

ANNUAL REPORT

AMERICAN SOCIETY FOR MICROBIOLOGY JOURNALS

2022



AMERICAN
SOCIETY FOR
MICROBIOLOGY

Journals.ASM.org



PAT SCHLOSS
CHAIR, JOURNALS COMMITTEE

The ASM Journals program is supported by excellent editorial staff and a large and diverse group of reviewers, editors, and editors in chief.

We all believe that the best product puts scientists and their science first. As practicing scientists, we can stand behind this statement. If you have experience with other publishers, you'll likely have noticed that they increasingly depend on non-scientists to make editorial decisions and that the science is not always the primary driver of their publishing philosophy. I am proud that the ASM Journals program has a home for the science that is as diverse as our members' interests.

I am regularly heartened by the support that the microbiology community has shown the ASM Journals program. Any of our editors can attest to the challenges of finding reviewers to provide critiques of the great manuscripts that are submitted to any of ASM's 12 research and 3 review journals. Despite the extra burdens placed on scientists due to the pandemic, I am proud of our community for continuing to value their service to each other. We should all be grateful to the community that the time to render a first review has remained steady throughout the pandemic.

Whenever I meet with junior scientists as the Journals Committee Chair, I am impressed by their interest in serving the society as a peer reviewer. Not only do they want to know how to become a reviewer, but also they want to be trained to be a good reviewer. Since 2021, *mBio* has run an experiment called the "*mBio* Junior Editorial Board," which has trained 64 individuals from across the globe and in various microbiology disciplines to become the next generation of peer reviewers. These editorial board members receive formal training and informal mentoring that they have used for two years in service to the editorial board. This program has been an amazing success! Looking ahead, we are excited to expand the program to serve not just *mBio* but all of ASM's journals.

After the appointment of new editors in chief for many of the journals over the past several years, those journals are finding a new groove. Whether it is adopting fresh approaches, such as using open searches for editors to look beyond our traditional professional networks, or new media, such as podcasts, our journals continue to innovate. One notable innovation that started in the past year has been the collaboration between *Microbiology Resource Announcements* (MRA) and *Applied and Environmental Microbiology* (AEM) and *mSystems* to publish companion papers. Authors can publish resources in MRA that are central to the work that they are publishing in AEM or *mSystems* to call greater attention to the resource and better assign credit for the generation of resources. The first companion papers are being published now, and we look forward to seeing broad adoption of this strategy by our authors. We hope to be able to expand the program to other ASM journals soon.

As we find our post-pandemic "new normal," I look forward to meeting more of our journals' readers, authors, and volunteers. Please don't hesitate to introduce yourself so that I can thank you for your contributions and get your feedback. You are what makes a society-based journal unique. Thank you!

EDITORS PAGE

RETIRED



PETER TONTOÑOZ
University of California,
Los Angeles

*Molecular and Cellular Biology
(MCB)*

In December 2022, Taylor & Francis acquired MCB from ASM. ASM Journals thanks Dr. Tontonoz and the MCB Editorial Board for the excellence, rigor, and unwavering dedication they brought to the journal over the years.

CURRENT TERM



CESAR A. ARIAS
University of Texas

*Antimicrobial Agents and
Chemotherapy (AAC)*



GEMMA REGUERA
Michigan State University

*Applied and Environmental
Microbiology (AEM)*



GRAEME FORREST
Rush University

*Clinical Microbiology Reviews
(CMR)*



SUSAN LOVETT
Brandeis University

EcoSal Plus (ESP)



ANDREAS J. BÄUMLER
University of California

Infection and Immunity (IAI)



GEORGE A. O'TOOLE
Geisel School of Medicine,
Dartmouth

Journal of Bacteriology (JB)



ALEXANDER J. McADAM
Boston Children's Hospital

*Journal of Clinical Microbiology
(JCM)*



STANLEY MALOY
San Diego State University

*Journal of Microbiology &
Biology Education (JMBE)*



FELICIA GOODRUM
University of Arizona

Journal of Virology (JVI)



STACEY SCHULTZ-CHERRY
St. Jude Children's Research
Hospital

Journal of Virology (JVI)



ARTURO CASADEVALL
Johns Hopkins

mBio



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DETWEILER**
University of Colorado, Boulder

*Microbiology and Molecular
Biology Reviews (MMBR)*



IRENE L. G. NEWTON
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Bloomington

*Microbiology Resource
Announcements (MRA)*



CHRISTINA CUOMO
Genomic Center for Infectious
Diseases of the Broad Institute
of MIT and Harvard University

Microbiology Spectrum (SPEC)



MICHAEL IMPERIALE
University of Michigan

mSphere (MSPH)



JACK A. GILBERT
University of California,
San Diego

mSystems (MSYS)

RESEARCH HIGHLIGHTS

Here, we highlight research published in the ASM Journal portfolio that captured our communities' attention across the microbial sciences.

CONSIDERATIONS FOR THE USE OF PHAGE THERAPY IN CLINICAL PRACTICE

Antimicrobial Agents and Chemotherapy
[10.1128/aac.02071-21](https://doi.org/10.1128/aac.02071-21)

ANALYSIS OF THE CLINICAL PIPELINE OF TREATMENTS FOR DRUG-RESISTANT BACTERIAL INFECTIONS: DESPITE PROGRESS, MORE ACTION IS NEEDED

Antimicrobial Agents and Chemotherapy
[10.1128/aac.01991-21](https://doi.org/10.1128/aac.01991-21)

CEFIDEROCOL- COMPARED TO COLISTIN-BASED REGIMENS FOR THE TREATMENT OF SEVERE INFECTIONS CAUSED BY CARBAPENEM-RESISTANT ACINETOBACTER BAUMANNII

Antimicrobial Agents & Chemotherapy
[10.1128/aac.02142-21](https://doi.org/10.1128/aac.02142-21)

POLYGENIC ANALYSIS OF TOLERANCE TO CARBON DIOXIDE INHIBITION OF ISOAMYL ACETATE "BANANA" FLAVOR PRODUCTION IN YEAST REVEALS MDS3 AS MAJOR CAUSATIVE GENE

Applied and Environmental Microbiology
[doi/10.1128/aem.00814-22](https://doi.org/10.1128/aem.00814-22)

PERSISTENCE OF CORONAVIRUS SURROGATES ON MEAT AND FISH PRODUCTS DURING LONG-TERM STORAGE

Applied and Environmental Microbiology
[10.1128/aem.00504-22](https://doi.org/10.1128/aem.00504-22)

DETECTION OF SARS-COV-2 VARIANTS MU, BETA, GAMMA, LAMBDA, DELTA, ALPHA, ANDOMICRON IN WASTEWATER SETTLED SOLIDS USING MUTATION-SPECIFIC ASSAYS IS ASSOCIATED WITH REGIONAL DETECTION OF VARIANTS IN CLINICAL SAMPLES

Applied and Environmental Microbiology
[10.1128/aem.00045-22](https://doi.org/10.1128/aem.00045-22)

A COMPREHENSIVE REVIEW ON THE ROLE OF THE GUT MICROBIOME IN HUMAN NEUROLOGICAL DISORDERS

Clinical Microbiology Reviews
[doi/10.1128/CMR.00338-20](https://doi.org/10.1128/CMR.00338-20)

