AT ASM:

WE ARE **ENGAGING** OUR MEMBERSHIP
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TO **STRENGTHEN** HEALTH SYSTEMS,
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**EMPOWER** EARLY-CAREER SCIENTISTS,
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**FOSTER** GLOBAL NETWORKS,
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**IMPROVE** ACCESS TO SCIENTIFIC RESOURCES,
[PAGE 18]

AND **ADVANCE** PARTNERSHIPS
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TO REALIZE A BETTER FUTURE.
In today’s global village, public health challenges know no borders, and neither should knowledge and scientific expertise. The days when Leonardo da Vinci could do it all alone, integrating within the genius of one individual all the knowledge and skills needed, are long over. As we grow to appreciate the complexity of biology, we also learn all that we do not know, and together with the shrunken world in the era of jet travel, we are confronted with daunting problems, such as the constant emerging and re-emerging of infectious diseases we thought we had eliminated. Just one scientist, one approach, one country capacity, even as big as the US or Europe, cannot do it alone; we need to build capacity around the world, learn from each other, and create a fertile ground for a culture of collaboration and cooperation to improve global health security.

Despite enormous public health and political challenges, the scientific landscape in many areas of the world is changing, and ASM played an important role in moving the needle. As you will read in the following Global Impact Report, we have become a truly global organization, with about 50% of our membership outside of America (despite the “A” in our name!). We have built a deep and wide network of microbiologists, starting with our ASM Country Ambassadors, who disseminate knowledge and deploy local solutions to complex problems. We have contributed to improving public health and strengthening health systems, particularly on the biosafety front, and perhaps most importantly, we focused on the next generation of global leaders in science by developing and empowering young investigators from all around the world.

I would be remiss if I did not give credit where credit is due—a big shout out to Jason Rao and his colleagues in the ASM International Department, and Steve Specter and the whole International Board who have made all this possible! Pasteur and Mechnikov greatly benefited from international collaboration, but today the need for collaboration goes well beyond individual and confined geographical areas; it is indeed a global village, where there is no them, it is just us! Onward and forward, ASM; we have a big job in front of us!
WHERE WE WORK

MAP KEY

- Country Ambassador
- Young Ambassador
- International Student Chapter
- Laboratory Capacity Building Program
- Global Science Engagement Program
- Bioresource Center
ASM’s international membership continues to climb at an unprecedented rate, growing to over 24,000 total members outside the U.S. International members now comprise 50.4% of total ASM membership.

With their diverse educational and experiential backgrounds, international ASM members directly advance our goal of strengthening public health systems in resource-challenged countries.

They represent dozens of countries and fields, speak numerous languages, and connect with life scientists from around the globe. These members impart their technical expertise to scientists in the field and connect their communities to the latest scientific research, resources, and training opportunities.

**TOP 5 MEMBERSHIP COUNTRIES OUTSIDE THE U.S.**
(Numbers as of December 31, 2015)

- **NIGERIA**
  2,672 MEMBERS
  *Nigeria has the largest number of ASM members outside of the United States.*

- **PAKISTAN**
  2,397 MEMBERS

- **YEMEN**
  1,298 MEMBERS

- **BANGLADESH**
  1,227 MEMBERS

- **VIETNAM**
  1,263 MEMBERS
VIETNAM
Dr. Pham Hong Nhung

In August 2014, Dr. Pham Hong Nhung partnered with ASM Country Ambassador Dr. Ngo Thi Phuong Dung to co-lead the *ASM Culture of Responsibility* workshop on basic biosafety principles in Hanoi, Vietnam.

Nhung successfully trained 40 laboratory staff members from the Microbiology Department at Bach Mai Hospital on reducing the risk of laboratory acquired infections.

Nhung also serves as the point of contact for the ASM BioResource Center at Bach Mai Hospital, frequently coordinates events, and connects hospital staff to microbial sciences information.

PAKISTAN
Sadiah Saleem

University of Karachi Ph.D. student Sadiah Saleem presented two posters at asm2015 showcasing research on low-cost culture media made from plant waste.

She and her team successfully developed culture media that supports the growth of fungi, yeast, and human pathogens, with the greater goal of improving access to culture media in Pakistan and resource-constrained areas of the world.

TRINIDAD & TOBAGO
Dr. Shirematee Baboolal (Shree)

One of ASM’s most esteemed consultants, Dr. Shirematee Baboolal delivers targeted technical assistance to TB and public health laboratories all over the world.

