

Humanimal Trust

Impact Report

2014 - 2021



**Humanimal
Trust**

ONE Medicine for humans and animals

Registered charity no.s 1156927 & SC048960

Chair's Introduction

A charity is only as good as the impact it can demonstrate. Have we achieved our aims and objectives, moved closer to our vision and fulfilled our purpose? Simply put, have we done what we said we would do?

Humanimal Trust is only seven years old; a small, young charity in a huge sector operating in extremely challenging times. From a standing start, we are already making quite a mark. We have built strong foundations for the future and are facing the immediate challenges of funding and competition with confidence and determination.



This is our first impact report and as such it looks at what we have achieved over the first seven years of our life, in addition to the more specific progress in 2020/21.

We believe the report represents the best of our efforts made before in 2020/21. We are proud of what we have already done. It also shows that sometimes hope and passion lead us to set over-ambitious targets – or that the economy, competition, health crises and staff recruitment can put the brakes on the best intentions.

Our resolution and conviction that we are making progress with integrity remain strong. Can we achieve much more? We have to. Have we already had an impact? Absolutely.

This report is now our benchmark for future impact as well as an honest record of the story so far.

Roberto La Ragione, Chair of Trustees

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1. Humanimal Trust: Summary of Our First 7 Years

2014

6th May
Humanimal Trust was founded

- Establishment and development of solid foundations and infrastructure to support future sustainable growth for the Trust, along with a period of awareness raising activity as a key priority

2017

- PhD studentship launched: Bacteriophages as an alternative to antibiotics
- PhD studentship launched: Oncolytic viro-therapy as a cancer treatment
- Research study launched: Investigating the feasibility of animal assisted intervention in a children's clinical setting

2018

- Research study launched: Developing liquid cancer biopsies for canine patients - reciprocity in action
- Volunteer Ambassador programme launched
- Community talks programme launched

2019

- Humanimal Trust Pledge for One Medicine launched
- Research study launched: Understanding how osteosarcoma spreads
- Support for Action Medical Research studies begins:
 1. Preventing infections and reducing the risk of antibiotic-resistant infections in critically ill children
 2. Juvenile idiopathic arthritis: personalising drug treatment

2020

- Launch of The Humanimal Hub
- Participation in National Biology Week
- Delivering the One Medicine message to approximately 300,000 people through national media, national and local public and professional events and growing social media presence

2021

- Stronger Together campaign engaged public and professionals throughout April and May 2021 with fundraising events, a photo competition and professional interactions
- First Humanimal Trust Symposium: 'Stronger Together' on One Medicine Day, May 6th 2021. Over 100 registered attendees from around the world representing all aspects of human and veterinary medicine
- Launch of the Humanimal Connection podcast series

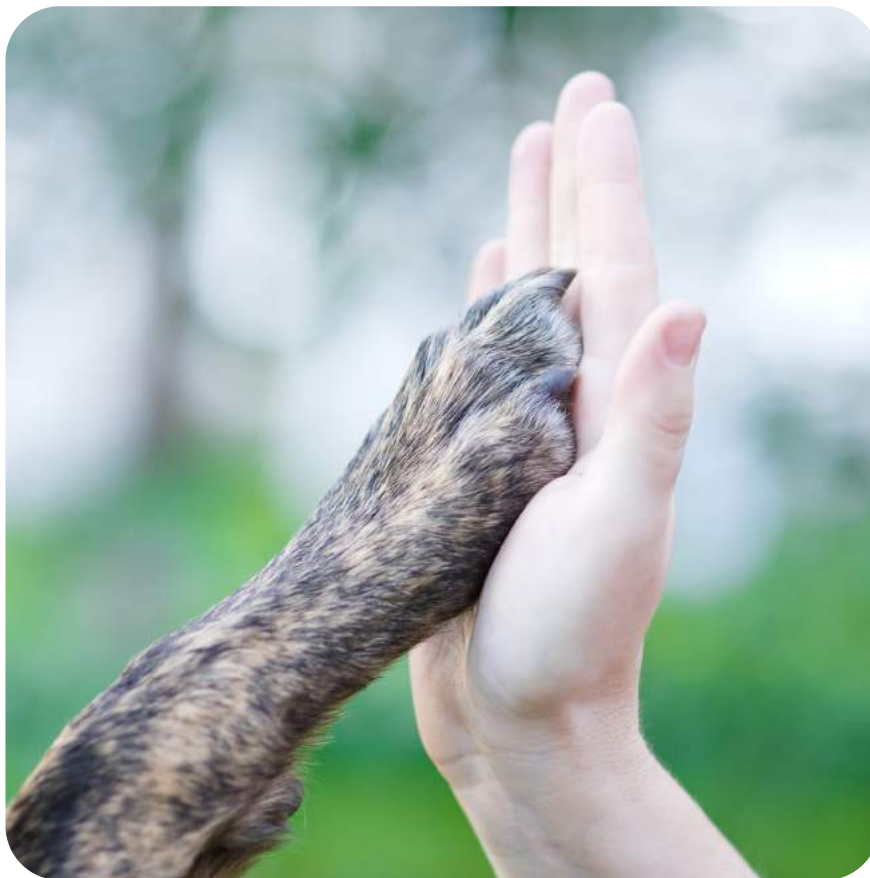
2. Purpose and Structure of this Report

This is Humanimal Trust's first impact report. Although we report on our achievements every year in our annual report and accounts, this is the first time we have produced a historical view of the impact story so far.

The report describes our successes from the first seven years of the charity, as well as the things we could have done better and our targets for the future. In the future we aim to produce an annual impact report alongside our annual review and financial report – with periodic special updates for our supporters.

The report outlines our strategic aims for each of our five work streams (awareness, collaboration, education, research, influence), our short term objectives for each, and the Key Performance Indicators (KPIs) we use to track our performance.

We are proud of our achievements so far, but we are also aware of the challenges of raising income in difficult times to allow us to do as much as we would like. We are still a young, small, developing charity. We have a firm foundation, a powerful vision and have achieved a great deal thanks to the donations and voluntary support we receive from so many people, but there is always more to do than there are funds or people to do it.