PARACOCCIDIOIDOMYCOSIS: CURRENT STATUS AND FUTURE TRENDS

Clinical Microbiology Reviews
[10.1128/cmr.00233-21](https://doi.org/10.1128/cmr.00233-21)

A BRIEF HISTORY OF PLASMIDS

Ecosal Plus
[10.1128/ecosalplus.ESP-0028-2021](https://doi.org/10.1128/ecosalplus.ESP-0028-2021)

PSEUDOMONAS SYNERGIZES WITH FLUCONAZOLE AGAINST CANDIDA DURING TREATMENT OF POLYMICROBIAL INFECTION

Infection and Immunity
[10.1128/iai.00626-21](https://doi.org/10.1128/iai.00626-21)

SALMONELLA ENTERICA SEROVAR TYPHIMURIUM INDUCES NAIP/NLRC4- AND NLRP3/ASC-INDEPENDENT, CASPASE-4-DEPENDENT INFLAMMASOME ACTIVATION IN HUMAN INTESTINAL EPITHELIAL CELLS

Infection & Immunity
[10.1128/iai.00663-21](https://doi.org/10.1128/iai.00663-21)

DEVELOPMENT AND IMPLEMENTATION OF A REMOTE ENZYME KINETICS LABORATORY EXERCISE

JMBE
[10.1128/jmbe.00286-21](https://doi.org/10.1128/jmbe.00286-21)

BIOFILM MAINTENANCE AS AN ACTIVE PROCESS: EVIDENCE THAT BIOFILMS WORK HARD TO STAY PUT

Journal of Bacteriology
[10.1128/jb.00587-21](https://doi.org/10.1128/jb.00587-21)

RELATIONSHIP BETWEEN DIAGNOSTIC METHOD AND PATHOGEN DETECTION, HEALTHCARE RESOURCE USE, AND COST IN U.S. ADULT OUTPATIENTS TREATED FOR ACUTE INFECTIOUS GASTROENTERITIS

Journal of Clinical Microbiology
[10.1128/jcm.01628-22](https://doi.org/10.1128/jcm.01628-22)

ASSESSMENT OF THE ANALYTICAL SENSITIVITY OF 10 LATERAL FLOW DEVICES AGAINST THE SARS-COV-2 OMICRON VARIANT

Journal of Clinical Microbiology
[10.1128/jcm.02479-21](https://doi.org/10.1128/jcm.02479-21)

THE HOST RESPONSE TO INFLUENZA A VIRUS INTERFERES WITH SARS-COV-2 REPLICATION DURING COINFECTION

Journal of Virology
[10.1128/jvi.00765-22](https://doi.org/10.1128/jvi.00765-22)

DEFECTIVE MITOCHONDRIAL QUALITY CONTROL DURING DENGUE INFECTION CONTRIBUTES TO DISEASE PATHOGENESIS

Journal of Virology
[10.1128/jvi.00828-22](https://doi.org/10.1128/jvi.00828-22)

THE IMPACT OF EVOLVING SARS-COV-2 MUTATIONS AND VARIANTS ON COVID-19 VACCINES

mBio
[10.1128/mbio.02979-21](https://doi.org/10.1128/mbio.02979-21)

CANDIDA ALBICANS ENHANCES THE PROGRESSION OF ORAL SQUAMOUS CELL CARCINOMA IN VITRO AND IN VIVO

mBio
[10.1128/mbio.03144-21](https://doi.org/10.1128/mbio.03144-21)

MGF360-gL IS A MAJOR VIRULENCE FACTOR ASSOCIATED WITH THE AFRICAN SWINE FEVER VIRUS BY ANTAGONIZING THE JAK/STAT SIGNALING PATHWAY

mBio
[10.1128/mbio.02330-21](https://doi.org/10.1128/mbio.02330-21)

GENOME SEQUENCING OF WASTEWATER CONFIRMS THE ARRIVAL OF THE SARS-COV-2 OMICRON VARIANT AT FRANKFURT AIRPORT BUT LIMITED SPREAD IN THE CITY OF FRANKFURT, GERMANY, IN NOVEMBER 2021

Microbiology Resource Announcements
[10.1128/MRA.01229-21](https://doi.org/10.1128/MRA.01229-21)

WHOLE-GENOME SEQUENCING ANALYSES OF HEAT-RESISTANT ESCHERICHIA COLI ISOLATED FROM BRAZILIAN BEEF

Microbiology Resource Announcements
[10.1128/mra.00371-22](https://doi.org/10.1128/mra.00371-22)

MOLECULAR VIROLOGY OF SARS-COV-2 AND RELATED CORONAVIRUSES

Microbiology & Molecular Biology Reviews
[10.1128/mmmbr.00026-21](https://doi.org/10.1128/mmmbr.00026-21)

HARNESSING THE POWER OF MODEL ORGANISMS TO UNRAVEL MICROBIAL FUNCTIONS IN THE CORAL HOLOBIONT

Microbiology & Molecular Biology Reviews
[10.1128/mmmbr.00053-22](https://doi.org/10.1128/mmmbr.00053-22)

THE USEFULNESS OF ANTIGEN TESTING IN PREDICTING CONTAGIOUSNESS IN COVID-19

Microbiology Spectrum
[10.1128/spectrum.01962-21](https://doi.org/10.1128/spectrum.01962-21)

BACTERIAL ADAPTATION TO VENOM IN SNAKES AND ARACHNIDA

Microbiology Spectrum
[10.1128/spectrum.02408-21](https://doi.org/10.1128/spectrum.02408-21)

CORRELATION ANALYSIS BETWEEN GUT MICROBIOTA ALTERATIONS AND THE CYTOKINE RESPONSE IN PATIENTS WITH CORONAVIRUS DISEASE DURING HOSPITALIZATION

Microbiology Spectrum
[10.1128/spectrum.01689-21](https://doi.org/10.1128/spectrum.01689-21)

BODY MASS INDEX (BMI) IMPACTS SOIL CHEMICAL AND MICROBIAL RESPONSE TO HUMAN DECOMPOSITION

mSphere
[10.1128/msphere.00325-22](https://doi.org/10.1128/msphere.00325-22)

ECOLOGICAL ROLE OF BACTERIA INVOLVED IN THE BIOGEOCHEMICAL CYCLES OF MANGROVES BASED ON FUNCTIONAL GENES DETECTED THROUGH GEOCHIP 5.0

mSphere
[10.1128/msphere.00936-21](https://doi.org/10.1128/msphere.00936-21)

EFFECTIVENESS OF HEPA FILTERS AT REMOVING INFECTIOUS SARS-COV-2 FROM THE AIR

mSphere
[10.1128/msphere.00086-22](https://doi.org/10.1128/msphere.00086-22)

GENOME-RESOLVED METAGENOMICS REVEALS DISTINCT PHOSPHORUS ACQUISITION STRATEGIES BETWEEN SOIL MICROBIOMES

mSystems
[10.1128/msystems.01107-21](https://doi.org/10.1128/msystems.01107-21)

PHENOTYPIC AND GENOMIC DIVERSIFICATION IN COMPLEX CARBOHYDRATE-DEGRADING HUMAN GUT BACTERIA

mSystems
[10.1128/msystems.00947-21](https://doi.org/10.1128/msystems.00947-21)

