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University : Cruzeiro do Sul University

Country : Brasil

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CRUZEIRO DO SUL UNIVERSITY – SUSTAINABILITY DATA AND EVIDENCE

MASTER'S AND DOCTORAL PROGRAM IN INTERDISCIPLINARY HEALTH SCIENCES (MEDICINE I)

1. The Program is related to the Sustainable Development Goals. Please describe how the Program addresses this perspective.

The Interdisciplinary Stricto Sensu Graduate Program in Health Sciences at Cruzeiro do Sul University contributes to the United Nations 2030 Agenda for Sustainable Development by integrating research, the education of highly qualified human resources, innovation, and social impact. Its research lines address major public health challenges by developing scientific solutions for the prevention, diagnosis, treatment, and rehabilitation of diseases that affect the population's quality of life, thereby contributing directly to SDG 3 – Good Health and Well-being and SDG 4 – Quality Education.

The Program's research encompasses topics such as cardiometabolic diseases, cancer, cardiovascular disorders, mental health, aging, immunology, nutrition, physical activity, and functional rehabilitation. Through interdisciplinary approaches, these investigations contribute to improving public health and promoting societal well-being.

Among its most impactful initiatives is a research program dedicated to promoting the physical and mental health of military police officers. The program develops preventive strategies based on physical activity, nutrition, and psychological support, while creating tools for the early identification of health risk factors and generating scientific evidence to support occupational health policies. This initiative seeks to reduce work-related illness, improve the quality of life of public safety professionals, and strengthen the effectiveness of the services they provide to society, thereby contributing to SDG 16 – Peace, Justice and Strong Institutions.

The Program also participates in a National Institute of Science and Technology (INCT) network coordinated by Professor Mario Hirata, from the School of Pharmaceutical Sciences at the University of São Paulo (USP), together with Professor Rui Curi, a faculty member of the Program. This extensive national research network is dedicated to developing strategies for the prevention and monitoring of cardiotoxicity associated with breast cancer treatment. By integrating expertise in pharmacogenomics, epigenomics, metabolomics, proteomics, and exercise science, the initiative contributes to safer therapies, fewer treatment-related complications, and more efficient use of healthcare resources.

In the field of chronic disease prevention, the Program conducts research on the impact of ultra-processed food consumption on metabolic syndrome, investigating inflammatory and metabolic

biomarkers capable of supporting nutrition education, disease prevention, and health promotion strategies. These studies generate valuable evidence for public policies aimed at promoting healthy eating habits and reducing risk factors associated with chronic noncommunicable diseases, thereby contributing to SDG 2 – Zero Hunger, particularly with regard to food security and improved nutrition.

Another strategic research area focuses on the neurological rehabilitation of individuals affected by stroke. These studies are dedicated to developing and evaluating interventions designed to improve mobility, balance, functional capacity, and patient independence. The resulting scientific evidence contributes to social inclusion, reduced disability, and enhanced quality of life.

Overall, the Program's teaching, research, innovation, and outreach activities are directly aligned with the following Sustainable Development Goals (SDGs):

- SDG 2 – Zero Hunger: promoting food security and improving nutrition through research on healthy eating and chronic disease prevention.
- SDG 3 – Good Health and Well-being: advancing research on the prevention, health promotion, diagnosis, treatment, and rehabilitation of chronic, metabolic, cardiovascular, oncological, and neurological diseases.
- SDG 4 – Quality Education: educating highly qualified master's and doctoral graduates, as well as researchers prepared to work through interdisciplinary and innovative approaches.
- SDG 8 – Decent Work and Economic Growth: promoting occupational health and developing strategies to reduce work-related illness, particularly among populations exposed to high levels of occupational stress.
- SDG 10 – Reduced Inequalities: conducting research focused on vulnerable populations and expanding access to evidence-based preventive and therapeutic strategies.
- SDG 16 – Peace, Justice and Strong Institutions: developing research aimed at improving the health and occupational performance of military police officers in the city of São Paulo.
- SDG 17 – Partnerships for the Goals: participating in national and international collaborative research networks involving universities, hospitals, research centers, and public institutions to strengthen scientific production, innovation, and knowledge transfer.