3. History and Purpose of the Charity

Humanimal Trust was founded in May 2014 by Professor Noel Fitzpatrick, known globally as a ground-breaking orthopaedic-neuro veterinary surgeon. As a vet he experienced personally the deep divide between human and animal medicine and saw how unfair this was. Frustrated by the lack of opportunities to share what he was learning from day to day practice, or to benefit from relevant learning from human medicine, he decided to create the platform himself. This laid the foundations for the work the Trust does today, removing barriers and seeking to close the divide between human and animal medicine.

Since those beginnings, the Trust has begun to establish an evidence base and to build public and professional understanding of both the principle and the potential of One Medicine. By studying and sharing knowledge about naturally occurring disease, we will make more rapid progress. This evidence will inform mechanisms to reduce, refine and replace laboratory animal tests – the three 'R's. Crucially, we also commit ourselves to a fourth 'R', reciprocity, or a world where animals and humans benefit equitably and at the same time from advances in medicine.

Based in Godalming, Surrey, the Humanimal Trust is a registered charity in England and Wales, and also in Scotland, operating and influencing worldwide.

Our purpose is to drive collaboration between vets, doctors and researchers so that all humans and animals benefit from sustainable and equal medical progress but not at the expense of an animal's life. We do this in pursuit of our vision: a world where both humans and animals have better opportunities to benefit equitably from medical progress because vets, doctors and researchers routinely collaborate and share: One Medicine.



We will have achieved our purpose if the following long-term strategic aims are achieved:

1. Human and animal health have demonstrably improved as a result of One Medicine;
2. One Medicine is widely understood and embraced by both the public and professionals;
3. Collaboration between human and animal medicine is the norm and the sharing of knowledge and research in pursuit of better health for all species is commonplace;
4. There is sufficient funding and robust public policy to support collaboration between human and animal medicine;
5. There is no scientific need and no legal requirement for experimental animal testing.

To deliver our purpose and these long-term aims, we pursue five workstreams, each with a strategic objective and one or more annual objective, with key performance indicators that help us to judge how well we have done.

5 Key Workstreams



We aim to measurably increase public, professional and political awareness, understanding and acceptance of One Medicine.



We aim to demonstrably increase collaboration between medical and veterinary professionals, to maximise value and minimise delays in progress.



We aim to inspire everyone to take the One Medicine message forward as a credible vision of hope for future generations of humans and animals.



We want to repaint the landscape in which medicine is researched and received; redefining the language of respectful interaction between species at the clinical coalface.

We aim to improve and accelerate the growing understanding of the complex interactions between animal and human biological characteristics, the similarities between them and the opportunities arising from them.



As the evidence for One Medicine grows, we will continue to share knowledge with policy-makers and politicians to inform better legislation

4. The First 7 Years - Achievements so far

Since 2014, as a new charity raising relatively small amounts of money from a core of loyal supporters, and with only one member of staff and a network of volunteers for most of that period, Humanimal Trust has achieved a great deal from a standing start as the only charity operating in its specific field. A small number of very significant individual gifts through trusts, foundations, legacies and individuals boosted our nascent cash and regular giving income along with steady returns from events, collections, merchandise and sponsored activities by individual supporters. Having reached a level of staffing during 2019 that allowed a significant uplift in activity, progress in the last two years has been more significant and this is reflected in the figures below. Despite the disruption of COVID-19 and the longer term impact of the pandemic on the Trust's team structure, the platform for more rapid future development is clearly in place.

Awareness

Although the cost of detailed market research has been prohibitive, it is clear that awareness of One Medicine and of Humanimal Trust is growing. For professional audiences, the Humanimal Hub in particular has significantly improved our visibility (see further below: Collaboration), while social media presence, numbers of signatures to the Humanimal Pledge, members of our Champion programme and other fundraising initiatives and visits to our website all demonstrate increasing reach to public and professional audiences alike.

Some key media articles have also begun to generate wider interest, such as major features in the Mail on Sunday, Innovators magazine and Edition Dog in 2019/20, as well as a wide spread of national and regional media mentions and growing social media presence.

Although disrupted in 2020 by COVID-19, the beginnings of a rolling programme of talks by staff and speaker ambassadors to students, professional audiences and the wider public have continued to build the profile of One Medicine moving online where appropriate.

Similarly disrupted by COVID-19, attendance at Dogfest and the National Pet Show (public audience) and Vet Festival (professional audience) as well as a range of other regional and local events has brought Humanimal Trust to the attention of tens of thousands of people.



Professional Audiences

Event Stands:



Humanimal Hub:

The Humanimal Hub was officially launched in February 2020. The Hub is a bespoke interactive online community, a place for human and animal health professionals to come together and collaborate, share ideas, and find out the latest developments in One Medicine. The Hub helps us to fulfil all five of our workstreams, so most of its impact is described here, but also has great relevance to all other sections of this report.

How we promote the Hub:

We primarily promote the Hub to health professionals through word of mouth, networking and presentations, and at physical and virtual events and conferences we attend (i.e. BSAVA Congress, Vet Festival, Royal College of Physicians events). In 2020 we featured in the [Royal Society of Biology's 'Biology for the Future'](#) news style programme (co-produced with ITN productions), where we actively promoted the Hub.

We also ask our funded researchers and other friends of the Trust to promote the Hub to their peers, and at research and educational conferences they attend, such as Professor Jo Morris (recipient of a Humanimal Trust research grant) and Dr Tomoko Iwata from the University of Glasgow at a Comparative Research Topics conference, aimed at encouraging medical and veterinary students to enter research careers. This quickly led to another talk at the Glasgow University One Health Society.

Hub Reach:

To meet our objectives of increasing awareness, improving understanding, and sharing One Medicine research, we regularly post curated details of One Medicine related research, news, funding opportunities, podcasts, webinars, conferences, symposiums, and other content on the Humanimal Hub:

- Humanimal Hub membership has steadily increased since launch, and as of July 2021 we have **204 active Hub members**.
- Our members made over **1600** visits to the Hub in the first year, to find out about the latest One Medicine news and research or to post their own comments and questions.
- We averaged 10-20 posts/week on our main live feed during our first year, plus more on our individual group forums.