DECIPHERING ACTIVE PROPHAGES FROM METAGENOMES

mSystems
[10.1128/msystems.00084-22](https://doi.org/10.1128/msystems.00084-22)

DIVERSITY, EQUITY, AND INCLUSION

2022 DEI-RELATED ARTICLES

APPLIED AND ENVIRONMENTAL MICROBIOLOGY

[Unexplored Challenges of Minoritized Microbiologists in Academia](#)

INFECTION & IMMUNITY

[Sex and Gender Differences in Bacterial Infections](#)

MICROBIOLOGY RESOURCE ANNOUNCEMENTS

[microshades: An R Package for Improving Color Accessibility and Organization of Microbiome Data](#)

JOURNAL OF MICROBIOLOGY AND BIOLOGY EDUCATION

[The PULSE Diversity Equity and Inclusion \(DEI\) Rubric: a Tool To Help Assess Departmental DEI Efforts](#)

[A Novel Undergraduate Seminar Course Celebrating Scientific Contributions by Scientists from Historically Marginalized Communities](#)

[AJEDI in Science: Leveraging Instructor Communities to Create Antiracist Curricula](#)

[National Summer Undergraduate Research Project \(NSURP\): A Virtual Research Experience to Deliver REAL \(Retention, Equity, Access, and Life-Changing\) Outcomes for Underrepresented Minorities in STEM](#)

MICROBIOLOGY SPECTRUM

[Clinical and Genomic Investigation of an International Ceftriaxone- and Azithromycin-Resistant Shigella sonnei Cluster among Men Who Have Sex with Men, Montréal, Canada 2017–2019](#)

[Molecular Identification of Cervical Microbes in HIV-Negative and HIV-Positive Women in an African Setting Using a Customized Bacterial Vaginosis Microbial DNA Quantitative PCR \(qPCR\) Array](#)

[Impact of Sex and Age on mRNA COVID-19 Vaccine-Related Side Effects in Japan](#)

mSYSTEMS

[Reciprocal Inclusion of Microbiomes and Environmental Justice Contributes Solutions to Global Environmental Health Challenges](#)

[Closing the GAP in Antimicrobial Resistance Policy in Benin and Burkina Faso](#)

[Perspectives on Inequity and Health Disparities in Chile and Their Relationship to Microbial Ecology](#)

[Twenty Important Research Questions in Microbial Exposure and Social Equity](#)

JOURNAL-WIDE

[Launch of the journals-wide DEI collection](#)

[Diversity, equity, and inclusion are among ASM's key values and a vital part of its mission. The Journals Department is proud to feature a Diversity, Equity, and Inclusion \(DEI\) article collection, addressing topics related to inclusive diversity with equity, access, and accountability, from across its wide range of journals. Such topics include:](#)

- Challenges faced by microbiologists from underrepresented groups
- Fostering DEI in STEM education
- Inclusive accommodations for scientists and students with disabilities
- Parallels between the microbial world and the DEI realm
- Neglected diseases affecting underrepresented populations
- Disproportionate disease outcomes for geographically and demographically underserved groups

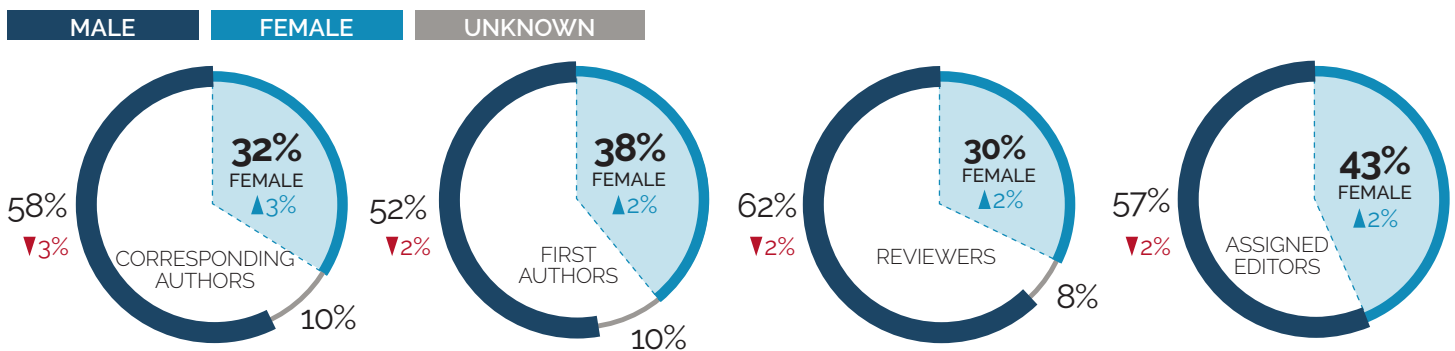
ASSESSING AND IMPROVING REPRESENTATION

Our Editor appointment process now includes open searches across the ASM Journals portfolio. Editor candidates are asked to include a diversity statement in their applications, and Editor in Chief candidates are required to describe their experience in fostering diversity, equity, and inclusion.