2. Graduate Curriculum. Several courses are directly aligned with the Sustainable Development Goals (SDGs). Does the Program adopt a cross-curricular approach to sustainability? Please describe how this is implemented

The Graduate Program in Interdisciplinary Health Sciences (Medicine I) offers a rigorous curriculum composed of required and elective graduate-level courses designed to address the major scientific and societal challenges in contemporary health through an interdisciplinary framework. Core courses include Current Topics in the Pathophysiology of Twenty-First Century Diseases, Bioethics, Biostatistics, Research Methodology, Nutrition and Body Composition Assessment in Health Sciences, Principles of Biochemistry Applied to Health Sciences, Regulation of Inflammation in Health and Disease, Basic and Applied Neuromechanics, Lipidomics and Clinical Applications, Introduction to Scientific Data Visualization and Programming in Health Sciences, and the Graduate

Teaching Practicum. Collectively, these courses provide students with advanced scientific training while strengthening methodological competence, ethical responsibility, and interdisciplinary thinking.

The curriculum is closely aligned with the United Nations Sustainable Development Goals (SDGs). SDG 3 – Good Health and Well-being is embedded throughout the curriculum by addressing the prevention, diagnosis, treatment, and rehabilitation of chronic, cardiovascular, metabolic, neurological, and oncological diseases. SDG 4 – Quality Education is advanced through the preparation of highly qualified researchers capable of producing innovative, internationally relevant scientific knowledge. SDG 9 – Industry, Innovation and Infrastructure is promoted through coursework focused on lipidomics, advanced analytical methodologies, translational research, and the development of emerging health technologies. In addition, Bioethics provides the conceptual foundation for responsible research conduct by emphasizing scientific integrity, social responsibility, research ethics involving human participants and laboratory animals, and evidence-based decision-making, all of which are essential dimensions of sustainable scientific development.

The integration of the Sustainable Development Goals is not confined to individual courses; rather, it constitutes a cross-curricular and program-wide educational strategy. Sustainability principles are systematically embedded across coursework, the Health and Disease Integration Seminar Series, faculty-led research projects, community engagement initiatives, and scholarly discussions. This integrated approach enables graduate students to connect fundamental scientific knowledge with complex societal challenges and to develop interdisciplinary solutions supported by scientific evidence.

Throughout the Program, topics including health promotion, chronic disease prevention, healthy nutrition, precision and personalized medicine, technological innovation, occupational health, healthy aging, functional rehabilitation, and evidence-informed public policy are examined from multiple disciplinary perspectives. By fostering collaboration among diverse fields within the Health Sciences, the curriculum prepares graduates to conduct high-impact research, contribute to sustainable healthcare systems, and generate scientific knowledge that advances both public health and the achievement of the Sustainable Development Goals.

3. Total Research Funding Allocated to Sustainability Research (Total Amount Awarded Over the Past Three Years)

The Graduate Program in Interdisciplinary Health Sciences (Medicine I) has secured substantial competitive research funding to support projects aligned with the United Nations Sustainable Development Goals (SDGs). These externally funded research initiatives primarily address strategic areas such as health promotion, disease prevention, healthcare innovation, healthy nutrition, functional rehabilitation, occupational health, and precision medicine. Through sustained investment in these research priorities, the Program advances scientific knowledge while contributing to evidence-based solutions that promote public health, social well-being, and sustainable development.

Research Project	Principal Investigator	Program Faculty Involved	Funding Agency	Awarded Funding
1. Instituto Brasileiro de Farmacogenômica e Epigenômica em Cardiotoxicidade (INCT/MCTI)	Mario Hirata (Coordenador – USP); Rui Curi (Vice-Coordenador – UNICSUL)	Tania C. Pithon-Curi, Sandro M. Hirabara, Rui Curi, Rosemari Otton, Roberto Bazotte, Renata Gorjão, Maria Fernanda Cury-Boaventura, Marcelo Paes de Barros, Fernanda T. Borges, Elaine Hatanaka, Alexandre Demargos e Adriana C. Levada-Pires	CNPq/CAPES/MCTI/FAPs	R\$ 11.865.344,10 (US\$ 2.254.415,38)
2. Avaliação da saúde física e mental da Polícia Militar do Estado de São Paulo	Sandro Massao Hirabara	Tania C. Pithon-Curi, Rui Curi, Renata Gorjão, Mario Hirata, Maria Fernanda Cury-Boaventura, Elaine Hatanaka e Adriana C. Levada-Pires	FAPESP (Projeto Temático)	R\$ 1.919.343,00 (US\$ 371.246,23)+ US\$ 128.250,00
3. Efeito do ácido palmitoleico na formação de NETs e NETose em feridas diabéticas	Elaine Hatanaka	Alexandre Demargos	FAPESP (Auxílio Regular)	R\$ 148.029,34 (US\$ 28.632,30)+ US\$ 16.370,00
4. Investigação da modulação epigenética promovida pelo herbicida glifosato com ou sem coexposição aos extratos de chá verde e guaraná	Rosemari Otton	—	FAPESP (Auxílio Regular)	R\$ 272.662,80 (R\$ 272.662,80) + US\$ 23.360,00
5. Estado inflamatório e atividade das células satélites na hipertrofia muscular em ratos Goto-Kakizaki	Rui Curi	Renata Gorjão, Sandro M. Hirabara e Tania C. Pithon-Curi	FAPESP (Auxílio Regular)	R\$ 263.486,15 (R\$ 263.486,15) + US\$ 56.350,00
6. Relação do consumo de alimentos ultraprocessados com as concentrações plasmáticas de organocinas em participantes com Síndrome Metabólica	Maria Fernanda Cury-Boaventura	Renata Gorjão, Rui Curi, Sandro M. Hirabara e Tania C. Pithon-Curi	FAPESP (Auxílio Regular)	R\$ 82.878,33 (R\$ 82.878,33) + US\$ 21.464,32

