

The Journal of Mammary Gland Biology and Neoplasia into the Future - the Potential of Plasticity and Pluripotency

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It is fair to say that perhaps one of the most fascinating concepts for those studying the mammary gland, the milk it produces, and the cancer it succumbs to, is the potential diversity harbored within the organ. As a tissue, the gland is plastic in that it evolves from being a highly-proliferative structure derived from pluripotent stem cells to a terminally-differentiated organ capable of secreting large amounts of milk with a complex and unique composition. In turn, this milk in all its different forms is the basis for the survival of all mammals as well as for a global dairy industry. Yet as an organ is also susceptible to a cancer that is complex and dangerous, and that affects the lives of many women across the world. Similar to the organ we study, the opportunity is present for our Journal to demonstrate its plasticity and pluripotency.

Almost 20 years ago the Journal of Mammary Gland Biology and Neoplasia went to print under the editorial supervision of Peggy Neville and Dan Medina in response to a call from members of the former International Committee on Mammary Gland Biology for a publication to serve the field. As introduced by them in January 1996, the Journal was created specifically with the goal of publishing quarterly issues comprised of minireviews “to meet the needs of researchers within and outside the field of mammary gland biology for an integrated source of information derived from studies of the

development, function and pathology of the mammary gland” [1]. That first issue was entitled “Experimental models of development, function, and neoplasia” (Guest Edited by Dan Medina and Charles Daniel) and had contributions with titles ranging from “Role of mesenchymal-epithelial interactions in mammary gland development” [2], to “Genetic manipulation of mammary epithelium by transplantation” (REF [3]). These and the other titles from that issue have gone on to become seminal reviews of topics that have now formed the mainstay for much of the research that has been undertaken over the past 20 years to enhance our understanding of mammary gland biology, lactation physiology, and breast cancer.

At the time of the Journal’s inception, there was no equivalent publication for the burgeoning field that boasted a solid and diverse base of investigators stemming from a long-standing connection between the fields of dairy science and breast cancer research. Relative to the current day, the funding climate of the day was unquestionably generous. Around that time there was also a massive expansion of accompanying disciplines, in particular through the development of readily-accessible tools for the study of molecular and developmental biology. Across the course of the past 20 years the Journal has continued to serve as a mainstay for our community of dedicated scientists by publishing a fascinating breadth of topics that has evolved with the latest methods and discoveries.

What has remained absent all these years, however, is a place for the primary literature in the field of mammary gland biology to be published. Of course, all authors inherently aspire to publish their works in the renowned top-tier “high impact factor” journals. Yet, these venues are often unreceptive to many of the topics published by investigators in our field. Authors have typically had to seek out publication homes for their work in a range of

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different journals that support other fields, whether that be in an area such as endocrinology, developmental biology, cancer biology, or cell biology. Yet, further to our own experience, many authors have shared the feedback from these journals along the lines of, “sorry, your work is too specialized for our journal”. It is fair to recognize that these same journals are often the product and core publication of a society or an association of like-minded researchers, and these same societies and associations generally collect membership dues as well as page charges and journal subscription fees to maintain their base. Thus, it is perhaps not surprising that a manuscript addressing a unique aspect of mammary gland biology is considered “specialized” by others in their own “specialized” field.

At the same time there have been continual challenges to maintaining this publication in its current format. The original and ongoing structure of the Journal was to publish quarterly thematic issues containing only solicited reviews. This has, in turn, created a reliance on Guest Editors who assembled contributors and who would seek to coordinate submissions and their peer-review. At the same time, external factors, particularly a declining base for research funding in many countries, has further pressured both editors and contributing authors, in terms of the time they have available to write articles and their ability to prioritize their commitment to doing so. With specific publication schedules and the inherent inflexibility of a singular theme for a given issue, this singular approach has become increasingly difficult to coordinate. Furthermore, given that the field, and science in general, is rapidly evolving whereby one month’s “hot topic” is another month’s “old news”, the fixed- and planned-theme approach has created significant limitations from the standpoint that we have not always been able to capture and publish the latest and most impactful material.

Despite much deliberation about doing so for the past decade, the mammary gland biology community has never developed its own venue for the publication of peer-reviewed original research. We are excited for this to now change. Following many discussions between both members of the Journal of Mammary Gland Biology and Neoplasia’s Editorial Board and the Editorial staff at Springer, the decision was made to explore the possibility. As the result of an Editorial Board meeting at the 2015 Gordon Conference of Mammary Gland Biology, the decision was made to enact the change to a new “hybrid” format whereby the Journal will now publish a combination of both review articles and high-quality peer-reviewed original research. Furthermore, the Journal will accept and consider unsolicited review articles on a range of relevant and cutting-edge topics, thereby

ensuring that we are publishing the most up-to-date and impactful material and perspectives.

The new format will be as follows:

For review articles, each quarterly issue of the Journal will have the following 5 standing topical-subject headings under which accepted reviews will be published:

1. **Topical issues and technical reports.** This category will allow for timely invited reviews, commentaries, letters to the Editor, and new techniques papers.
2. **Mammary gland development.** Encompasses review articles related to topics including epithelial-stromal interactions, stem cells, and cellular differentiation in the normal and cancerous mammary gland.
3. **Lactation.** All topics related to the synthesis, secretion and composition of milk.
4. **Disease.** Thematic area covering all aspects of disease of the mammary gland ranging from mastitis to cancer.
5. **Endocrine and environmental control.** This category will capture all elements of the factors regulating mammary gland development, function and cancer including hormones, metabolism, microbiology, nutrition and the external environment.

Original research:

For original research papers, a select number of timely original research papers will be published in all disciplines represented by the Journal. Submissions will first be pre-screened by members of the Editorial Board for their potential impact on the field. If a manuscript is approved for further consideration, it will then undergo full peer-review by experts prior to a final decision being made about its suitability for publication. A continued goal for the publication of original research will be its potential scientific impact and importance to the field, with a general focus on comparative biology.

Looking forward, the Journal is in a position to evolve and differentiate, just like cells in the mammary gland would during a phase of its growth or during its preparation for lactation. At the same time there is now a new and greater opportunity for members of the field to align in support of this effort by contributing their best works, and by providing suggestions regarding articles or contributors that would best serve the field. We welcome your input and look forward to receiving your work at the start of this exciting juncture!

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