We also collate and send out a 'round-up' One Medicine digest email which 184 members have opted to receive and which is regularly opened and read by around 50-60 Hub members/week (approx. 30%). We also get a small but steady level of engagement from Hub members as a result of the newsletter, examples of engagement include:

- A student asking if we could put out a call to help her find a work placement.
- Academics sharing their own and their groups' One Medicine-related research papers for wider dissemination to other interested professionals via the Hub.
- As we get to know our audience we are also beginning to introduce new communication outreach approaches to encourage engagement between the human and veterinary medical communities, such as the Collaboration Café e-zine, the [Humanimal Connection Podcast](#), and guest articles.



**The Humanimal
Hub**

204 active Hub Members
Over 1600 visits to the Hub in the first year
10-20 news posts per week
The Hub 'round up' email opened by 50 - 60 Members per week



**The Humanimal Connection
PODCAST**

1st episode of a series of 7 Podcasts launched in June 2021 - 'Oneness - How charging ahead with One Medicine will make us all stronger together'



**Collaboration
Café**

Launch of Collaboration Café in December 2020 - Bi-monthly e-zine for Humanimal Hub Members

Hub Feedback:

Direct feedback from Hub members demonstrates that our work is actively helping to increase awareness and understanding of One Medicine and One Health (see feedback comments below).



Humanimal Trust Close-Up: Helping scientists keep on top of COVID-19 research

We encourage Hub members to post and share their own research or news articles on the Hub. For example, we posted a new article from researchers (and Hub members) based at the University of the West of England. The researchers had put together a useful resource which brings together some of the evidence they have found so far in relation to COVID-19 species susceptibility, and draws some 'tentative' conclusions.

This article is not available on usual medical literature search engines and is a direct example of the Hub providing a platform for researchers to share One Medicine related-findings more widely to colleagues they might not otherwise be able to reach.

"I thought (this article) might possibly of interest for your next Activity Digest? (which is really useful to us, BTW, many thanks for doing this)..."

....We thought the article might be useful to others, as we all struggle across the sector to keep on top of the huge number of publications coming out...

(Researchers at the University of the West of England share an article with us for dissemination to Hub members)

Public Audiences: Media Reach



Average readership of the Mail on Sunday alone is 871,638 with a further 74,480 for the digital edition (as of October 2020 (Source: ABC)



1.25 million reach (Source: Innovators, February 2021)



12,000 reach (Source: Edition Dog Magazine, June 2021)



One Medicine in 2020 with Humanimal Trust: 475 plays (Source: Wilderness Medic podcast, February 2021)



Co-produced with ITN productions: Over 300,000 reach (Source: ITN Productions, RSB, October 2020)

Social Media Reach



From 9,900 to 10,976 likes - 11% increase year on year 19/20 to 20/21



From 0 (June 2019) to 1429 followers June 2021



From 6,700 to 7,015 followers - 3% increase year on year 19/20 to 20/21



From 60 to 143 followers - 67% increase year on year 19/20 to 20/21

Public Events:

Promotion, fundraising and sales at the following:

- One Live Festival 2015 - 2016: c.5000 visitors
- DogFest South 2014 - 2019: c25,000 visitors
- DogFest North 2017 - 2019: c25,000 visitors
- DogFest West: 2018 - 2019: c20,000 visitors
- National Pet Show: 2016 - 2019: c25,000 visitors
- Guildford Chilli and Cheese Festival 2018: c5000 visitors
- Dogs Trust Fun Day, Salisbury 2018 - 2019 c2000 visitors
- Dogs Trust Fun Day, Manchester 2019 c3000 visitors



Community Talks:

Having first recruited volunteer speaker ambassadors during 2017/18, we were able to start delivering community talks in 2019, with a total of 26 delivered in the first year and a further 7 in 2020 before they were disrupted by COVID-19 (although some were delivered via Zoom). This programme will kick off again in earnest in 2021 with eight already scheduled.



**26 talks delivered
in 2019**

Website:

By the end of 2020, Humanimal Trust's website was achieving 5.7k total website views per month, with the most popular pages being:

- 'Our stance on animal testing' page most viewed
- Home page
- 'Sign Humanimal Pledge today' page
- 'One Medicine' page



**5.7k website views
per month**

Humanimal Pledge:

As a means of both introducing a wider audience to One Medicine and introducing larger numbers of the public to the Trust, the Humanimal Pledge for One Medicine has proved extremely successful. Launched in summer 2019, 18,347 people had already signed the pledge by June 2021, many going on to become donors, supporters and advocates.



18,347 Signatures

One Team, One Dream, One Medicine

The Humanimal Trust Pledge for One Medicine

- I pledge to champion One Medicine.
- I want human and veterinary medicine to collaborate for all people and all animals.
- I want regulatory bodies to actively support One Medicine.
- I want to help make animal testing obsolete by supporting its reduction, refinement and replacement.
- I want reciprocity – both humans and animals should benefit from sustainable medical progress.

2020/21 Awareness Objectives and Targets

Before the pandemic hit us, the Trust set the following objectives, KPIs and targets for 2020/21. The financial year runs from 1 June to 31 May and all figures below relate to that period. In every case expectations were revised down during the year as financial, resourcing, event cancellation, lockdown and movement restrictions all played their part in reducing our planned activity – in common with every other charity in the UK. However, the original targets are listed where relevant.

- **Achieve step change in level of awareness in Humanimal Trust and One Medicine, especially among key target audiences (public, veterinary and medical)**

KPI: Membership of hub

- Target total: 250 registrations by May 2021
- Achieved by June 2021: 204 current active members

KPI: Media coverage (volume, favourability, reach, message delivery/frequency).

Set long term targets based on establishing quarterly benchmarks.