Research Project	Principal Investigator	Program Faculty Involved	Funding Agency	Awarded Funding
7. Efeito do ácido palmitoleico na formação de NETs e NETose em feridas diabéticas	Elaine Hatanaka	Alexandre Demargos, Maria Fernanda Cury-Boaventura e Fernanda T. Borges	CNPq (Edital Universal)	R\$ 203.000,00 (US\$ 39.265,00)
8. Adaptação sensorio-motora durante a locomoção no solo: implicações para estratégias de reabilitação de indivíduos pós-AVC	Ana Maria Forti Barela	—	FAPESP (Auxílio Regular)	R\$ 98.130,64 (US\$ 18.980,80) + US\$ 14.155,00
9. Avaliação do controle da geração de força rápida em níveis submáximos: análise eletromiográfica e comparações entre diferentes populações	Paulo Barbosa de Freitas Júnior	—	FAPESP (Auxílio Regular)	R\$ 88.652,87 (US\$ 17.147,60)
10. Pré-habilitação baseada no treinamento resistido em mulheres com câncer de mama em terapia neoadjuvante: do mecanismo molecular aos benefícios clínicos	Rui Curi	Renata Gorjão, Sandro M. Hirabara e Tania C. Pithon-Curi	FAPESP (Convênio Internacional)	R\$ 70.303,75 (US\$ 13.598,40) + US\$ 25.735,00

Total de recursos captados (últimos três anos):

- **Recursos em moeda nacional:** R\$ 15.011.831,98 (US\$ 2.903.642,55)
- **Recursos internacionais (Reserva Técnica/Importação e despesas em moeda estrangeira):** US\$ 285.684,32
- **Total Geral:** US\$: 3.189.326,87

The research funding secured supports projects focused on health promotion, the prevention of chronic diseases and cancer, precision medicine, occupational health, healthy nutrition, post-stroke rehabilitation, technological innovation, biomarker discovery and validation, and the strengthening of national and international research collaborations. Collectively, these initiatives generate scientific knowledge with significant societal impact while advancing the **United Nations Sustainable Development Goals (SDGs)**, particularly **SDG 3 – Good Health and Well-being**, **SDG 8 – Decent Work and Economic Growth**, **SDG 9 – Industry, Innovation and Infrastructure**, and **SDG 17 – Partnerships for the Goals**.

4. Number of Scholarly Publications on Sustainability in 2025 (Please include the URL/DOI link for each publication)

In 2025, faculty members of the Graduate Program in Interdisciplinary Health Sciences (Medicine I) at Cruzeiro do Sul University produced a substantial body of peer-reviewed scholarly publications aligned with the United Nations Sustainable Development Goals (SDGs). These research outputs contribute primarily to SDG 3 – Good Health and Well-being, while also advancing SDG 2 – Zero Hunger, SDG 4 – Quality Education, SDG 9 – Industry, Innovation and Infrastructure, SDG 12 – Responsible Consumption and Production, SDG 15 – Life on Land, SDG 16 – Peace, Justice and Strong Institutions, and SDG 17 – Partnerships for the Goals. Among the Program's most significant scientific contributions in 2025 are the following publications:

- ✓ de Siqueira CD, Borges L, Dal Mora T, Saleh NA, Alves ES, Wopereis S, Mendes BG, de Moraes ACR, Hatanaka E, Filippin-Monteiro FB. **Early postnatal effects of maternal obesity on breast milk composition and breastfeeding outcomes.** Clin Nutr ESPEN. 2025 Feb;65:365-374. doi: 10.1016/j.clnesp.2024.11.036. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/39644921/>.
- ✓ Nguyen C, Figueiroa RI, da Silva CM, Hatanaka E, Sweeney G, Lambertucci RH. **Melatonin attenuates cardiac oxidative stress in diabetic rats following acute exhaustive exercise.** Cell Stress Chaperones. 2025 Dec;30(6):100126. doi: 10.1016/j.cstres.2025.100126. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/41110543/>.
- ✓ Furtado GE, de Barros MP, Rodrigues RN, Bachi ALL, Chupel MU, Rocha SV, Vieira RP, Hogervorst E, Teixeira AM, Ferreira JP. **Examining the impact of 28-week multicomponent and strength exercises on brain health, salivary stress, and mental well-being in frail older women: A controlled trial analysis.** Physiol Behav. 2025 May 15;294:114868. doi: 10.1016/j.physbeh.2025.114868. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/40024357/>.
- ✓ Palotino-Ferreira BM, Rocha SV, Nunes-Silva A, Souza-Gomes AF, Rodrigues F, Coelho P, Bachi ALL, de Oliveira RA, de Barros MP, Furtado GE. **The influence of structured physical activity on vaccination response from adults to older individuals: a systematic review on the Immunoinflammatory crosstalk of COVID-19.** Immun Ageing. 2025 Oct 30;22(1):44. doi: 10.1186/s12979-025-00515-x. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/41168772/>.
- ✓ DE SOUSA, C. A. Z.; SIERRA, A. P. R.; LIMA, G. H. O.; MARTÍNEZ GALÁN, B. S.; BARBEIRO, H. V.; SOUZA, H. P.; CURY-BOAVENTURA, M. F. **Comparison of Muscle Damage Markers and Myokines between Adult and Middle-Aged Marathon Runners.** OBM Geriatrics, v. 9, p. 1–16, 2025. Disponível em: <https://www.lidsen.com/journals/geriatrics/geriatrics-09-01-301>
- ✓ de Fontes-Junior AA, de Sousa CAZ, de Oliveira LB, Sierra APR, Cury-Boaventura MF. **Decorin levels and cardiometabolic function after endurance exercise.** Front Physiol. 2025 Jul 8;16:1546370. doi: 10.3389/fphys.2025.1546370. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/40697980/>
- ✓ Bacca O, Celestino ML, Barela JA, Barela AMF. **Identification of stiff-knee gait in stroke survivors.** BMC Biomed Eng. 2025 Sep 1;7(1):11. doi: 10.1186/s42490-025-00097-1. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/40887619/>
- ✓ Noda P, Francini ALR, Teles F, Júnior SJ, Fonseca FLA, Borges FT, Sobrinho AC, Taniwaki N, Noronha IL, Fanelli C. **Extracellular Vesicles (EVs) Derived from Mesenchymal Stem Cells (MSCs) as Adjuvants in the Treatment of Chronic Kidney Disease (CKD).** Cells. 2025 Mar 14;14(6):434. doi: 10.3390/cells14060434. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/40136683/>

