrated Molecular Biotechnology for Climate-Resilient Agriculture programme at Michael Okpara University of Agriculture, Umudike (MOUUAU), Nigeria, in collaboration with MOUUAU and the University of Cambridge. Together, these initiatives laid the foundation for the AGRIP Research & Entrepreneurship Fellowship, launching in 2027 to support African researchers and innovators in developing practical, climate-responsive solutions for farmers, food systems, and indigenous crops.

JR Biotek Innovation Pathway

2017

Africa Bio-Innovation Pitch Challenge

Winner: Advocate for Clean Climate & Environment, Nigeria

Launched in Cambridge to encourage young African scientists and innovators to develop practical solutions to agricultural, environmental, and societal challenges.



Dr Bolaji Thanni pitching Advocate for Clean Climate & Environment during JR Biotek Foundation's 2017 Africa Bio-Innovation Challenge, Cambridge

2018

Africa Bio-Innovation Pitch Challenge

Winner: EcoSeed / Seed Services, Benin Republic

The winning team later expanded its ecological seed enterprise and strengthened access to indigenous vegetable seeds for farmers in Benin.



EcoSeed co-founders receiving the 2018 Africa Bio-Innovation Challenge award from Dr Carol Ibe in Cambridge.

2019

Africa Bio-Innovation Pitch Challenge

The 2019 edition expanded the model by recognising multiple winning groups across non-profit and for-profit categories, reflecting JR Biotek's growing emphasis on both social impact and enterprise development.



Winning teams from JR Biotek Foundation's 2019 Africa Bio-Innovation Challenge, held alongside the Benin training programme.

2021

Africa Bio-Innovation Pitch Challenge

Winner: Soilless Veggy, Ghana

A low-cost soilless growing medium developed to support vegetable production in space-constrained and resource-limited settings.



The Soilless Veggy team, winners of JR Biotek Foundation's 2021 Africa Bio-Innovation Challenge, presenting a low-cost soilless growing medium for vegetable production in Ghana.

2026

JR Biotek Research & Innovation Challenge

As part of JR Biotek's 2026 Integrated Molecular Biotechnology for Climate-Resilient Agriculture programme at MOUAU, Nigeria, participants took part in a Research & Innovation Challenge focused on climate resilience, indigenous crops, and food security. Winning teams will be invited and fast-tracked into the AGRIP Research & Entrepreneurship Fellowship, helping promising ideas move beyond training towards practical, farmer-responsive solutions.



Participants in JR Biotek Foundation's 2026 Research & Innovation Challenge at MOUAU, Nigeria, showcasing ideas for climate-resilient agriculture and indigenous crop systems.

Impact Spotlight

EcoSeed / Seed Services, Benin Republic

One of the clearest examples of JR Biotek Foundation's innovation challenge model in action is EcoSeed (now Seed Services), a Benin-based ecological seed production enterprise co-founded by Dr Aristide Carlos Houdegbe and Dr Dèdèou Apocalypse Tchokponhoue. After winning first prize in the 2018 Africa Bio-Innovation Pitch Challenge, the team received a £1,500 cash prize, which helped catalyse the company's early growth.

With this support, Seed Services expanded its operations, acquired an additional 1.75 hectares of land, installed irrigation, and strengthened certified ecological seed production. The business also recruited two full-time technicians and has since supplied high-quality indigenous vegetable seeds to more than 2,500 farmers across southern and central Benin.



EcoSeed's expanded seed production activities in Benin, supported by the 2018 JR Biotek Africa Bio-Innovation Challenge prize.

EcoSeed's journey illustrates how relatively modest but strategic support can help early-stage African innovators strengthen local seed systems, expand enterprise activity, and deliver tangible benefits to farming communities.

"The cash prize enabled our start-up seed company, EcoSeed, to expand its operations and distribute high-yielding indigenous vegetable and legume seed varieties to nearly 2,500 farmers across southern and central Benin, something that would have been unimaginable just a few years ago. The entire Seed Services team remains deeply grateful to JR Biotek Foundation."

Dr Aristide Carlos Houdegbe and Dr Dèdèou Apocalypse Tchokponhoue,
Co-Founders of Seed Services (formerly EcoSeed)

Centre for Dryland Agriculture (CDA), Bayero University Kano, Nigeria; CSIR-Crops Research Institute, Ghana; and Masinde Muliro University of Science and Technology (MMUST), Kenya

In 2021, JR Biotek Foundation expanded its molecular biology training model across Nigeria, Ghana, and Kenya through partnerships with the Centre for Dryland Agriculture (CDA), Bayero University Kano, CSIR-Crops Research Institute, and Masinde Muliro University of Science and Technology (MMUST). Together, the programmes trained 80 scientists and marked a major step towards delivering scientific capacity building through locally rooted, partnership-driven programmes across Africa.

The programmes also demonstrated the growing multiplier effect of JR Biotek Foundation's work, with alumni returning as facilitators, trainers, and laboratory support staff. This strengthened South–South collaboration, peer learning, and locally led programme delivery, providing a strong foundation for future initiatives.



Participants and facilitators of JR Biotek Foundation's 2021 molecular biology training at CDA, Bayero University Kano, Nigeria.



Participants and facilitators of JR Biotek Foundation's 2021 Plant Molecular Biology Laboratory Training in Ghana (left) and Kenya (right).

Legacy

The 2021 programmes demonstrated that JR Biotek's capacity-building model could be scaled through alumni engagement, institutional partnerships, and local leadership, an approach that would later help shape the collaborative structure of AGRIP.

2022

JR Biotek–Plant Cell Atlas African PhD Scholars Mentorship Programme

In 2022, JR Biotek Foundation partnered with the Plant Cell Atlas (now based at the Plant Resilience Institute, Michigan State University) to launch a six-month mentorship programme connecting outstanding African plant science PhD scholars with international mentors. Designed to strengthen research, leadership, and career development, the programme expanded access to structured mentorship and global scientific networks, reinforcing the Foundation's commitment to supporting scientists beyond technical training.

**JR Biotek-Plant Cell Atlas (PCA) Africa
PhD Scholars Mentoring Program**
The 2022 Inaugural Class of Outstanding Scholars

Cohort 1

Mentoring a new cadre of African crop scientists and global research leaders

2022

**JR Biotek-Plant Cell Atlas (PCA) Africa
PhD Scholars Mentoring Program**
The 2022 Mentors

Mentoring a new cadre of African crop scientists and global research leaders

Selected mentees (left image) and mentors (right) of JR Biotek Foundation's 2022 African PhD Scholars Mentorship Programme.

Legacy

The mentorship programme helped establish a new model for supporting African doctoral researchers through structured, international mentoring relationships, while deepening JR Biotek's work in leadership development and scientific career progression.

“Through its tailored training and mentorship, JR Biotek Foundation empowered me to navigate academic challenges and elevate my research, paving the way for greater success in my career. The foundation's support has been a catalyst for both my personal and professional advancement.” –Nii Ayi Ankrah, Kwame Nkrumah University of Science and Technology, Ghana

CSIR-Crops Research Institute, Ghana

In 2024, JR Biotek Foundation partnered with SPUN, CSIR-Crops Research Institute, and Oxford Nanopore Technologies to deliver the Africa Mycorrhizal Mapping & Metagenomics Workshop in Ghana. Bringing together scientists from seven African countries, the programme provided hands-on training in metagenomics, Oxford Nanopore sequencing, soil biodiversity, and mycorrhizal ecology, expanding access to emerging technologies while strengthening research capacity, collaboration, and innovation in sustainable agriculture and climate resilience.



Participants and facilitators of the Africa Mycorrhizal Mapping & Metagenomics Workshop, Ghana (2024).

Legacy

The workshop broadened JR Biotek Foundation's scientific training portfolio into the fields of metagenomics, soil biodiversity, and ecological resilience, while creating new opportunities for African scientists to engage with cutting-edge technologies and international research networks.

“The Foundation's commitment to empowering scientists like me has truly transformed both my personal and professional trajectory, enabling me to contribute meaningfully to global research efforts.” –Grace Gachara, Mohammed VI Polytechnic University, Morocco

Part I Summary

Over the past decade, JR Biotek Foundation has built a strong foundation for scientific capacity building across Africa. Through training programmes, workshops, mentorship initiatives, and strategic partnerships, the Foundation has equipped hundreds of scientists with practical skills, expanded professional networks, and created opportunities for collaboration, leadership, and growth.

Yet over time, it became clear that scientific skills alone do not create lasting change. Knowledge has the greatest impact when it is connected to leadership, innovation, collaboration, and community engagement. That realisation shaped the next phase of JR Biotek Foundation's journey, moving beyond technical training alone to invest more intentionally in leaders, networks, innovation ecosystems, and pathways through which knowledge could travel beyond the laboratory and into institutions, classrooms, communities, and society.

