SPECIAL ARTICLE

World alliance against antibiotic resistance: The WAAAR declaration against antibiotic resistance

Jean Carlet, on behalf of the members of the WAAAR

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Abstract  We must change how antibiotics are used and adopt proactive strategies, similar to those used to save endangered species. Preservation of the efficacy of antibiotics and to stabilization of antibiotic-susceptible bacterial ecosystems should be global goals. © 2014 Elsevier España, S.L.U. and SEMICYUC. All rights reserved.

Alianza Mundial contra la resistencia antibiótica. Declaración contra la resistencia antibiótica

Resumen  Debemos cambiar la forma como se utizan los antibióticos, adoptando estrategias proactivas, de igual manera que se protegen las especies en peligro de extinción. Preservar la eficacia de los antibióticos y mantener la susceptibilidad de los ecosistemas bacterianos deben ser objetivos globales. © 2014 Elsevier España, S.L.U. y SEMICYUC. Todos los derechos reservados.

We must change how antibiotics are used and adopt proactive strategies, similar to those used to save endangered species. Preservation of the efficacy of antibiotics and to stabilization of antibiotic-susceptible bacterial ecosystems should be global goals. We urge all of you to participate in this crusade, in your own field of interest. The medical miracle of antibiotic therapy must be protected – this is a global priority and our duty. Please, help us to act NOW, by supporting this declaration, to promote wiser use of antibiotics in animal and human health, and the necessary accompanying political actions to support better education, integrated surveillance for public health action, and research.

The increase in antibiotic resistant bacteria poses a major healthcare threat. In the face of an almost complete absence of new antimicrobial drugs in development, antibiotic resistance (ABR) has become one of the main public health problems of our time. Antibiotics are a unique class of medications because of their potential societal impact; use of an antibiotic in a single patient can select for ABR that can spread to other people, animals, and the environment, making an antibacterial used in one patient ineffective for many others. Bacterial resistance can evolve rapidly. As bacteria acquire resistance mechanisms, the altered bacterial
genetic material coding for resistance mechanisms can be transmitted at times readily between bacteria, broadening the reach and extent of resistance. Treatment failures because of multidrug resistant (MDR) bacteria, once rare, notable, and limited to hospitals, now occur very commonly in hospitals and increasingly in the community as well. It is estimated that a minimum of 25,000 patients in Europe and 23,000 in the USA die each year from infections caused by resistant bacteria. The cost of antibiotic resistance is tremendous, whether measured as the personal and societal burden of illness, death rates, or healthcare costs.

Although it is a never-ending phenomenon, antibiotic resistance is directly related to the volume of antibiotics used. We are using increasing amounts of antibiotics in health care and agriculture, and discharging these active drugs into the environment. The impact of widespread antibiotic use is enormous, promoting the development and dissemination of antimicrobial resistance.

Safeguarding antibiotics will require a concerted effort by citizens, patients and prescribers. The primary goal of WAAAR is to raise awareness about the urgency and magnitude of the threat and to promote an international dialogue to assist in effective responses. The Alliance, in particular through this declaration, is dedicated to actively promoting antibiotic preservation and to raising awareness among antibiotic prescribers, politicians and policy-makers, patient safety and advocacy groups, the pharmaceutical industry, international health organizations, and the general population. Individual actions, no matter how well intended, are doomed to failure unless there is an international dialogue, a common sense of purpose, and broad consensus on how best to proceed.

**WAAAR advocates for the following 10 actions**

1. **Promotion of awareness of all the stakeholders – including the general public – of the threat represented by antibiotic resistance**
   - Strong cooperation among international political, economic and public health organizations, which, all together, must take the lead of this action against antibiotic resistance.