2022 GENDER REPRESENTATION

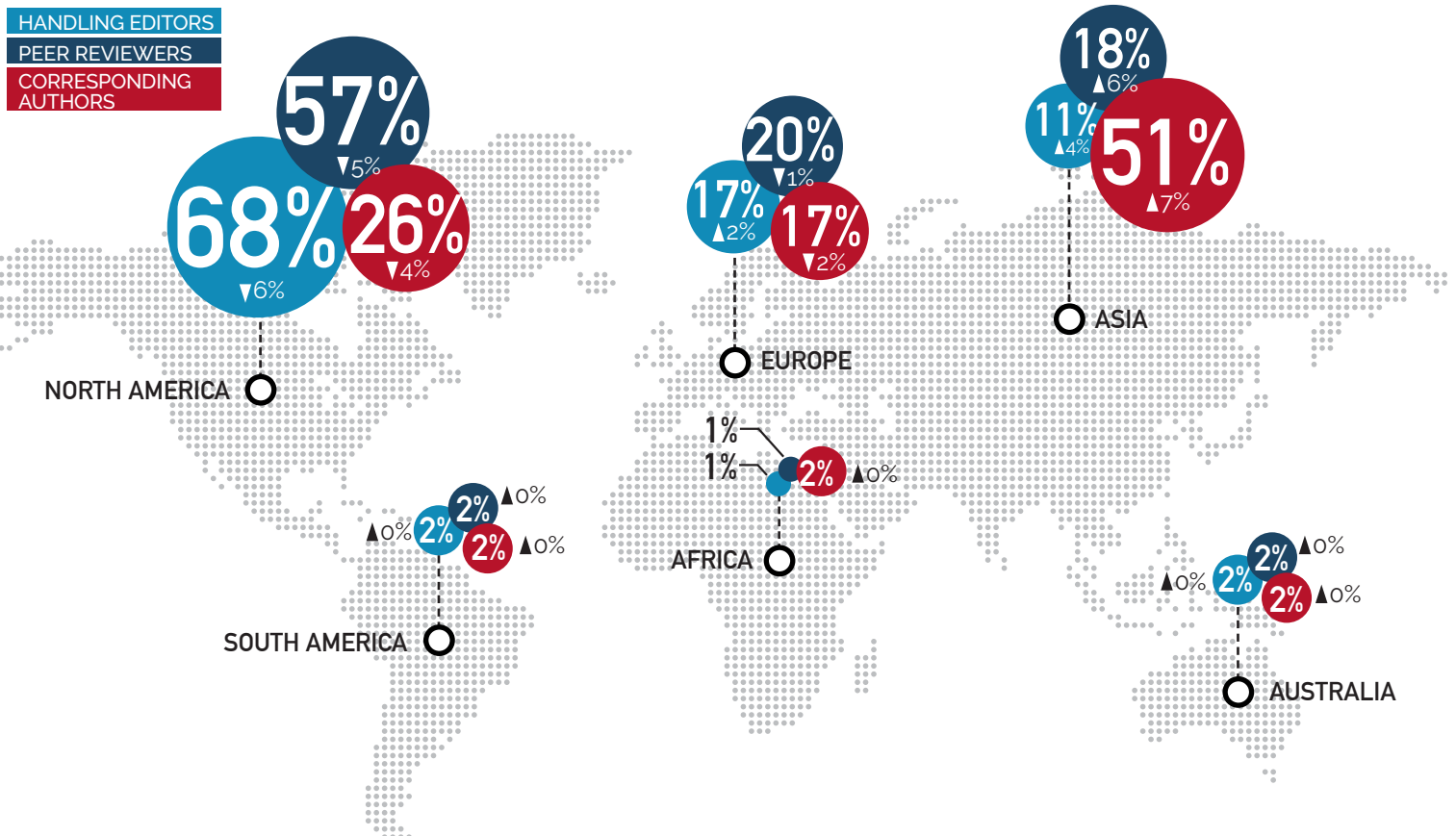
ASM JOURNALS-WIDE

We used genderize.io to examine gender diversity within our publication process.

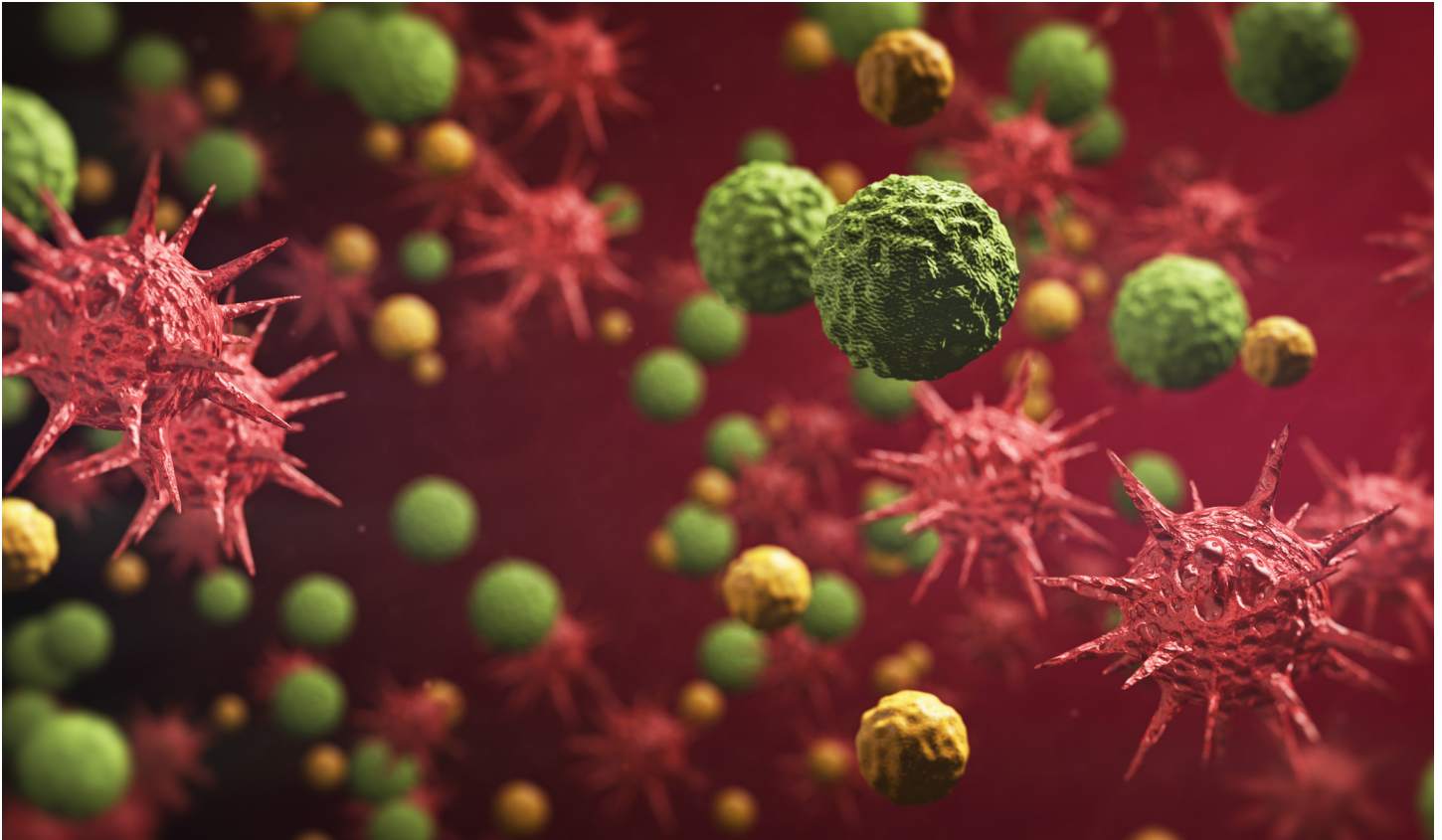


2022 GEOGRAPHICAL REPRESENTATION

ASM JOURNALS-WIDE



JOURNAL INITIATIVES



CLINICAL MICROBIOLOGY REVIEWS

This seminal COVID-19 review published in 2020 has accumulated over 2000 citations since publication.

- [Coronavirus Disease 2019–COVID-19 | Clinical Microbiology Reviews \(asm.org\)](#)

JOURNAL OF VIROLOGY AND APPLIED AND ENVIRONMENTAL MICROBIOLOGY

As an author service, JVI and AEM revised their scopes to be more current and reader-friendly.

- [JVI Scope \(asm.org\)](#)
- [AEM Scope \(asm.org\)](#)

OPEN PEER REVIEW

In 2022, 1,234 submitting authors opted in for open peer review, which accounted for 28% of submissions to *mSystems* and 19% of submissions to *Microbiology Spectrum*.

MICROBIOLOGY RESOURCE ANNOUNCEMENTS

MRA joined forces with two other ASM journals, *Applied and Environmental Microbiology* and *mSystems*, to submit MRA companion articles focused on expanded, rigorous analysis of data resources reported in the primary article.

- [Recognizing the Contribution of Data: The Use of Companion Articles To Highlight Novel Resources in Microbiology Research](#)

RESEARCH GATE PARTNERSHIP

Articles from ASM's Open Access Journals (*Journal of Microbiology & Biology Education*, *mBio*, *Microbiology Resource Announcements*, *Microbiology Spectrum*, *mSphere*, and *mSystems*) are now shared to the ResearchGate platform directly upon publication, with the goal of facilitating the discovery of and access to the latest research in microbiology.