Part II

Building Leaders, Networks & Innovation Ecosystems

Beyond Technical Training

Scientific skills are essential, but they are only part of what is needed to create meaningful and lasting impact.



JR Biotek Foundation's 2018 cohort of early-career African scientists participating in a scientific leadership session (left) and a peer discussion during the Foundation's Plant Molecular Biology training workshop and UK–Africa Food Security Symposium at the University of Cambridge.

As JR Biotek Foundation's work expanded, it became increasingly clear that building scientific capacity alone would not be enough. Scientists also needed mentorship, leadership development, professional networks, innovation opportunities, and communities of practice that could support their growth beyond the laboratory. In response, the Foundation developed programmes and partnerships designed to support scientists not only as researchers, but also as educators, mentors, collaborators, innovators, and changemakers

“JR Biotek fostered my professional growth by facilitating networking opportunities with African researchers, enabling collaborations and the exchange of knowledge. These experiences expanded my perspective beyond the laboratory and helped shape my development as both a scientist and innovator.” –*Beakal Tadesse Girma, University of Cape Town / Ethiopian Institute of Agricultural Research*



Beakal Tadesse Girma receiving his certificate after participating in JR Biotek Foundation's 2021 hands-on Plant Molecular Biology training programme at Masinde Muliro University of Science and Technology (MMUST), Kenya.

Building a Community of Practice

From Trainees to Volunteer Leaders



Dr Flora Asibe participated in JR Biotek Foundation's 2018 training programme at the University of Cambridge (left) and facilitated our workshop in Nigeria in 2021 (right). She has since returned in volunteer leadership roles within JR Biotek-AGRIIP

One of JR Biotek Foundation's greatest achievements has been the growth of a community of scientists who continue to support one another long after participating in our programmes. Many alumni have returned as trainers, mentors, collaborators, programme leaders, and AGRIP volunteers, demonstrating the Foundation's commitment to building not only scientific capacity, but also a lasting network that continues to multiply impact across Africa.



JR Biotek Foundation's Plant Molecular Biology training workshop at the Centre for Dryland Agriculture, Nigeria, where several facilitation roles were led by JR Biotek alumni scientists.



Dr Catherine Danmaigona (second from left), one of the earliest participants in JR Biotek's 2014 training in Nigeria, later returned to support subsequent Foundation programmes, including the 2019 training workshop in Benin Republic.

Impact Spotlight

From Trainee to Research Leader

“The Foundation’s initiatives helped me establish a strong professional network, creating reliable collaborations that will support my research endeavours well into the future. Through training programmes, mentorship, journal clubs, and international partnerships, I became part of a community of scientists who continue to learn from, collaborate with, and support one another. JR Biotek Foundation’s commitment to capacity building and mentorship has been truly transformative, enabling me to excel both academically and professionally.” –*Dr Anthony Mabele, Research Fellow, Kibabii University and the Masinde Muliro University of Science and Technology, Kenya*



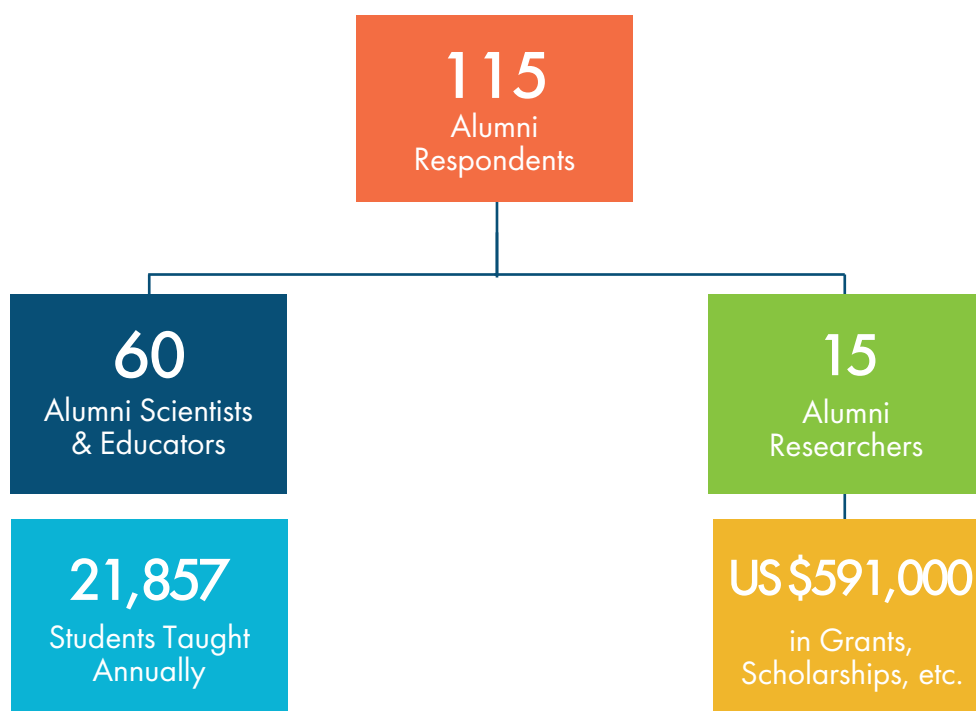
Dr Anthony Mabele (right end) helping lead JR Biotek Foundation’s 2021 Plant Molecular Biology training programme at Masinde Muliro University of Science and Technology (MMUST), Kenya.

The Alumni Multiplier Effect

From Trained Scientists to Educators, Mentors and Multipliers

JR Biotek Foundation's first decade has created opportunities far beyond technical training, supporting leadership, teaching, mentorship, collaboration, innovation, and career progression. An alumni survey involving 115 respondents found that 60 alumni now teach, train, supervise, or mentor approximately **21,857** university students each year, demonstrating the Foundation's growing multiplier effect across African higher education and research.

The survey also found that 15 alumni respondents had collectively leveraged more than **US\$591,000** in research grants, scholarships, fellowships, travel awards, equipment support, and professional opportunities following their participation in JR Biotek Foundation programmes. As many alumni did not assign monetary values to all opportunities received, this figure is likely a conservative estimate of the Foundation's longer-term impact.



Note: These figures are based on responses from 115 programme alumni and represent a documented subset of JR Biotek Foundation's wider alumni network.

"The knowledge gained has enabled me to teach biotechnology concepts more confidently. I regularly share JR Biotek educational resources with my students and encourage them to learn beyond the classroom." -Dr Obaiya Grace Utoblo, University of Jos, Nigeria



Dr Obaiya Grace Utoblo participating in the JR Biotek Foundation–SPUN Africa Mycorrhizal Mapping & Metagenomics Training Workshop in Kumasi Ghana (2024).

Building Collaborations

Strengthening Scientific Networks

Participants consistently identified networking and collaboration as among the most valuable outcomes of JR Biotek Foundation programmes. Many alumni have gone on to develop research partnerships, international collaborations, publications, grant applications, and long-term professional relationships spanning Africa and beyond. These connections have extended the Foundation's impact beyond training, creating a growing network of scientists, institutions, and mentors working together to advance agricultural research and innovation.



Dr Carol Ibe speaking at JR Biotek Foundation's Alumni Symposium in Ghana (left), alongside members of the Foundation's 2018 cohort of African early-career scientists who participated in the Plant Molecular Biology training workshop at the University of Cambridge.

“Networking is key in research and development. Through the workshop, I met researchers and collaborators who have since become partners on projects that led to peer-reviewed publications.” –*Dr Ethelyn Forchibe, The University of Bertoua and the Catholic University of Cameroon, Bamenda*

“Through JR Biotek, I successfully secured funding from SPUN to conduct studies on mycorrhiza. The foundation also provided invaluable networking opportunities, connecting me with scientists whose collaborations continue to shape my research today.” –*Dr Jacob Ulzen, University of Ghana, Ghana*



Dr Jacob Ulzen (right) and Dr Astride Carole Djeuani (left, in right image) collecting soil samples for metagenomics analysis during the JR Biotek Foundation–SPUN training workshop in Ghana.

Building Leaders

Mentorship, Confidence and Career Progression

The JR Biotek–Plant Cell Atlas African PhD Scholars Mentorship Programme, alongside other leadership-focused initiatives, reinforced a lesson that has shaped the Foundation’s work over time: mentorship accelerates growth. Through structured mentoring relationships, scholars gained support in career development, research planning, scientific communication, international networking, and leadership development. Participants reported increased confidence, stronger professional networks, and greater clarity around their career trajectories.



This emphasis on leadership development reflects JR Biotek Foundation’s broader understanding that strengthening African science requires more than technical competence alone. It also requires scientists who are confident, connected, and supported as they navigate research careers, build collaborations, mentor others, and take on leadership roles within their institutions and communities.

