

Letter from the Editor-in-Chief

Launching Our New EBM Cover

To our entire readership of *Experimental Biology and Medicine* (EBM), I wish you and your loved ones a happy, healthy, and prosperous New Year. With the New Year 2015, we have a beautiful new cover adorning this January issue of the journal. I would like to explain the genesis of this cover.

Our September 2014 Annual Thematic Issue on “The Biology and Medicine of Microphysiological Systems” captured my imagination as I contemplated the many important future uses for the “Organs on a Chip” technologies. I read this Thematic Issue, edited by John P. Wikswo, PhD, our Associate Editor for the Systems Biology category of EBM, from cover-to-cover. The introductory article for the Thematic Issue was a mini-review by John entitled “The relevance and potential roles of microphysiological systems in biology and medicine”¹. While reading this mini-review my eye was caught by Figure 1, which was captioned “The hermeneutic circle of biology and microphysiological systems”. I immediately started envisioning how this figure, with a few revisions and artistic pizzazz, could capture the history of experimental biology research as it relates to human disease and health and at the same time represent the history of the journal *Experimental Biology and Medicine*. I contacted John about this vision for our future cover and thankfully he shared my enthusiasm. Now I will describe this detailed vision concerning our new cover.

One of the changes that I suggested to John, in converting the figure from his mini-review¹ to our new EBM cover, was adding a human as the first and last piece of the hermeneutic circle. Further, I said in the same e-mail “If this was to be done, I would make this human a female.” Why did I make these suggestions? The reasons were that the history of biomedical research and our journal are focused on human experimental biology and medicine. From this perspective the animal studies in Figure 1 of John’s mini-review¹ were to help understand human physiology and pathophysiology and the organ, cellular and molecular reductionist studies were for the same purpose. What I liked about the right-hand side of the hermeneutic circle is that it visually tells the story of biomedical research over the past 20 years, coming full circle with the use of systems biology, stem cell biology, bio-nanoscience and bio-engineering (all of which are needed to conduct the microphysiological studies described in the thematic issue), whole body imaging techniques, and translational and clinical research leading us back to the study of the human as a whole rather than individual parts. The suggestion that this human be drawn as a female was to highlight the importance of conducting basic, translational and clinical science studies on women (and tissue and cell samples derived from women) in order to successfully contribute to women’s health issues. In their accompanying Commentary, “Biology coming full circle: Joining the whole and the parts”² Dr. Wikswo and Dr. Andrew P. Porter have elegantly described the meaning of the hermeneutic circle, the yin and the yang of the “whole” and the “parts”, and the fact that experimental biology research requires many voyages around the circle as each integrative study leads to new reductionist questions and vice versa. As John and Andrew have done an excellent job of covering this biologic hermeneutic circle², I will now move on to my thought linking the history of the EBM journal to our new cover.

In June 2006, the issue prior to my becoming the Editor-in-Chief, the EBM cover was a solid pink and black containing the name of the journal and the logo of the society. The EBM categories at that time were: Biochemistry/Nutrition; Cellular and Organ Physiology; Endocrinology/Metabolism; Experimental and Molecular Medicine (oncology/pathology); Immunology/Microbiology/Virology; Molecular, Cell and Developmental Biology; and Pharmacology/Toxicology. As you can see, with some classical historic pairings, these categories covered a part, but not all, of the left side of the hermeneutic circle in our new cover. I was brought in as Editor-in-Chief by the Society of Experimental Biology and Medicine (SEBM) Leadership and Council with several goals in mind. Amongst these goals was to modernize the scientific breadth of the journal. So I updated some of the existing paired couplings and added the field of Neuroscience (which was then included in our multidisciplinary categories), as well as adding seven new interdisciplinary categories that can be found in the front matter of each EBM issue. To represent the shared importance of the existing multidisciplinary categories and the new interdisciplinary categories, I developed a new eye-catching cover that visually demonstrated this concept. This cover, which was introduced with my inaugural July 2006 issue, showed a cell into which therapeutic molecules could be introduced by viral penetration or via protein-coated nanotubes or dendrimers. This single colorful picture demonstrated the value of our existing multidisciplinary categories and new interdisciplinary categories to biomedical research. It has served the journal and society well for the past 8+ years.

With the current new cover, we have integrated the fifteen EBM categories (back cover) into the hermeneutic circle of experimental biology and medicine (front cover) in roughly their historical context. The left-hand side of the hermeneutic circle involves many of our EBM multidisciplinary categories and the right-hand side our interdisciplinary categories. The fact that biological research will be constantly revolving around this hermeneutic circle demonstrates the importance of

each of these EBM categories in better understanding human health and disease. I want to thank John Wikswow, Andrew Porter, and members of the SEBM Publication Committee for their important roles in producing this imaginative cover.

I hope that you enjoy our new *Experimental Biology and Medicine* cover, which will adorn our journal for many years to come.

1. Wikswow, JP. The Relevance and Potential Roles of Microphysiological Systems in Biology and Medicine, *Exp.Biol.Med.*, 239, 1061–1072, 2014
2. Wikswow, JP and Porter, AP., Biology coming full circle: Joining the whole and the parts, *Exp. Biol. Med.*, 240, 3–7

Steven R. Goodman, PhD
Editor-in-Chief