Her commitment to technical excellence, ability to assimilate with local cultures, and desire to ensure laboratories own their new skills, have all made an impact towards reaching our program goals—quality assured diagnostics and accurate care and treatment of patients living with HIV/AIDS, TB, and other related opportunistic infections (OIs).
To meet the challenges of global health security, we work with clinical and public health laboratory networks and academic institutions in 24 countries. We provide technical assistance, workshop training, and in-laboratory mentoring.
STRENGTHENING HEALTH SYSTEMS

HOW WE CHANGED THE WORLD THIS YEAR

OUR MENTORSHIP REACH

The goal of our mentoring programs is to ensure quality service in the diagnosis of HIV/AIDS and related opportunistic infections of public health significance. ASM’s packages include training on Microbiology, Tuberculosis (TB), Antimicrobial resistance (AMR), Zoonotic diseases, Sexually-transmitted infections (STIs).

ASM successfully developed a model for conducting laboratory mentoring in resource-limited countries to advance technical skills, quality, biosafety, and other skills—often on a pathway towards accreditation.

Our mentorship process combines direct observation and feedback, document review, case studies, continuing education, and the promotion of a multidisciplinary team model. Progress is measured using a scored checklist based on international laboratory standards, while individual knowledge and technical skills are assessed through competency testing.

Mentorship continues until successful completion of the program, typically achieved within 2 years.

We developed our mentoring packages using standardized open source international guidelines and references, and they can be easily tailored and implemented in countries across the globe.

TANZANIA

Dennis Kirindo, an ASM-trained local mentor, works at the Kibong’oto National Tuberculosis Hospital in Tanzania, and mentors staff at the Kitete Regional Hospital in Tabora.

At both institutions, Dennis notes that his technical training with ASM helps increase the quality of laboratory services and earns the confidence of clinicians. Using the ASM Microbiology Mentoring package, Dennis trained 16 local microbiologists as laboratory mentors—a significant leap forward for programs in Tanzania.

The mentors learned to use the mentoring package program themselves, and were then assigned to adeptly serve 16 sites across Tanzania.

IN 2015
ASM PROVIDED GLOBAL LABORATORY MENTORSHIP TO 82 PEOPLE IN 7 COUNTRIES
The GHSA encourages partnership among nations, international organizations, and other stakeholders in order to prioritize and prevent the spread of infectious diseases globally, to support early detection of health threats, to respond to outbreaks, and to promote health security.”

**ETHIOPIA**

In the fall of 2015, the Bahir-Dar Regional Public Health Laboratory (BRPHL) became the second regional lab in Ethiopia to graduate from ASM’s Microbiology Mentoring Program.

Located in the city of Bahir-Dar, the BDRHRL had very little capacity to carry out accurate laboratory diagnostics at the inception of the program. After participating in a 21-week one-on-one mentoring program, the laboratory can now perform the core functions and activities of a microbiology reference laboratory.

Additionally, participating staff have the capacity to train others, and the BDRHRL plans to continue contributing to improved health outcomes for the regional population and train other laboratories.

This follows the success of the Adama Regional Reference Laboratory in Adama City, the first laboratory in Ethiopia to graduate from the rigorous ASM program in the summer of 2014.

**INDIA**

ASM has been collaborating with sister societies to promote sustainable biosafety and biosecurity best practices in India since 2012. In partnership with the Society for Biosafety-India (SBS), ASM has trained more than 1,000 microbiologists in basic biosafety principles through the Culture of Responsibility program and targeted workshops.

In 2015, ASM and SBS drafted the first comprehensive biosafety level 2 (BSL-2) checklist for India. The checklist—based on customized elements of the WHO Laboratory Biosafety Manual and CWA 15793:2011—will be piloted and rolled-out by SBS in 2016. The checklist includes sections on management and organization risk assessment, training and competency, good laboratory practice, personal protective equipment, emergency preparedness, decontamination and sterilization, transport, and security.

In 2016-2017, ASM plans to further build SBS’s capacity to serve as a sustainable repository of resources and training for India by supporting SBS’s first conference and rolling out a BSL-3 checklist.
CÔTE D’IVOIRE

In 2014, there was only one central laboratory in Côte d’Ivoire providing early infant diagnosis (EID) and viral load testing. ASM worked with partners to build a regional laboratory network of Containerized Molecular Laboratories (CMLs) diagnosing HIV in infants.

The establishment of these CMLs provides access to critical services for thousands of people, and more infants can be diagnosed and begin receiving the care and treatment they need.

Thanks to close collaborations with local partners—including CDC-Côte d’Ivoire and many others—ASM introduced the first fully functional CML in February 2015 and plans to deliver the four additional CMLs are already underway.