- We have been unable to fund investment in full media evaluation benchmarking; however coverage in Innovators Magazine (1.25m reach), a Podcast for medical professionals (The Wilderness Medic - 475 plays) and especially the launch of a Humanimal Trust video editorial package with ITN coinciding with National Biology Week which reached c300,000 people, were particular highlights. Television coverage of the Trust's supported Animal Assisted Intervention study and promotion of the One Live Festivals on ITV's This Morning programme also assisted in building awareness of the Trust in earlier years

KPI: Speaking/event invitations

- Target – minimum two per month average
- Achieved: restricted by COVID-19, however in 2019/20, a total of 33 public and 3 student talks were delivered, averaging three per month

KPI: Website visits and analysis

- Target – set benchmark stats using Google analytics
- Setting benchmark statistics after a year of more concerted promotion and analysis. By December 2020, a total of 5,700 visits per month were being achieved

KPI: Pledge sign-ups

- Target 2,500 total
- 18,347 achieved by December 2020

Collaboration

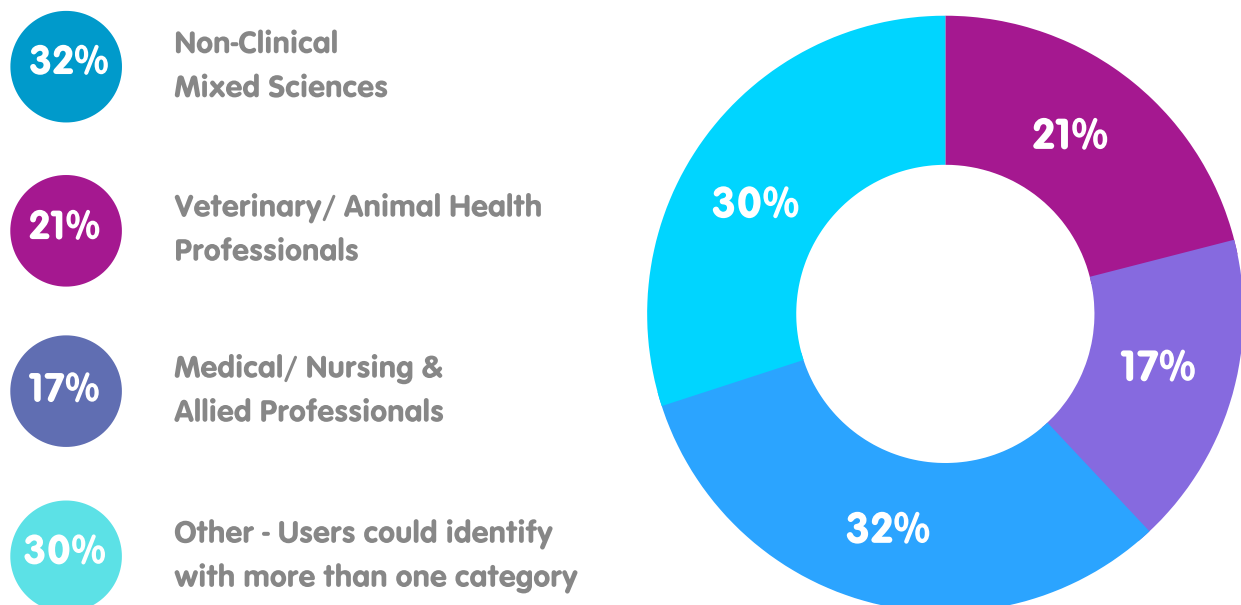
Driving collaboration between vets, doctors and researchers is at the heart of One Medicine. It will take time to see the long term fruits of our efforts in terms of actual collaborations between specific individuals or institutions, resulting in research outcomes and treatments. However, we can see collaboration beginning in real time through activities we have initiated or delivered.

For example, The Humanimal Hub (described above in the section on 'Awareness') is succeeding in bringing vets, doctors, and researchers together. A major focus of the Humanimal Hub is to help improve collaboration between human and animal health and research professionals. It provides an online and - we hope - eventually physical space for them to connect, collaborate, and share. To facilitate this type of collaboration, we need to address that first vital step of bringing human and animal health professionals who are interested in One Medicine together in one place.

The COVID-19 pandemic has served as a stark reminder of just how closely all species on this planet are connected. Infectious disease and public health experts have long known that tackling any disease which affects both humans and animals requires a targeted, coordinated, and highly collaborative response between human and veterinary health professionals. Yet even in this field, recent publications lament the ongoing paucity of collaboration between the two disciplines (Cooper, 2020; De Giusti, 2019).

Our latest data suggests that our carefully targeted approach for attracting Hub members is working. The majority of our 204 current members are allied with human or veterinary medicine, or work within the sciences. Based on the answers given by our Hub users when setting up their profiles, human and animal-allied professional categories appear to be represented in roughly equal proportions (i.e. 21% veterinary/animal health, 17% human health, 32% non-clinical mixed sciences, 30% other- NB users could identify with more than one category).

Hub User Registrations



Humanimal Trust Close-Up: Starting New Conversations

As our community grows and begins to develop, we are starting to see those initial sparks of interest and communication that are essential for innovative research to happen. We actively work to nurture these potential new connections. For example, the Hub recently received a request from a paediatric urologist looking for an individual or group in veterinary medicine with a speciality in problems with urinary tract or kidneys, urinary tract infections, and/or antimicrobial resistance, for the possibility of collaborating on a new project idea. We were able to use the Hub to track down a relevant professional member.

This exciting 'proof-of-concept' case study really demonstrates that the Hub can be an effective tool to help drive interdisciplinary collaboration. This example also shows that the Hub is meeting an important need. It provides a safe and positive space to actively facilitate the sort of interdisciplinary meeting which may not ever happen outside of the Hub. We are delighted to be right here where we can make the most impact, at the very start of these new and utterly vital relationships. We plan to follow up in time to see how this potentially exciting new collaboration has moved forward.

Humanimal Trust Close-Up: Collaboration Café

We are in the process of developing new and effective ways to facilitate Hub member engagement and collaboration. In December 2020 we piloted our first ever Collaboration Café, a mini e-zine highlighting the work of two of our Hub members, Professor Jo Morris and Dr Tomoko Iwata at the University of Glasgow. The magazine specifically focuses on their own work, and the type of One Medicine collaborations the researchers are looking for. It is available freely on the Hub, and was sent to all Hub members as part of the monthly digest.