- [Microbiology Research From ASM Journals Comes to ResearchGate](#)

SPECIAL SECTIONS/COLLECTIONS

ANTIMICROBIAL AGENTS & CHEMOTHERAPY

[New Perspectives on Antimicrobial Agents](#)

New Perspectives on Antimicrobial Agents are brief invited reviews of antimicrobial agents that have been introduced recently into clinical practice. The aim is to provide a clinically-oriented, concise summary supported by emerging clinical trial and/or real-world data.

INFECTION AND IMMUNITY

[Minireviews from Early Career Investigators](#)

Early career investigators embody the future of the host-microbe interaction field. Infection and Immunity has released an open call for nominations of potential candidates over the last few years. We are proud to introduce these exceptional individuals and their research in this collection of minireviews.

JOURNAL OF MICROBIOLOGY AND BIOLOGY EDUCATION

["Opportunities and Challenges of Online Instruction"](#)

During the COVID-19 pandemic, the shift to emergency remote learning provided instructors with opportunities to assess inclusiveness and equity, biases and stressors, and students' engagement and needs within their classrooms. Explore research on these techniques, as well as their effective implementation, not only in remote instruction but also for blended or in-person learning, post-COVID.

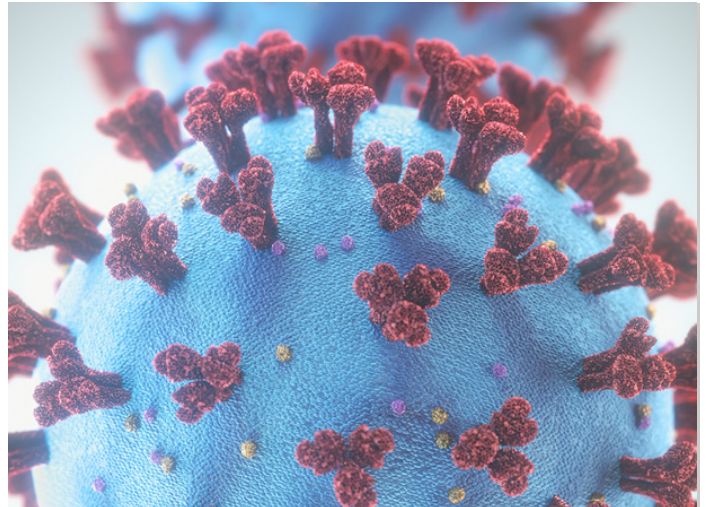
["Scientific Literacy"](#)

This JMBE special series covers scientific literacy in both the classroom and the community, as well as the impacts of scientific literacy education on learning and attitudes. It addresses concepts of scientific literacy and how to cultivate it, to equip today's and tomorrow's decision makers with functional knowledge and skills in a world of evolving technology, public health challenges, and climate crises.

JOURNAL OF BACTERIOLOGY

[The 27th Annual Midwest Microbial Pathogenesis Conference in the Age of COVID](#)

The autumn 2021 meeting of the Midwest Microbial Pathogenesis Conference (MMPC) brought nearly 300 microbiologists from across the Midwest to East Lansing, Michigan. MMPC supports the development of the next generation of research scientists, with special emphasis upon inclusion of women and researchers from underrepresented minority (URM) populations. At the 2021 convention, MMPC prioritized works from trainees and early-stage investigators whose developing careers were impacted by the COVID-19 pandemic.



mBIO

[Clinical Microbiology Research](#)

Clinical research advances the safety and effectiveness of patient care, including the prevention, treatment, and diagnosis of infectious diseases. In this collection, we bring together clinical microbiology articles to aid in the collaboration and rapid dissemination of rigorous research focused on: human-microbe interactions, characteristics of the infecting microbe, or immune response to infection.

mBio welcomes clinical studies that advance our understanding of microbial diseases and immune responses or offer new therapies and diagnostics. From our Editors: "this initiative is an additional focus for the journal...to address the clinical and scientific awakening brought about by the pandemic."

mSYSTEMS

[Social Equity and Disparities in Microbial Exposure](#)

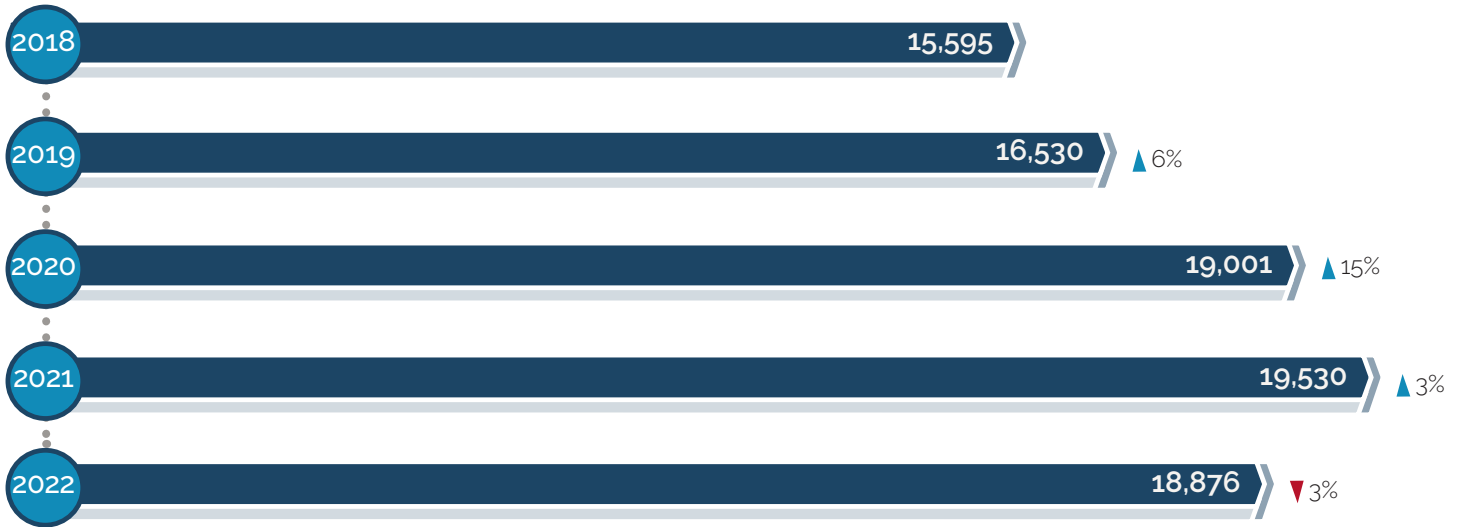
Microorganisms are critical to many aspects of biological life, including human health. The human body is a veritable universe for microorganisms: some pass through but once, some are frequent tourists, and some spend their entire existence in the confines of our body tissues. The collective microbial community, our microbiome, can be impacted by the details of our lifestyle, including diet, hygiene, health status, and more, but many are driven by social, economic, medical, or political constraints that restrict available choices that may impact our health. This collection highlights recent investigations into beneficial and detrimental instances of microbial exposure, in the context of how social policy may mediate or deepen disparities between and within populations.

2022 JOURNAL METRICS

All metrics refer to the 2022 calendar year.

