

Project Acronym:
FUSVET (SEED/1221/0080)

Focused Ultrasound System for Veterinary Chemotherapeutic
Applications for Oncology

Deliverable number: 1.3

Title: Communication and outreach strategy plan.

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Executive summary

The present deliverable describes all internal and external activities undertaken to outreach to external stakeholders and generate awareness about the FUSVET project and its results. Dissemination and outreach activities included among others creation of a range of dissemination materials, dissemination of the project on social media platforms, presentations at scientific conferences and public events and publications in scientific journals.

Initially, the project's logo was created to strengthen the corporate identity and branding of the project, while a website was also developed to disseminate key project information to the public. In line with corporate identities, the project website was individually incorporated on the websites of the host (VET-EX MACHINA) and partner organisations (CUT). Project activities and results were uploaded on the two websites throughout the framework of the project. The project and its aims were introduced to the scientific community by the Focused Ultrasound Foundation, while the project's progress and activities were regularly disseminated through social media platforms. Furthermore, stakeholders attended various local and international events throughout the project duration disseminating the project and its associated technology and networking with experienced people from a vast range of backgrounds (academics, researchers, veterinarians, and clinicians). The technology developed during the project was showcased to important people from academic or governmental organisations during laboratory visits at the premises of the partner organisation (CUT). Important results of the project were directly projected to the scientific community through various conference presentations, while several publications relating to research outcomes were made to high-impact scientific journals.

Both organisations enrolled in the FUSVET project participated in the dissemination activities. The various activities undertaken presented the project and introduced the benefit associated with its potential commercial exploitation to numerous local and international academic institutions and companies as well as to entrepreneurs and investors. All activities undertaken are listed in this deliverable according to the dissemination type (i.e., logo, website, social media, presentations, etc.).

Logo creation

A logo for the FUSVET project (Figure 1) was created at the early start of the project in November 2022. The logo was included in all dissemination material created throughout the project achieving a direct and unique visual branding.



Figure 1: Logo of the FUSVET project.

Website development

A website was developed representing one of the main communication tools for disseminating project related information. Researchers from the project's consortium continuously uploaded information and material on the website. The website was developed in PHP. In line with corporate identities of the participating organisations, the website of the FUSVET project was independently integrated in the websites of the Therapeutic Ultrasound Laboratory (partner organisation) and VET-EX MACHINA (host organisation).

Partner organisation website

The website of the Therapeutic Ultrasound Laboratory describes the principal research activities performed in the laboratory and includes information about any past and ongoing research grants.

The website can be accessed from this domain: <https://theralabcut.org>

A screenshot of the website is shown in Figure 2. On the main page, key information relating to the laboratory including founding period, research focus, and existing infrastructure are described. Additionally, photos of the software that controls the MRI guided focused ultrasound robotic systems and indicative lesions inflicted on excised pork tissue by FUS ablations are shown. The FUSVET project can be accessed by clicking on the 'Ongoing grants' button located on the website menu bar. The homepage of the FUSVET project is shown in Appendix 1.



Figure 2: Screenshot of the website of the Therapeutic Ultrasound Laboratory.

Host organisation website

Accordingly, the website of VET-EX MACHINA provides an overview of the activities and services offered by the company as a preclinical contract research organisation and contains information of any research projects in which the company participates.

The website can be accessed from this domain: <https://vetexmachina.com>

A screenshot of the website is shown in Figure 3. The homepage outlines important data relating to the establishment of the company including its founding year, goals, available infrastructure and expertise of personnel. The web page of the FUSVET project can be visited through the website's navigation menu by clicking on the 'Projects' button. The FUSVET project as incorporated in the website of the host organisation is shown in Appendix 1.

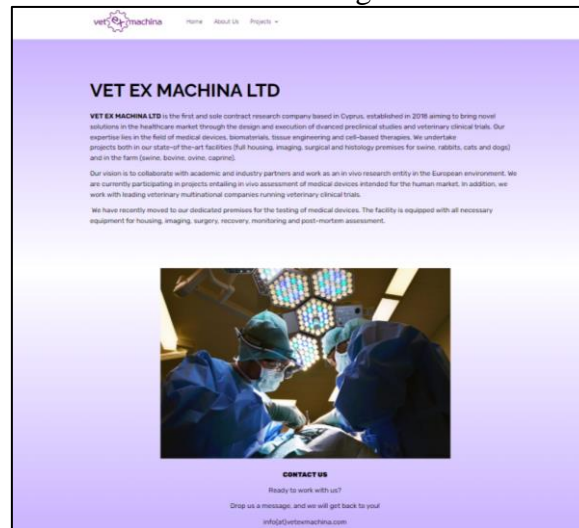


Figure 3: Screenshot of the website of VET-EX MACHINA.

Focused Ultrasound Foundation website post

A post about the project was made on the website of the Focused Ultrasound Foundation on June 1st, 2023. The project was posted on the news section of the website wherein the latest advancements in the field are mentioned. The relevant post as seen in Figure 4, included details relating to the aims and objectives of the project, participating organisations, publications relating to pilot results that served as pillars for the project as well as research funding information. The post can be accessed from: <https://www.fusfoundation.org/posts/veterinary-collaboration-will-advance-affordable-focused-ultrasound-solutions/>



Figure 4: Post about the FUSVET project on the Focused Ultrasound Foundation website.

Social media platforms

LinkedIn profile

A LinkedIn profile relating to the FUSVET project was created as shown in Figure 5. From the first day of the creation the page received 46 followers as well as several messages seeking additional information. Several activities (project results and events attended) were regularly disseminated through this page throughout the duration of the project.

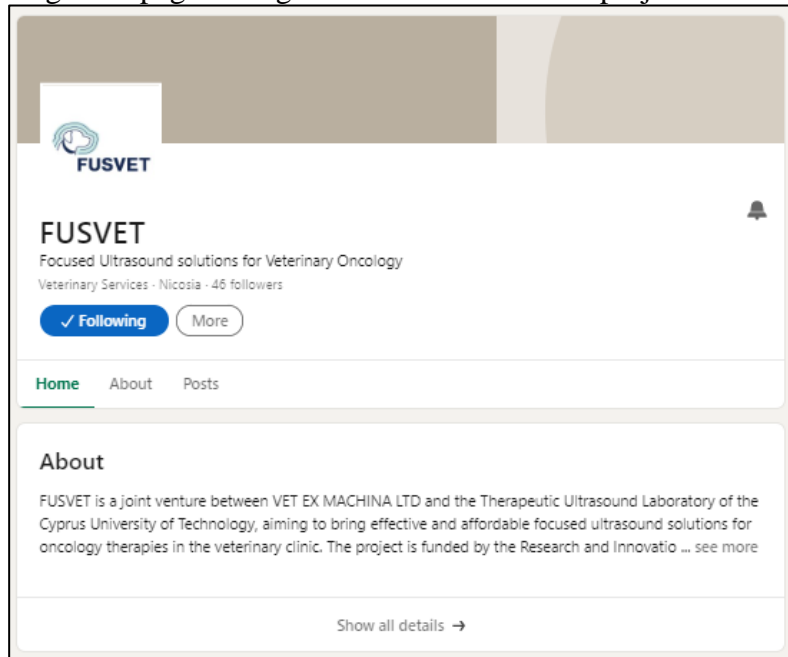


Figure 5: Screenshot of the project's LinkedIn profile.