“The six-month mentorship programme provided invaluable insights into reviewing papers, publications, and building my academic career.” –Dr Anthony Mabele, Masinde Muliro University of Science and Technology, Kenya



Dr Anthony Mabele presenting his research during JR Biotek Foundation’s Alumni Symposium in Ghana (2022).

“Through its tailored training and mentorship, JR Biotek Foundation empowered me to navigate academic challenges and elevate my research, paving the way for greater success in my career. The Foundation’s support has been a catalyst for both my personal and professional advancement.” –Nii Ayi Ankrah, Kwame Nkrumah University of Science and Technology, Ghana

Building Innovators

From Bio-Innovation to Research & Entrepreneurship

Innovation has been a defining feature of JR Biotek Foundation's programmes. Through the Africa Bio-Innovation Pitch Challenge (2017–2021) and the JR Biotek Research & Innovation Challenge (2026), participants have been encouraged to transform scientific knowledge into practical solutions for agricultural and societal challenges. These initiatives have fostered creativity, teamwork, and entrepreneurial thinking, while helping early-career scientists move beyond technical training.

Winning teams from the 2026 Challenge are invited into the **AGRIIP Research & Entrepreneurship Fellowship**, supporting the development of farmer-informed innovations into practical, climate-resilient solutions. Together, these initiatives bridge JR Biotek Foundation's first decade of scientific capacity building with AGRIP's next phase of research, innovation, and entrepreneurship.



Participants of the Open Labware Training Workshop (left image) and one of the winners of the Africa Bio-Innovation Pitch Challenge during JR Biotek's 2019 lab training workshop in Benin Republic.

“The innovation pitches encouraged me to think beyond my immediate research interests and work effectively with people from different disciplines.” –*Fatima Fibrin Abubakar Institute for Agricultural Research, Ahmadu Bello University, Nigeria*

Part II Summary

Over the past decade, JR Biotek Foundation has done more than train scientists. It has helped develop educators, mentors, leaders, innovators, collaborators, and communities of practice whose work now extends into classrooms, laboratories, institutions, and communities across Africa. The Foundation's experience demonstrates that investments in people continue generating value through teaching, mentorship, research, innovation, and leadership.

Yet a further question remained: how could these capacities be connected more directly to the challenges facing farmers, indigenous crops, food systems, and climate resilience across Africa? That question led to the next evolution of JR Biotek Foundation's work.

PART III

AGRIIP – From Vision to Implementation

The Next Chapter of JR Biotek Foundation

For more than a decade, JR Biotek Foundation invested in people. Scientists were trained. Leaders emerged. Networks grew. Collaborations formed. Innovations were explored. Yet one question continued to surface: **how can scientific knowledge be connected more directly to the farmers, communities, and food systems it is intended to serve?**

Across Africa, farmers possess valuable knowledge and lived experience, while scientists contribute research, technology, and innovation. Too often, however, these groups operate in parallel rather than together. At the same time, many indigenous crops with significant nutritional, economic, cultural, and climate resilience value remain under-researched and underutilised. These realities led to the creation of the **Agri-Innovation & Impact Platform (AGRIIP)** - a long-term initiative designed to connect scientists, farmers, extension systems, institutions, entrepreneurs, policymakers, and communities around locally led solutions for climate resilience, food security, indigenous crop revitalisation, and sustainable development.

AGRIIP represents the next evolution of JR Biotek Foundation's work: moving from building scientific capacity alone to strengthening the systems that enable scientific knowledge to create lasting impact.



Participants in JR Biotek Foundation's 2026 Plant Molecular Biotechnology training programme delivered in partnership with Michael Okpara University of Agriculture, Umudike (MOUAI), Nigeria, and the University of Cambridge.

"The first decade was about building people. The next decade is about connecting people to create lasting systems change." – Dr Carol Ibe, Founder & Executive Director of JR Biotek Foundation.

A Decade of Impact, A New Platform for the Future

Where AGRiIP Began

On 27 March 2025, JR Biotek Foundation marked its tenth anniversary at the University of Cambridge through a special public convening that celebrated a decade of impact and introduced AGRiIP as the Foundation's next major platform for action. The event brought together scientists, entrepreneurs, policy experts, artists, funders, students, and community members to reflect on JR Biotek Foundation's first decade and to explore how the next decade of work could connect science more intentionally to farmers, indigenous crops, climate resilience, and sustainable livelihoods.



JR Biotek Foundation's 10-year anniversary celebration, Roots of Resilience, and the official launch of AGRiIP at the University of Cambridge (2025).

Through scientific presentations, policy dialogue, innovation showcases, artistic engagement, and community conversations, a clear message emerged: the future of African agricultural innovation would require stronger connections between science, farmers, indigenous knowledge, entrepreneurship, and community impact. It was within this context that AGRiIP was formally introduced as JR Biotek Foundation's long-term platform for translating scientific capacity, research, and partnerships into integrated, farmer-centred agricultural systems across Africa, marking the Foundation's evolution from scientific capacity building to a broader platform for agricultural innovation and systems transformation.



A panel-led discussion during JR Biotek Foundation's 10-year anniversary celebration at the University of Cambridge, chaired by Professor Mizeck Chagunda of the University of Edinburgh



key JR Biotek and AGRiIP partners at the Cambridge launch, including Dr Rebekah Sacher, Dr Carol Ibe, Dr Kabir Mustapha Umar, and Dr Ruth Naa Ashiokai Prempeh.



JR Biotek Foundation team members and implementation partners meeting in Cambridge a day after the AGRIP launch for a Learning & Action Group session focused on practical strategies for implementing AGRIP in African countries.

Honouring a Decade of Partnership, Service and Scientific Leadership

As part of Roots of Resilience, JR Biotek Foundation hosted the inaugural JR Biotek Awards, celebrating a decade of partnership, mentorship, scientific leadership, and service that has helped advance African agricultural research and innovation.

The awards recognised institutional partners, collaborators, mentors, volunteers, board members, and scientific leaders whose commitment has strengthened the Foundation's impact. More than a celebration of individual achievements, the ceremony honoured the collective effort and shared vision that continue to drive JR Biotek Foundation's mission across Africa.



Award recipients and long-term JR Biotek collaborators honoured during the inaugural JR Biotek Awards at the University of Cambridge, including Dr Ruth Naa Ashiokai Prempeh, Dr Kabir Mustapha Umar, Ruth Nanjala, and Professor John P. Carr. The awards were presented by Professor Mizeck Chagunda on behalf of JR Biotek Foundation.

AGRIP in Action – Nigeria 2026

In 2025–2026, AGRIP moved from vision to implementation. Building on JR Biotek Foundation's decade of scientific capacity building, its early implementation was informed by a climate resilience research collaboration led by Dr Carol Ibe (JR Biotek Foundation) and Professor Olayinka Nwachukwu at Michael Okpara University of Agriculture Umudike (MOUUAU), supported by the Mastercard Foundation–University of Cambridge Climate Resilience and Sustainability Research Fund. The collaboration helped test and refine key elements of the AGRIP model, including scientific training, farmer engagement, innovation, stakeholder dialogue, climate resilience education, and community outreach.

Training 30 Nigerian Scientists in Plant Molecular Biotechnology



Participants in the 2026 Integrated Plant Molecular Biotechnology and Climate-Resilient Agriculture training workshop delivered in partnership by JR Biotek Foundation, MOUUAU, and the University of Cambridge.

Listening to 50 Smallholder Farmers

Through this work, scientists, farmers, extension professionals, community leaders, health practitioners, policymakers, and institutional stakeholders were brought together within a single framework focused on practical solutions, shared learning, and more connected approaches to climate resilience and agricultural development.



The MOUUAU Agricultural Extension & Rural Development team with 50 farmers from five local communities in Umuhia, Abia State, alongside the JR Biotek Foundation team during the Farmer–Scientist Engagement and Medical Outreach held at MOUUAU in March 2026.



Agricultural extension professionals facilitating focus group discussions and reviewing field insights generated during the engagement.

These activities provided valuable insights that continue to shape AGRIP's implementation approach and helped JR Biotek Foundation begin testing how scientific training, farmer engagement, innovation, climate resilience education, and community support might work together within one integrated platform.

Medical Outreach and Community Health Services



As part of JR Biotek–AGRIP's commitment to supporting farming communities, JR Biotek Foundation partnered with the MOUAU Medical Centre to deliver a medical outreach alongside the farmer engagement activities, providing consultations, medication, and treatment to 96 farmers and community members.

Impact at a Glance

The integrated programme delivered in collaboration with MOUAU generated significant outcomes that are now informing AGRIP's next phase of implementation and scale-up.