2. **Organization, in each country, ideally by Ministries of Health or regulatory bodies, of a financed national plan for the containment of antibiotic resistance, with the participation of all stakeholders, including patient advocacy groups**

3. **Continuous access to antibiotics of assured quality, especially in middle and low income countries**

4. **WAAAR advocates for the following 10 actions Integrated Surveillance of antibiotic resistance (ABR) and antibiotic use**
   - Standardized monitoring of antibiotic use and resistance at institution, regional, and country (comprehensive national data instead) level (through a Centres for Diseases Control and Prevention model) to allow comparative statistics (benchmarking), to be updated preferably in real-time and at least every 12 months. This will require adequate laboratory capacity using international standardized methods that may be facilitated by a centralized technologic coordinating infrastructure and information technology

5. **Use of diagnostic tests**
   - Appropriate use of existing diagnostic tests and development and implementation of new rapid, cost-effective and accurate diagnostic tests, adapted to the local context, to aid in distinguishing bacterial and nonbacterial etiologies. Rapid diagnostics may help clinicians avoid unnecessary treatments, rapidly select appropriate targeted therapies and inform the duration of treatment

6. **Antibiotic stewardship (prudent, controlled and monitored approaches to the use of antibiotics)**
   - In humans (hospitals, long term care facilities and primary care).
   - In animals (animal husbandry, agriculture, aquaculture and animal health/veterinary setting), in a “one health” philosophy.
   - Progressive elimination of the 'over the counter’ (i.e. available without a prescription) access to antibiotics (systemic and topicals) for humans or animals.
   - Ban of the use of antibiotics as growth promotion in food animals, and exceptional use in prophylaxis.
   - Rational use of metaphylaxis (Prophylaxis when some animals in the livestock are sick, or at high risk to be sick), and of animal treatment.
   - Limitation of the use of critically important antibiotics in humans and animals (e.g., carbapenems).

7. **Educational efforts for change**
   - Educational programmes directed at children/teenagers on antibiotics, bacterial resistance, and infection control (e-Bug model).
   - Development of large coordinated, effective information and awareness campaigns directed at the public on expectations about the rational/appropriate use of antibiotics.
   - Continuous education and training programmes in the curriculum for all health care professionals in all settings (veterinarians, medical, dental, nursing, pharmacy and allied health care schools) and continuing professional education programmes, on the rational use of antibiotics, including indications, dosing and duration of therapy. Education of farmers.

8. **Containment of bacterial transmission and prevention of infection**
   - Promotion of universal hand hygiene and all infection control interventions that have been proven to reduce rates of resistance.
   - Relentless efforts to prevent transmission of MDR organisms in healthcare, food production and animal husbandry.
   - Programmes to limit the contamination of drinking water with MDR bacteria, as well as contamination of the environment.
   - Promotion of the use of available vaccines, in humans and animals.

9. **Basic and applied research, and development of new antibiotics**
   - Increased support for basic and applied research aiming at curbing bacterial resistance in human and veterinary medicine.
• Use of the principles of orphan drugs for new antibiotics.
• Incentives to stimulate research of new drugs (antibiotics and novel compounds) and vaccines via regulatory pathways that allow for fast track development.
• New economic business models to support the cost of innovation while safeguarding public health interests.

10. Request for UNESCO to include the “concept of antibiotic” in the list of the intangible cultural heritage.

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No conflict of interest.

Appendix.

WAAAR is a group of 700 individuals from 55 different countries representing all the key stakeholders (physicians, veterinarians, microbiologists, surgeons, pharmacists, nurses, evolutionary biologists, ecologists, environmentalists, patient advocacy groups). The Alliance receives support from more than 140 learned societies or professional groups throughout the world. WAAAR is a nonprofit organization open to professionals and consumers worldwide. WAAAR receives no funding from the pharmaceutical industry.