Focused Ultrasound Foundation dissemination through LinkedIn

The project was also disseminated through the LinkedIn page of the Focused Ultrasound Foundation (Figure 6).

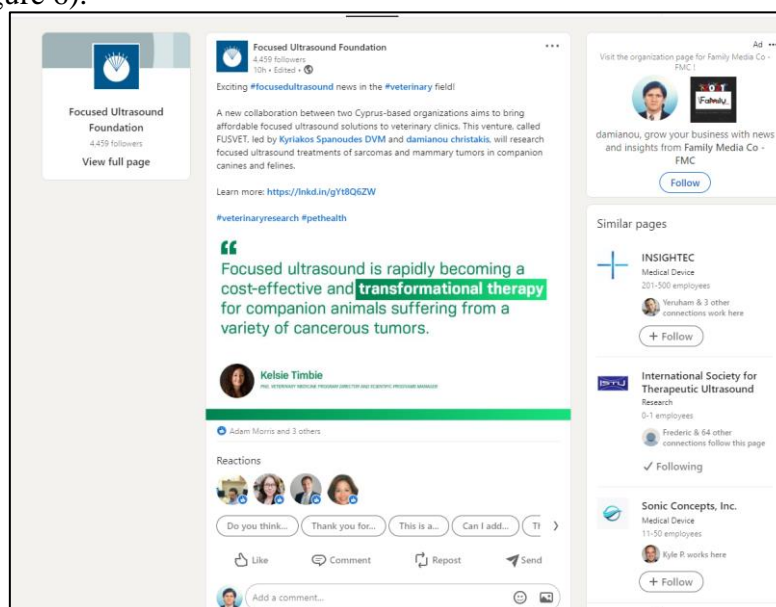


Figure 6: Dissemination of the project through LinkedIn.

Focused Ultrasound Foundation veterinary group meeting

On April 28th, 2023, a virtual meeting of the veterinary group of the Focused Ultrasound Foundation was held. The meeting gathered 14 researchers and veterinarians involved in researching the application of the focused ultrasound technology in the veterinary field. Dr. Christakis Damianou (CUT) participated in the meeting presenting the project and gaining valuable information about the latest advancements in the field. A screenshot of the virtual meeting is shown in Figure 7.

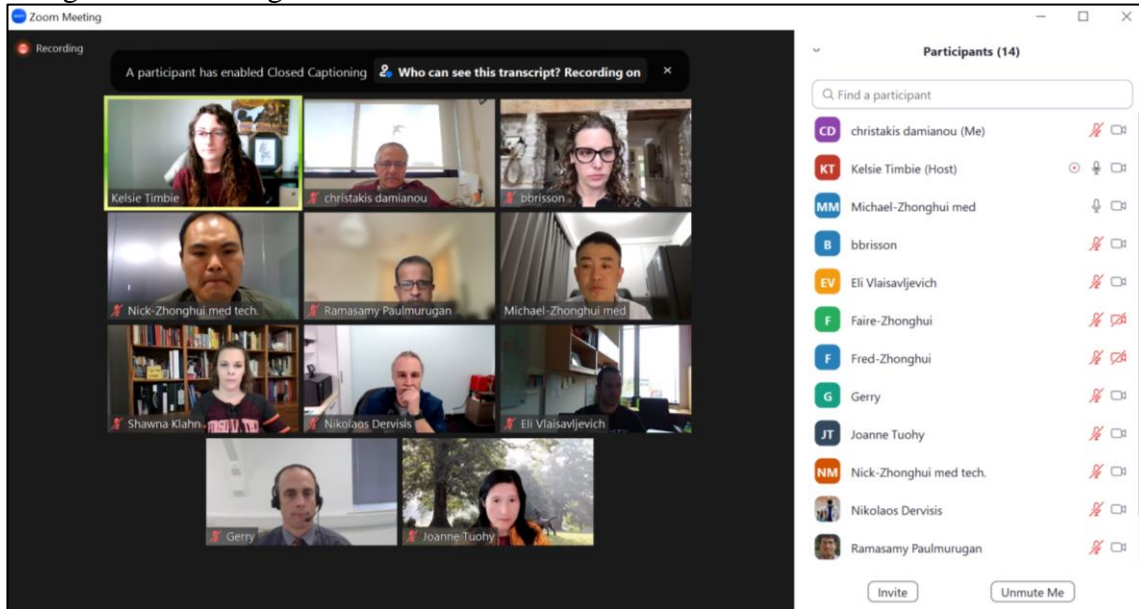


Figure 7: Screenshot of the virtual meeting of the Focused Ultrasound Foundation veterinary group.

Events and presentations

Presentations

Poster presentations at the UltraCon Annual Meeting in USA

Two articles generated during the FUSVET project entitled “Focused Ultrasound Phantom with Inclusion of Tumour” and “Focused Ultrasound Ablation of Canine Mammary Cancer” were presented by Prof. Christakis Damianou (CUT) and Anastasia Antoniou (CUT) at the *UltraCon Annual Meeting* that took place between the 25-29 March 2023 in Orlando, Florida, USA. Sample photos from the poster presentations are shown in Figure 8.



Figure 8: Photos from poster presentations at the UltraCon Annual Meeting 2023 (Orlando, Florida, USA).

Poster presentations at the 12th Veterinary forum on Companion Animal Medicine in Greece

Christakis Damianou (CUT) and Kyriakos Spanoudes (VET-EX MACHINA) presented two articles prepared during the FUSVET project entitled “MRI-guided focused ultrasound system for veterinary oncology” and “T1 and T2 values of an agar-based phantom with inclusion of tumour” at the 12th Hellenic Companion Animal Veterinary Society Forum that took place between 1-2 April 2023 in Thessaloniki, Greece. Many veterinarians and companies in the field were impressed by the technology presented. Figure 9 shows a screenshot of the poster presentations as included in the forum proceedings.



Figure 9: Photos from the submitted poster presentations at the 12th Veterinary forum on Companion Animal Medicine (Thessaloniki, Greece).

Poster presentation at the 6th International Caparica Conference on Ultrasonic-based applications from analysis to synthesis (ULTRASONICS 2023) in Portugal

A paper that was prepared throughout the framework of FUSVET entitled “MR thermometry for a multipurpose phantom for focused ultrasound” was presented by Prof. Christakis Damianou (CUT) at the 6th International Caparica Conference on Ultrasonic-based applications from analysis to synthesis that was organised between 26-29 June 2023 in Caparica, Portugal. Figure 10 shows a photo taken during the conference.



