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Introduction to *Translation*

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We introduce here the inaugural issue of the new scientific journal *Translation*. The over-arching aim of this endeavor is to establish a new forum for a broad spectrum of research in the area of protein synthesis in living systems ranging from structural biochemical, evolutionary and regulatory aspects of translation to the fundamental questions related to post-translational control of somatic phenomena in multicellular organisms including human behavior and health. The journal will publish high quality research articles, provide novel insights, ask provocative questions and discuss new hypothesis in this emerging field. Launching a new journal is always challenging. We hope that strong criteria for the peer-review process, transparency of the editorial policy and the scientific reputation of its founders, editors and editorial board assure the success of *Translation*; and we rely on continuing support of the scientific community in all aspects of the journal's activity.

We are excited to introduce the inaugural issue of *Translation*, a new scientific journal launched by Landes Bioscience. The major purpose of this journal is to establish a new forum for a broad circle of researchers working in the area of protein synthesis, one that may accelerate the exchange of important new findings and opinions on the structural basis, mechanism and regulation of translation in the vast field of control of gene expression. We foresee *Translation* to become a multi-disciplinary, high profile journal with an extensive international audience. It will cover all aspects of mRNA turnover and translation, from molecular, cellular, structural and evolutionary views, to applications of medical relevance. It will publish three general types of papers: 1) original research [standard and expedited reviews]; 2) review article and meeting reports; and 3) commentaries and opinions. Original papers will cover three major areas: 1) biochemistry and basic cell biology of the translation apparatus in prokaryotic and eukaryotic cells; 2) molecular events regulating translation; and 3) translational control in biology and medicine at the molecular and systems level.

The launching of *Translation* is a timely opportunity. More than a half-century ago, the investigations of Sanger and Tuppy in 1951 revealed the linear amino acid sequence of the insulin B chain, and opened the field for the concept of the role of RNA in the flow of genetic information from DNA to protein. Comprehensive investigations of the mechanism underlying assembly of a protein chain on ribosomes soon followed. Two decades later, it became clear that mRNA levels are not the rate-limiting step in global protein synthesis in many circumstances, as a substantial number of mRNAs are found untranslated and preserved in different cell compartments. These findings resulted in outbursts of new ideas and concepts that led to the elucidation of the general features and principles of translational control as a mechanism for rapid cellular responses to external

signals. The initiation phase was recognized as the major rate-limiting step in protein synthesis and analysis of upstream signals modulating the activity of the initiation factors revealed fundamental principles of reprogramming of the translational apparatus.

These principles place the translational machinery at a critical nodal point for numerous signal transduction pathways, which function to link the cellular signaling network with the proteome. Applications of microarray, RNA-Seq and ribosome profiling methodologies allow evaluating at the genome-wide level how these signaling networks affect the overall translational landscape of a cell as well as the translational activity of individual mRNAs and mRNA subsets. Studies of the role of microRNAs and trans-acting proteins in the specific translational regulation of individual mRNAs have become a new and exciting area. Ramifications of these fundamental achievements include understanding of the role of translational control in prokaryotic organisms and unicellular eukaryotes and in regulating gene expression that underlies many normal and pathological somatic effects in multicellular organisms. Examples include development, synaptic plasticity, memory, some mental disorders and diseases associated with deregulation of cell proliferation and viability, including cancer and fibrosis. The deregulation of translation in a broad spectrum of diseases provides new opportunities for the development of novel therapeutics that may target aberrant translation and that can be applied to enable more rational drug design. We anticipate that subjects such as these will find their place in forthcoming issues of *Translation*.

Launching a new journal is always challenging. Most researchers want to publish in journals that have a high impact factor and where their articles will get readily noted and cited by colleagues. A journal's impact factor is based on several essential

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elements. The most important is the quality of the publications. To keep a high level of quality, we have developed strong criteria for the peer-review process, selection of manuscripts for publication and for the technical preparation of the selected papers. Another indicator of a journal's quality is transparency. On our website, we systematically explain things such as scope, target readership, peer-review procedures, and anticipated rejection rates. Important additional components of a journal's viability are the scientific reputation of its founders, editors and editorial board. We hope that all of these aspects assure the success of *Translation*.

We are enthusiastically looking forward to the launching of *Translation* with a single motivation: to make it possible to share and discuss advances in the field of protein synthesis. We are committed to respecting the experimental work and conceptual ideas contained in submitted papers, and we will make every effort to have a manuscript reviewed by capable peers in order to provide fast and constructive feedback. To accomplish these goals, we need and ask for your continuing support. Please contact us with your submissions as well as with your ideas and suggestions regarding the structure of the journal, its content and its management.