







PRESS RELEASE

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Citizen science: TIQUoJARDIN is looking for volunteers to collect ticks from the gardens around Nancy

When they bite, ticks can transmit pathogens such as the bacterium responsible for Lyme disease. Although this risk is usually associated with forests, many bites also occur in gardens. The TIQUOJARDIN project is seeking to better understand the associated risks, and to do this it relies on the participation of as many people as possible. After a first campaign in 2021, the scientific team is once again calling on the inhabitants of Nancy and its surroundings to collect ticks in their gardens from 1 May to 10 July 2022.

According to data from the CiTIQUE programme, more than a quarter of tick bites occur in private gardens. However, little is known about the factors that influence the presence of ticks in these places, or whether this poses a risk to human health, given that ticks can transmit pathogens such as those responsible for Lyme disease. The TIQUOJARDIN project, led by INRAE, ANSES, the ARBRE Laboratory of Excellence, the University of Lorraine and the Permanent centre for initiatives on the environment (CPIE) in Nancy-Champenoux, aims to answer these questions.

A participatory project in and around Nancy

In order to collect the maximum amount of data and ticks from private gardens, TIQUoJARDIN relies on the general public's participation. From 1 May to 10 July 2022, local volunteers are therefore invited to hunt for ticks in their gardens. Equipped with a sampling kit provided by the project managers, they will follow a defined, easy-to-implement protocol to collect any ticks they









find and send them to the scientific team. They will also be asked to answer a detailed questionnaire about the characteristics of their garden.

A target of 150 gardens in 2022

Conditions for participation

- Live within a 30 kilometre radius of Nancy, to ensure relatively uniform weather conditions in the study area
- Have a garden of at least 100 m²
- Register online on the project website

The sampling kits can then be collected by appointment from one of the four pick-up points located in Champigneulles, the INRAE centre in Champenoux, ANSES in Malzéville and the Jean-Marie Pelt botanical gardens in Villers-lès-Nancy. For more details, visit the project website.

This is the second year of the tick collection campaign. "Last year, we covered 73 gardens," explained Laure Bournez, from the ANSES Laboratory for Rabies and Wildlife in Nancy. "For this year, we have set ourselves a target of 150 gardens. The bigger the number of participants, the more data we will have to determine the environmental factors that influence the presence of ticks in gardens."

In the first campaign, ticks were found in 40% of the gardens surveyed, with an average of four ticks per garden. The species *Ixodes ricinus* was the most common (246 out of 254 ticks collected), but three other tick species were also collected. The second year of collection will allow us to refine these initial results and determine the characteristics of the gardens most likely to harbour ticks.



INRAO





The CiTIQUE programme



TIQUOJARDIN is part of the CiTIQUE participatory research programme. One objective of this programme, which began in 2017, is to collect data on the geographical distribution in France of **tick bites** and the **pathogens** they carry, depending on the environment, weather and seasons. This data collection relies

on citizen participation.

Since the beginning of the project, more than 72,000 tick bites (on humans and animals) throughout France have been reported via the *Signalement TIQUE* app, more than 50,000 biting ticks have been sent in by members of the public and archived in the "tick library" of the *Tous Chercheurs* platform in Champenoux, and more than 2,000 ticks have been analysed to identify the pathogens they carry.

This programme won the 2021 edition of the participatory research award, presented by the Ministry of Higher Education, Research and Innovation.

For more information, visit the <u>CiTIQUE programme website</u>.

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The French Agency for Food, Environmental and Occupational Health & Safety (ANSES) provides public decision-makers with the scientific benchmarks needed to protect humans and the environment against health risks. It studies, assesses and monitors all the chemical, microbiological and physical risks to which humans, animals and plants are exposed, thereby helping the public authorities take the necessary measures, including in the event of a health crisis. A national agency working in the public interest, ANSES comes under the responsibility of the French Ministries of Health, the Environment, Agriculture, Labour and Consumer Affairs.

INRAE, the French National Research Institute for Agriculture, Food and the Environment, is a major player in research and innovation. It was created on 1 January 2020. A targeted research institute resulting from the merger between INRA and IRSTEA, INRAE brings together a community of nearly 12,000 people, with 268 research, support and experimental units located in 18 centres throughout France. The institute is one of the world's leading research organisations in agricultural, food, plant and animal sciences, as well as in ecology and the environment. It is the world's leading research organisation specialising in the "agriculture-food-environment" complex. INRAE's ambition is to be a key player in the transitions needed to address society's greatest global challenges. In the face of population growth, climate change, resource scarcity and biodiversity decline, the institute is building solutions for versatile agriculture, quality food and sustainable management of resources and ecosystems.

The University of Lorraine is a public higher education institution made up of 10 scientific clusters encompassing 60 laboratories and 9 colleges covering 43 training components, including 11 engineering schools. It has almost 7,000 staff and hosts more than 60,000 students each year.

The Permanent centre for initiatives on the environment (CPIE) in Nancy-Champenoux is a member of a national network including 78 other associations. Every day, these CPIEs work together with local inhabitants and stakeholders for a more environmentally friendly and inclusive world. The open science approaches led by the CPIEs allow members of the public to take part in research in various fields (agroecology, health and ecology, fauna and flora). Since the CiTIQUE programme was launched, the CPIE in Nancy-Champenoux has played an active part in mobilising efforts, awareness-raising and offering training to citizens and committed intermediaries.