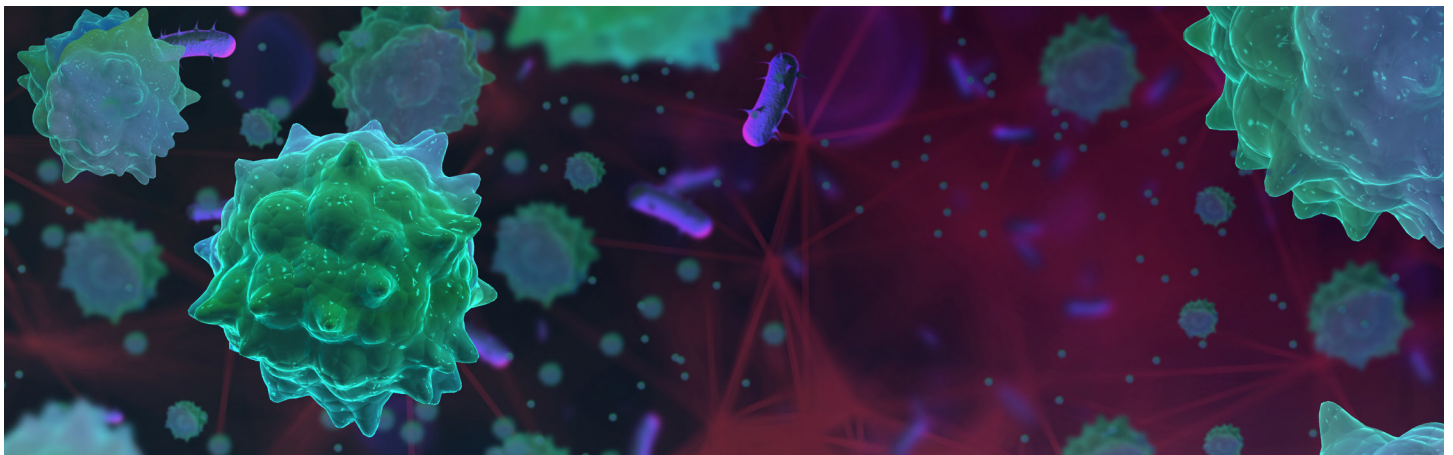
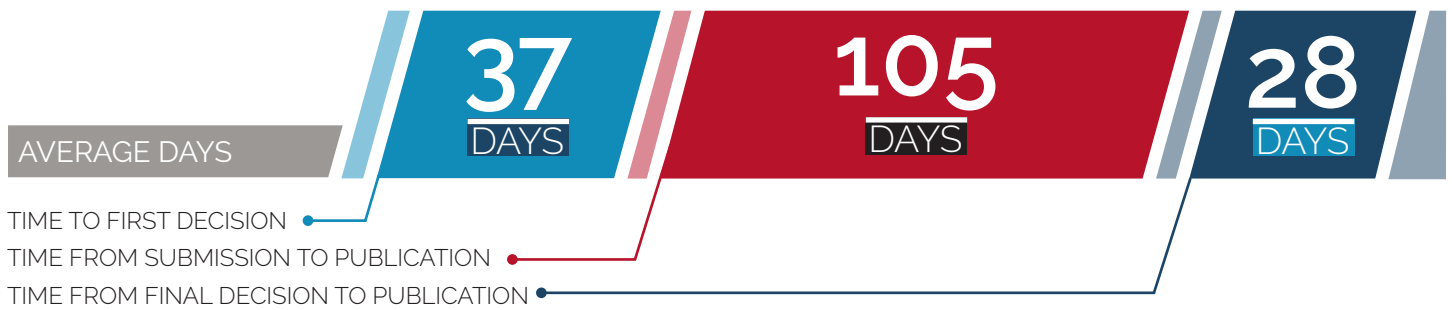
SUBMISSIONS

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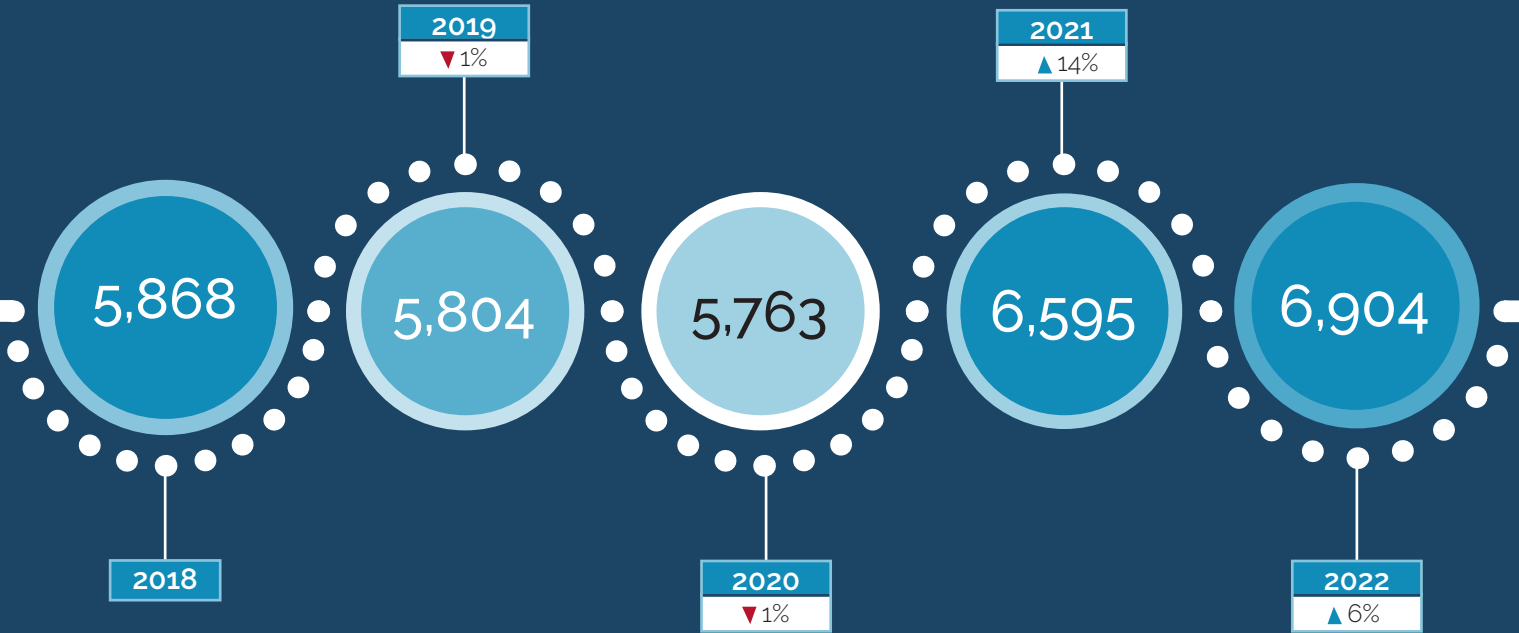