Supporting individuals

Laurent Aaron (France), Mohamed Salah Abassi (Tunisia), Lilian Abbo (USA), Oladipo Aboderin (Nigeria), Edward Abraham (USA), Fekri Abroug (Tunisia), Jacques Acar (France), Wafa Achour (Tunisia), Javier Adachi (USA), Seif Al-Abri (Oman), Haifaa Al-Mousa (Kuwait), Antonio Albaya-Moreno (Spain), Corinne Alberti (France), Serge Alfandari (France), Amani Alnimir (Saudi Arabia), Celia Alpuche Aranda (Mexico), Francisco Alvarez de Lerma (Spain), Fatma Amer (Egypt), Antoine Andremont (France), François Angoulvant (France), Maryvonne Anguil (France), Massimo Antonelli (Italy), Eleni Antoniadou (Greece), Guillaume Arlet (France), Apostolos Armaganidis (Greece), Anne Arnera (France), Antonio Artigas (Spain), Claude Attali (France), Frédéric Aubr (France), Jean-Pierre Aubert (France), Bernard Augereau (France), Martine Aupée (France), Olfa Bahri (Tunisia), Françoise Ballerave (France), Gérard Bapt (France), Fernando Baquero (Spain), Timothy Barkhan (Singapore), Ouahid Barouti (Morocco), Marie-Anne Barthelemy (France), Greg Barton (UK), Davide Bastoni (Italy), Michel Baussier (France), Luis Bavestrello (Chile), Birgit Beger (Belgium), Samuel Benenson (Israel), Fethiy Bensalem (France), Guillaume Béraud (France), Frédérique Berghave (France), Gordon Bernard (USA), Philippe Berthelot (France), Xavier Bertrand (France), Frédérique Beuhrory-Sassus (France), Pascal Beuret (France), John Billington (USA), Jacques Birgé (France), Sandra Biscardi (France), Luis Blanch (Spain), Hervé Blanchard (France), Thomas Bleck (USA), Joseph Blondeau (Canada), François Blot (France), France Borgey (France), Alain Bousquet-Méhou (France), Jean Brami (France), Christophe Brard (France), Stéphane Bregagne (France), Cédric Bretonnière (France), Adrian Brink (South Africa), Sheldon Brown (USA), Catherine Brun-Rodier (France), Christian Brun-Buisson (France), Fabrice Bruneel (France), Frederico Bruzzi de Carvalho (Brazil), Christophe Buhot (France), Huda Bukharie (Saudi Arabia), André Cabié (France), Thierry Calandra (Switzerland), Isabelle Caniaux (France), Manuela Caniça (Portugal), Rafael Canton (Spain), Philippe Carencro (France), Camille Carlet (France), Claude Carlet (France), Florian Carlet (France), Jean Carlet (France), Romain Carlet (France), Otto Cars (Sweden), Manuel Cassiano-Neves (Portugal), Bernard Castan (France), Vincent Castellan (France), France Cazenave-Roblot (France), Alain-Michiel Ceretti (France), Jean-Charles Chakarian (France), Ludvine Chalumeau-Lemoine (France), John Chandy (USA), Bernard Chanfreau (France), Jean Chastre (France), Robert Chaussée (France), Pascal Chavanet (France), William Cheadle (USA), Jean-Daniel Chiche (France), Christian Chidiac (France), Olivier Chosidow (France), Natalia Chueca (Spain), Jon Cohen (UK), Robert Cohen (France), Peter Collignon (Australia), Frédéric Collot (France), Patrick Coloby (France), John Conly (Canada), Cruz Cordero (Brazil), Catherine Cordonnier (France), Alejandro Corso (Argentina), Sara Cosgrove (USA), René Courcol (France), Steve Crané (USA), Donald Craven (USA), Adnida Crespin (France), Marcos Cyrillo (Brazil), Pierre-Eric Danin (France), Jan De Waele (Belgium), Pierre Dellamonica (France), E. Patchen Dellingr (USA), Philip Dellingr (USA), Jean Delmont (France), Eric Denes (France), George Dimopoulos (Greece), Dimitri Drekonja (USA), Anahi Dreser Mansilla (Mexico), Pierre-Louis Drua (France), Sylvie Dufour-Pierrot (France), Catherine Dumartin (France), Martin Dünser (Austria), Michel Dupont (France), Ricardo Durlach (Argentina), Olivier Dyr (UK), Gabriela Echaniz (Mexico), Paul Edelestein (USA), Philippe Eggimann (Switzerland), Mohamed Elghoneimi (Egypt), Naima Elmdaghri (Morocco), Rehab Elsaid (Egypt), Rehab Elsokari (Egypt), Dan Engelhard (Israel), Jacques Fabry (France), Christopher Farmer (USA), J. Fernandez (Spain), Simon Finfer (Australia), Patricia Finn (USA), Katrin Fjeldsted (Israel), Daniel Floret (France), Francesco Flozaro (Spain), Jacinthe Foegle (France), Xavier Forciveyls (France), Sandra Fournier (France), Irène Frachon (France), Alexander Friedrich (The Netherlands), Pascal Funel (France), Didier Gaillard (France), Jacques Gaillart (France), Tiatiana Galperine (France), Karine Gamarbott (France), Bernard Garo (France), Maitê Garrrouste-Orgeas (France), Petra Gastamele (Germany), Jean-Yves Gauchot (France), Remy Gauzit (France), Gaëtan Gavazzi (France), Louise Gazagné (France), Julie Gerberding (USA), Abdul Ghafur (India), Evangelos Giamarelos-Bourboulis (Greece), Eleini Giamarellou (Greece), Marine Giard (France), Mark Gilchrist (UK), Jacques Gilquin (France), Fernando Gilsanz (Spain), Marek Gniadkowski (Poland), Charalambos Gogos (Greece), Don Goldman (USA), Florence Gordon (France), Thomas Gottlieb (Australia), Ian Gould (UK), Joao Gouveia (Portugal), Jennifer Grant (Canada), Lindsay Grason (Australia), Alx Greder (France), Hajo Grundman (The Netherlands), Eric Guaguere (France), Gwenaelle Guéroult-Löcher (France), Benoit Guery (France), Bertrand Guidet (France), Catherine Guignabert (France), Pradip Gupta (India), Sanjay Gupta
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(UK), Mohan Gurjar (India), Manuel Guzman (Venezuela), Joseph Hajjar (France), Noha Hammad (Egypt), Anette Hammerum (Denmark), Hakan Hanberger (Sweden), Regina Hanke (Germany), Stephan Harbarth (Switzerland), Anita Harel (France), Elisabeth Heisbourg (Austria), Isabelle Hermes (France), Jean-Pierre Hermet (France), Bernard Hirschel (Switzerland), Bruno Hoen (France), Aidan Hollis (Canada), Xiao Hongchong (China), David Hooper (USA), Juan Pablo Horcajada (Spain), Bruno Housset (France), Waleria Hryniewicz (Poland), Li Yang Hsu (Singapore), Susan Huang (USA), James Hughes (USA), Jean-Louis Hunault (France), Lotte Jakobsen (Denmark), Nordial Jail (Malaysia), Hilde Jansens (Belgium), Vincent Jarlier (France), William Jarvis (USA), Dominique Jean (France), Matjaz Jereb (Slovenia), James Johnson (USA), Marie-Laure Joly-Guillou (France), Olivier Jonquet (France), Guillaume Kac (France), Deogracias Kaddu-Mulindwa (Uganda), Mitsu Kaku (Japan), Badreddine Kilani (Tunisia), Eui-Chong Kim (South Korea), Dorothee Kinde Gazzard (Benin), Keith Klugman (USA), Stacey Klutts (USA), Jan Kluytmans (The Netherlands), Marin Kolleff (USA), Despoina Koulets (Greece), Michael Kresken (Germany), Francois Lacoin (France), Jean-Patrick Lajonchere (France), Nathalie Landgraf (France), Gerard Larroussinie (France), Pierre-Francois Laterre (Belgium), Anne-Marie Lavenaire (France), Thierry Lavigne (France), Ramanan Laxminarayan (USA), Thi Anh Thu Le (Vietnam), Francoise Leblanc-Jouffre (France), Nam Yong Lee (South Korea), Olivier Lehian (France), Hervé Lelouet (France), Frédéric Lemanach-Kergueris (France), Alain Lepape (France), Joel Leroy (France), Xavier Lescure (France), Mitchell Levy (USA), Gabriel Levy-Hara (Argentina), Ling Moi Lin (Singapore), Jeffrey Lipman (Australia), Joel Livartowski (France), David Lookie (Australia), Fernando Luis Lopez Cardozo (Brazil), Francisco Lopez Medrano (Spain), Anne Lotté (France), Jean Christophe Lucet (France), David Lupande (D.R. Congo), Jean-Yves Madec (France), Jean-Luc Mainardi (France), Sundaresan Maiyalagan (Mauritius), Jordi Mancebo (Spain), Franck Mansour-Adeoti (France), Enrique Maravi (Spain), Bruno Marchou (France), Darcy Marciniuk (Canada), John Marshall (Canada), Claude Martin (France), David Martin (USA), Luis Martinez-Martinez (Spain), Alain Martinot (France), Emilio Maseda (Spain), Dimitrios Matamis (Greece), Sophie Matheron (France), Ricardo Matos (Portugal), Marie Matthews (UK), Thierry May (France), Thierry Mayet (France), John McGowan (USA), Shaheen Mehtar (South Africa), Jose Mario Meira Teles (Brazil), Marc Mendelson (South Africa), Christian Michele (France), Albert Mifsud (UK), Magolia Mikaszewska-Sokolewicz (Poland), Jessica Minion (Canada), Christelle Miquel (France), Jean-Paul Mira (France), Jose