Editorial: “Dedicated to Professor Van C. Mow”

It is a wonderful treat for us to edit this special issue to honor one of the modern fathers of biomechanics and biomedical engineering. Indeed, Professor Van C. Mow embodies innovation, excellence, and consistency in his vast work as a researcher and a teacher. Some of us owe our ascent through the academic ranks to the intense and unparalleled training we received under Professor Mow. Others have been influenced by his outstanding publications, relentless pursuit of rigor and innovation, inspiration, and mentorship.

Both co-editors of this special issue have always been impressed by Professor Mow's erudition, ability to work hard, and his supreme confidence. At the same time, he always seems to know where the field is headed and what seems to hide at every turn. As his students and colleagues, either directly or indirectly, we need to express the profound influence that he had on us. Not everything about him was positive or easy, but it was all so educational and catalytic in us becoming knowledgeable, self-confident, and ambitious faculty members, always striving for excellence. Because of him, we learned that truly there were no boundaries in how high we could reach. Enthusiasm and positive energy became our hallmarks.

As the co-editors of this special issue, our goal was to collect a compendium of outstanding papers spanning bioengineering as it applies to cellular and molecular bioengineering. The objective was to prepare an edition that researchers in both academe and industry would want to refer to. Clearly, a single edition of the journal, comprising of only 16 papers, cannot do justice neither to the burgeoning area of cellular and molecular bioengineering nor to accurately reflect what Professor Mow has done for bioengineering. The special issue consists of both reviews

and original articles on various topics, such as bone and articular cartilage mechanobiology; effects of exogenous stimuli on chondrocytes toward regeneration; effects of physiological forces or pathological microenvironment on cell signaling pathways in, for example, endothelial cells; pericellular mechanics of cells in the spine; investigation of surface or traction forces exerted by cells on their substrata; new ways of advancing and employing technologies in cellular and molecular bioengineering research, etc.

As indicated, it is our hope that this special issue will serve as a valuable source of information for individuals looking for the newest in cellular and molecular bioengineering. The present issue consists of papers by some of the established leaders in the field or by some of its rising stars. It is indeed exciting to have many illustrious investigators participate in this issue.

Both co-editors are products of the academic environment at Columbia University and we both discovered that our days at Columbia imparted an intrinsic desire for continuous excellence and progress. Professor Mow, emblematic of our days there, has been a bright academic example for us. This special issue is dedicated to him as a token of our deep respect and appreciation for his guidance and leadership. We wish him continued health, happiness, and success. We also wish him ceaseless inspiration so he can share it with the rest of us who are so indebted to him. As this is dedicated to Professor Van C. Mow, this is indeed a very special issue.

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