Figure 10: Photos from poster presentations at the 6th International Caparica Conference on Ultrasonic-based applications from analysis to synthesis (Caparica, Portugal).

Presentation at the Reflect Festival 2022 in Cyprus

Kyriakos Spanoudes (VET-EX MACHINA) attended a session at the Reflect Festival which took place in Limassol on the 21st October 2022 where he presented the FUSVET project. The project was presented as part of a side event organised by the Research and Innovation Foundation (RIF). Since the Reflect Festival is the largest technology and entrepreneurship event of the Mediterranean region, we had the chance to present the project in front of entrepreneurs, innovation players, investors, decision makers and technology enthusiasts. Indicative photos of the event are shown in Figure 11.

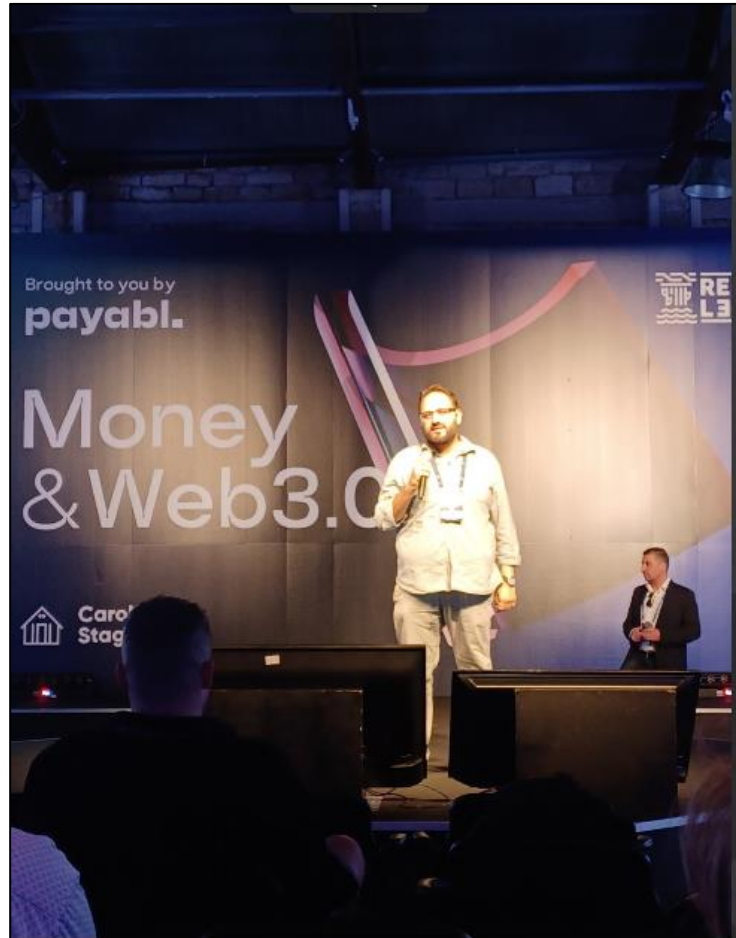


Figure 11: Photo from presentation at the Reflect Festival 2022 (Limassol, Cyprus).

Poster presentations at the 10th International Conference on Biomedical and Bioinformatics Engineering in Japan

Prof. Christakis Damianou (CUT) and Kyriakos Spanoudes (VET-EX MACHINA) presented two articles entitled “Veterinary Ablation system using MRI Guided Focused Ultrasound” and “T1 and T2 values of an agar-based phantom with inclusion of tumour” at the *10th International Conference on Biomedical and Bioinformatics Engineering* that took place between the 9-12 November 2023 at the Suzaku Campus of the Ritsumeikan University in Kyoto, Japan. Figure 12 shows a photo taken during the presentation delivered by Kyriakos Spanoudes.



Figure 12: Photo from presentation at the 10th International Conference on Biomedical and Bioinformatics Engineering (Kyoto, Japan).

Moreover, the article entitled “Veterinary Ablation system using MRI Guided Focused Ultrasound” that was presented by Prof. Christakis Damianou won the best presentation award at the conference. The news was communicated to the public through a post at the LinkedIn profile of FUSVET (Figure 13). As shown in Figure 13, the post included a photo taken during presentation of the award to Prof. Christakis Damianou.



Figure 13: Screenshot of the LinkedIn post showing photo for best presentation award received for a poster presentation at the 10th International Conference on Biomedical and Bioinformatics Engineering (Kyoto, Japan).

Presentation of FUSVET at the Second Affiliated Hospital of Zhejiang University School of Medicine in China

The FUSVET project was presented by Prof. Christakis Damianou (CUT) at the High Intensity Focused Ultrasound Center of the Second Affiliated Hospital of Zhejiang University School of Medicine (SAHZU) in Hangzhou, China in December 2023. The associated technology of FUSVET was presented to physicians related to the clinical HIFU field. During the presentation, participants were very impressed by the project and its therapeutic potential for oncological applications. Photos of the premises of the SAHZU HIFU center and Prof. Christakis Damianou with various physicians at the SAHZU HIFU premises are shown in Figure 14. Figure 15 shows an indicative photo taken during presentation of FUSVET by Prof. Christakis Damianou.

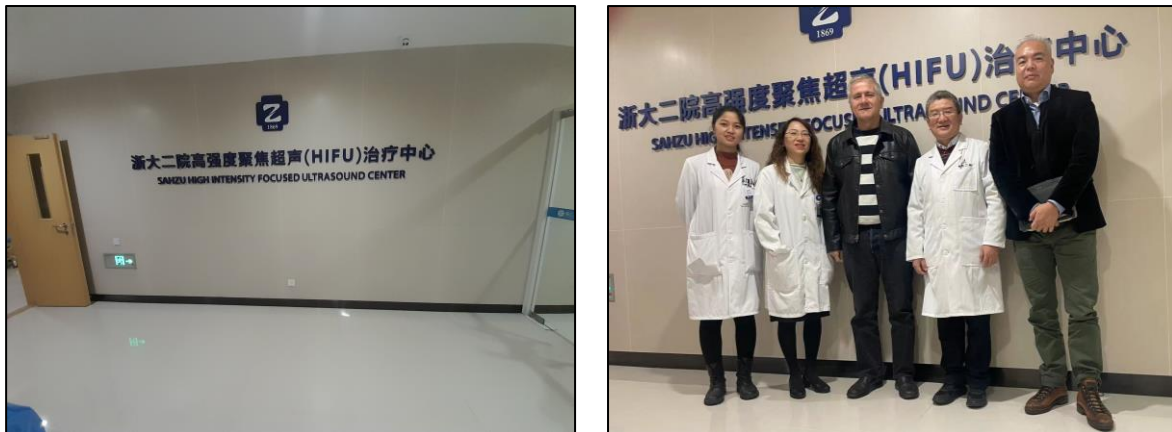


Figure 14: Photos of the premises of the SAHZU HIFU center (left), and Prof. Christakis Damianou with various physicians at the SAHZU HIFU center (Hangzhou, China) (right).