Applications & Registrations

2,300+

Scientists Trained In-Person

30

Scientists Trained Virtually

459

Climate Summit Participants

120+

Smallholder Farmers Engaged

50

Farmer & Community Health Outreach Beneficiaries

96

From Dialogue to Field Insight

The AGRIP National Stakeholder Roundtable



Speakers, senior delegates, university leadership, and stakeholders at the JR Biotek–AGRIIP–MOUUAU Climate Resilience Summit held at MOUUAU, Nigeria, in March 2026

Following the MOUUAU programme and associated climate resilience activities, JR Biotek Foundation convened the AGRIP National Stakeholder Roundtable and Art-for-Impact Showcase in Abuja, Nigeria, on 31 March 2026. The event brought together researchers, policy experts, entrepreneurs, agricultural leaders, artists, and community stakeholders to explore practical approaches to strengthening climate resilience, indigenous crops, and agricultural development. The discussions helped refine AGRIP's implementation priorities and reinforced its core premise: that strengthening African agriculture requires better connections between farmers, researchers, extension services, markets, institutions, and communities.



Stakeholders and delegates at JR Biotek Foundation's AGRIP National Stakeholder Roundtable and Art-for-Impact Showcase in Abuja, Nigeria.

“Implementation, coordination, and collaboration are essential for translating ideas into impact.” –Summit Delegate

Listening to Farmers First

One of AGRIP's guiding principles is that meaningful innovation begins by listening. Through engagement with farmers, agricultural extension professionals, and community stakeholders, recurring priorities emerged, including climate variability, limited access to quality planting materials, declining cultivation of indigenous crops, weak market connections, and the need to engage more young people in agriculture. These insights reinforced AGRIP's commitment to co-creating farmer-centred research, innovation, and entrepreneurship that respond to real community needs.



Dr Carol Ibe, Dr George Okoro, Professor Olayinka Nwachukwu, and the MOUAU Agricultural Extension & Rural Development team led by Professor Ike Nwachukwu during the Farmer–Scientist Engagement at MOUAU, Nigeria.

Preparing for Scale

Kano State: From Planning to Implementation

In June 2026, AGRIP entered a new phase of implementation in Kano State, Nigeria. The process began with the AGRIP Kano Inception Meeting, which brought together agricultural extension professionals and community-based facilitators from multiple Local Government Areas to help shape the field engagement strategy and strengthen local partnerships.



JR Biotech–AGRIP Kano Inception Meeting with agricultural extension leads and facilitators in Kano State, Nigeria, as the team prepared for large-scale farmer engagement across selected Local Government Areas.

Building on this foundation, JR Biotek–AGRIIP Nigeria and its extension partners completed the first phase of farmer engagement across six Local Government Areas, engaging more than 637 smallholder farmers. The insights generated highlighted major challenges, including climate change, pest and disease pressures, high input costs, low yields, and the decline of indigenous crops, and are now shaping AGRIP's next phase. In response, the programme is rolling out Climate Resilience Practice Workshops and community health outreach, reflecting its commitment to practical, farmer-centred and non-extractive engagement.



Some of the farmers engaged during JR Biotek–AGRIIP's first phase of farmer consultations in Kano State, where extension teams worked across six Local Government Areas to document challenges, priorities, and opportunities for climate-resilient agricultural support.

The insights generated will directly inform the **AGRIIP Research & Entrepreneurship Fellowship**, where Fellows will co-create practical, farmer-centred solutions using field data and community partnerships, marking AGRIP's transition from planning to implementation.



Dr Kabir M. Umar leading JR Biotek Foundation's 2021 Plant Molecular Bio-Lab training programme in collaboration with the Centre for Dryland Agriculture, Bayero University (Nigeria) and the University of Cambridge.

The AGRIP Research & Entrepreneurship Fellowship

Developing the Next Generation of Agricultural Leaders

A key component of AGRIP is the Research & Entrepreneurship Fellowship, one of its flagship capacity-building initiatives. The Fellowship equips emerging scientists, innovators, and professionals to work alongside farmers and agricultural enterprises, developing practical solutions to real-world challenges. Building on more than a decade of JR Biotek Foundation's experience in scientific training, mentorship, innovation, and leadership, it aims to prepare a new generation of leaders who can translate research into meaningful impact.



Photo credit: JR Biotek Foundation

Part III Summary

AGRIP emerged from a decade of learning, partnership-building, scientific capacity development, and community engagement. Through its public launch in Cambridge, early pilot implementation activities, stakeholder dialogue, farmer consultations, fellowship development, and the first large-scale deployment activities in Kano State, the platform has moved from concept to action. The journey is only beginning, but the foundations for the next decade have now been laid: a platform rooted in science, shaped by farmers, strengthened by partnerships, and committed to building practical, locally grounded solutions for climate resilience, indigenous crops, and sustainable agricultural development across Africa.

PART IV

Stewardship, Partnerships & Value Creation

The Multiplier Behind the Multiplier

Over the past decade, JR Biotek Foundation has shown that lasting impact is driven not only by funding, but by strong partnerships, volunteer expertise, strategic leadership, and the effective use of knowledge and opportunities. By mobilising mission-aligned resources, the Foundation has delivered scientific training, mentorship, innovation, research collaboration, and community engagement across Africa, demonstrating how relatively modest resources can create lasting impact that continues to multiply across institutions, communities, and countries.



Photo credit: JR Biotek Foundation

A Partnership-Driven Model

JR Biotek Foundation has grown through a partnership-driven model, working with universities, research institutes, funders, volunteers, industry, and community organisations to expand scientific training, research, innovation, mentorship, and farmer engagement across Africa. This collaborative approach has enabled the Foundation to mobilise expertise, funding, and in-kind support beyond its own resources, strengthening both the reach and sustainability of its programmes while reflecting its commitment to transparency and accountability.



JR Biotek Foundation and University of Cambridge team members paid a courtesy visit to the Vice-Chancellor of Michael Okpara University of Agriculture, Umudike (MOUUAU), Nigeria



Where Dr Carol Ibe and Professor Olayinka Nwachukwu presented a gift during the launch of the 2026 lab training workshop and climate resilience summit.

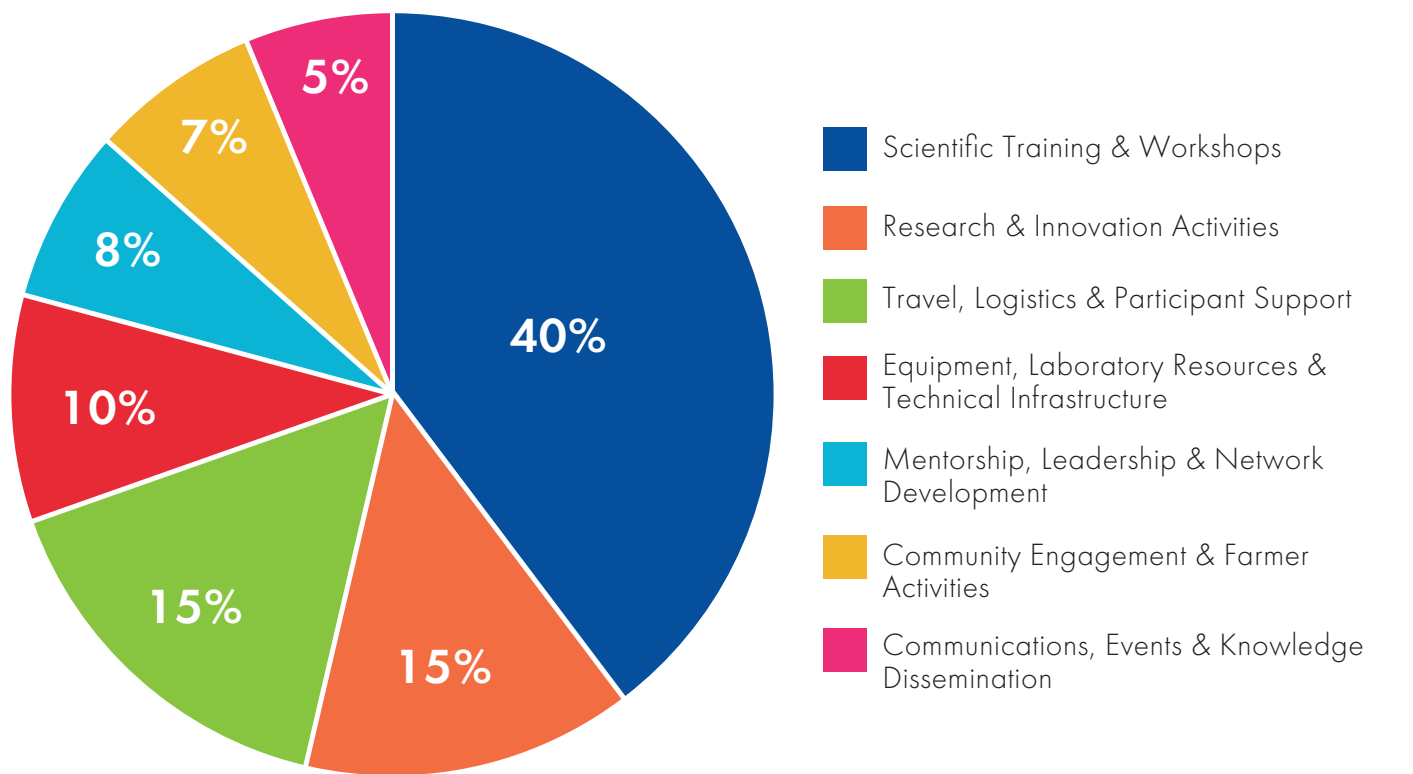
Mission-Aligned Resources Mobilised

Mission-Aligned Resources Mobilised
£325,000+

JR Biotek Foundation’s work has been supported through collaborative grants, institutional partnerships, sponsorships, direct donations, volunteer expertise, and in-kind contributions. Between 2016 and 2026, the Foundation helped mobilise more than **£325,000** in mission-aligned resources to advance scientific training, innovation, mentorship, research collaboration, farmer engagement, and climate resilience activities across Africa. As many programmes were delivered with partner organisations, these figures reflect resources mobilised across the Foundation’s wider partnership network, rather than direct organisational income alone.