"Without these crucial diagnoses, HIV-infected infants in Africa have a 35% chance of dying by age 1, and a 52.5% chance of dying by age 2.”¹

UNITED STATES

In 2015, ASM’s International Affairs won a CDC grant to implement programs in support of the Global Health Security Agenda in Ethiopia and Tanzania.

The $500,000 awarded for the first year will focus on prevention of antimicrobial resistance (AMR) and laboratory systems strengthening in Ethiopia and Tanzania. AMR support will include:

- Strengthening national AMR action plans
- Building laboratory network capacity for culture
- Identification and antimicrobial susceptibility testing (AST) using a One Health approach
- Improving infection control practices

ASM will engage with CDC offices in-country, ministries of health, and other local stakeholders to develop country-specific strategies and work plans to build upon current microbiology laboratory strengthening programs in these countries.

ASM YOUNG AMBASSADORS OF SCIENCE

The 48 ASM Young Ambassadors of Science engage the next generation of scientists by leveraging ASM resources, facilitating networking and professional development, and inspiring collaboration among students and early-career scientists. In 2015 alone, Young Ambassadors represented ASM at over 45 events attended by over 1,200 individuals around the world.

YOUNG LEADERS CIRCLE

The Young Leaders Circle, a select group of Young Ambassadors, supports and represents the Young Ambassadors of Science. They seek to empower the voices of young microbiologists through support for professional development, global networking, and increased gender diversity in the microbial sciences.

INTERNATIONAL STUDENT CHAPTER

SPOTLIGHT ON BRAZIL:

In addition to hosting events for the students, the University of São Paulo, Brazil ASM student chapter launched a blog called “Ciência Informativa” (Informative Science), which is a scientific blog that publishes a text about different topics in science each week.

Initially, all posts were published in Portuguese, but now the Brazil student chapter is reaching an even larger audience by publishing an English version twice a month.

International Student Chapters support the interests of the student science community and provide leadership opportunities for students interested in the microbial sciences.

With nearly 50 active student chapters located within the United States, the expansion to the international sphere offers even more opportunities for global partnership and learning.

Look for the icons on the Impact Map on Pg. 4 to see the locations of all our Young Ambassadors & International Student Chapters.

13 INTERNATIONAL STUDENT CHAPTERS AND 6 NEW CHAPTERS

EGYPT, TURKEY, GEORGIA, CANADA, AND INDIA
COUNTRY AMBASSADORS

The Country Ambassador Program reflects the breadth and depth of ASM’s global network, advancing collaboration and knowledge sharing for all members. In 2014-2015, ASM appointed two new cohorts of 55 Country Ambassadors from six continents, expanding the network to 83 countries across the globe.

THE COHORTS INCLUDE 20 COUNTRIES THAT HAVE NEVER PREVIOUSLY HAD ASM REPRESENTATION:

AFGHANISTAN • ANGOLA • BOTSWANA
CUBA • CYPRUS • DR CONGO • GUYANA
HUNGARY • LIBERIA • LITHUANIA • MALI
MOZAMBIQUE • MYANMAR • OMAN • QATAR
SAINT KITTS AND NEVIS • PALESTINE
RWANDA • SUDAN • TOGO

+ 63 MORE COUNTRIES WITH ASM REPRESENTATION

Look for the icon on the Impact Map on Pg.4 to see the locations of all our Country Ambassadors.
Fostering Global Networks

Ambassador Leadership Circle Activates Our Global Presence

The Ambassador Leadership Circle—currently comprising 7 senior ambassadors from 5 continents—provides strategic direction and a cohesive voice for the Country Ambassadors. Together, they work to address challenges and capitalize on opportunities arising from the Society’s expanding global presence.

In 2015, one of their significant projects was the creation of a New Ambassador Webinar Training Series. This series provided peer-to-peer training to the newest cohort of 33 Country Ambassadors appointed in December 2015.

Represented ASM at over 320 scientific events

Coordinated onsite registration for 4500 ASM members

97 professional development workshops

200 universities visited

ASM represents 83 ambassadors on 6 continents part of 1 global network

(As of 2015)
ASM partners with 10 sister societies.

Pakistan's ASM membership increases by 2300+.

Bangladesh ambassador reaches 800+ scientists.
Fostering Global Networks

How We Connected Around the World This Year

**Global**

During 2014-2015, ASM worked with more than 10 scientific societies around the world to support collaboration, travel grants, panel discussions, plenary speakers, pre/post-conference workshops, and other activities.