A fellow Hub member, Professor Matthew Breen based at North Carolina State University in the US, got in touch with us after reading Collaboration Café and we were able to put him in touch with Professor Morris and Dr Iwata, with exciting results and a new potential collaboration in the works.

Our goal is also to expand this initiative to include dogs and their owners from other countries and so if anyone has interest in learning more, I think the Hub could be a great forum to begin the discussions". (Comment about the Hub from Professor Matthew Breen)

"The Humanimal Hub enabled us to have a wonderful meeting with Professor Matthew Breen in North Carolina State University, well known for his contributions to comparative genetics and oncology, particularly in canine urothelial carcinoma. We discussed the goal of developing international collaborations aimed at accelerating comparative oncology research, including the exciting potential for a Tissue Biobank of canine cancers, which would be a unique and precious resource in the UK and world-wide, and a foundation for innovative research for One Medicine benefitting both animals and humans.

We hope to keep up the transatlantic communication and take things forward at some point!" (Professor Jo Morris and Dr Tomoko Iwata kindly sent us this update following a meeting with fellow Hub member, Professor Matthew Breen)

Collaboration Makes Us All
#StrongerTogether



Humanimal Trust Close-Up: One Medicine Symposium 6 May 2021

We were delighted to hold our inaugural One Medicine Day Symposium virtually on Thursday 6 May 2021, the 7th anniversary of the founding of Humanimal Trust.

The theme of the inaugural Symposium was 'Stronger Together – How we can take One Medicine forward' and comprised a number of speaker sessions, a panel discussion, and an address from our Founder, Professor Noel Fitzpatrick.

The aim of the Symposium was to support the creation of a roadmap as to how human and veterinary medicine can more routinely work together and how to address the challenges that One Medicine faces.

This dynamic and thought-provoking day confirmed to us that in order to continue to push One Medicine forward, we must continue our work to navigate some complicated pathways, and overcome some difficult hurdles. As part of our ongoing work in developing a roadmap for how One Medicine can become a default approach, our Symposium resulted in several key themes being identified:

- A requirement for clear and robust ethics and regulatory research frameworks which can better support and encourage a One Medicine research approach
- A need to improve cross-disciplinary knowledge sharing by vets, doctors, nurses and researchers, for example through research journals publishing high-quality, peer-reviewed One Medicine research
- Improved awareness of (and access to) One Medicine in medical, veterinary, nursing and scientific higher education programmes of study- where vets, doctors, nurses, clinical professionals and researchers of the future are currently in training

The symposium was attended by over 100 highly-engaged delegates from all areas of human and animal science and healthcare. The feedback was overwhelmingly positive, and demonstrated huge enthusiasm and appetite for change. The Symposium also highlighted the significant energy, momentum and drive that exists to ensure One Medicine is finally brought into the mainstream. The symposium provided a real platform for shared learning, and demonstrated the importance of building bridges, developing stronger links, closer relationships and greater collaborative practices.

2020/21 Collaboration Objectives and Targets:

- Continue to raise awareness of The Hub and use it to generate active collaboration
- Fund new collaborative research programmes
- Maximise mutual benefit of collaboration with Action Medical Research
- Fuel public debate and raise expectations for collaboration

KPI: Hub registrations (Target total: 250 registrations by May 2021)

KPI: Conversations on The Hub (benchmark to be set)

KPI: Other social or digital media conversations (benchmark to be set)

KPI: Evidence of resulting collaboration (benchmark to be set)

KPI: Fundable research requests to Humanimal Trust under new funding criteria and process (benchmark needed but target 3)

KPI: Enquiries about One Medicine approaches to research funding (benchmark to be set)

The majority of these Key Performance Indicators (KPIs) were set around the time that the Hub was launched. We thought about and predicted the kind of engagement outcomes that we would like to see happening on the Hub, and that we would like to measure.

Now that the Hub is in its second year, we are beginning to understand more about how and where Hub members prefer to engage, and how they like to use the Hub. We tend to see more collaborative engagement take place off the Hub and via email than we first predicted, for example, with the Hub acting instead more as a place to highlight and advertise collaborative opportunities through our newsletter and feed posts.

Members also tend to email us articles and opportunities to advertise, as opposed to posting them directly on the Hub themselves. As we learn more about these emerging engagement trends we are now in a better place to build on our strengths by encouraging engagement that is more likely to yield results, and also set KPIs relevant to the sort of engagement that our Hub members prefer. We will be resetting KPIs for the 2021/2022 business plan. That said, some of these original KPIs are still relevant:

KPI Hub registrations (target 250):

- The Hub has (by July 2021) 204 users who have activated their invitation email registration and joined the Hub

KPI number of collaborations:

- We have evidence via follow-up discussions with Hub members of at least two incidences where potential 'pre-collaboration' conversations have begun between different members. One case where the Hub admin team received a request from a paediatric urologist looking for an individual or group in veterinary medicine to collaborate with, and another where a US based researcher got in touch with us after reading about work done by UK based researchers who have similar interests (see Humanimal Trust Close-Up). In both cases we were able to bring the researchers together via email and help to initiate introductory conversations

Education

In terms of short term 'reach' targets as well as long-term impact, education is central to our approach. Only by engaging with the vets, doctors, nurses, researchers and other professionals of the future will we be able to fully embed One Medicine as the norm.

As the resources available to us have increased – in expertise as well as funds – so we have been able to begin programmes of engagement with a range of younger audiences.

Children

A series of online learning resources demonstrating the similarities between humans and animals were created in 2020. There were 72 views of the pilot 'Education' webpage and 9 downloads of the worksheets after its launch in 16 July 2020. These resources will be more heavily promoted following review of feedback from those who have viewed or used the resources. Discussions about global distribution are underway.

Further key-stage relevant programmes are in development and children's book publishing is being investigated.

