



Frequently Asked Questions (FAQ)

# 1- Why do researchers need to study human decomposition? How is this research useful?

REST[ES] allows scientists to conduct experimental research on the decomposition of human remains under natural conditions. This helps with the acquisition of new knowledge on how Canadian environmental and climatic conditions influence the rate and process of human decomposition. The results obtained are highly beneficial and useful to police and forensic services during the investigation of a homicide, missing persons, mass disaster or war crimes.

### 2- What kind of remains will be studied at REST[ES]?

Researchers at REST[ES] are currently studying both human and pig remains. Animal carcasses serve as a substitute for cadavers and allow a greater ease for the optimization of methods and the study of scavengers. All studies using pigs are taking place outside of REST[ES]. Research done on human remains utilize validated and optimized techniques in an effort to use donor remains to their fullest capacity.

# 3- Why can't only animal remains be used in your research? Why do humans have to be studied?

Numerous studies<sup>1,2</sup> have demonstrated that decomposition rates vary considerably between humans and animals (primarily pigs) due to a difference in body composition and microbiome (the microbial communities that live within and on our bodies). However, pig carcasses are still useful for the development of experimental protocols (e.g. sensors) and preliminary studies to investigate vertebrate and invertebrate activity. For studies that cannot be conducted on human remains, such as observing vertebrate scavenger activity, pigs are an adequate substitute.

4- Where are the bodies coming from? Will unclaimed bodies be used in your research? All cadavers will come from the UQTR whole-body donation program. All donors and their families will have provided their informed consent to participate in research REST[ES]. As with all body donation programs within the province of Quebec, unclaimed bodies can be used. However, it has been many years since UQTR has received an unclaimed body. It is therefore very unlikely that unclaimed bodies will be used for studies at REST[ES].

In order to diversify the microbiomes present in studies, body donation to the SSRT is open to individuals from all regions, environments, communities and ethnicities.

<sup>1</sup> Connor M, Baigent C, Hansen ES. 2018. Testing the Use of Pigs as Human Proxies in Decomposition Studies. *J Forensic Sci.* 63(5):1350-1355. doi: 10.1111/1556-4029.13727

<sup>&</sup>lt;sup>2</sup> Knobel Z, Ueland M, Nizio KD, Patel D, Forbes SL. 2019. A comparison of human and pig decomposition rates and odour profiles in an Australian environment. *Aust J Forensic Sci. 51*(5):557-572. doi: 10.1080/00450618.2018.1439100





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# 5- Do animal scavengers have access to donor remains at RES[ES]?

No. In addition to the main fence, REST[ES] is also surrounded by an electric fence in order to deter large animals such as bears. Furthermore, all donors are covered by an anti-scavenger cage when not being studied or sampled. Studies on scavenger activity are only done using pig carcasses outside of the REST[ES] facility.

### 6- Are donors placed inside of REST[ES] visible to passersby?

Passersby will not be able to see within REST[ES], for it is surrounded by a large view-obstructing fence and is further protected by forest vegetation. Signage is posted around the facility's exterior to explain the sensitive nature of the work being conducted and to indicate the prohibition of trespassing. These measures are often sufficient at deterring curious individuals. REST[ES] is also equipped with 24/7 video surveillance and additional security measures.

## 7- Do you have the proper authorizations to conduct this type of research?

It is important to note that REST[ES] is financed by public research funds. To obtain such funds, the quality of the project and its researchers were heavily scrutinized. These funds were awarded on the condition that all ethical, environmental and biosecurity certificates are appropriately obtained. In addition, the *Ministère de l'environnement et lutte contre les changements climatiques* (MDDELCC) has been consulted in order to ensure that REST[ES] conforms to all federal and provincial environmental regulations.

#### 8- How large is the terrain of REST[ES]?

REST[ES] covers approximately and area of 1600 m<sup>2</sup>. Studies on scavengers using pig carcasses are conducted nearby in a designated area outside the REST[ES] facility.

#### 9- Are there any future plans for expanding the terrain of REST[ES]?

The current size of REST[ES] is ideal for it to function as a pilot decomposition facility. It allows us to establish the baseline functioning of REST[ES], as well as test new approaches, methods and instruments. However, the site's small size and limited biotope (temperate mixed forest) greatly limits its potential and the scope of research and training activities that can take place. We therefore have the desire and intention to expand REST[ES] sometime in the future. We also hope to establish additional sites throughout the province of Quebec in an effort to facilitate decomposition research and training in other regions and environments.





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# 10- Is there a risk of environmental contamination from the research activities taking place at REST[ES]?

REST[ES] has received the required approbations by the Quebec provincial ministry of environment (*Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques* (MDDELCC)). This certifies that the activities taking place at REST[ES] conform to both provincial and federal environmental norms and regulations. In addition, we will be closely monitoring the site's soil and groundwater as part of a study on the potential long-term environmental impacts of human decomposition and the activities of REST[ES].