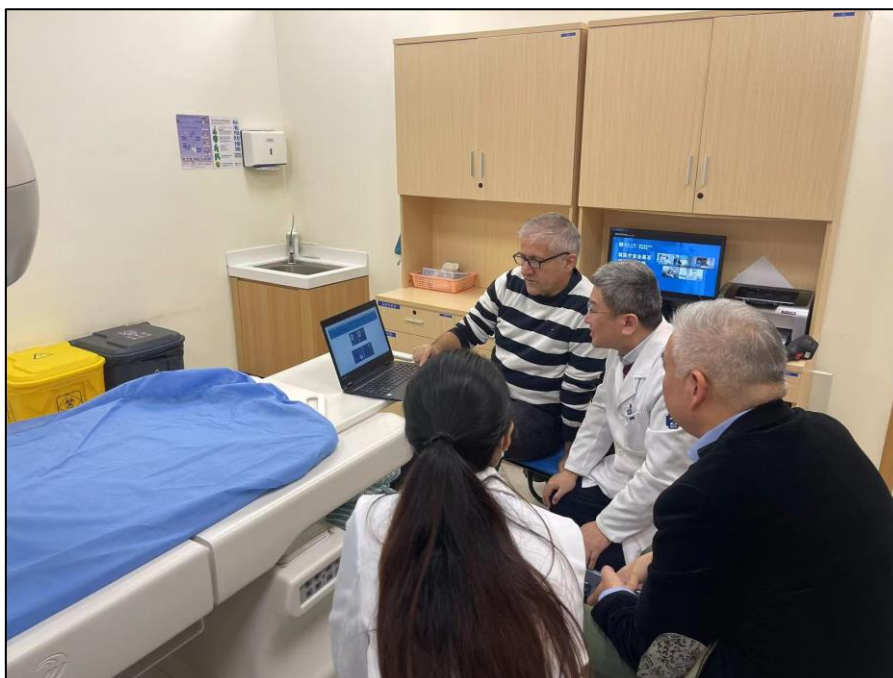


Figure 15: Photo from FUSVET presentation at the SAHZU HIFU center (Hangzhou, China).

Seminar presentation at the Hangzhou Dianzi University (HDU) in China

Prof. Christakis Damianou (CUT) delivered a presentation relating to the FUSVET project during a seminar that took place in December 2023 at the Electronic and Information School of the HDU in Hangzhou, China. The technology of the project and preliminary results were communicated to various professors and students of this Chinese University. Indicative photos from the presentation are shown in Figure 16.

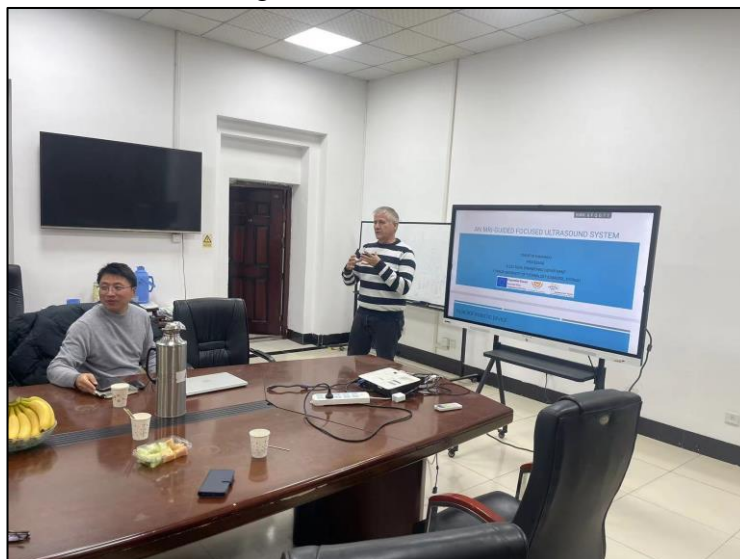


Figure 16: Photo from seminar presentation at the Electronic and Information School of the Hangzhou Dianzi University (Hangzhou, China).

Presentation at the BioTECPro Workshop in Cyprus

Nikolas Evripidou (CUT) participated in a workshop executed under the BioTECPro project (ENTERPRISES/0521/0185) that took place on the 26th January 2024 at the premises of the Kean Soft Drinks company in Limassol, Cyprus. At this workshop, Mr Evripidou presented the partner organisation (CUT) and the infrastructure and research performed at the Therapeutic Ultrasound Laboratory, including the technology developed in the framework of the FUSVET project. The event was attended by various members from academia and industry who were impressed by the developed technology. Figure 17 shows photos taken during the presentation, while Figure 18 shows screenshots of the workshop's agenda.



Figure 17: Photos from presentation at the BioTECPro workshop at the Kean Soft Drinks company (Limassol, Cyprus).

**Transforming waste into Wealth:
Valorization of citrus processing waste for
manufacture of high-added value commodities**
26th January 2024

When: 26 January 2024
Where: Kean Soft Drinks, 35 Promachon
Eleftherias, 4103, Limassol

Time: 9:00 – 13:30
Contact: michail.koulinas@cut.ac.cy
+35725002067

Program	
09:00-09:15	Registration
09:15-09:25	Welcome speeches Dr G. Botsaris (Dean of Faculty of Geotechnical Sciences and Environmental Management, CUT)
09:25-09:40	The history of a citrus processing industry. Mr P. Christou (KEAN)
09:40-09:50	The BioTECPro project: an integrated approach for citrus processing waste valorization. Dr M. Koulinas (CUT)
09:50-10:10	The impact of wastewater valorization in the circular economy. Dr Stella Parmaki (OEB)
10:10-10:30	Ultrasonic laboratory at Cyprus University of Technology. Mr N. Evripidou (CUT)
10:30-11:00	Coffee Break
11:00-11:30	A holistic approach for citrus processing waste valorization. Ms P. Karanicola (KEAN)
11:30-12:00	Comprehensive evaluation of techno-economic and environmental aspects in bacterial cellulose production processes. Dr D. Ladakis & Dr S.M. Ioannidou (AUA)
12:00-12:15	Utilization of domestic and industrial wastewater: SBLA case. Mr Y. Tsouloftas (SBLA)
12:15-12:30	Plant Visit & Closing
12:30-13:30	Lunch Break

Figure 18: Screenshot of the agenda of the BioTECPro workshop (Limassol, Cyprus).