TURNAROUND TIMES

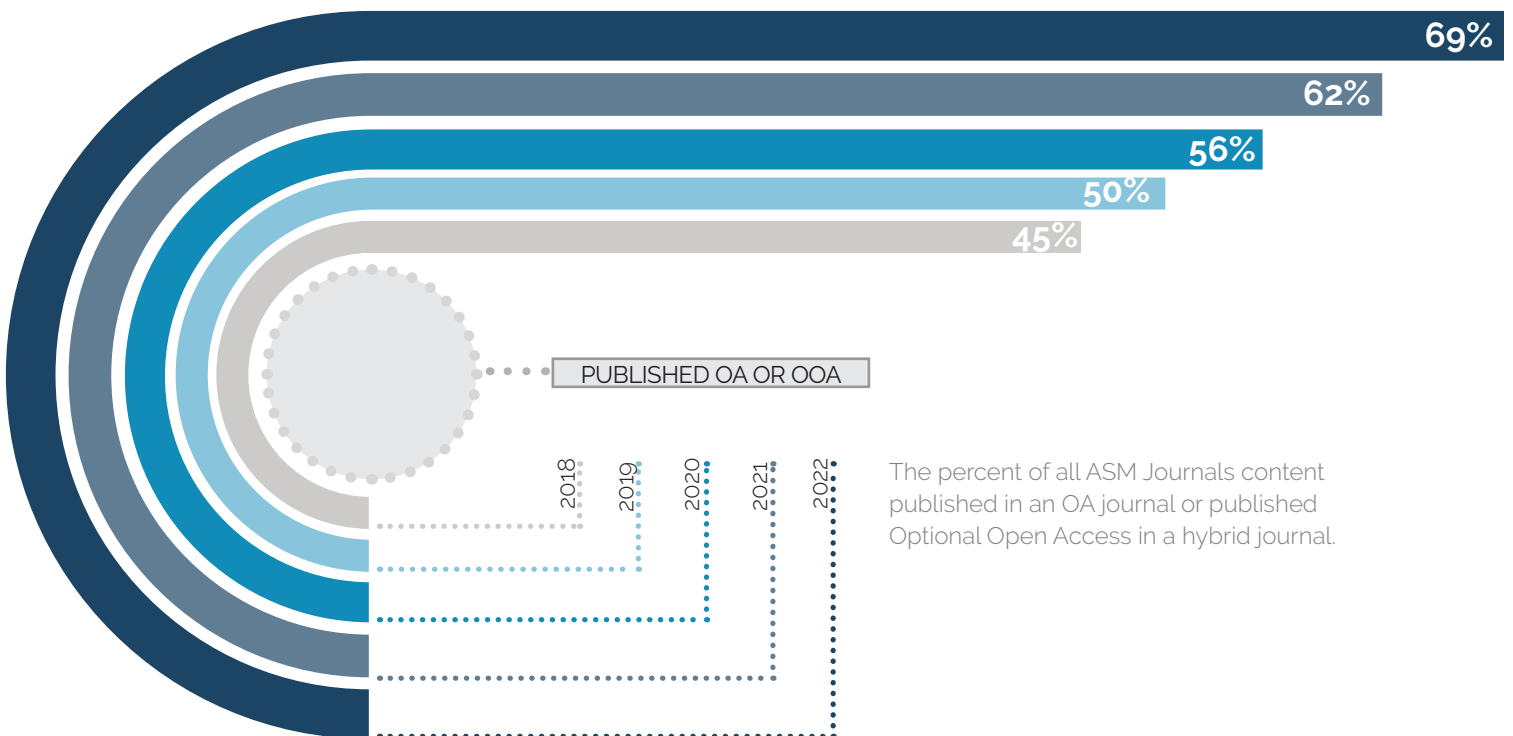
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ANNUAL PUBLICATIONS
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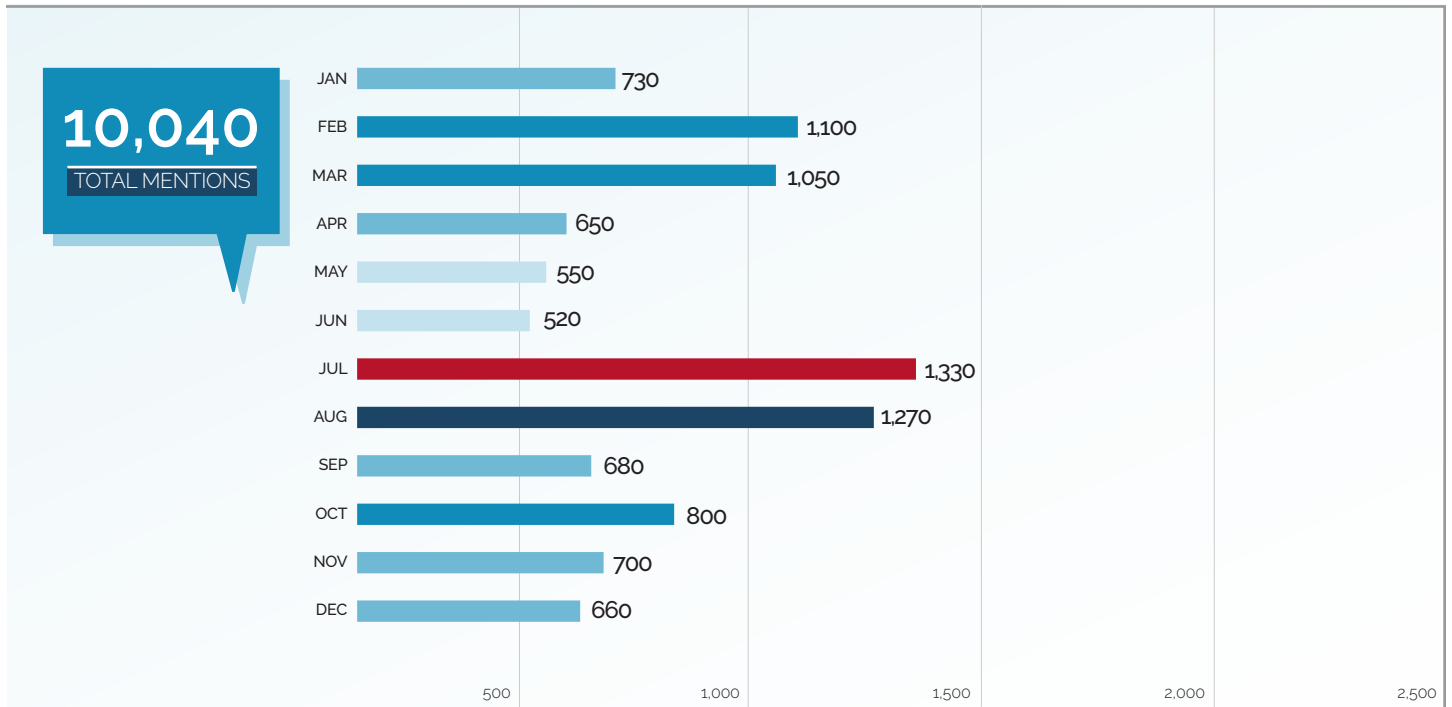
OPEN ACCESS
ASM JOURNALS-WIDE