How Resources Were Used

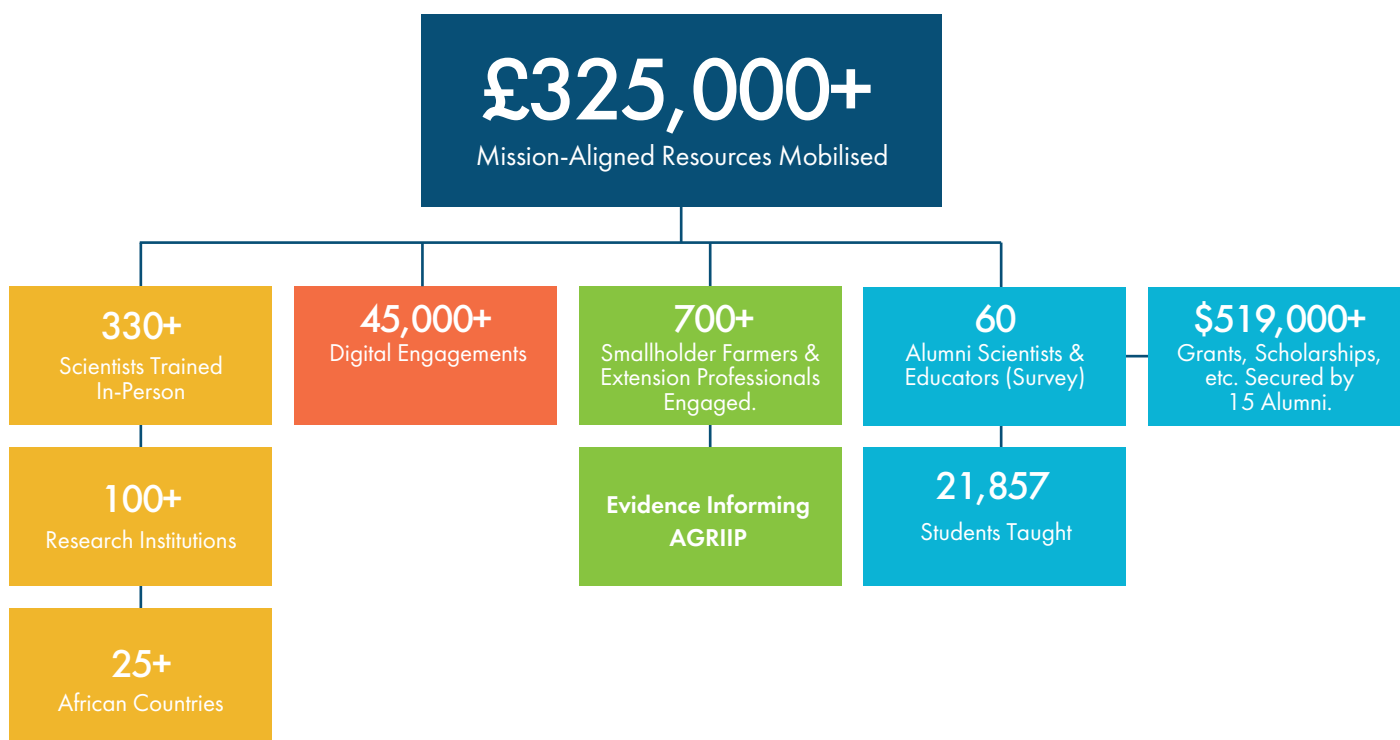
Mission-aligned resources were strategically invested in scientific training, research and innovation, mentorship, community engagement, and the infrastructure needed to deliver high-quality programmes across Africa.



Illustrative allocation of mission-aligned resources across JR Biotek Foundation's core programme areas.

Value Created

The true value of these resources lies not in the funding itself, but in the opportunities, leadership, networks, collaborations, and innovations they helped create. Over the past decade, JR Biotek Foundation has used collaborative resources, institutional support, volunteer expertise, and mission-aligned funding to create opportunities that extend far beyond individual programmes. These investments have supported the training of scientists, the development of leaders and mentors, the growth of research collaborations and innovation pathways, and the expansion of farmer-centred and community-responsive engagement through AGRIP.



This figure illustrates the multiplier effect of mission aligned resources. Through partnerships, volunteer expertise, and strategic investment, JR Biotek Foundation has expanded scientific capacity, strengthened institutions, supported research careers, and laid the foundation for farmer-centred innovation through AGRIP.

Together, these resources have contributed to 330+ scientists trained in person, engagement across 25+ African countries and 100+ institutions, 45,000+ digital learning engagements, 115 alumni survey respondents, of which 60 scientists and educators taught ~21,857 students annually, and 15 alumni raised US \$519,000+ in grants, scholarships, fellowships, travel awards, and related opportunities reported by surveyed alumni, and 700+ smallholder farmers and agricultural extension professionals engaged through farmer consultations, focus group discussions, training, climate resilience education, and medical outreach activities. These figures reflect not only the scale of JR Biotek Foundation's work, but the growing multiplier effect of investments in people, partnerships, and locally grounded innovation.

Power of Volunteerism

JR Biotek Foundation is powered by people. Since its inception, more than 50 unpaid volunteers, including the Founder, have contributed their time, expertise, and leadership to programme delivery, scientific training, mentorship, communications, fundraising, strategic planning, and farmer engagement, helping advance the Foundation's mission across Africa.



Christianah Oseni, a PhD scientist at Harper Adams University, teaching during JR Biotek Foundation's scientific training programme at MOUAU, Nigeria (left). She joined Dr Carol Ibe and Mujeeb Adaraloye, a PhD scientist at the University of Cambridge, in delivering the intensive programme as part of JR Biotek Foundation's volunteer-led scientific training efforts.

This volunteer-powered model has been one of the Foundation's greatest strengths, enabling it to remain lean, collaborative, and mission-driven while drawing on expertise from across Africa and beyond. Although these contributions are not reflected in financial records, they have been fundamental to the Foundation's growth, resilience, and long-term impact.



Professor John Carr of the University of Cambridge delivering a lecture to JR Biotek Foundation's 2017 cohort of African scientists at the Department of Plant Sciences, Cambridge.

Partners in Impact

JR Biotek Foundation's achievements have been made possible through a broad ecosystem of institutional, scientific, technical, and community partners across Africa and beyond. These partnerships have strengthened scientific capacity, supported innovation, deepened collaboration, and laid the foundations for AGRIP. Alongside formal partnerships, the Foundation's work has also been powered by a dedicated volunteer community whose contributions have supported programme delivery, training, communications, fundraising, strategic planning, and farmer engagement.

The Foundation's growth has therefore been driven not only by funding, but by generosity, commitment, shared purpose, and the willingness of people and institutions to invest in a common vision for African science, innovation, agricultural resilience, and community impact.



Photo credit: JR Biotek Foundation

Part IV Summary

JR Biotek Foundation's first decade demonstrates that meaningful impact is created when people, partnerships, and opportunities are connected around a shared vision. Its greatest assets are not financial alone. They are the scientists, educators, innovators, volunteers, institutions, partners, and communities who continue to multiply the value of every opportunity created. The Foundation helped mobilise **£325,000+** in mission-aligned resources, alongside substantial volunteer and in-kind contributions, to support scientific training, mentorship, innovation, research collaboration, and farmer-centred engagement across Africa.

PART V

The Next Multiplier: AGRIP 2036

If JR Biotek Foundation's first decade was about building people, its next decade is about rebuilding systems around Africa's indigenous crops. The Agri-Innovation & Impact Platform (AGRIP) is the Foundation's next evolution, a long-term, farmer-centred and scientist-led platform that connects scientific capacity, farmer knowledge, innovation, entrepreneurship, and community engagement to strengthen climate resilience, food systems transformation, and sustainable livelihoods across Africa.