Poster presentations at the 39th World Veterinary Association Congress in South Africa

Kyriakos Spanoudes (VET-EX MACHINA) and Christakis Damianou (CUT) presented two posters prepared during the FUSVET project at the 39th World Veterinary Association Congress that took place between the 16-19 April 2024 in Cape Town, South Africa. The two posters related to the project's developed technology and *in-vivo* results of veterinary clinical trials and were entitled "Positioning device for MRI guided focused ultrasound for veterinary applications" and "Ablation of dog and cat cancer using MRI guided focused ultrasound", respectively. The event was attended by practitioners, professionals, innovators and decision-makers of veterinary medicine who were impressed by the developed technology and its promising potential for veterinary oncological applications. Figure 19 shows indicative photos from the poster presentations.

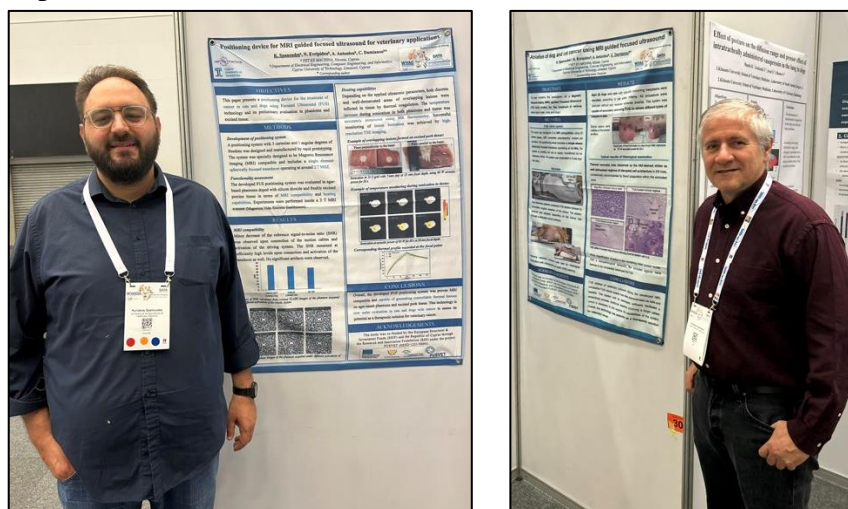


Figure 19: Photos from poster presentations at the 39th World Veterinary Association Congress (Cape Town, South Africa).

Poster presentations at the 2024 6th International Conference on Intelligent Medicine and Image Processing (IMIP 2024) in Indonesia

Two articles that were prepared during the framework of the FUSVET project were presented at the 2024 6th International Conference on Intelligent Medicine and Image Processing (IMIP 2024) that was organized between 26-29 April 2024 in Bali, Indonesia. The two articles entitled “Focused ultrasound tumor bearing phantom” and “Robotic device for MRI guided focused ultrasound for veterinary oncology” were presented by Prof. Christakis Damianou (CUT) and Anastasia Antoniou (CUT), respectively. Sample photos from the poster presentations are shown in Figure 20.



Figure 20: Photos from poster presentations at the 2024 6th International Conference on Intelligent Medicine and Image Processing (Bali, Indonesia).

Presentation at the Research, Innovation, Cooperation and Internationalisation Convention in Cyprus

On the 5th June 2024, Kyriakos Spanoudes (VET-EX MACHINA) attended the “Research, Innovation, Cooperation and Internationalisation” convention organised by RIF at Nicosia, Cyprus. During the scheduled networking activity, he presented the FUSVET project through an oral pitch to various academics, research organisations and business representatives. Indicative photos of the event are shown in Figure 21.



Figure 21: Photo from presentation at the Research, Innovation, Cooperations and Internationalisation convention (Nicosia, Cyprus).

Poster presentation at the 23rd Annual International Symposium on Therapeutic Ultrasound (ISTU) in Taiwan

Kyriakos Spanoudes (VET-EX MACHINA) attended the 23rd Annual International Symposium on Therapeutic Ultrasound that took place between the 19-22 September 2024 in Taipei, Taiwan. At the ISTU, which is the annual event on the latest advancements in therapeutic ultrasound, he presented a poster entitled “Canine and feline tumor ablation field trial with a FUS ablation system” that was prepared during the FUSVET project. Specifically, the poster related to the veterinary trials that were executed on pets with spontaneous tumours so as to assess the efficacy of the project’s developed technology. The promising *in-vivo* results acquired from these experiments on cancer pet patients were presented to scientists, engineers, clinicians and persons from the industry that attended the event from around the world. Figure 22 shows indicative photos from the poster presentation, while Figure 23 shows a relevant photo acquired during one of the scheduled events of the symposium.



Figure 22: Photos from the poster presentation at the 23rd Annual International Symposium on Therapeutic Ultrasound (Taipei, Taiwan).



Figure 23: Photo of one of the discussion panels at the 23rd Annual International Symposium on Therapeutic Ultrasound (Taipei, Taiwan).

Networking events

Attendance at the Artificial Intelligence in Modern Oncology event in Cyprus

Professor Christakis Damianou (CUT) attended the “Artificial Intelligence in Modern Oncology” event that took place on the 22nd March 2024 in Limassol, Cyprus. The event was jointly organised by the German Oncology Centre, the Cancer Research and Innovation Centre, and the Cyprus University of Technology at the premises of the latter. During the event, the project’s scientific coordinator (Prof. Christakis Damianou) had the opportunity to meet and network with various members from national and international academic institutions, distinguished physicians practising in the clinical oncological sector, key associates of regional cancer patient organisations, as well as affiliates of different research institutes and other organisations related to the wider clinical sector. Some of these aforementioned members were stakeholders and scientific advisors of the FUSVET project who were well-acquainted with the majority of people that attended the event. Therefore, during the scheduled mingling session of the event, Prof. Christakis Damianou had the opportunity to be introduced to numerous attendees by the project’s scientific associates and informally talk about the FUSVET project and its therapeutic oncological potential. Consequently, he networked and established connections with numerous stakeholders who were interested in the therapeutic applications of the system and its prospective for potential translation in the clinical segment. Figure 24 shows the schedule of the event, while Figure 25 shows relevant photos acquired.

