



Collaborating for the Advancement of Interdisciplinary Research in Benign Urology

Development of a CAIRIBU Research Interest Group



INTRODUCTION: Advancing scientific understanding of complex genitourinary diseases necessitates deep knowledge exchange and collaboration across disciplines. Addressing questions beyond the expertise of a single researcher requires cross-disciplinary cooperation.¹ In this context, the urobiome field, in which investigators study the microbiome of the urinary tract, remains in its early stages. Greater collective efforts are essential for progress. **The CAIRIBU Interactions Core formed a pilot research interest group (RIG), the CAIRIBU Uromicrobiota RIG (U-RIG), to unite investigators studying the urobiome** – from both within the CAIRIBU Community and from the broader genitourinary research community – facilitate discussions on the current state of the field, enhance networking and interactions, foster collaboration, and advance urobiome science.

OBJECTIVE: The primary objective of forming the CAIRIBU U-RIG was to bridge gaps in knowledge within the urobiome research community by creating a structured platform for experts to share insights and engage in collaborative efforts. The goal was to generate new research ideas and advance the field of urobiome studies through shared expertise and interdisciplinary dialogue.

METHODS: The CAIRIBU U-RIG was initiated as part of a strategic effort to unite leading researchers in the field. Key steps in the formation included:

1. **Identifying key investigators:** Researchers with expertise in the urobiome were identified via literature reviews, professional networks, conference presentations, word-of-mouth, and suggestions
2. **Kick-off meeting:** A foundational meet-and-greet event was organized during which a few experts discussed their research. The meeting served as a platform for introducing each other, exchanging ideas, and identifying key areas for collaboration.
3. **Discussion and knowledge sharing:** During the event, investigators provided insights into current understanding of the urobiome, identified critical knowledge gaps and barriers to research, and proposed future collaborative efforts. A mind map summarizing key points from the discussion was created and disseminated widely.

To maintain and expand upon the momentum, the CAIRIBU U-RIG adopted several strategies. These included:

1. **Periodic meetings:** In the years following the kick-off meeting, the group convened intermittently, which brought key players to the forefront who would help to establish sustained interest and engagement with the community. As of October 2024, 14 different investigators from 13 institutions have shared their research in 9 different monthly “knowledge exchanges.” These will continue through 2024 and 2025. A list of presenters and their presentation titles is shown (**TABLE**).
2. **Patient and clinician involvement:** Renewed momentum for the U-RIG started with a series in which scientists and clinicians engaged in dialogue with patients suffering from relevant diseases, further enriching the collaborative effort.
3. **Series of collaborative meetings:** A new series of meetings was introduced, allowing investigators to present their latest research, build their professional networks, and facilitate broader community involvement.
4. **Organizational support and coordination from the CAIRIBU Interactions Core:** The CAIRIBU Interactions Core played a crucial role in organizing events, providing logistical support, and ensuring the group’s sustainability.

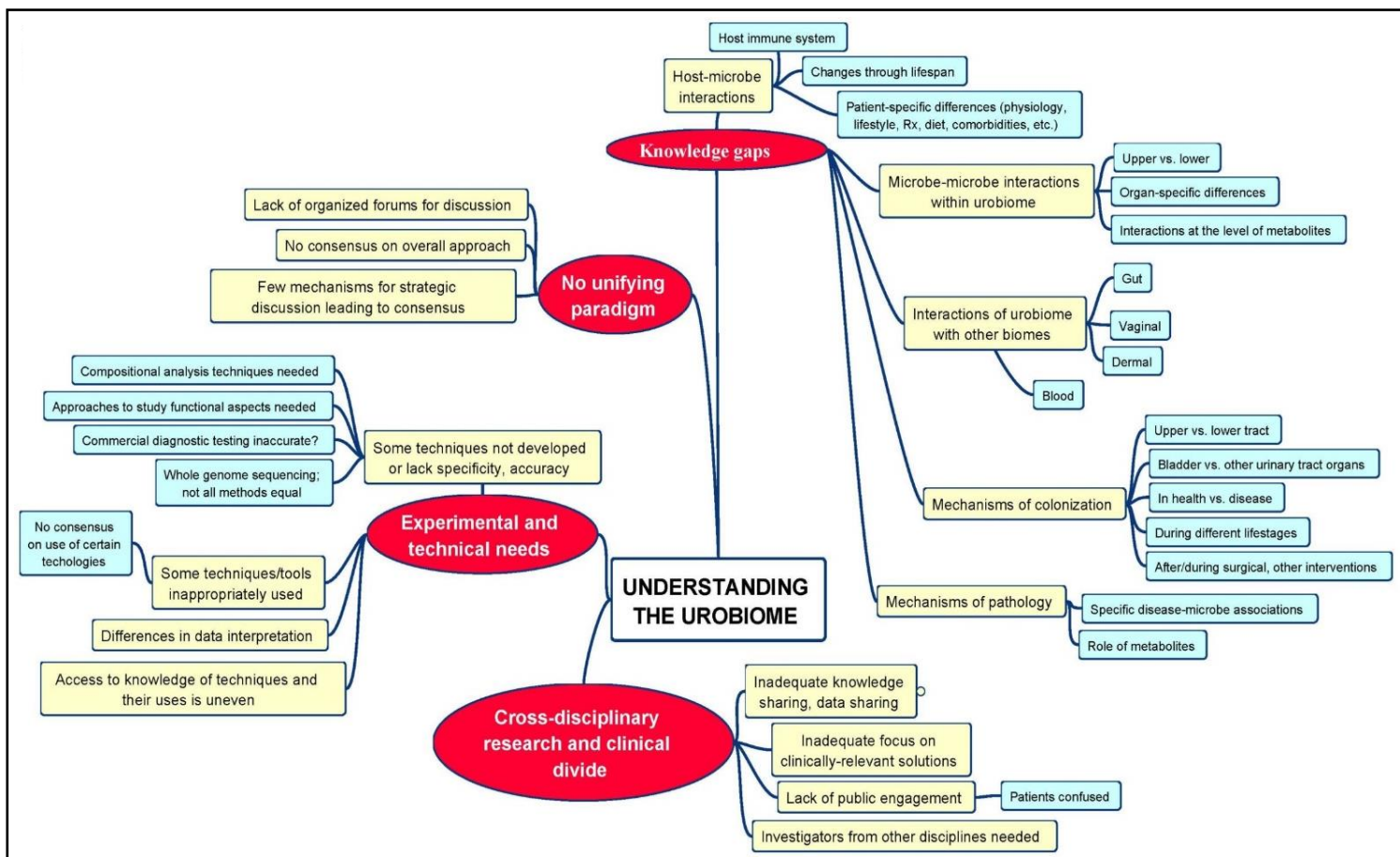
RESULTS: The impact of the CAIRIBU U-RIG on collaborative outputs – including joint publications, grant applications, and new research initiatives – remains under evaluation. An outcome of the inaugural meeting was the development of the conceptual mind map, which synthesized the collective insights from the participants (**FIGURE**, available at <https://cairibu.urology.wisc.edu/uromicrobiota-research-interest-group-u-rig/>). This map highlighted significant knowledge gaps in the field, experimental and technical needs, the cross-disciplinary research and clinical divide, and the issue of a lack of a unifying paradigm in the field. Additionally, the inclusion of patient and clinician perspectives ensured that the research remained relevant and impactful, addressing real-world clinical concerns and contributing to the broader scientific understanding of the urobiome.