Miro (Spain), Benoit Misset (France), Jean-Jacques Monot (France), Philippe Montravers (France), Joy Mootien (France), Rui Moreno (Portugal), Andrew Morris (USA), Gerard Moulin (France), Cécile Mourlan (France), Gilbert Mouthon (France), Wafaaw Mowafy (Egypt), Elke Muhl (Germany), A. Muruganathan (India), Enani Mushira (Saudi Arabia), Babacar N’Doye (Senegal), Aburjania Nana (USA), Michael Niederman (USA), Gérard Nitenberg (France), Patrice Nordman (France), Assumpta Novira (Spain), Cyrille Nowak (France), Iruka Okeke (USA), Pedro Maria Olachea (Spain), Abeer Omar (Kuwait), Steve Opal (USA), Carlos Ortiz Leyba (Spain), Bauke Ouedge (The Netherlands), Eric Oziol (France), Bernard Page (France), Jose Arthur Paiva (Portugal), Lucy Palmer (USA), Mercedes Palomar-Martinez (Spain), Pierre Parneix (France), Didier Payen de la Garanderie (France), Eli Perencevich (USA), Trish Perl (USA), Christian Perronne (France), Georg Peters (Germany), Matthew Peters (Australia), Dominique Peyramond (France), Francois Philippart (France), Didier Pittet (Switzerland), Jean-Francois Pittet (USA), Patrick Pletsiat (France), Mathias Plettz (Germany), Marie-Cécile Ploy (France), Florence Pospisil (France), Pascal Poudras (France), Garyphallia Poulakou (Greece), Anny Poursinoff (France), Peter Pronovost (USA), Céline Pulcini (France), Massimo Puoti (Italy), Shannugan Puvanendraram (Sri Lanka), Michael Quintel (Germany), Christian Rabaud (France), Claude Rambaud (France), Helena Ramos (Portugal), Ossama Rassla (Egypt), Josette Raymond (France), Bernard Regnier (France), Konrad Reinhart (Germany), Jordi Rello Condomines (Spain), Jean-Claude Reivelt (Reivelt?), (France), Agnès Riché (France), Paul Richman (USA), Rosana Richmann (Brazil), Viviana Rodriguez (Argentina), Jesus Rodriguez-Bano (Spain), Olivier Romain (France), Karine Romand (France), Elisabeth Rossines (France), Monique Rothamel (France), Jean-François Rousselot (France), Ethan Rubinstein (Canada), Vladimir Rudnov (Russia), Narender Saini (India), Dominique Salmon (France), Reinaldo Salomao (Brazil), Miguel Sanchez Garcia (Spain), Antonio Santos-Bouza (Spain), Marie-Caude Saux (France), Anne Savy (France), Lynora Saxinger (Canada), Benoit Schlemmer (France), Jean-Luc Schmit (France), Dietmar Schneider (Germany), Janet Schoemaker (USA), Sanjeev Singh (India), Jordi Sole-Violan (Spain), Sara Soto (France), Jean-Paul Stahl (France), Annabelle Stoclin (France), Alexis Tabah (Australia), Jean-Philippe Tabut (France), Paul Anantharajah Tambyah (Singapore), Fabienne Tamion (France), Phillip Tarr (USA), Pierre Tattevin (France), Fred Tenover (USA), Nicolas Terzi (France), Marthe Than Lecompte (Switzerland), Jonathan Theodore (France), Didier Thevenin (France), Philippe Thevenot (France), Laurent Thiriet (France), Carol Thompson (USA), Joseph Thurn (USA), Glenn Tillotson (USA), Hanene Tiouri (Tunisia), Antonio Torres (Spain), Francois Trémolières (France), Michel Troade (France), Rabiutu Umar (Nigeria), Garance Upham (France), Carl Urban (USA), Jan Vaarten (Belgium), Dominique Valla (France), Nathalie Van Der Mee-Marquet (France), Jos Van Der Meer (The Netherlands), Tom Van Der Poll (The Netherlands), Jacques Vanel (France), Philippe Vanhems (France), Remi Varin (France), Emmanuelle Varon (France), David Vaughan (USA), Marc Veilly (France), K. Vijayarajakumar (India), Alvaro Villanueva (Columbia), Jean-Louis Vincent (Belgium), Virginie Vitrat (France), Andreas Voss (The Netherlands), Robert Wachtler (USA), Tim Walsh (UK), Peter Wark (Australia), Grant Waterer (Australia), Henrik Caspar Wegener (Denmark), Pierre Weinbreck (France), Robert Weinstein (USA), Scott Weissman (USA), Jeanine Wiener-Kronish (USA), Alexander Wilmer (Belgium), Benjamin Wyplosz (France), Ibrahim Yacoub-Agha (France), Melanie Young (USA), Ibrahim Yusuf (Nigeria), Emile Zein (Lebanon), George Zhanel (Canada), Stephen Zinner (USA), Joséphine Zougrana (Burkina Faso), Nadezhda Zubareva (Russia).

