

Lord Hanson of Flint
Minister of State
Home Office

Chris McDonald MP
Minister of State (Minister for Science, Innovation and Investment)
Department for Business, Innovation, Science and Trade

Dear Minister Hanson and Minister McDonald:

Open Letter: End the Use of Animals in Sepsis Experiments

We urge the UK Government to include sepsis as a priority topic in its strategy to phase out animal testing.

Sepsis kills more people in the UK annually than breast, bowel, and prostate cancer combined and affects tens of millions worldwide.¹⁻³ Yet, despite decades of experiments using animals, targeted and effective treatments remain elusive. Indeed, hundreds of drugs that work in animals have proven ineffective in humans.⁴ With sepsis costing the UK an estimated £7.4–15.6 billion each year,⁵ there is an urgent need for effective therapies.

It is now widely recognised that sepsis models using animals poorly replicate human sepsis. Mice, for example, require large bacterial loads – much larger than loads detected in human patients – to trigger an inflammatory response. These large bacterial loads trigger an acute inflammatory response in mice, which directly contrasts with the milder, more prolonged inflammatory response observed in human patients.⁶⁻⁸ Crucial features of human sepsis, such as changes in blood pressure and flow, are absent in mice.^{7,8} Even the widely used caecal ligation and puncture method is flawed; outcomes vary with age, sex, strain, and technique, compromising reproducibility and cross-laboratory comparisons.⁷⁻¹¹

External variables further undermine validity. Animals used are typically young, inbred, and kept in sterile conditions, while human sepsis affects genetically diverse populations, often infants, the elderly, and those with underlying conditions, living in unsterile environments.^{6,7,12-14} Moreover, animals often receive no supportive care, including fluids, pain relief, or ventilation, which are standard when treating humans.^{8,9,12,13} Untreated pain alters physiology, reducing model relevance.^{15,16} These studies also cause immense suffering. Animals endure pain, fever and organ failure before they are killed.

Recognising these issues, US agencies are already phasing out the use of animals to model human sepsis.¹⁷⁻²⁰ The UK must not be left behind. The Government's strategy to phase out animal testing presents a golden opportunity to accelerate the transition to human-relevant approaches in sepsis research.

We, the undersigned, urge the UK Government to align with scientific evidence and international progress by phasing out the use of animals to model human sepsis. To achieve this, we strongly encourage the inclusion of clear objectives and timely milestones in the UK strategy to end sepsis-induction experiments using animals and investment in superior non-animal methods that reflect the human condition.

Sincerely,

People for the Ethical Treatment of Animals UK
Ms Gail Porter, Celebrity, Actress, Model, Presenter, Animal Advocate
Mr Shockat Adam, Member of Parliament
Ms Sian Berry, Member of Parliament
Mr Bob Blackman CBE, Member of Parliament
Ms Irene Campbell, Member of Parliament
Mr David Chadwick, Member of Parliament
Dr Ellie Chowns, Member of Parliament
Ms Carla Denyer, Member of Parliament
Mr Neil Duncan-Jordan Member of Parliament
Mr Alex Easton Member of Parliament
Mr Chris Hinchliff, Member of Parliament
Mr Ben Lake, Member of Parliament
Ms Rachael Maskell, Member of Parliament
Ms Kerry McCarthy, Member of Parliament
Mr Navendu Mishra, Member of Parliament
Mr Iqbal Mohamed, Member of Parliament
Ms Kate Osamor, Member of Parliament
Dr Manuela Perteghella, Member of Parliament
Mr Adrian Ramsay, Member of Parliament
Ms Bell Ribeiro-Addy, Member of Parliament
Ms Vikki Slade, Member of Parliament
Ms Cat Smith, Member of Parliament
Ms Hannah Spencer, Member of Parliament
Ms Suzanne Williams, Member of Parliament
Mr Sammy Wilson, Member of Parliament
Lord Dholakia Navnit, Member of the House of Lords
Lord Foulks of Cumnock, Member of the House of Lords
Baroness Jones of Moulsecoomb, Member of the House of Lords
Baroness Catherine Meyer, Member of the House of Lords
Baroness Stedman-Scott OBE DL, Member of the House of Lords
Dr Diana Abrao, Scientist
Mr Lewis Adams, Scientist
Dr Jarrod Bailey, Scientist
Professor Michael Balls, Scientist
Dr Joao Barroso, Scientist
Dr Vanessa Bones, Scientist
Dr Luis Borda de Agua, Scientist
Dr Jenna Bowen, Scientist
Ms Kate Cook, Scientist
Professor Leonie Cornips, Scientist
Mr Merlin Davies, Scientist
Mrs Nathalie De Ridder, Scientist
Dr Ciska De Ruyver, Scientist
Dr Kristof Dhont, Scientist
Dr James Dickey, Scientist
Dr Maria Concetta Digiacomo, Scientist
Dr Crina Dragz, Scientist
Dr Gabriella Errico, Scientist
Dr Refath Farzana, Scientist