**Pakistan**

Over the past 7 years as the ASM Ambassador in Pakistan, Dr. Shahana Urooj Kazmi has embodied ASM’s mission to advance the microbial sciences through her strong contributions in Pakistan.

She has expanded ASM programming throughout Pakistan, launching 4 ASM BioResource Centers and forging a close, productive partnership with the Pakistan Society for Microbiology.

Since her appointment in 2008, ASM’s membership in Pakistan has grown from 48 to over 2,397 members—representing one of the largest ASM membership groups outside the U.S.

**Bangladesh**

Firdausi Qadri, the ASM Country Ambassador in Bangladesh, along with her team from the International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b), spent the year traveling to 5 prominent universities in Bangladesh to share ASM scientific resources, current microbiology research, and opportunities for young Bangladeshi scientists.

Qadri leveraged ASM’s virtual professional development tools—including the Virtual Workshop on Scientific Writing and Publishing and Virtual Speaker Program library—to provide scientists in attendance with advanced, peer-reviewed trainings.

Over 800 scientists—including Vice Chancellors, Department Chairs, faculty, and students from 12 universities and institutions from across Bangladesh—attended the seminar series.

Through the ASM Global Outreach Program, all attendees were registered for complimentary ASM membership and journals, continuing their long-term engagement with ASM.

“This appointment has afforded [me] opportunities to interact and network with seasoned scientists from around the globe, and opened several avenues and unlocked opportunities for collaboration in science research.”

**Moses Vurayai**

ASM Young Ambassador to Botswana
Look for the icon on the Impact Map on Pg.4 to see the locations of all our BioResource Centers.
IMPROVING ACCESS TO SCIENTIFIC RESOURCES

BIORESOURCE CENTERS MAKE EDUCATION LOCAL & SUSTAINABLE

BioResource Centers (BRCs) act as local ASM hubs for scientific exchange and virtual education, featuring ASM books, publications, journals, and digital copies of conference sessions and symposia. BRCs are also sustainable, local platforms for continuing education and professional development.

In 2014 alone, 19 BRCs opened, nearly doubling our total number of established BRCs (there are now 44 BRCs globally).

BIORESOURCE FELLOWS ARE BRC CHAMPIONS

Recognizing that local champions ensure the sustainability and success of BRCs, ASM piloted a BRC Fellowship program in 2014-2015.

The fellowship program engages local BRC leaders with a mutually beneficial opportunity to strengthen their respective BRCs, engage their local communities, and enhance the global network of BRCs.

At a three-day training in January 2015, fellows created tailored marketing strategies, developed a framework for annual projects to meet a specific need in their community, learned key monitoring and evaluation tools, and shared BRC successes and challenges.

THE INAUGURAL CLASS OF EIGHT BRC FELLOWS REPRESENTS:

KENYA
RWANDA
SOUTH AFRICA
YEMEN
MYANMAR
THAILAND
PAKISTAN
PARAGUAY

19
LEARN ANYWHERE: VIRTUAL PROGRAMMING IS GLOBAL

In 2014-2015, our virtual products reached over 7,500 scientists around the world.

The International Board partnered with the American Academy for Microbiology (AAM) to launch the Virtual Speaker Program, leveraging virtual communication technologies to provide ASM’s microbiological expertise to remote classrooms and scientific meetings worldwide.

In 2014-2015, AAM Fellows recorded 47 virtual lectures and 60 Virtual Speaker events were implemented, reaching an audience of over 3,000 participants in 30 countries.

BRC FELLOW & THAILAND AMBASSADOR

COLLABORATION ON VIRTUAL SPEAKER PROGRAM

Chanwit Tribuddharat (ASM Ambassador for Thailand) and Tossawan Jitwasinkul (ASM BRC Fellow) partnered to host a monthly Virtual Speaker Lecture Series, leveraging ASM’s Virtual Speaker Program to bring microbiology resources and lectures to their university and local community. Lecture topics included:

- Scientific Writing
- Metagenomics and the Microbiome: Applications for Clinical Research
- Cancer and Infectious Disease: Bacterial Proteins/Peptides for Therapy and Prevention
Now into its second volume of publication, *Cultures* continues to drive conversation at the intersection of science, policy, and global challenges.

Since 2014, we have published five new issues, focusing on: youth, biosecurity, food security, foundations and frontiers of microbiology, and a special kids’ issue.

These issues featured a diverse group of voices, including:

- **Jane Goodall**, Primatologist
- **Janet Napolitano**, Former United States Secretary of Homeland Security
- **Jessica Meir**, American Astronaut

(As of June 2015)
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