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Vijayakumar), Infection Control Association of Singapore (ICAS) (Ling Moi Lin), Instituto Latino-Americano de Sepsis (ILAS) (Reinaldo Salomao), International Society of Chemotherapy (Ian Gould), International Society of Infectious Diseases (ISID) (Jon Cohen, Keith Klugman), Israel Society for Infectious Diseases, Italian Society of Anesthesiology, Korean Society of Clinical Microbiology (Nam Yong Lee), Lebanese Association for Medical Diagnosis and Auto-Immune Diseases (Lamba) (Georges Khallil), Pan American Society of Infectious Diseases (Luis Buvarestrolo), Paul-Ehrlich-Gesellschaft für Chemotherapie e.V. (Paul-Ehrlich-Society for Chemotherapy) (Achim Hoerach), Polish Society of Anesthesiology and Intensive Care (Magolia Mikaszewska-Sokolewicz), Portuguese Society of Infectious Diseases and Clinical Microbiology (Helena Ramos), Portuguese Society of Intensive Care (Joao Gouveia, Ricardo Matos), Saudi Society of Medical Microbiology and Infectious Diseases (Huda Bukharie), Sociedad Española de Enfermedades Infecciosas y Microbiología Clinic (SEIMC) (Jose M Miro), Sociedad Española de Enfermedades Respiratorias (SEPAR) (Pilar de Lucas), Sociedad Española de Medecina Intensiva, Crítica y Unidades Coronarias (SEIMCYUC) (Luis Blanch, Miguel Sanchez Garcia, Francisco Alvarez Lerma, Pedro Maria Olaechea), Society for Healthcare Epidemiology of America (SHEA) (Melanie Young), Societé Paulista de Infectologia-Brazil (Rosana Richman), Société Belge de Microbiologie Clinique (BVIMK/SBIMC) (Camelia Rossi), Société de Pathologie Exotique (Jean Delmont), Société de Pathologie Infectieuse de Langue Française (SPLIF) (Christian Rabaud), Société de Pneumologie de Langue Française (SPLF) (Alain Didier), Société de Réanimation de Langue Française (SRLF) (Djilali Annane), Société Française d’Anesthésie Réanimation (SFAR) (Claude Ecoffey), Société Française d’Hygiène Hospitalière (SFZH) (Philippe Berthelot), Société Française de Chirurgie Orthopédique et Traumatologique (Bernard Augereau), Société Française de Dermatologie (SFD) (Olivier Chosidow), Société Française de Gériatrie et Gérontologie (SFGG) (Geneviève Ruault), Société Française de Greffe de Moelle et de Thérapie Cellulaire (SFGM-TC) (Ibrahim Yacoub), Société Française de Médecine Générale (SFMLG) (Pascale Arnauld), Société Française de Médicine Interne (SFMI) (Loic Guillevin), Société Française de Microbiologie (SFML) (René Courcol), Société Française de Pharmacie Clinique (SFPC) (Marie-Claude Saux, Remi Varin), Société Française de Santé Publique (SFSP) (Pierre Lombrail), Société Libanaise de Médecine Interne (SLMI) (Emile Zein), Société Marocaine d’Hégiène Hospitalière (Ouahid Barouti), Société Marocaine de Maladies Infectieuses (SMMI), Société Nationale des Groupements Techniques Vétérinaires (SNGTV) (Christophe Brard), Société Tunisienne de Pathologie Infectieuse (STPI), Society of Critical Care Medicine (SCCM) (Chris Farmer, David Martin), Society of Infectious Diseases of Singapore (Paul Anantharajah Tambyah), Société Suisse d’Infectiologie (Bernard Hirschel), Spanish Society of Anesthesiology and Critical Care (Fernando Gilsanz, Emilio Maseda), Spanish Society of Infectious Diseases and Clinical Microbiology (José Miro, Rafael Canton), Standing Committee of European Doctors (Katrin Fjeldsted, Birgit Beger), Surgical Infection Society (SIS) (William Cheadle), The Infectious Diseases Society of America (IDSA) (John Billington, David Reiman), The Mexican Society of Infectious Diseases and Clinical Microbiology (AMIICM) (Celia Alpuche Aranada), Thoracic Society of Australia and New Zealand (Matthew Peters, Peter Wark), United Kingdom Clinical Pharmacy Association (UKCPA) (Mark Borthwick), World Federation of Societies of Intensive Care and Critical Care Medicine (WFSICCM) (Jean-Louis Vincent).