Dr Marion Garnett, Scientist
Dr Annalisa Gastaldello, Scientist
Dr Corina Gericke D.V.M., Scientist
Ms Karin Gunnarsson Dinker, Scientist
Dr Lawrence Hansen, Scientist
Dr Wendy Hasenkamp, Scientist
Dr Luciana Honorato, Scientist
Dr Stefanie Horndasch, Scientist
Ms Alice Johnson, Scientist
Dr Mike Joy, Scientist
Mr Venkatkrishna Karumanchi, Scientist
Professor Shireen Kassam, Scientist
Dr Ali Kermanizadeh, Scientist
Ms Nuria Kojusner, Scientist
Ms Sara V. Kondrup, Scientist
Ms Marie Kruth, Scientist
Dr Peng Liu, Scientist
Dr Stacy Loeb, Scientist
Professor Maristela Martins de Camargo, Scientist
Dr Zaher Nahle, Scientist
Dr Michael Pardo, Scientist
Dr Michael Parsons, Scientist
Dr Erik Persson, Scientist
Ms Rebecca Ram, Scientist
Dr Sonia Rao, Scientist
Mr William Keith Robertson, Scientist
Dr James Ross, Scientist
Dr Izidora Sladakovic, Scientist
Dr Caglar Solak, Scientist
Dr Vivak Soni, Scientist
Professor Cedric Sueur, Scientist
Dr Paula Sweeten, Scientist
Mr Jonathan Tipping, Scientist
Dr Richard Twine, Scientist
Ms Sue van de Griendt Scientist
Dr Marina Vegue, Scientist
Dr Toni Vernelli, Scientist
Professor Roos, Vonk Scientist
Ms Catherine Wang, Scientist
Dr Miriam, Zemanova, Scientist
Mr Simon, Zschieschang, Scientist
Ms Emma Jamieson, Scientist and Ethicist
Dr Jessica, Pierce, Bioethicist
Dr Chinenye Akpulu, Academic
Professor Robin Attfield, Academic
Dr Simon Baines, Academic
Dr Brian Berkey, Academic
Mr Mayank Bhandare, Academic
Dr Charlotte Blattner, Academic
Dr Natasha Boyland, Academic