- ✓ Valente LC, Riechelmann-Casarin L, Otton R, Delella FK, Barbisan LF, Romualdo GR. **Transcriptomic implications of low herbicide concentrations in hepatic cells: Insights into the individual and combined effects of 2,4-D, glyphosate, and AMPA.** *Toxicol Lett.* 2025 Jun;409:1-11. doi: 10.1016/j.toxlet.2025.04.009. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/40294809/>
- ✓ Otton R, Aquino M, Soares LN, Valon A, Riechelmann-Casarin L, Romualdo G. R. **Immune Disturbance Induced by Glyphosate and Glyphosate-Based Herbicides: Integrating Preclinical and Human Data.** *Immunology and Cell Biology*, 2025. Disponível em: <https://www.authorea.com/doi/full/10.22541/au.175518205.50964540/v1>
- ✓ da Costa TS, Pontes JGM, García Delgado G García, Omege FB, de Oliveira Santana G, Rodrigues GT, Scervino MVM, Pithon-Curi TC, Cruzat V, Bazotte RB, Hirabara SM, Gorjao R, Curi R, Tasic L. **Systemic and skeletal muscle metabolic signatures associated with early insulin resistance in just-weaned non-obese Goto-Kakizaki diabetic rats.** *Biomed Pharmacother.* 2025 Dec;193:118826. doi: 10.1016/j.biopha.2025.118826. Disponível em: <https://doi.org/10.1016/j.biopha.2025.118826>.
- ✓ Zampero G, Trevisan I, Monma F, Tinti JC, Dos Santos LP, Lima TCP, Gorjão R, Hirabara SM, Pithon-Cur TC, Curi R, Santa-Rosa FA, de Souza DR. **Low physical activity levels of military police officers during day and night radio patrolling.** *BMJ Mil Health.* 2026 Mar 20;172(2):160-163. doi: 10.1136/military-2024-002897. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/40294809/>
- ✓ Ramos de Mendonça C, Cristina Monteiro Galindo L, Karoline Alves de Melo Silva B, Hilary Avelino de Vasconcelos B, de Araújo Bandeira VC, Massao Hirabara S, Morio B, Antonio Alves de Vasconcelos D. **Maternal obesogenic diet causes insulin resistance by modulating insulin signaling pathways in peripheral tissues of offspring: a systematic review.** *Life Sci.* 2025 Nov 1;380:123947. doi: 10.1016/j.lfs.2025.123947. Disponível em: <https://doi.org/10.1016/j.lfs.2025.123947>.
- ✓ Leite JSM, Vilas-Boas EA, Takahashi HK, Munhoz AC, Araújo LCC, Carvalho CR, Jr JD, Curi R, Carpinelli AR, Cruzat V. **Liver lipid metabolism, oxidative stress, and inflammation in glutamine-supplemented ob/ob mice.** *J Nutr Biochem.* 2025 Apr;138:109842. doi: 10.1016/j.jnutbio.2025.109842. Disponível em: <https://doi.org/10.1016/j.jnutbio.2025.109842>

5. Número de Eventos realizados pelo programa em 2025 (quais, dados sobre o evento)

Throughout 2025, the Graduate Program in Interdisciplinary Health Sciences (Medicine I) implemented a broad range of community engagement, health education, and science outreach activities aimed at promoting health, advancing graduate education, and strengthening partnerships with the wider community. These initiatives actively involved faculty members, graduate students, undergraduate students, and collaborating researchers, fostering the integration of research, education, and community engagement while enhancing the societal impact of the Program.

Collectively, these activities contributed directly to the United Nations Sustainable Development Goals (SDGs), particularly SDG 3 – Good Health and Well-being, through health promotion and disease prevention; SDG 4 – Quality Education, by supporting the education and professional development of highly qualified researchers and healthcare professionals; and SDG 17 – Partnerships for the Goals, by promoting collaborative initiatives involving universities, healthcare institutions, research centers, and community organizations.

Event/Activity	Description	Target Audience Reached	SDGs
1. 1st Pro-Health Campaign	Health promotion campaign conducted at the 23rd Battalion of the São Paulo State Military Police, in partnership with the Physical Education School of the São Paulo State Military Police (PMESP). The initiative included blood pressure, blood glucose, cholesterol and lipid profile assessments, body composition analysis, and individualized health education and counseling.	450 military police officers	SDG 3 and SDG 17
2. 2nd Pro-Health Campaign	Health promotion campaign conducted at the Metropolitan Area Policing Command 3 (Santana), in partnership with the Physical Education School of the São Paulo State Military Police (PMESP), including clinical assessments and health promotion guidance.	400 military police officers	SDG 3 and SDG 17
3. 3rd Pro-Health Campaign	Health promotion campaign conducted at the 18th Battalion of the São Paulo State Military Police, including cardiometabolic risk assessment, body composition analysis, and preventive health counseling.	388 military police officers	SDG 3 and SDG 17
4. 6th Health Week	Free community health services provided at the Liberdade Campus, including blood glucose, total cholesterol, triglyceride, body composition, and nutritional assessments.	44 consultations	SDG 3
5. 7th Health Week	Free health services provided at the São Paulo Workers' Union Federation (Força Sindical), including clinical assessments and guidance on health promotion and the prevention of chronic diseases.	108 consultations	SDG 3
6. Post-Stroke Patient Rehabilitation Project	Assessment and follow-up of community volunteers affected by stroke as part of an FAPESP-funded research project, contributing to functional evaluation and the development of rehabilitation strategies.	Community volunteer patients	SDG 3

Event/Activity	Description	Target Audience Reached	SDGs
7. Hands-on Workshop on Real-Time PCR (qPCR)	Practical training for Biomedical Science students in molecular biology techniques, including sample preparation, real-time PCR procedures, and interpretation of results. The workshop was delivered by doctoral students under faculty supervision (6 hours).	Biomedical Science students	SDG 4
8. Hands-on Flow Cytometry Workshop	Practical training in immunophenotyping by flow cytometry, including cell preparation, fluorescent antibody labeling, data acquisition, and analysis. The workshop was delivered by doctoral students under faculty supervision.	Biomedical Science students	SDG 4