Other supporting groups
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Monique Rotha-Tondeur), Collège des Enseignants de Maladies Infectieuses (CMIT) (Christian Michelet), Collège National de Médecine Générale (CNMG), Collège National des Généralistes Enseignants (CNGE) (Pierre Louis Druais), Comité de Pilotage des Réseaux de Surveillance ATB et BMR Sud Est, Doctors Without Borders/Médecins Sans Frontières (Arlıne Chua, Richard Murphy), Egyptian Patient Safety Association (EPSA) (Ossama Rassla), ESGAP working group (ESCMID) (Jordi Rello), Fédération des Spécialités Médicales (FSM), Fédération Française d’Infectiologie (FFI) (Christian Perrone), Fédération Française de Pneumologie (FFP) (Bruno Housset), Global Sepsis Alliance (Konrad Reinhart), Groupe de Pathologie Infectieuse en Pédiatrie (GPIP) (Robert Cohen), Grupo de Infeccao e Sepsis (Joao Jaime Sa), Grupo de Trabajo de Enfermedades Infecciosas y Sepsis De la Sociedad Española de Medicina Intensiva, Hellenic Sepsis Study Group (Gogos Charalambos, Evangelos Giamarelos-Bourboulis), Infection Control Directorate (Ministry of Health-Kuwait), Infection Prevention and Control African Network (IPCAN) (Shaheen Mehtar), Institut de Recherche en Médecine Générale (IRMG), Institut Maurice Rapin (IMR) (Christian Brun-Buisson), International Forum for Acute Care Trialists (InfACT) (John Marshal), International Sepsis Forum (Tom Van Der Poll), Le Forum des Bio-hygienistes, Ligue Africaine des Associations pour la Sécurité des Patients (LIASEP), Medqual (F. Ballereau), National Committee for the Proper Use of Antimicrobials (Ministry of Health-Kuwait), Observatoire du Risque Infectieux en Gériatrie (ORIG) (Monique Rotha-Tondeur), Observatoire National d’Épidémiologie de la Resistance Bactérienne aux antibiotiques (ONERBA) (Marie-Hélène Nicolas-Chanoine), Portuguese Intersectorial Alliance for the Preservation of the Antibiotics (APAPA) (Jose Arthur Paiva), Programme National de Lutte contre l’Infection Nosocomiale (PRONALIN), Sénégal (Babacar N’Doye), Réseau International pour la Planification et l’Amélioration de la Qualité des Soins en Afrique (RIPAQS) (Bernard Chanfreau), Réseau Sud-Est de Surveillance et de Prévention des Bactéries Multirésistantes aux Antibiotiques, South African Antibiotic Stewardship programme (Adrian Brink), Spanish Network for Research in Infectious Diseases (REIPI) (Jesus Rodriguez-Bano), Safe Observer International (SOI) (Garance Upham), The Bekele Afessa Initiative to Improve Sepsis Care in Resource-Limited Areas (Joseph Christopher Farmer), The Canadian Antimicrobial Resistance Alliance (CARA), The Eastern Mediterranean Regional Network for Infection Control (EMRNI) (Ossama Rassla), The Gulf Cooperation council (GCC) (Hanan Balkhy).