TABLE. CAIRIBU U-RIG monthly knowledge exchanges, Sept. 2023-Nov. 2024. Presenters and presentation titles are listed. Monthly exchanges will continue through 2025 and will feature both established investigators and trainees.

WHEN	PRESENTER(S)	TITLE OF PRESENTATION
Sept 2023	Aaron Miller, PhD	The presence of bacteria right where you expect them: implications of kidney bacteria for urologic pathologies
	Lindsey Burnett, MD, PhD	Understanding the role of host cell metabolism in urinary tract infection
Oct 2023	Catherine Putonti, PhD	Sequencing the urobiome – going beyond profiling genera
Nov 2023	Alan J. Wolfe, PhD	An update on the urobiome
	Maria Hadjifrangiskou, PhD	People are convinced there is a urobiome. Now what?
Dec 2023	Lisa Karstens, PhD	Optimizing information to investigate the urobiome
	Jeremy Burton, PhD, MS	New ways of looking at the urobiome
Jan 2024	Vanessa Hale, PhD, DVM, MAT	The dog as a model for urobiome research
	A Lenore Ackerman, MD	The role of the microbiome in pelvic pain
Mar 2024	Tatyana Sysoeva, PhD	Urinary microbiome resistance: urinary Lactobacilli inhibit major uropathogens in vitro
Apr 2024	Henry Schreiber, PhD, MS	Gut-bladder axis
May 2024	Nazema Siddiqui, MD, MHSc	rUTIs: lessons learned from the microbiome
	Chelsea Armbruster, PhD	Composition and consequences of polymicrobial bacteriuria during long-term catheterization
Sept 2024	Nicole De Nisco, PhD	Fatty acid auxotrophy as a defining metabolic adaptation of urogenital lactobacilli
Oct 2024	Open floor discussion	Challenges and opportunities in building impactful collaborations in the urobiome field
Nov 2024	Jean-Phillipe Gourdine, PhD, MSc	TBD
	Emmanuel Elijah, medical student	TBD

DISCUSSION: Models for collaborative research working groups in the urology research space are needed. The urobiome and its role in multiple genitourinary conditions is an example of the kind of complex research area that requires interdisciplinary perspectives and collaboration. **The CAIRIBU U-RIG is poised to play a role in advancing scientific knowledge by fostering interdisciplinary collaboration and knowledge sharing.** Studies show that working groups such as these can enhance research dissemination,² contribute to personal and professional development,³ and encourage truth-oriented common goals.⁴ Sustainability is supported by leveraging virtual infrastructures and collaborative workspaces.^{5,6} Future evaluations will assess the CAIRIBU U-RIG's influence on collaborative outputs, such as co-authored publications, joint grant applications, and the initiation of new research projects. Additionally tracking citations among investigators in the group and analyzing changes in citation metrics since the CAIRIBU U-RIG's inception will provide valuable insights into its long-term impact on scholarly influence and research visibility. Finally, given the significant participation of trainees (e.g., graduate students, postdocs), tracking their networking and collaborative research activities beyond their involvement in the CAIRIBU U-RIG is planned.

FIGURE. Mind map created by CAIRIBU U-RIG investigators at first meeting. Full size version available on CAIRIBU website [HERE](#).



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