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EPUAP - Call for Co-chair application: Scientific Committee

Dear EPUAP,

I am an Associate Professor at the Institut de Biomécanique Humaine Georges Charpak, ENSAM, Paris, France and immediate past chair of the EPUAP research committee and I would like to apply for the position of EPUAP Co-Chair of the Scientific Committee in order to actively participate in the strategic development and planning of EPUAP and to support the Executive Committee in its tasks.

I have been conducting research activities in the field of Pressure Ulcer prevention since 2016 when my group obtained a research grant from the Fondation Arts et Metiers on the *development of computational methods for the modelling of the human-machine mechanical interface in the full-body exoskeleton EMY (Enhanced Mobility)* developed by a French research team from CEA LIST. As part of that grant, we proposed an original method for the fast generation of patient-specific Finite Element models of the buttock which received the **Journal of Clinical Biomechanics Award during the 2018 EPUAP conference**.

I am currently conducting research to develop a personalized, multi-scale, multiphysics model of the subcutaneous tissue response during interactions with support surfaces. Since 2016, I have co-supervised six PhDs on pressure ulcer prevention, with three ongoing (Thomas Lavigne, Maïalen Matray, and Alexandre Segain). Additionally, as the Principal Investigator, I have secured several grants to further advance these developments. The « Fondation de l'Avenir pour la recherche médicale » awarded a grant of in collaboration with Fondation HOPALE in 2023 for the clinical transfer of tools from bench to bedside. The EPUAP Research Project provided a seed funds in 2020 for collaboration between Yohan PAYAN and Bethany KEENAN. Additionally, I applied for the French National Research Agency ANR PRC grant this year in collaboration with TIMC (Yohan PAYAN, Nathanael CONNESSON) and LBMC (Sonia DUPREY, Laura DUBUIS), with a response pending. My research aligns with the EPUAP community's research themes, and I am confident that I can aid in advancing research on the prevention and management of pressure ulcers at the international level in the scientific committee.

Engaging with clinical partners has enlightened me on the significance of conducting research with the patient as the central point of focus. This motivated the development of research in close collaboration with clinical partners and I am glad that this year two ethical applications have been approved for two clinical trials. One trial will be conducted across three clinical centres in France: Hôpital

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Charles Foix (located in Ivry-sur-Seine), Pôle Saint-Hélier (based in Rennes), and Centre J. Calvé, Fondation Hopale (located in Berck-sur-Mer). The aim is to investigate the morphological, mechanical, and vascular properties of soft tissues in at-risk populations, as part of the prevention of pressure ulcers. The second study conducted by the Service de Diabétologie at Hôpital Pitié-Salpêtrière aimed to assess and characterize stiffness, geometry, and tissue perfusion on the plantar surface of the feet of both healthy participants and those with peripheral neuropathy.

This was a very motivating experience and I am keen to contribute to the development of research frameworks that encompass the crucial elements concerning pressure ulcers, as well as the advancement of global research collaborations and excellent research. I have been the chairperson of the EPUAP Research committee from 2021 to 2023 and would like to continue my efforts as a member of the Research committee.

Thank you in advance for your consideration,

Yours sincerely



Pierre-Yves Rohan