ARTIFICIAL INTELLIGENCE IN MODERN ONCOLOGY	
AMPHITHEATER T. PAPAPOPOULOS, CUT, LIMASSOL	
22.03.2024 15:30-18:30	
15:30-16:00	Registration
Introduction	
16:00-16:05	Welcoming, N. Tsapatsouls (CUT, Limassol)
16:05-16:10	Welcoming, A. Anayiotos (CARIC, CUT Limassol)
16:10-16:15	Welcoming, C. Zamboglou (GOC, Limassol)
Part 1 - Presentations	
Chairs: G. Kyriakoudes (DCentric health, Limassol), A. Constantinidou (UCY, Nicosia), D. Skourides (Cypriot Chief Scientist)	
16:15-16:25	Introduction to modern AI tools, A. Thieme (Stanford University)
16:25-16:35	AI in modern oncology: the physician's perspective, J.C. Peeken (TU Munich)
16:35-16:45	AI in modern oncology: the European Cancer Organization's perspective, A. Charalambous (President ECO, CUT, Limassol)
16:45-16:50	Summary, D. Skourides (Cypriot Chief Scientist)
16:50-17:00	Discussion
17:00-17:15	Break
Part 2 - Panel discussion	
Moderator: P. Doolan (GOC, Limassol), Y. Roussakis (GOC, Limassol)	
Panel: N. Philippou (PASYKAF), A. Kkofou (Anticancer Society), C. Dowrolis (The Cyprus Institute, Nicosia), C. N. Phellas (Cyprus National Bioethics Committee), T. Loukaides (Cypriot RIF)	
17:15-18:00	Discussion with panel members on psychological and ethical aspects of AI in Oncology
18:00	Get together

 
www.agora3.com.cy

Figure 24: The schedule of the Artificial Intelligence in Modern Oncology event (Limassol, Cyprus).



Figure 25: Photos of the Artificial Intelligence in Modern Oncology event at the premises of the Cyprus University of Technology (Limassol, Cyprus).

Visits at the laboratory premises of the partner organisation

Visit of the rector of the HDU and his delegation

On the 9th of May 2024, the rector of HDU, Professor Chen Jiming, and his delegation (Professors He Zhiwei, Cao Jiuwen, Feng Ying and Wu Jian) visited the Therapeutic Ultrasound Laboratory at CUT (partner organisation). Prof. Christakis Damianou (CUT) showcased the technology developed in the framework of the FUSVET project by demonstrating the robotic system and its accompanying software. Participants were impressed by the developed technology and its potential impact in the veterinary field. Indicative photos from the visit are shown in Figure 26.

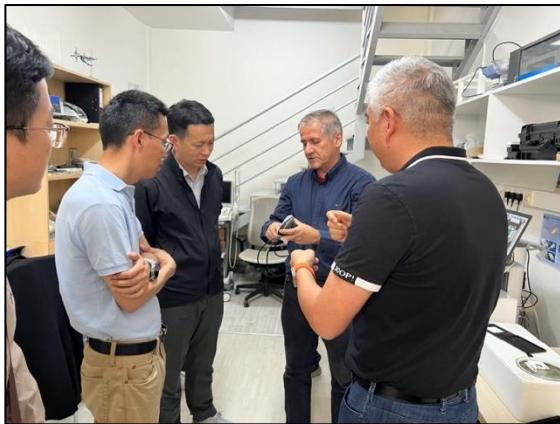


Figure 26: Photos taken during the visit of the rector of HDU and his delegation at the Therapeutic Ultrasound Laboratory.

Visit of the chief scientist for research, innovation and technology of the Republic of Cyprus

The chief scientist for research, innovation and technology of the Republic of Cyprus, Dr. Demetris Skourides, along with various delegates from CUT, visited the Therapeutic Ultrasound Laboratory on the 16th May 2024 to obtain a firsthand insight on the activities performed at the university's laboratories. The research activities performed at the laboratory, including the technology developed in the framework of the FUSVET project and its therapeutic applications in animal oncology were presented by Prof. Christakis Damianou (CUT). Dr. Skourides was particularly impressed by the promising therapeutic potential of the FUSVET robotic system. Figure 27 shows indicative photos acquired during the visit.



Figure 27: Photos taken during the visit of the chief scientist for research, innovation and technology of the Republic of Cyprus at the Therapeutic Ultrasound Laboratory. .

Conference papers

- 1) A. Antoniou, N. Evripidou, C. Damianou, “Focused Ultrasound Ablation of Canine Mammary Cancer”, *UltraCon Annual Meeting 2023*, Orlando, Florida, USA, 25-29 March 2023, **Poster Presentation** (in person attendance).
- 2) C. Damianou, A. Antoniou, N. Evripidou, “Focused Ultrasound Phantom with Inclusion of Tumour”, *UltraCon Annual Meeting 2023*, Orlando, Florida, USA, 25-29 March 2023, **Poster Presentation** (in person attendance).
- 3) C. Damianou, K. Spanoudes, “MRI guided focused ultrasound system for veterinary oncology”, *12th Veterinary Forum on Companion Animal Medicine*, Thessaloniki, Greece, 01-02 April 2023, **Poster presentation** (in person attendance).
- 4) C. Damianou, K. Spanoudes, “T1 and T2 values of an Agar-based phantom with inclusion of tumour”, *12th Veterinary Forum on Companion Animal Medicine*, Thessaloniki, Greece, 01-02 April 2023, **Poster presentation** (in person attendance).
- 5) A. Antoniou, N. Evripidou, K. Spanoudes, C. Damianou, “Treatment of cancer with focused Ultrasound in cats and dogs”, *22nd Annual International Symposium on Therapeutic Ultrasound (ISTU)*, Lyon, France, 17-20 April 2023, **Poster presentation** (in person attendance).
- 6) N. Evripidou, A. Antoniou, C. Damianou, “Ultrasound and MRI guided focused ultrasound system for veterinary applications”, *29th International conference of the Australian sonographers association*, Brisbane, Australia, 26-28 May 2023, **Presentation** (in person attendance).
- 7) C. Damianou, N. Evripidou, A. Georgiou, “MR Thermometry for a multipurpose phantom for focused ultrasound”, *6th International Caparica Conference on Ultrasonic-based applications from analysis to synthesis*, Caparica, Portugal, 26-29 June 2023, **Poster presentation** (in person attendance).
- 8) K. Spanoudes, C. Damianou, “Robotic system for veterinary applications”, *6th International Conference on Manipulation, Automation and Robotics at Small Scales (MARSS)*, Abu Dhabi, UAE, 9-13 October 2023, **Presentation** (in person attendance).
- 9) C. Damianou, N. Evripidou, K. Spanoudes, “Veterinary Ablation system using MRI Guided Focused Ultrasound”, *10th International Conference on Biomedical and Bioinformatics Engineering*, Kyoto, Japan, 9-12 November 2023, **Presentation** (in person attendance).
- 10) K. Spanoudes, N. Evripidou, A. Antoniou, C. Damianou, “T1 and T2 values of an agar-based phantom with inclusion of tumour”, *10th International Conference on Biomedical and Bioinformatics Engineering*, Kyoto, Japan, 9-12 November 2023, **Presentation** (in person attendance).
- 11) K. Spanoudes, N. Evripidou, C. Damianou, “Veterinary oncology using MRI guided focused ultrasound”, *6th International Conference on BioMedical Technology (ICBMT)*, Ho Chi Minh City, Vietnam, 23-25 February 2024, **Presentation** (in person attendance).