Summary of Activities Conducted in 2025:

- Eight community engagement, health promotion, and graduate education initiatives organized by the Program.
- 1,390 direct services provided to community members and public safety professionals, excluding the ongoing participants in the Post-Stroke Patient Rehabilitation Project and the attendees of the hands-on training workshops.
- Active participation of faculty members, graduate students, and undergraduate students in the planning, implementation, and delivery of all activities
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Direct Contribution to the Following United Nations Sustainable Development Goals (SDGs):

- ✓ SDG 2 – Zero Hunger: advancing food security and improved nutrition through research on healthy eating, nutritional status, and the prevention of nutrition-related diseases.
- ✓ SDG 3 – Good Health and Well-being: conducting research focused on the prevention, diagnosis, treatment, rehabilitation, and health promotion of chronic, metabolic, cardiovascular, oncological, and neurological diseases.
- ✓ SDG 4 – Quality Education: educating highly qualified master's and doctoral graduates, as well as researchers equipped to work through interdisciplinary, innovative, and evidence-based approaches.

- ✓ SDG 8 – Decent Work and Economic Growth: promoting occupational health and developing evidence-based strategies to reduce work-related illness, particularly among populations exposed to high levels of occupational stress.
- ✓ SDG 10 – Reduced Inequalities: conducting research that addresses the needs of vulnerable populations and expands equitable access to evidence-based preventive and therapeutic interventions.
- ✓ SDG 16 – Peace, Justice and Strong Institutions: developing research initiatives aimed at improving the health, well-being, and occupational performance of military police officers in the city of São Paulo, thereby strengthening the effectiveness and resilience of public institutions.
- ✓ SDG 17 – Partnerships for the Goals: participating in national and international collaborative research networks that bring together universities, hospitals, research institutes, and public agencies to advance scientific excellence, foster innovation, and maximize the societal impact of research.

6. Impact of the Program's Education and Research Activities in Advancing the Sustainable Development Goals

Within its educational mission, the Graduate Program in Interdisciplinary Health Sciences (Medicine I) adopts an interdisciplinary, research-intensive, and cross-curricular approach that systematically integrates the principles of sustainable development throughout its graduate curriculum. Courses such as Current Topics in the Pathophysiology of Twenty-First Century Diseases, Bioethics, Nutrition and Body Composition Assessment in Health Sciences, Applied Molecular Biology in Health Sciences, Regulation of Inflammation in Health and Disease, Research Methodology, Biostatistics, Health and Disease Integration Seminar, and the Graduate Teaching Practicum foster critical inquiry into health promotion, disease prevention, responsible research conduct, technological innovation, and social responsibility. This educational framework prepares master's and doctoral graduates to conduct high-impact research that responds to contemporary societal challenges while advancing the principles of sustainable development.

The Program's research portfolio addresses strategic issues with significant scientific and societal relevance, including health promotion, chronic disease prevention, precision medicine, healthy nutrition, occupational health, functional rehabilitation, and healthcare innovation. Major research initiatives focus on the physical and mental health of military police officers, the prevention of cardiotoxicity associated with cancer treatment, metabolic syndrome, inflammatory diseases, cancer, diabetes, and the rehabilitation of individuals recovering from stroke. Collectively, these

projects generate robust scientific evidence that informs public policy, strengthens clinical practice, and supports the development of innovative, effective, and sustainable healthcare technologies and therapeutic strategies.

The impact of these research activities is further enhanced through the active participation of Program faculty in national and international research networks, the coordination of multicenter research projects, and the successful acquisition of competitive research funding from leading Brazilian agencies, including FAPESP, CNPq, and CAPES. These collaborations strengthen scientific cooperation, promote internationalization, expand research capacity, and accelerate the production of knowledge capable of generating meaningful societal impact while advancing multiple United Nations Sustainable Development Goals (SDGs).

Consequently, the educational and research activities of the Graduate Program in Interdisciplinary Health Sciences extend well beyond scholarly output. By educating highly qualified researchers, generating scientific innovation, strengthening evidence-based healthcare, and translating research into practical solutions for society, the Program contributes to improving population health, enhancing the sustainability and resilience of healthcare systems, and advancing sustainable development at both the national and international levels.