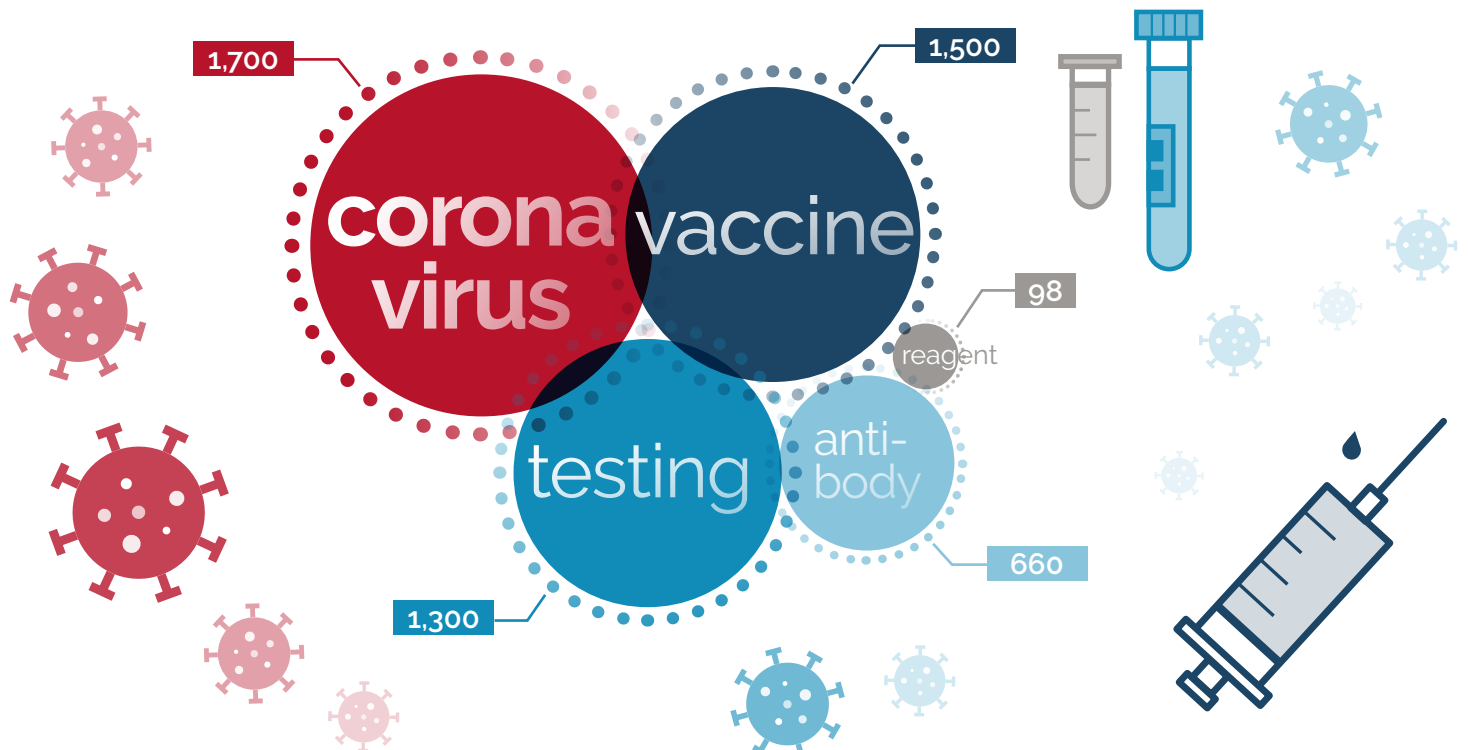
The percent of all ASM Journals content published in an OA journal or published Optional Open Access in a hybrid journal.

PRESS HIGHLIGHTS

TOTAL ASM MEDIA COVERAGE



KEY MESSAGES



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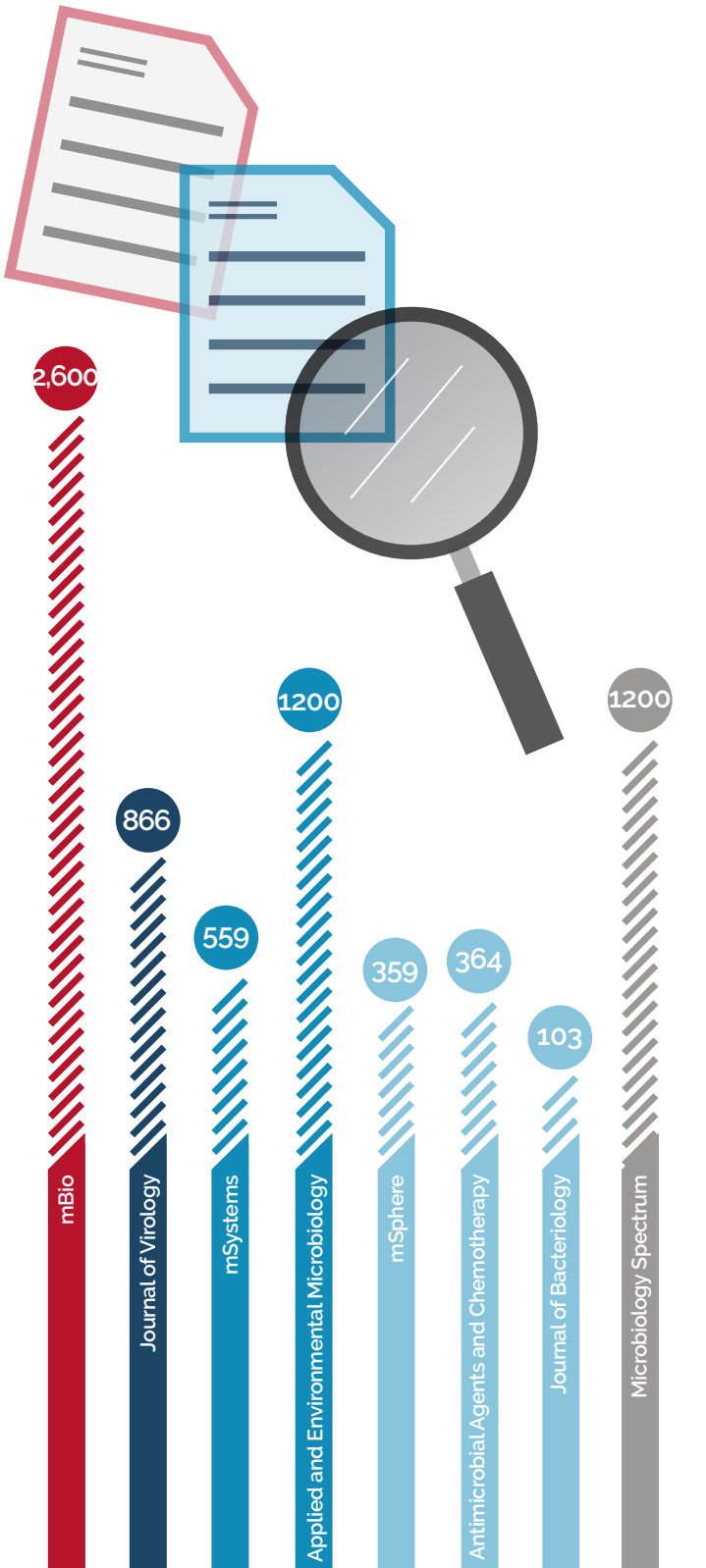
Deborah Plavin

DIGITAL PUBLISHING

Jay Brite

*With thanks to Karen Esplin, David Jackson, Maisha Miles, Margaret Milhous, and Diane Smith, who supported Journal activities in 2022

MEDIA MENTIONS







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