12) K. Spanoudes, N. Evripidou, A. Antoniou, C. Damianou, “Ablation of dog and cat cancer using MRI guided focused ultrasound”, *39th World Veterinary Association Congress (WVAC2024)*, Cape Town, South Africa, 16-19 April 2024, **Presentation** (in person attendance).

13) K. Spanoudes, N. Evripidou, A. Antoniou, C. Damianou, “Positioning device for MRI guided focused ultrasound for veterinary applications”, *39th World Veterinary Association Congress (WVAC2024)*, Cape Town, South Africa, 16-19 April 2024, **Presentation** (in person attendance).

14) K. Spanoudes, A. Antoniou, N. Evripidou, C. Damianou, “Robotic device for MRI guided focused ultrasound for veterinary oncology”, *The 2024 6th International Conference on Intelligent Medicine and Image Processing (IMIP 2024)*, Bali, Indonesia, 26-29 April 2024, **Poster presentation** (in person attendance).

15) C. Damianou, K. Spanoudes, A. Antoniou, N. Evripidou, “Focused ultrasound tumor bearing phantom”, *The 2024 6th International Conference on Intelligent Medicine and Image Processing (IMIP 2024)*, Bali, Indonesia, 26-29 April 2024, **Poster presentation** (in person attendance).

16) K. Spanoudes, A. Antoniou, N. Evripidou, A. Filippou, C. Damianou, “Canine and feline tumor ablation field trial with a FUS ablation system”, *23rd Annual International Symposium on Therapeutic Ultrasound (ISTU)*, Taipei, Taiwan, 19-22 September 2024, **Poster presentation** (in person attendance).

Journal papers

Published or accepted:

1. Antoniou A, Spanoudes K, and Damianou C, “Treatment of mammary cancer with focused ultrasound: A pilot study in canine and feline patients”, *Ultrasonics* (2023), doi: 10.1016/j.ultras.2023.106974.
2. Filippou A, Evripidou N, and Damianou C, “Robotic system for magnetic resonance imaging-guided focused ultrasound treatment of thyroid nodules”, *International Journal of Medical Robotics and Computer Assisted Surgery* (2023), doi: 10.1002/rcs.2525.
3. Antoniou A, Evripidou N, Georgiou L, Chrysanthou A, Ioannides C, and Damianou C, “Tumor phantom model for MRI-guided focused ultrasound ablation studies”, *Medical Physics* (2023), doi: 10.1002/mp.16480.
4. Antoniou A, Evripidou N, and Damianou C, “Focused ultrasound heating in brain tissue/skull phantoms with 1-MHz single-element transducer”, *Journal of Ultrasound* (2023), doi: 10.1007/s40477-023-00810-7.
5. Evripidou N, Antoniou A, Georgiou L, Ioannides C, Spanoudes K, and Damianou C, “MRI compatibility testing of commercial high intensity focused ultrasound transducers”, *Physica Medica* (2024), doi: 10.1016/j.ejmp.2023.103194.
6. Antoniou A, Evripidou N, Nikolaou A, Georgiou A, Giannakou M, Chrysanthou A, Georgiou L, Ioannides C, and Damianou C, “Magnetic resonance imaging monitoring of thermal lesions produced by focused ultrasound”, *Journal of Medical Ultrasound* (2024), doi: 10.4103/jmu.jmu_112_23.
7. Evripidou N, Antoniou A, Lazarou G, Georgiou L, Chrysanthou A, Ioannides C, and Damianou C, “Workflow of a preclinical robotic magnetic resonance imaging-guided focused ultrasound body system”, *Journal of Medical Ultrasound* (2024), doi: 10.4103/jmu.jmu_135_23.
8. Antoniou A, Evripidou N, Chrysanthou A, Georgiou L, Ioannides C, Spanoudes K, and Damianou C, “Effect of magnetic resonance imaging on the motion accuracy of magnetic resonance imaging-compatible focused ultrasound robotic system”, *Journal of Medical Physics* (2024), doi: 10.4103/jmp.jmp_7_24.
9. Filippou A, Evripidou N, Georgiou A, Nikolaou A, and Damianou C, “Estimation of the proton resonance frequency coefficient in agar-based phantoms”, *Journal of Medical Physics* (2024), doi: 10.4103/jmp.jmp_146_23.

Submitted (under review):

1. Filippou A, Evripidou N, and Damianou C, “A high magnetic resonance imaging (MRI) contrast agar/silica-based phantom for evaluating focused ultrasound protocols”, *Physica Medica* (2024).
2. Filippou A, Evripidou N, Spanoudes K, and Damianou C, “Focused ultrasound treatment of spontaneous canine and feline tumours: An interventional veterinary clinical pilot study”, *Journal of Ultrasound* (2024).
3. Antoniou A, Evripidou N, Filippou A, Georgiou L, Chrysanthou A, Christofi A, Roussakis Y, Ioannides C, Spanoudes K, Damianou D, Lyu Y, Zhao J, Yu L, and Damianou C, “MR imaging assessment of thermal lesions in focused ultrasound phantom”, *Medical Physics* (2024).

On hold (potential submission):

1. Filippou A, Evripidou N, Spanoudes K, Giannakou M, and Damianou C, “Magnetic resonance imaging guided focused ultrasound system for veterinary applications for oncology”.

Appendix 1

FUSVET homepage on partner organisation website

The FUSVET project was incorporated on the website of the Therapeutic Ultrasound Laboratory (partner organisation). A screenshot of the homepage of the project is shown in Figure 28. The project homepage includes a brief summary of the core aims of the project, information relating to financial support, the created logo of the project and interactive buttons from where further data relating to the project can be accessed.



Figure 28: Screenshot of the homepage of the FUSVET project on the website of the Therapeutic Ultrasound Laboratory.

From the homepage of the FUSVET project, users can access certain deliverables produced throughout the project by clicking on the 'Deliverables' button. The 'Deliverables page' is shown in Figure 29. As seen from Figure 29, the page includes all public deliverables in a list of buttons. Website visitors can access and download specific deliverables by simply clicking on the relevant button.

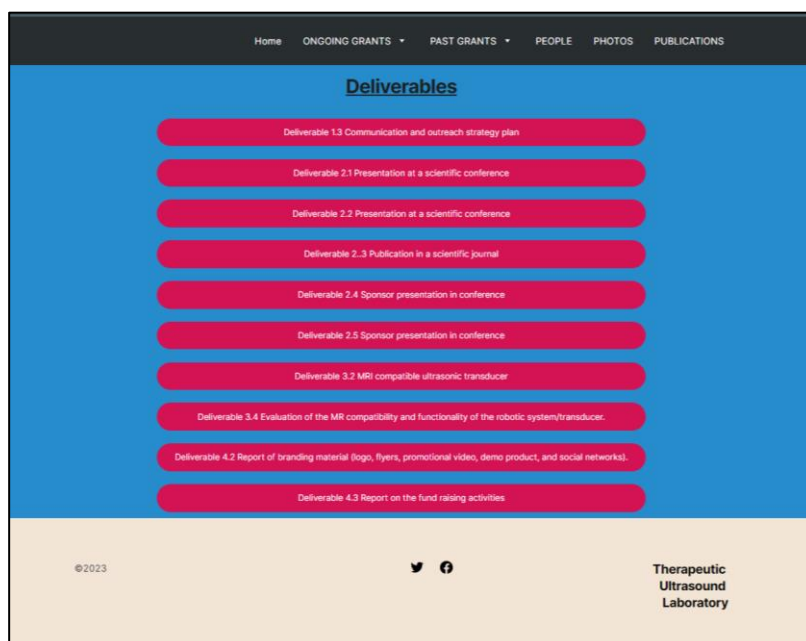


Figure 29: Page with deliverables of the FUSVET project.