Further/Higher Education Students

We began our programme of college and university talks in 2019/20, with events at Leeds, Chester and Birmingham universities. Further talks were prevented initially by staff shortages, then by COVID-19 and will be picked up again in 2021.

2020/21 Education Objectives and Targets:

- Raise awareness of and engagement with Humanimal Trust and One Medicine among future vets, doctors and animal welfare professionals

KPI: Establish benchmark awareness figure with students/lecturers etc

KPI: Identify Student Ambassadors (target: 8 - one in each university with a vet and medical school)

- Disrupted by COVID-19 and will be reset in 2021

Research

Ultimately our aim is to improve and accelerate the growing understanding of the complex interactions between human and animal biological characteristics, the similarities between them and the opportunities arising from them. Demonstrating this through collaborative research that we fund, support, participate in or encourage is the key to this.

Each of these projects has the potential to progress One Medicine in one or more of the Trust's key areas of interest, especially infection control and antibiotic resistance, cancer, and bone and joint disease.

By supporting PhD studentships, we have provided a stepping stone for researchers at the beginning of their careers and the potential to have a future impact on One Medicine. Several of these projects have now completed, and have produced demonstrable impact in the field of One Medicine. A summary of Humanimal Trust's funded research projects, and impact from completed projects, is provided below.

In future, Humanimal Trust will seek to fund Proof of Concept studies up to £5k, medium size projects up to £25k and a number of smaller One Medicine prizes and awards as well as PhDs and larger studies.

Completed Projects

Humanimal Trust Close-Up: PhD Studentship: Bacteriophages as an alternative to antibiotics

With our support, Dr Lucy Grist at the University of Surrey completed her PhD focusing on the issue of antibiotic resistance in companion animal medicine, and the subsequent need for alternatives to antibiotics.

Lucy is also our first ever fully-funded PhD, and this milestone achievement for both Lucy and Humanimal Trust shows that our support is not only progressing One Medicine research with real potential to benefit both humans and animals, it is also helping to ensure a new generation of One Medicine researchers can carry the message forward.

"Funding from Humanimal Trust, and the use of a One Medicine approach, has offered a unique perspective of the complexities associated with antimicrobial resistance in veterinary medicine, and has highlighted the contrasts and parallels with human medicine," says Lucy.

"Approaching research with this outlook has been an eye-opening experience which has allowed me to develop as a researcher, all whilst contributing to an important and topical area of study."

What was the research about?

Bacterial resistance to antibiotics (i.e. the ‘superbug’ problem) is an emerging major threat to both human and animal health. The World Health Organisation recently highlighted antibiotic resistance (also known as antimicrobial resistance (AMR)) as one of the biggest single threats to global health today. Bacteriophages (phages) are small viruses which can infect and kill the bacteria that cause infections. Therefore, bacteriophage-based therapy could potentially help reduce the need for antibiotics, or improve their effectiveness. Lucy’s research particularly focused on the potential need and feasibility of introducing phage therapy as an acceptable antimicrobial in small animal medicine in the UK.

What did the research achieve?

As part of this project Lucy produced valuable work investigating the ability of phages to target and kill strains of *Escherichia coli* which have caused infections in canine patients. Her findings will contribute further research understanding the mechanisms that enable phages to kill bacteria, and to assess their safety as alternative antimicrobials.

A second part of Lucy’s project focused on understanding the nature of public and veterinary perceptions of the use of antibiotics and novel phage-based antimicrobials to tackle antibiotic resistance. A survey and interviews with UK vets and pet owners found that vets commonly had difficulties finding effective antibiotics to treat infections, underscoring the pressing need for vets to find alternative antimicrobial medicines.

The study also revealed that both vets and pet owners were positive and open to the concept of using phage therapy in companion animals. However, there were also some interesting differences between the two groups, including varying levels of overall awareness about the therapy, and who is responsible for prudent antimicrobial use. This work has helped highlight some of the challenges and communication needs that must be met when raising awareness about antibiotic and introducing alternative antimicrobials in public settings.

The full study is now published and freely available in [Frontiers in Veterinary Science](#).

How will this research impact One Medicine?

Some countries already use phage therapy in medicine, but awareness around this therapy in the UK is still generally low. This could hinder any potential roll-out of phage therapy. One way of raising awareness and acceptance of phage therapy in the UK, as well as helping to provide better treatments for companion animals, could be through its introduction into small animal medicine. Lucy’s work suggests that antibiotic use in companion animals is vulnerable to the same human behaviours as those seen in human medicine, and provides much needed information on some of the challenges that will need to be overcome, should phage therapy be introduced for wider use in the UK.

“The companion animal sector of veterinary medicine is often overlooked when considering the reach and impact of antimicrobial resistance and excessive antibiotic use.” says Lucy.

“This project has highlighted the significance of companion animal medicine in terms of antibiotic use and as a potential health literacy tool when introducing alternative antimicrobials.”

Lucy was a recipient of our PhD studentship award in 2017. This project is now completed.

Humanimal Trust Close-Up: Developing liquid cancer biopsies for canine patients- reciprocity in action

Our funding helped Professor Joanna Morris and Dr Tomoko Iwata at the University of Glasgow in their work to develop 'liquid biopsy' technology for use in canine cancer patients.

Liquid biopsies aim to detect fragments of DNA from tumour cells (called circulating tumour DNA or ctDNA for short) in a patient's blood or urine. If a way can be found to reliably detect and monitor ctDNA, it might help medics understand a lot about the type, size and stage of the tumour, without the patient having to undergo invasive tissue biopsies.

This new type of 'liquid biopsy' is already in development for use in humans, but is not yet widely available for companion animals.

What did the research achieve?

In this study the researchers investigated whether a particularly sensitive molecular test could potentially be used to detect ctDNA from canine patient samples. The test was designed to detect a mutation in the BRAF gene, (this being a gene which codes for a protein called b-RAF, which helps transmit chemical signals on cell growth). Mutations in this gene are found in both human and canine cancers, including canine bladder cancer.