AGRIP was born from a simple but urgent recognition: **Africa's food, nutrition, health, and climate challenges are deeply connected to the long-term neglect of indigenous crops and the systems that sustain them.** As these crops disappear from farms, diets, markets, and research agendas, Africa loses climate-resilient genetic resources, nutrient-dense foods, local livelihoods, and cultural knowledge. AGRIP seeks to help reverse that trend by reconnecting farmers, scientists, innovation, enterprise, and policy around crops that are locally adapted, nutritionally valuable, and essential to resilient African food systems.



Left: An indigenous bean crop, representing AGRIP's focus on Africa's indigenous and underutilised crops. Right: JR Biotek Foundation alumna Dr Binta Sani Ibrahim during plant molecular biology training in Cambridge. Together, these images reflect AGRIP's vision of strengthening scientific capacity while remaining grounded in farmer realities.

The AGRIP Model

AGRIP is organised around crops, not projects. Each priority crop moves through an integrated system:



This crop-centred approach connects farmers as custodians and co-creators, scientists as innovators and translators, enterprises as vehicles for value addition and scale, and policy and culture as sources of legitimacy, protection, and continuity. By treating each crop as a long-term system rather than a series of isolated projects, AGRIP seeks to strengthen resilience, value creation, and local ownership from seed to market to community impact.

Farmers at the Core

AGRIIP works with farmers as partners and co-creators, never as passive recipients. Through farmer associations, community networks, extension systems, and research partnerships, the platform helps identify priority indigenous crops, document local varieties and knowledge, understand production and post-harvest challenges, and co-develop practical pathways for crop improvement, value addition, and resilience.

Support may include participatory crop mapping, climate-smart agronomic practices, pest and disease management, post-harvest handling, market access, and enterprise development, with particular priority given to women farmers, youth, climate-vulnerable communities, and custodians of indigenous crop knowledge.



JR Biotek Foundation's Bambara groundnut production testing in Nigeria: experimental plots, seedling trials, and early crop development activities. Bambara groundnut, a nutritious, drought-tolerant African indigenous crop facing low yields and limited investment, has emerged as one of the important crops informing JR Biotek Foundation–AGRIIP's early research, farmer engagement, and value-addition work.

Our Ambition by 2036

10 million	smallholder farmers supported through indigenous-crop-based value systems
10,000	African scientists trained as crop-centred innovators and translators
30	indigenous crops safeguarded and valorised
1,000	sustainable agrifood ventures rooted in indigenous crops
10	African countries engaged through direct activities, partnerships, institutional networks, and community-centred implementation

These ambitions will be pursued through strategic partnerships, institutional networks, extension systems, innovation programmes, and community engagement. Success will be measured not only by numbers, but by stronger institutions, revitalised indigenous crops, more resilient communities, improved livelihoods, and deeper connections between research and society.

A Pathway to Scale

AGRIP is being built through evidence, partnerships, local ownership, and practical learning. Its initial focus is on Nigeria, where pilot activities are already underway. Early farmer consultations, extension engagement, climate resilience activities, and scientific training programmes are helping generate the relationships, field insights, and operational lessons needed to refine the model and guide future scale. Growth will be guided by a simple principle: **build strong foundations first, then scale what works.**



Agricultural Extension professionals and farmers participating in JR Biotek Foundation-AGRIP engagement activities in Abia and Kano States (left) and Kano State (right), Nigeria. These early partnerships are generating the evidence, relationships, and local ownership needed to shape AGRIP's future expansion.

An Invitation to Partner

Africa's food systems require strong partnerships. AGRIP welcomes collaboration with universities, research institutes, governments, philanthropic organisations, private sector partners, investors, farmer organisations, and communities committed to advancing locally led agricultural innovation.

Building on JR Biotek Foundation's first decade of investing in people, AGRIP connects science, innovation, entrepreneurship, and farmers to develop African-led solutions that strengthen indigenous crops, climate resilience, food security, and sustainable livelihoods.



JR Biotek Foundation team members, Board representatives, and collaborating partners from Nigeria and Ghana during a Learning & Action Group meeting following AGRIP's launch. AGRIP is being built through collaboration across scientists, farmers, institutional partners, and community stakeholders.



JR Biotek Foundation-AGRIP team during AGRIP's national launch in Abuja, Nigeria (2026).

Part V Summary

AGRIP represents the next chapter of JR Biotek Foundation's journey. It builds on a decade of scientific capacity building while shifting the Foundation's focus toward indigenous crop systems, farmer-centred innovation, climate resilience, and community-responsive transformation. If the first decade demonstrated the power of investing in people, the next decade will focus on connecting those people, partnerships, and capabilities around the crops and systems that matter most.

Closing Reflection

The Multiplier Effect Continues

When JR Biotek Foundation was established in 2015, its vision was to create opportunities for African scientists to learn, lead, and collaborate. Over the past decade, that vision has become a growing multiplier effect, with alumni returning as mentors, trainers, collaborators, and leaders who continue to influence research, education, innovation, and communities across Africa.



JR Biotek Foundation's collaborative scientific training programme in Nigeria (2026).

The statistics in this report tell only part of the story. The real impact lies in the people, partnerships, and opportunities that continue to multiply long after each programme ends. As JR Biotek Foundation enters its next chapter through AGRIP, it is building on this foundation by connecting science, innovation, farmers, indigenous knowledge, and partnerships to create practical, African-led solutions for resilient food systems.

“The true measure of impact is not the number of people we reach directly. It is the number of lives they go on to influence.”



JR Biotek Foundation team members, partners, alumni, and guests gathered at the Foundation's 10-year anniversary celebration and the official launch of AGRIP in March 2025

Impact Spotlight

Dr Olaide Ogunsanya

Plant Pathologist, Soil Microbiologist, JR Biotek Alumni
Member & AGRIP Volunteer Leader



Dr Olaide Ogunsanya (right) participating in JR Biotek Foundation's 2018 plant molecular biology laboratory training at the University of Cambridge.

Dr Olaide Ogunsanya represents the kind of leadership AGRIP seeks to cultivate and support. Since AGRIP's inception, she has played an important role in shaping Nigeria's operational framework, supporting programme planning, volunteer coordination, reporting systems, and implementation activities. Her journey reflects the power of investing in people and creating opportunities for leadership, collaboration, and service.

“Through JR Biotek, I had the opportunity to collaborate with a researcher from the University of Cambridge who was interested in African yam bean.” -Dr Olaide Ogunsanya

Igyuve Terngu Moses

Plant Breeder | Country Coordinator &
Field Scientist, JR Biotek Foundation–
AGRIP Nigeria

As a dedicated volunteer leader, Igyuve Moses has played a key role in leading AGRIP's farmer engagement activities in Kano State, Nigeria. He coordinated a team of agricultural extension professionals to engage 637+ farming households, document indigenous crops, identify local agricultural challenges, and generate field insights to inform climate-resilient agricultural research and innovation. His work reflects JR Biotek Foundation's commitment to bridging the gap between research and practice by ensuring that scientific knowledge reaches farmers and communities where it can create lasting impact.



Igyuve Moses co-leading JR Biotek Foundation–AGRIP's Kano Inception Engagement with Dr Flora Asibe, bringing together agricultural extension professionals and community facilitators to help shape climate-resilient, farmer-centred agricultural innovation in northern Nigeria.

“The most rewarding part of my journey has been helping bridge the gap between research and practice, ensuring that innovations and indigenous crops reach the people who need them most. Empowering extension agents and farmers with knowledge strengthens livelihoods, improves food security, and builds more resilient agricultural communities.” -Igyuve Terngu Moses

Mainda Kiwelu

Director, AGRIP Research & Entrepreneurship Fellowship
| Volunteer Leader, Advisor & Innovation Champion



Mainda Kiwelu exemplifies the power of sustained volunteer leadership and service. Her journey with JR Biotek Foundation began in 2017 when she served as a judge for the inaugural Africa Bio-Innovation Challenge. She returned in 2018 and continued supporting the Foundation in a range of advisory and leadership capacities, including as a Steering Committee member, advisor, and strategic supporter of several Foundation initiatives.

In 2021, she played a leading role in delivering the Foundation's multi-country Africa Bio-Innovation Challenge, supporting young scientists and innovators across Africa and helping strengthen the organisation's growing innovation ecosystem. Today, she serves as Director of the AGRIP Research & Entrepreneurship Fellowship, helping shape one of AGRIP's flagship initiatives designed to connect scientific knowledge, innovation, entrepreneurship, and community impact. Mainda's journey demonstrates how committed volunteers, advisors, and collaborators can help build institutions, create opportunities, and multiply impact across generations.

