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Aedeszero in action: the role of university extension fostering to social change against Arboviruses

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Sustainable Development Goals / ONU
Good health and well-being

Abstract. The AedesZero Extension Project, created in 2024, aims to mitigate the impacts of arboviruses in Rondonópolis-MT, by integrating teaching, research and extension. In 2025, its second edition expanded activities with a focus on social transformation and the integrated response to arboviruses, particularly in light of the significant increase in chikungunya cases in the municipality. Developed in the area covered by the Family Health Strategy (ESF) unit Jardim Sumaré, the project involves the participation of seven medical students, a master's student, an administrative technician and six professors from the Federal University of Rondonópolis. Grounded in student leadership, its main objectives include educating the population on the importance of vector control and disseminating prevention information through social media. To achieve these goals, several actions have been carried out, from a selection process to student training, planning meetings, strengthening the visual identity, expanding digital communication and in-person engagement with the community. Among these initiatives, two extension actions conducted at the ESF Jardim Sumaré and one at the Padre Lothar Sports Center stand out. The results demonstrate the project's effectiveness in fostering community dialogue and strengthening social empowerment in the face of arboviruses, thereby contributing to their prevention and control. Thus, AedesZero is consolidated as a project with significant social impact, reaffirming the importance of university extension as a transformative practice.
Keywords: *Aedes aegypti*, Arboviruses, Dialogic interaction, Student protagonism.

Contextualization and goals

Arboviruses are a group of viral diseases transmitted by arthropods that significantly impact public health in Brazil and contribute to absenteeism, thereby negatively affecting the national economy (Teich, Arinelli and Fahham, 2017; Souza et al., 2020). In the country, Zika, dengue, and chikungunya are the most prominent arboviruses, causing clinical syndromes that range from acute febrile illness to severe hypovolemic shock and neurological complications (Donalisio, Freitas and Zuben, 2017; Brasil, 2025). A common feature of these diseases is their transmission by the vector *Aedes aegypti* (Sousa et al., 2020). Therefore, actions aimed at eliminating and preventing the proliferation of the vector are essential for effective arbovirus control. To date, Brazil has recorded 1,585,188 probable cases of dengue, 122,169 probable cases of chikungunya, and 3,739 probable cases of Zika, in addition to numerous deaths associated with these diseases (Brasil, 2025). This scenario defined the initial premise of the project; a high vulnerability to arbovirus transmission, marked by insufficient preventive education and limited university and community interaction. In this context, the AedesZero Project was proposed as an important university extension initiative with the potential for social transformation. Its first edition began in 2024, involving a multidisciplinary team of professors and students from the Federal University of Rondonópolis and focusing on activities in the Vila Verde neighborhood. Given the project's success and relevance, a second edition was implemented in 2025 in the Jardim Sumaré neighborhood to expand its area of influence within the municipality. Considering the significant public health impact of arboviruses, the promotion of preventive measures

through health education strategies and social mobilization is essential for the control of *Aedes aegypti*. In this sense, the AedesZero project seeks to foster student leadership and interdisciplinarity by integrating different areas of knowledge in the development of strategies to combat vector-borne diseases. Additionally, by articulating teaching and extension activities, the project aims to strengthen dialogue between the university and the community, valuing popular knowledge and fostering collective care practices. In this way, AedesZero contributes to social transformation by promoting awareness and encouraging active community participation in health promotion.

Methodology

The methodology of the AedesZero Project involved the work of a multidisciplinary team from the Federal University of Rondonópolis. The activities were organized according to the following stages: (1) the selection process for participating students; (2) training meetings with project members; (3) planning meetings for the development of extension actions; (4) promotion of the project's social media presence and visual identity; and (5) implementation of extension activities within the coverage area of the Jardim Sumaré Family Health Strategy (ESF) unit.

Results and discussion

The student selection process was conducted in March and included 11 applicants who submitted their information via Google Forms. A total of seven students were selected, four of whom received scholarships, in accordance with the established selection criteria. Student training was carried out in seven meetings, which addressed topics related to *Aedes aegypti*, the LIRAa index (Brasil, 2013), chikungunya, and dengue. Planning of the health education activity involved the participation of the entire team across three in-person meetings and two online meetings. The project's Instagram page (@aedeszero) (**Figure 1**), originally created during the first edition, continued to be updated weekly by the new participants and currently has 904 followers.

T he first extension action implemented at the ESF unit featured a project presentation performed by the students (**Figure 2**). With the permission from the unit's management team, educational folders addressing dengue, Zika, and chikungunya were distributed and displayed for community access during extensional actions (**Figure 3**).

A QR code was also made available that was directed directly to the project page, facilitating the adhesion of users of the unit. The second extensional action of the project was carried out at the Padre Lothar Bauchrowitz Sports Center, with the participation of approximately 80 people (**Figure 4**).

Figure 1. An Instagram post from the project's official account (@aedeszero) providing guidance on habits to prevent vector breeding.

Figure 2. Project presentation and educational activity conducted in the waiting room of the ESF Jardim Sumaré.

Figure 3. Educational folders distribution and student protagonism during a health education activity conducted in the waiting room of the Jardim Sumaré ESF unit.

Figure 4. Dialogic Interaction before AedesZero´s bingo at the Padre Lothar Bauchrowitz Sports Center.

Initially, the team introduced themselves to the community and provided a brief explanation of the planned activity, which consisted of a bingo game interspersed with a “myths and truths” dynamic about arboviruses led by the students. This approach enabled dialogic interaction with the participants and strengthened the bond between the project team and the community. For the bingo activity, thematic cards created by the students were distributed along with beans for marking the drawn numbers (**Figure 5**). This dynamic facilitated the clarification of numerous questions and the dissemination of additional information about arboviruses. In addition, six theme-related gifts were distributed to the bingo winners, and the activity was concluded with a collective snack to strengthen social interaction.

Figure 5. AedesZero thematic cards made for the dynamic of “ myths and truths” about arboviruses.

On November 6th, 2025, the project members participated in the V Extension Fair of the Federal University of Rondonópolis, where they presented the main results of the project to students and faculty members (**Figure 6**). During the event, the students also distributed informational flyers on dengue, Zika, and chikungunya. At the conclusion of the fair, it is noteworthy that the project received the award in the category “Destaque ODS Prof. Dr. Benjamin Cristobal Mardine Acuña,” granted by the Pro-Rectorate for Extension (PROEX) from Federal University of Rondonópolis (UFR).

Figure 6. AedesZero team presentation at the V Extension Fair/ UFR/PROEX

Final Considerations

The actions of AEDESZERO have demonstrated great relevance for the community of Rondonópolis-MT by promoting awareness of arboviruses and encouraging prevention practices against *Aedes aegypti*. The activities that have been carried out also strengthen the bond between the university and the community, expanding access to information and enabling the construction of collective knowledge that promotes social transformation. In addition, the use of social networks represents a strategy to enhance the reach of the project, promoting health education in environments beyond the places where actions were developed. As a next step, it is intended to carry out extension actions on the symptoms of arboviruses in the waiting room of the ESF Jardim Sumaré and in other places in the territory, such as schools. In addition, through student protagonism, the production of educational materials will be intensified and disseminated on the project's Instagram. Thus, the project is expected to contribute continuously and significantly to the promotion of public health in the municipality, particularly with regard to arbovirus control.

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