## 11- Will the activities at REST[ES] contaminate the site's soil?

Protocols have been put in place in order to minimize any potential soil contamination. Decomposition is a natural process that occurs regularly within natural scenarios with the carcasses of wild animals. We generally do not consider wild animal carcasses a threat to the soil and environment. The risks associated with animal decomposition are the same for human bodies. We know that any changes to the soil and/or environment will not exceed safety levels and will be contained to within close proximity to the body, as demonstrated by studies done at similar facilities in the United States and Australia.

#### 12- Is REST[ES] located in a flood zone?

No. REST[ES] is not located in a designated flood zone.

## 13- Are there any odours being emitted from the facility?

The air quality in and around REST[ES] will be evaluated in order to ensure that the odours and gases generated remain below the accepted local, provincial and federal thresholds. The site is furthermore located in a remote area that is far from any residences. It is unlikely that a member of the general population will be affected by any odours generated at REST[ES].

#### 14- Is there a noticeable increase in fly and insect activity in and around REST[ES]?

The site's temperate climate and research will result in a local increase in insect activity. However, any increase in activity will be limited to the donors and will remain unnoticeable within a few meters from the body and REST[ES]. Entomological studies that are currently taking place will further help evaluate the impact of REST[ES] on insect activity and populations.

#### 15- Are there any public health risks from the use of donors at REST[ES]?

There is minimal risk for the release on an infectious disease (e.x.: HIV, Hepatitis, COVID-19) into the surrounding environment and population. As required by law, all donors are subjected to a thorough screening for infectious diseases prior to entering REST[ES].





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## 16- Will REST[ES] attract criminal activity?

Majority of individuals are unaware of REST[ES] and its activities. REST[ES] is equipped with various security measures such as a barbed wire fence, anti-tresspassing signs and 24/7 video surveillance. It is therefore unlikely that REST[ES] will attract any criminal activities.

## 17- Is REST[ES] considered a cemetery?

REST[ES] is a research and educational facility. Unlike a cemetery, remains at REST[ES] are not interred for an indefinite amount of time. At all times, there will be a small number of remains present, however the presence of individual remains will be temporary. REST[ES] will only be accessible to authorized personnel and will be restricted to visitors. The active site will always be protected from access and visibility.

# 18- What will happen to the remains once a study is completed? Will the remains be buried on-site?

No remains will be permanently interred onsite. At the end of all research projects, the remains will be individually recovered and returned to the UQTR anatomy department. The remains are cremated, and the ashes will be returned to the donors' families. In certain cases where specific consent is given, some remains may be retained for teaching purposes. Pig remains located outside of REST[ES] will also be removed and sent to UQTR for further studies.

#### 19- Are there any similar research facilities in Canada?

This is the first facility of its kind in Canada.

#### 20- Why can't you conduct your research at pre-existing facilities?

Unfortunately, research done at other facilities in the United States, Australia and the Netherlands cannot be extrapolated to Canada and Quebec due to the differences in climate, environment, fauna and flora. These factors can greatly impact how decomposition occurs. Researchers have therefore stressed the need for regionally distinct decomposition facilities. This allows researchers to work in an environment that yields useful information for local police, search and rescue, coroners and other death investigators. The studies done at REST[ES] will particularly focus on body decomposition in a temperate mixed forest. These studies need to be repeated and validated in different ecosystems across Quebec and Canada.





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### 21- How long will the studies take? Are you planning to create human fossils?

The duration of a study will vary depending on the research project. The majority of studies will only last a few months. Some may last a few years, but not long enough to create fossils. Eventually the remains must be collected, cremated and returned to the families.

#### 22- Is REST[ES] open to visitors?

No. We do not provide any visits or tours of REST[ES] in an effort to protect the identity and dignity of our donors. REST[ES] is only accessible to authorized personnel.

## 23- Who should I contact if I wish to donate my body for research at REST[ES]?

Please refer to our **Body Donation** page for further information.

\*\* Please note that we cannot accept donors that reside outside the province of Quebec at the time of death \*\*

### 24- How is REST[ES] financed?

All research projects taking place at REST[ES] are funded by provincial and federal research grants and/or awards. REST[ES] is largely supported by the federal grant for the Canada 150 Research Chair in Forensic Thanatology and a by the provincial AUDACE award from the Fonds de recherche du Quebec. Other research subsidies were also awarded to UQTR and the researchers associated to REST[ES]. All funds granted to projects taking place at REST[ES] were evaluated for their scientific quality and pertinence. All funding agencies involved can be viewed on our <a href="Partners & Funding">Partners & Funding</a> page.