Through the project’s homepage, visitors can access a compiled list of external web-based resources particularly useful for veterinarians by clicking on the ‘Resources for veterinarians’ button. Figure 30 shows a screenshot of the ‘Resources for veterinarians’ page. The page includes linked resources for various organisations associated with cancer management in animals. Users can visit the association of their choice by clicking on the relevant link wherein they will be automatically transferred to the website of the corresponding organisation.

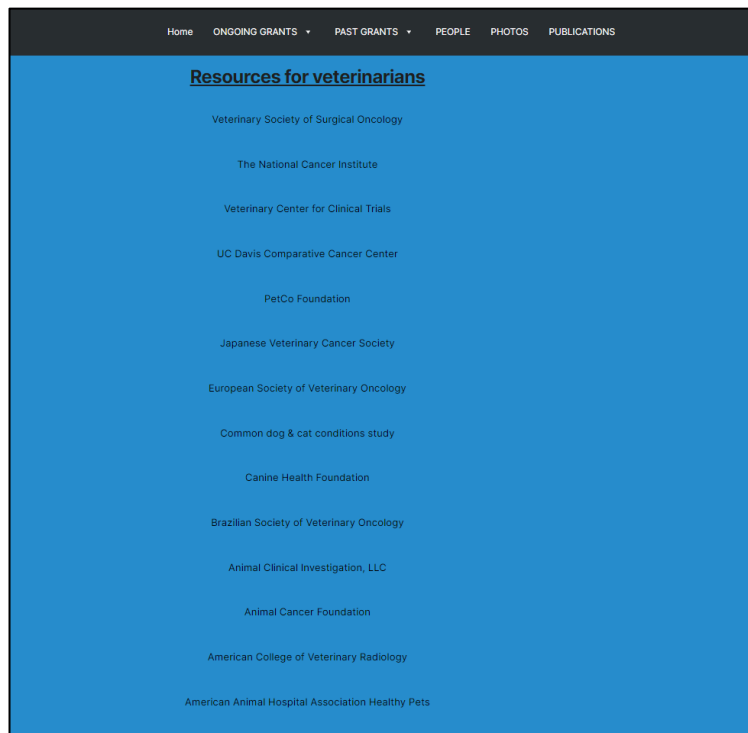


Figure 30: Resources for veterinarians page.

In case website visitors wish to obtain more specific information relating to the project or they have any inquiries, they can contact the partner organisation through the website. A dedicated ‘Contact Us’ section exists on the homepage of the website of the Therapeutic Ultrasound Laboratory. Visitors can go at the bottom of the homepage and fill all relevant details on the dedicated section as shown in Figure 31.

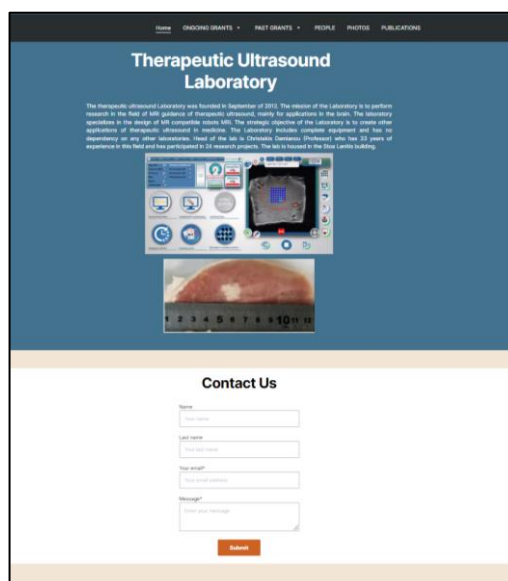






Figure 31: Homepage of the Therapeutic Ultrasound Laboratory website – Contact section.

FUSVET homepage on host organisation website

Accordingly, the FUSVET project was included on the website of VET-EX MACHINA (host organisation). Figure 32 shows a screenshot of the project's homepage as developed on the site of the host organisation. The page of the project outlines the participating organisations and the main goal of the project. Moreover, a brief overview of the system developed during the project, information regarding application of the end-product on animals and the benefits of this treatment are provided. Additionally, information about potential translation of the end-product in clinical medicine as well as the funding organisations is given. Furthermore, a link that directs visitors to the LinkedIn profile of the project (Figure 5) is provided, while a 'Contact Us' section exists for webpage visitors who wish to acquire more project-related information. The FUSVET project appears in the <https://vetexmachina.com/fusvet/> URL.

vet-ex machina Home About Us Projects ▾

FUSVET   **Funded by the European Union**  **Cyprus tomorrow**  **RECOVERY AND RESILIENCE PLAN** **Republic of Cyprus**

VET EX MACHINA LTD in collaboration with Cyprus University of Technology is developing an MRI-guided focused ultrasound (MRgFUS) robotic system for veterinary cancer applications. The final product will be applied in pets (dogs and cats) with naturally occurring cancer. This robotic system has the potential to be utilized in the future for brain, thyroid, breast, liver, kidney, fibroids, and bone cancer in humans. The main advantage of focused ultrasound is that the procedure is non-invasive and has no side effects (mechanical wave). The proposed device is portable to all commercially available MRI scanners. The proposed fast robotics and algorithms will reduce the length of time the animal lies within the machine and therefore it may work favourably to alleviate stress and make this treatment more attractive as well as possibly enable clinicians to treat increasingly larger tumours. The consortium develops a prototype robotic system, electronic system and software. The consortium has conducted extensive phantom and animal experiments with focused ultrasound. Our aim is to convert the prototype technology into a commercial product.

*The project is funded By the European Structural & Investment Funds (ESIF) and the Republic of Cyprus through the Research and Innovation Foundation (RIF) under the FUSVET (SEED/1221/0080).

PROJECT LINK: <https://www.linkedin.com/showcase/fusvet/?viewAsMember=true>

CONTACT US

Ready to work with us?

Drop us a message, and we will get back to you!

info(at)vetexmachina.com

Figure 32: Screenshot of the homepage of the FUSVET project on the website of VET-EX MACHINA.