In the course of this work the team successfully established optimal conditions for collection, transport, storage, and processing of ctDNA from canine patient samples. They also created a collection of bladder cancer samples from a cohort of canine patients-a valuable research resource.

Through painstaking work, the researchers were able to establish that although this technique could work in principle, a more robust, reliable method may be needed for clinical use. They are now building on these findings by continuing their research in new and related areas, and this work will help to inform future progress.

How can this research impact One Medicine?

These findings have helped push forward further understanding and progress of liquid biopsy development and ctDNA science for both dogs and humans.

As well as being presented and shared with other researchers and veterinary and medical students at a Comparative Research Topics conference, this research also contributed to a PhD thesis which investigated both human and canine disease.

Humanimal Trust gave a larger award to this project in 2018. This project is now completed.

Humanimal Trust Close-Up: Investigating the feasibility of animal assisted intervention in a children's clinical setting

Animal Assisted Intervention (AAI) is increasingly popular within healthcare fields. In 2017 we helped support Lyndsey Uglow, Lead Therapy Dog Handler at Southampton Children's Hospital, in her research investigating the feasibility of developing an AAI service for children in hospital.

What did this research achieve?

During this 12-month project three volunteer handlers with five golden retriever dogs provided AAIs across all eight paediatric wards. Interventions ranged from meet and greet to assisting nursing care, physiotherapy and occupational therapy, as well as providing distraction during blood taking and other tests including radiology examinations.

Parents and staff were then asked to complete an online survey to provide their thoughts on the AAI service. A total of 200 surveys were completed, with an overwhelmingly positive response to the service.

How can this research impact One Medicine?

The findings have contributed to a deeper knowledge of AAI, and can help us better understand the potentially mutual benefits of human and animal interaction in this relatively new and emerging field.

This research was intended to inform the NHS on future use of AAI. The results of the project were published in the British Journal of Nursing, and the publication has already been cited by other research papers a number of times. Some of the information from this study was also used when Lyndsey discussed AAI with the Royal College of Nursing for the 'Working with Dogs in Healthcare Settings' guidelines.

At the beginning of 2020 Lyndsey went on to begin another research study (separate to the work supported by Humanimal Trust) to try and quantify the physiological benefits AAI can bring to patients in paediatric intensive care.

Humanimal Trust supported this project in 2017. This project is now completed.

Humanimal Trust Close-Up: Oncolytic viro-therapy as a cancer treatment

Our support helped postgraduate researchers working with Dr Daniel Horton at the University of Surrey to investigate the feasibility of using viruses to attack cancerous cells as a form of targeted cancer therapy.

Oncolytic viruses, like a reovirus, can preferentially infect and kill cancer cells while leaving healthy cells relatively unaffected. For several decades oncolytic virus therapy has been investigated as a new cancer therapy for humans, resulting in a number of viruses, including reovirus, being approved for the treatment of human cancers.

Oncolytic virus therapy also has great potential for the treatment of companion animal cancers. However, some cancer types are more susceptible to reovirus than others, and finding ways to predict which cancer types are most likely to benefit from oncolytic viral therapy with reovirus are needed. Tumour genetics are thought to have a role in influencing reovirus susceptibility. The aim of this study was to search for any genetic characteristics (i.e. biomarkers) which could potentially help to predict the types of canine cancer most susceptible to reovirus.

What did the research achieve?

During this project the researchers were able to gain some valuable insights into the fascinating and fast moving field of oncolytic virus treatment, and genetics of canine cancer. They also made progress in understanding some of the challenges of developing an oncolytic viral therapy for canines, and the potential of immunotherapy (helping the body defend itself against cancer).

Whilst this project did not culminate in a full PhD studentship due to unforeseen circumstances, nevertheless, the data generated resulted in a report which will undoubtedly inform future research.

"This project was instrumental in stimulating important ongoing collaborations between veterinary and medical oncologists, and will help to inform future work in this area." says Daniel.

How is this work related to One Medicine?

Understanding the genetic factors which influence susceptibility of different canine cancers to viruses can also help to inform human medicine – this is a One Medicine approach; recognising that cancers have many similarities between species.

The project was a landmark collaboration between veterinary and medical researchers, bringing together the two sides of One Medicine, and leading to future benefit for both humans and animals.

Humanimal Trust funded part of a PhD studentship for this project in 2017. This project is now closed.

Active Projects

Supporting research with the potential to help children and animals

We're proud to be collaborating with children's charity Action Medical Research to help support two ongoing child-focused medical research studies. Both studies have the potential to benefit animals as well as children and to demonstrate the value of One Medicine, sharing learning between the worlds of human and veterinary medicine. As with so many aspects of One Medicine, we believe we are stronger together and hope there will be future similar collaborations.:

- Preventing infections and reducing the risk of antibiotic-resistant infections in critically ill children. The first study focuses on Humanimal Trust's core aim of finding new ways to improve infection control and antibiotic resistance. Antibiotic resistance is a global problem, affecting humans and animals. Our funding is helping Dr Nazima Pathan at the University of Cambridge build crucial knowledge about whether a new treatment affects the risk of antibiotic-resistant infection developing in critically-ill children who are being treated in intensive care
- Juvenile idiopathic arthritis: personalising drug treatment. The second study fits neatly into another of our core aims, finding new ways to treat bone and joint disease. Professor Margaret Hall-Craggs at University College London is developing specialised magnetic resonance scans to help doctors measure joint inflammation more accurately and to choose the best drug treatment for children with juvenile idiopathic arthritis. This research work shows real transferrable potential, as inflammatory and degenerative joint conditions can affect animals too

Humanimal Trust gave small awards to these projects in 2020. Both of these projects are still active and are due to complete within the next two years.

Understanding how osteosarcoma spreads

We're also supporting Professor Matthew Allen and his team at the University of Cambridge to study the bone cancer osteosarcoma. They want to find better ways to predict which patients have a higher risk of their cancer spreading. Osteosarcoma is the most common malignant bone cancer in dogs and humans, and for both species, treatment options are relatively limited.