“Being involved in JR Biotek Foundation and AGRIP has been a truly rewarding opportunity to work alongside outstanding African scientists, educators, and innovators. Together, we are pursuing practical, relevant, and impactful solutions with our food systems at the centre.”

–Mainda Kiwelu

Final Reflection

Ultimately, JR Biotek Foundation's first decade has shown that the most powerful resource available to any society is not funding, infrastructure, or technology alone. It is people equipped with the knowledge, confidence, relationships, and opportunities needed to create change. That belief has guided the Foundation since the beginning. It continues to guide its work today, and it will continue to shape the next chapter through AGRIP, where investing in people, indigenous crops, and locally grounded systems can help build a more resilient and equitable future for African agriculture and communities.

The Next Decade Starts Now

Join Us in Shaping Africa's Agricultural Future

Our first decade was about investing in people. Our next will connect scientists, farmers, entrepreneurs, institutions, and communities to strengthen indigenous crops and build more resilient food systems across Africa.

Whether you're a scientist, university, funder, company, policymaker, volunteer, or supporter, we invite you to be part of this journey.

Partner with us. Support our work. Join our network.

www.jrbiotekfoundation.org
info@jrbiotekfoundation.org



Appendix A

Voices of Impact

Stories from Our Alumni Across Africa

Behind every statistic in this report is a person whose knowledge, confidence, and opportunities have grown. Their stories demonstrate the multiplier effect of investing in African scientists and the lasting impact they create for students, institutions, farmers, and communities.

"The foundation's initiatives helped me establish a strong professional network, creating reliable collaborations that will support my research endeavours well into the future. Through training programmes, mentorship, journal clubs, and international partnerships, I became part of a community of scientists who continue to learn from, collaborate with, and support one another. JR Biotek Foundation's commitment to capacity building and mentorship has been truly transformative, enabling me to excel both academically and professionally." –*Dr Anthony Mabele, Research Fellow, Kibabii University & Masinde Muliro University of Science and Technology, Kenya*



Research Capacity & Scientific Skills

Alumni Testimonials highlighting the development of laboratory skills, research confidence, scientific communication, molecular biology, bioinformatics, grant writing, and research excellence.

"The training resources remain my evergreen reference point for research enquiries and consultations. They strengthened my scientific network and boosted my confidence in molecular biology laboratory techniques." –*Dr Timi Wood, Centre Coordinator/Assistant Director, National Biotechnology Research and Development Agency (NBRDA), Odi, Bayelsa State, Nigeria*



JR Biotek's Plant Molecular Bio-Lab training programme at the Centre for Dryland Agriculture, Bayero University, Kano, Nigeria



Teaching, Mentorship & Knowledge Sharing

Stories demonstrating how our participants have gone on to teach, supervise students, mentor early-career researchers, develop curricula, and share knowledge within their institutions and communities.

“Before attending the workshop, I was struggling to refine my PhD research direction. The lectures provided insights that helped shape a well-organised research programme using plant breeding to address major health challenges.” *-Esosa Abraham Omere, University of Benin, Nigeria*

“The workshops gave me some of the best hands-on training and research exposure in molecular biology, which continue to be instrumental to my current research and career.” *-Promise Kenkwo, Michael Okpara University of Agriculture, Nigeria*



“The workshop improved my skills in the serological and molecular characterisation of pathogens and strengthened my ability to conduct advanced molecular research.” *-Lubao Wanyonyi Murere, Masinde Muliro University of Science and Technology, Kenya*



Dr Carol Ibe (blue) facilitating the 2017 plant molecular bio-laboratory training workshop at Cambridge



Collaboration & Professional Networks

JR Biotek Foundation programmes have helped foster lasting professional relationships across Africa and beyond. Alumni reported forming new research collaborations, co-authoring publications, developing joint grant proposals, presenting at international conferences, and building scientific networks that continue to support their research and professional development.



“We are currently applying for research funding in collaboration with a colleague I met through a JR Biotek Foundation workshop.” -Hellen Njoroge, Director of Agricultural & Ecological Research, Sirisia Leadership Academy, Kenya

“The programme helped expand my professional networks and collaborations while strengthening the quality of my research.” -Dr Velma Okaron, Research Scientist, Kenya

“Through the 2026 training at MOUAU, I established a collaboration with Dr Peter from the NCRI, which is now supporting my PhD research on sweet potato breeding.” -John Alfred, PhD Researcher, Nigeria

“I collaborated with colleagues from Ghana and Nigeria to develop joint research proposals, while also establishing new international connections through conference participation.” -Dr Mona Zayed, Egypt

“The programme inspired me to build partnerships and collaborations that continue to support my PhD research and professional development.” -Naaman Arodi, PhD Researcher, Kenya



Leadership & Career Development

Reflections on scholarships, fellowships, promotions, leadership roles, confidence building, and professional growth inspired through participation in our programmes.

“The knowledge gained has enabled me to teach biotechnology concepts more confidently. I regularly share JR Biotek educational resources with my students and encourage them to learn beyond the classroom.” -Dr Obaiya Grace Utoblo, University of Jos, Nigeria

“The skills obtained have been highly valuable in my teaching of undergraduate and postgraduate biotechnology courses.” -Kayode Ezekiel Ogunsola, Bells University of Technology, Nigeria

“I had the opportunity to be recruited into a tissue culture laboratory because of the knowledge acquired during the workshop.” -Deborah Oforiwa, CSIR-SARI, Ghana

“JR Biotek Foundation’s unwavering commitment to capacity building and mentorship has been transformative.” -Dr Anthony Mabele, Kibabii University and MMUST, Kenya

“JR Biotek encouraged me to move beyond the technical confines of my profession and adopt a holistic approach that integrates research and its broader applications.” -Beakal Tadesse Girma, Ethiopia / South Africa



Climate Resilience & Biotechnology

As climate change increasingly affects agricultural systems across Africa, participants emphasised the value of gaining knowledge and tools that can support the development of more resilient crops, farming systems, and communities.

“This training has aroused my curiosity and interest in the use of modern molecular tools in plant breeding to advance climate-resilient crops.” -Michael Israel, National Root Crops Research Institute, Nigeria

“The whole training was overwhelming in the best possible way. I felt the need to learn more so that I can apply such knowledge in helping my community.” -Harun Ali Kellu, University of Maiduguri, Nigeria

“The lectures were engaging and definitely stir you to go back to the drawing board on how we can improve agriculture in Africa.” -Oluwapelumi Adesola, Nigerian Research and Education Network



JR Biotek Foundation's collaborative training on the applications of molecular biotechnology in climate resilient agriculture (Nigeria 2026)



Advanced Technologies & Genomics

Exposure to emerging technologies, genomics, sequencing tools, and modern molecular techniques helped participants explore new research possibilities and strengthen their ability to engage with rapidly evolving areas of agricultural science.

“Portable sequencing demonstrated how genomics can move from central laboratories into the field, making advanced biotechnology more accessible in resource-limited settings.”
-Abdulbasid Bashir, Umaru Musa Yar'Adua University, Nigeria

“This learning opportunity provided useful information about Nanopore sequencing that will support my future metagenomics research.” -Saïdou Zongo, Burkina Faso



Charles Kayuki (Oxford Nanopore Technologies) leading the metagenomics training for soil microbiome identification during the JR Biotek-SPUN scientific capacity development program at CSIR-Crops Research Institute, Ghana.



The Multiplier Effect

The impact of JR Biotek Foundation extends far beyond individual participants. Through teaching, mentorship, research, collaboration, innovation, and community engagement, alumni continue to create opportunities and influence others within their institutions, professions, and communities.

“The Foundation equipped me with the tools, skills, and networks needed to contribute meaningfully to addressing ecological and agricultural challenges.” -Dr George Okoro, Michael Okpara University of Agriculture Umudike

“The Foundation’s commitment to empowering scientists like me has truly transformed both my personal and professional trajectory.” -Grace Gachara, Mohammed VI Polytechnic University, Morocco



Appendix B

Geographic Reach & Programme Footprint

A Decade of Building Scientific Capacity Across Africa

Over the past decade, JR Biotek Foundation has grown from a single molecular biotechnology training workshop into a pan-African network of scientists, institutions, partners, and farming communities. Through scientific training, mentorship, research collaborations, farmer engagement, and digital learning, the Foundation has built relationships that now span more than 25 African countries and 100+ universities and research institutions.