Dr Heather Browning, Academic
Mrs Paula Brugger Neves, Academic
Professor Dr Nedim Buyukmihci, Academic
Dr Ainoa Cabada, Academic
Dr Silvia Caprioglio Panizza, Academic
Professor David Clough, Academic
Dr Mara-Daria Cojocaru, Academic
Professor Marie Crandall, Academic
Professor Olaf Cremer, Academic
Professor Heather Eaton, Academic
Dr Rainer Ebert, Academic
Professor Amanda Elyse, Academic
Professor Inez Flameling, Academic
Dr Jasbir Kaur Grewal, Academic
Professor Mike Grocott, Academic
Dr Rosalind Hannen, Academic
Love Hansell, Academic
Dr Anne Hirky, Academic
Professor Kate Nicole Hoffman, Academic
Ms Laura Holden, Academic
Professor Kai Horsthemke, Academic
Dr Rebekah Humphreys, Academic
Professor Samantha Hurn, Academic
Mr Ramnath Iyer, Academic
Dr Richard Kahn, Academic
Dr Niyati Kandikanti, Academic
Professor Andrew Knight, Academic
Dr Fabiola Leyton, Academic
Professor Michael Loughlin, Academic
Dr Saite Lu, Academic
Dr Emily Major, Academic
Dr Arlete Malta, Academic
Ms Sarah Marks, Academic
Dr Mara Martinez-Morant, Academic
Dr Steven McCulloch, Academic
Professor Debra Merskin, Academic
Miss Mayahuel Mojarro, Academic
Dr Macarena Montes, Academic
Professor Alexander Mosig, Academic
Dr Dania Movia, Academic
Dr Nico Müller, Academic
Dr Eva-Maria Nag, Academic
Ms Melani Nardone, Academic
Dr Amrita Narlikar, Academic
Dr Ganesh Nathan, Academic
Dr Nathan Nobis, Academic
Professor Philip Oliver, Academic
Dr Nick Peake, Academic
Ms Karen, Peters, Academic
Professor Tomasz Pietrzykowski, Academic

Dr Pandora Pound, Academic
Ms Dimitrina Prakova, Academic
Professor Ana Cristina Ramírez, Academic
Ms Mira Reyes, Academic
Mr Sean Richardson, Academic
Professor Gillian Russell, Academic
Ms Julia Rzaska, Academic
Dr Faruk Saglamoz, Academic
Dr Adam See, Academic
Professor Lori Sheeran, Academic
Dr Jinesh Sheth, Academic
Professor Krithika Srinivasan Academic
Dr Marta Tafalla, Academic
Ms Lisa Toi, Academic
Professor Joseph Tuminello, Academic
Professor Outi Vainio Academic
Mr Lars van der Miesen, Academic
Dr Gail Van Norman, Academic
Dr Tatjana Visak, Academic
Dr Jack Waverley, Academic
Dr Zipporah Weisberg, Academic
Mr Wayne Williams, Academic
Professor Richard Wrangham, Academic
Mr Athan, Yanos, Academic
Dr Garrett Oberst, Academic and Clinician
Mr Ben Mattock, Clinician
Dr George Bates, Veterinarian
Dr Vanessa Howie, Veterinarian
Dr Marta Do Nascimento, Healthcare Professional
Dr Mariangela Ferrero, Healthcare Professional
Dr Jessica Malki, Healthcare Professional
Risa Mandell Healthcare Professional
Dr Siva Oruganti, Healthcare Professional
Dr Hannah Short, Healthcare Professional
Ms Petra den Boer, Lawyer
Mr Chase Hamilton JD, Lawyer
Ms Lenneke van Gaal, Lawyer
Ms Katherine Bascom, Industry Expert
Ms Marina Bradford, Industry Expert
Dr Eirini Epitropaki, Industry Expert
Dr Jan Lichtenberg, Industry Expert
Dr Christian Maass, Industry Expert
Mr Simcha Nyssen, Industry Expert
Dr Carlo Alberto Paggi, Industry Expert
Dr Carol Treasure, Industry Expert
Ms Kathy Archibald, NGO
Dr Karynn Vieira Capile, NGO
Mrs Jan Creamer, NGO
Ms Tamara Drake, NGO
Ms Christina Elliott, NGO

Dr Alison Giles, NGO
 Mr Rob Harrison, NGO
 Ms Susan Hartland, NGO
 Ms Isobel Martin, NGO
 Ms Emily McIvor, NGO
 Mr Joseph Merz, NGO
 Miss Sarah Moran, NGO
 Ms Rhiddhi Patel, NGO
 Dr Ishani Rao, NGO
 Ms Shannon Ray, NGO
 Ms Kate Salmon, NGO
 Ms Daniela Schrudde, NGO
 Ms Antoinette Vermilye, NGO
 Professor Ugo Teixeira Werneck Vianna, NGO
 Ms Donna Zeiber, NGO

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