The researchers want to help improve treatment of osteosarcoma by finding better ways to predict how a patient's bone cancer is likely to progress and spread. To do this, the team are analysing different tumour samples from dogs with osteosarcoma, and comparing the molecular and genetic profiles of the samples. This type of information can help to form the basis of new methods to help vets and doctors better tailor treatment for their patients.

The researchers hope that the results of this work will not only contribute to existing understanding of osteosarcoma in humans and animals, but could also lead to new ways of predicting and ultimately even controlling or preventing the growth and spread of bone cancers to other organs. The five most common cancers are predominantly fatal because they spread to other parts of the body – highlighting just why this research is so crucial.

Humanimal Trust gave a larger funding award to this project in 2019. The project is still active and is due to complete within the next two years.

2020-21 Research Objectives and Targets:

- Establish first full Humanimal Trust research funding round
- Fund at least one significant new research proposal with One Medicine ethos
- Broaden funding routes through seed/top-up funding and learning-related awards

Note: This was overtaken by both the pandemic and the developing relationship with Action Medical Research and the decision to offer a grant-linked donation.

KPI: Deliver first funding round

- COVID-19 impact on income and activity for ourselves and research institutions meant that our plan to launch a full funding round has been delayed. That said, a decision was taken to support two important studies funded by Action Medical Research, to the tune of £5,000 each, both of which demonstrate One Medicine impact potential)

KPI: Attract minimum of three fundable applications (see above)

KPI: Funding granted (c.£25k/12 months) (see above)

KPI: launch first seed/top-up funding call (the timing of the launch of these awards, subject to funding and COVID-19 impacts is still planned for 2022)

KPI: Launch first One Medicine Challenge and Learning Awards (the timing of the launch of these awards, subject to funding and COVID-19 impacts is planned for Summer/Autumn 2021)

Influence

To attract One Medicine researchers and to extend our research remit, Humanimal Trust is establishing a panel of scientific and medical experts to ensure that Humanimal Trust- funded research continues to contribute to building a strong and powerful research evidence base for a One Medicine approach across our five key flagship areas.

The arrival of our Science Officer, Dr Margarida Simoes, in 2019 helped kick-start a new wave of network connections, but her return to Portugal in early 2020 led to a hiatus until the appointment of Dr Tracey King as Research and Outreach Manager in mid-2020.

2020-21 Influence Objective and Targets

- Establish credible and effective presence and relationships with regulatory and membership veterinary and medical bodies and associated bodies

KPI: Pledge sign ups (see above)

KPI: Hub sign-ups (see above)

KPI: Meetings arranged (COVID-19 impact and awaiting appointment of new Research and Outreach Manager)

KPI: Invitations to participate in events (COVID-19 impact and awaiting appointment of new Research and Outreach Manager)

KPI: Evidence of influence on policy framework from above bodies (COVID-19 impact and awaiting appointment of new Research and Outreach Manager)



5. People Making A Difference for One Medicine

Humanimal Trust achieves everything it does because of a small but talented and tireless group of two staff and five trustees along with a network of 25 volunteer ambassadors, specialist advisors and a global community of supporters. Despite limited resources, this report is testament to how much can be built with passion and commitment.

Of course, nothing can be achieved without money or resources. Since our foundation in 2014 we have received generous large gifts from a number of individuals and organisations including MSPCA-Angell via the Engelhart Foundation, The Biltema Foundation, and The Rose Animal Welfare Trust.

We would also like to acknowledge all of the personal gifts received in the form of legacies, including those from:

- Pamela Laurence
- Terry Eames
- Lesley Warren
- Denise Mihaylova
- Valerie Meldrum Middleton

As we strive to broaden our income and build our network of individual givers, our thanks goes to every one of our thousands of supporters all around the world who drive One Medicine through sharing our message, donating, volunteering and helping to raise funds in support of our work. Our thanks goes to every individual and organisation, large and small, who each make a valuable contribution to making One Medicine a reality.



Humanimal Trust's community of compassion exists thanks to the support and hard work of dedicated and passionate people all over the world, and every contribution, every share on social media, every conversation to spread the word and every penny raised brings us a step closer to a fairer world for humans and animals alike.

Everyone matters in this journey, however, there are some we would like to cite specifically for their contribution and efforts in going above and beyond for One Medicine:

**Declan
Monaghan**

The first Humanimal Trust staff member, who introduced the 4th'R' - Reciprocity for humans and animals, as a method by which to articulate how medical collaboration can work within, and expand, the current concept of the 3 Rs (Replace; Reduce, Refine) in relation to animal testing in medical research.

**Lisa
Pendleton**

For being one of our first fantastic fundraising supporters, promoting One Medicine with co-workers and encouraging her employer to support her fundraising activities.

**Bev
Hunt**

Who walked the entire Cornish coastline and created a wonderful photo calendar to raise funds and awareness in support of One Medicine, and who continues to fundraise in aid of Humanimal Trust.



Volunteer Ambassador Team

To all of our volunteer Ambassador team, who have supported every aspect of our work in a variety of ways, and whose dedication enables so many more to understand what One Medicine is and how it can benefit us all.



Natasha Novak (formerly Natasha Richardson)

A hugely dedicated young supporter who has organised an annual fun dog show promoting responsible animal care and guardianship for several years, educating others, raising awareness and funds for Humanimal Trust.



John Grounds

For his commitment and unwavering support, going well above and beyond as advisor to the Board of Trustees and broader Trust team in working to drive One Medicine.

Annie Leete

For bravely abseiling down the Spinnaker Tower in Portsmouth in 2019, raising vital awareness and funds for One Medicine.

**Professor
Jo Morris &
Dr Tomoko
Iwata**

For their support in the development of the Collaboration Café mini e-zine, and for giving a talk about One Medicine and Humanimal Trust at University of Glasgow.



**Dr Anna
Radford**

For her support in discussing opportunities to promote One Medicine from a strategic perspective and for giving a talk about One Medicine and Humanimal Trust to her peers.

**Our Board
of Trustees**

Always happy and ready to be involved from taking part in podcasts, to helping on event stands, and fundraising – in addition to their demanding and challenging workloads.