£325,000+

Mission-aligned
resources mobilised

330+

Scientists trained
in-person

45,000+

Digital learning
engagement

25+

African countries
reached

700+

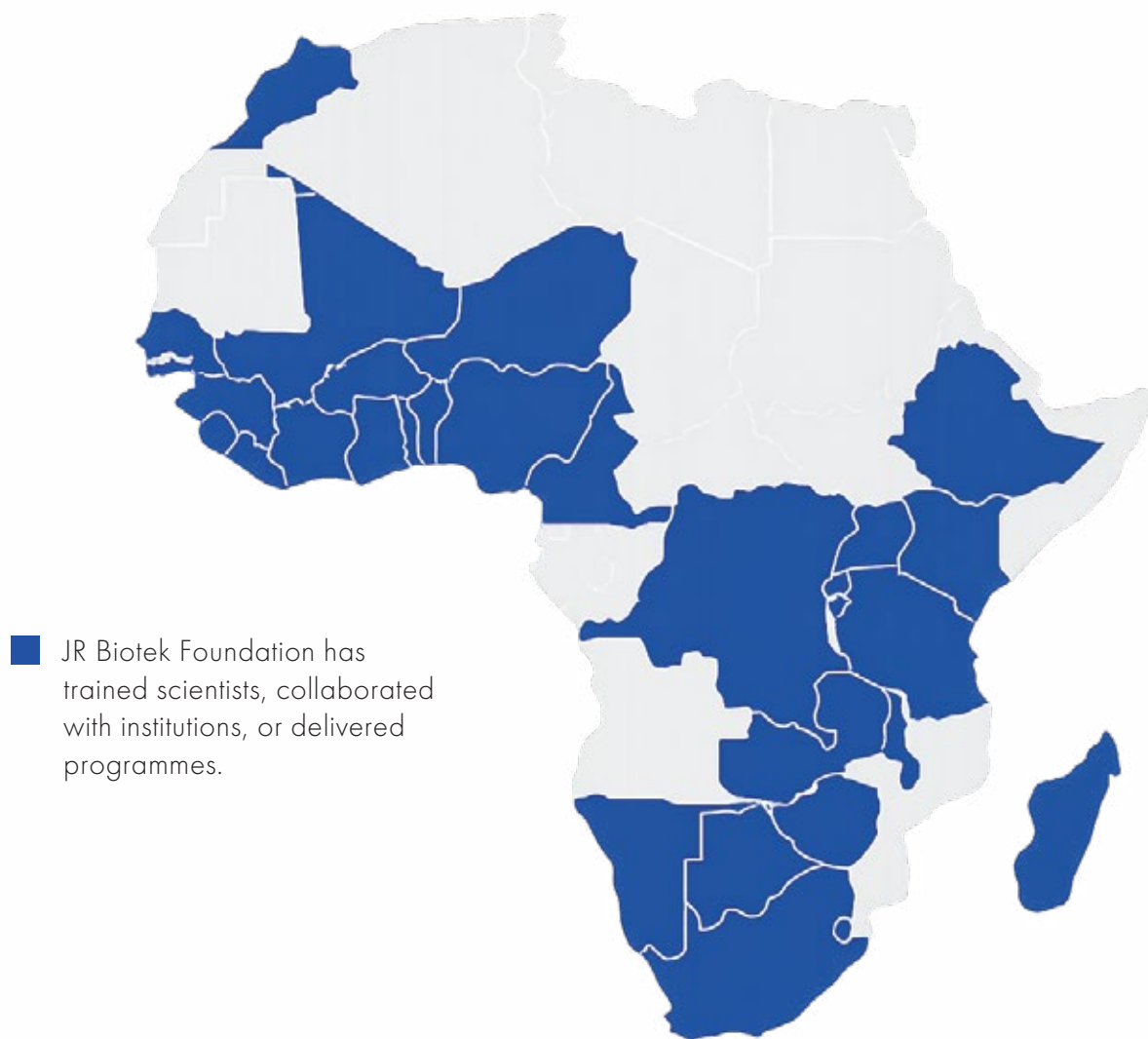
Smallholder farmers &
extension professionals
engaged

21,857

Students taught
annually by 60
surveyed alumni

\$519,000+

Grants, scholarships,
fellowships, etc.,
secured by 15 alumni



25+ African Countries Reached

- Benin
- Botswana
- Burkina Faso
- Burundi
- Cameroon
- Côte d'Ivoire
- Democratic Republic of Congo
- Ethiopia
- Ghana
- Kenya
- Liberia
- Madagascar
- Malawi
- Mali
- Morocco
- Namibia
- Niger
- Nigeria
- Rwanda
- Senegal
- Sierra Leone
- South Africa
- Tanzania
- Togo
- Uganda
- Zambia
- Zimbabwe

JR Biotek Foundation's programmes have brought together scientists, educators, institutions, and farming communities across Africa, creating a growing network committed to scientific excellence, innovation, and resilient food systems.

Appendix C

Programme Portfolio (2014–2026)

A Decade of Scientific Training, Innovation and Partnership

Over the past decade, JR Biotek Foundation has developed a diverse portfolio of scientific training programmes, conferences, mentorship initiatives, innovation challenges, farmer engagement activities, and strategic partnerships. Together, these programmes laid the foundation for AGRIP and the Foundation's next phase of growth.

Year	Programme	Reach / Participation
2014*	 Molecular Biotechnology Training Workshop (IITA, Nigeria)	13-15 Scientists • 4 African Countries
2015	 JR Biotek Foundation Established	Organisation Officially Established
2017	 Cambridge Molecular Biology & Bioinformatics Training	17 Scientists • 6 African Countries
	 African Diaspora Biotech Summit	100+ Participants from Africa, UK & Europe
2018	 Cambridge Molecular Biology & Bioinformatics Training	17 Scientists • 6 African Countries
	 UK–Africa Food Security Symposium	100+ Participants from Africa & UK
2019	 African Plant Breeders & OpenLabware Workshop (Benin)	100 Scientists • 19 African Countries)
	 Africa Bio-Innovation Pitch Challenge	100 Scientists • 18 Teams
2020	 COVID-19 Virtual Lecture Series	40+ Countries Reached - mostly Africa
2021	 Molecular Biology Training – Nigeria	25 Scientists + Facilitators
	 Molecular Biology Training – Ghana	25 Scientists + Facilitators

Year	Programme	Reach / Participation
2021	 Molecular Biology Training – Kenya	30 Scientists + Facilitators
	 Africa Bio-Innovation Pitch Challenge	Multi-country Participation
2022	 JR Biotek–Plant Cell Atlas African PhD Scholars Mentorship Programme	15 Scholars, 30 Mentors
	 JR Biotek Alumni Symposium (Ghana)	Multi-country Participation
2024	 Africa Mycorrhizal Mapping & Metagenomics Workshop (SPUN)	15 Scientists • 7 African Countries)
2025	 Roots of Resilience: A Decade of Innovation & Impact & AGRIP Launch	60+ Participants; Multi-sector Stakeholders
2026	 Plant Molecular Biology for Climate-Resilient Agriculture – Virtual Training Programme	400+ Participants
	 Hands-On Plant Molecular Biology for Climate-Resilient Agriculture (MOUUAU)	30 Scientists
	 Climate-Resilient Agriculture – Nigeria Summit	120+ Participants
	 JR Biotek-AGRIP Farmer–Scientist Engagement Activities, (Abia State, Nigeria)	50+ Farmers, 12 Extension Professionals
	 Community Health Outreach	96 Community Members
	 JR Biotek-AGRIP Farmer Engagement , (Kano, Nigeria)	637+ Farmers, 6 Extension Professionals

Appendix D

Strategic Supporters, Institutional Partners & Volunteers

Strategic Supporters & Funding Partners

- Mastercard Foundation & University of Cambridge Climate Resilience & Sustainability Research Awards
- Global Challenges Research Fund (GCRF)
- Cambridge-Africa
- Gates Cambridge Trust
- Trinity College Cambridge
- Newnham College Cambridge
- University of Cambridge
- SPUN
- OpenPlant
- Global Food Systems, Cambridge
- BBSRC
- Individual Donors & Supporters

Institutional Partners

- University of Cambridge, United Kingdom
- CSIR-Crops Research Institute, Ghana
- Michael Okpara University of Agriculture Umudike, Nigeria
- Centre for Dryland Agriculture, Bayero University, Nigeria
- Masinde Muliro University of Science and Technology, Kenya
- Kibabii University, Kenya
- University of Abomey-Calavi, Benin Republic

Scientific & Technical Partners

- Plant Cell Atlas
- SPUN
- Oxford Nanopore Technologies

Volunteers

JR Biotek Foundation's work has been strengthened by the contributions of **50+ volunteers** who have served as trainers, mentors, speakers, programme coordinators, communications officers, fundraising advisors, technical experts, and strategic advisors.

Alumni & Participants

Finally, we recognise the thousands of scientists, students, innovators, educators, entrepreneurs, farmers, and community stakeholders who have participated in JR Biotek Foundation programmes and continue to multiply their impact across Africa.



THE MULTIPLIER EFFECT

2015-2026 Impact Report

“The true measure of impact is not the number of people we reach directly. It is the number of lives they go on to influence.”

****The first decade built people.
The next decade begins with AGRIP.****

Empowering African Scientists. Transforming Communities.

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