

Celebrating JBMR's 40th Anniversary

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Celebrations, which are special events to commemorate an occasion or honour a person, are embedded in human culture since prehistoric times, as depicted on cave paintings from the stone-age, and ancient civilisations that first record a birthday celebration for an Egyptian Pharaoh around 3000 B.C.E. This year, we celebrate the 40th anniversary of the *Journal of Bone and Mineral Research (JBMR®)*, the flagship journal of the American Society for Bone and Mineral Research (ASBMR).

The goals of *JBMR* were clearly specified by Larry Raisz, the founding editor-in-chief (EiC), in his editorial announcing the first issue, in 1986. ⁽¹⁾ Larry Raisz stated that “...*The subject matter of JBMR will include both clinical and laboratory investigations covering the wide range of research related to bone and mineral metabolism which has been presented at the annual meeting of ASBMR. We will also publish editorials and editorial reviews on controversial topics...*”.⁽¹⁾ *JBMR*, under the magnificent leadership and direction of its EiCs (see below), has constantly exceeded in delivering these goals over the past 40 years, by publishing highly impactful original manuscripts, reviews, and special articles on basic, translational and clinical investigations relevant to the musculoskeletal system and mineral metabolism, and it is regarded as the premiere journal in its field with a global reach. These astounding successes of *JBMR* have been achieved because of *you*, who as researchers and investigators in the disciplines of bone biology and skeletal disease have published your important and impressive discoveries in *JBMR*. *Your* publications have also captured the rapid and accelerated advances made during the past 4 decades, in molecular biology, genetics, genomics, proteomics, metabolomics, structural biology, drug design, experimental medicine, statistical methodology and clinical trials, and have established *JBMR* as an exemplar of interdisciplinary research.

To celebrate this momentous 40th year of *JBMR* and the outstanding scientific, translational and clinical advances in musculoskeletal system and mineral metabolism that have been published in *JBMR* over the past 4 decades, an editorial panel has selected over 40 seminal *JBMR* articles and provided commentaries that encapsulate the excitement and importance of the reported discoveries. The editorial panel comprised: the past and present EiCs of *JBMR* - Marc Drezner (EiC 1995-2003), John Eisman (EiC 2003-2007), Thomas Clemens (EiC 2008-2012), Juliet Compston (EiC 2013-2017), Roberto Civitelli (EiC 2018-2022) and Rajesh Thakker (EiC 2023-present); the first chair of the publications committee (John Bilezikian); and the first EiC of *JBMR Plus* (Peter Ebeling). The task of the editorial panel was to review the ~10,000 articles published during the past 40 years in *JBMR* and select ~40 papers that reported important and exciting discoveries across the breadth of our field. This was a daunting task, especially as we wanted to limit the total number to around 40 articles (~1 per year), and in doing so we are aware that we have not been able to include many other top quality and important publications. We apologise to the authors for our omissions. The commentaries and

reflections on the ~40 selected papers will be published as a series of 7 articles between January -July 2026.

In this issue, the first article of the series reports on the beginning and first decade under the stewardship of Larry Raisz, the founding EiC (1986 - 1995)⁽²⁾, and is accompanied by an editorial from the President of ASBMR, Emma Duncan.⁽³⁾ The article describes events and discussions leading to the founding of *JBMR* and also reflections on the beginning and the first 10 Years of *JBMR*.⁽²⁾ A special tribute to Larry Raisz (1925-2010), who was President of ASBMR (1980-1981) and Editor-in-Chief of *JBMR* (1986-1995), is provided together with reflections on the early development of *JBMR*. The commentaries on the top ten publications, from 1986-1995, selected by the editorial panel, focus on the roles these studies had in advancing the field and our concepts, and in providing the foundations for future studies. Thus, these papers report on:

- Standardisation of bone histomorphometry measurements that led to a new nomenclature which has been universally adopted since publication of the report in 1987, and has over 5000 citations, one of the highest of any article published in *JBMR*.
- Association of reduced bone mineral density (BMD), as assessed by dual-energy X-ray absorptiometry (DXA), with fracture, thereby contributing to the major role DXA now has in fracture risk assessment in clinical practice.
- Demonstration that vertebral and hip fractures increase steeply with age and equally in both sexes, although 10 years later in men, thereby establishing foundational evidence for the public health consequences of osteoporosis.
- Showing the ability of conventional X-ray imaging to identify the presence of vertebral osteoporotic fractures among those who did not necessarily have a documented clinical event.
- A likely role for non-additive gene interactions in determining bone mass in adult women and a potential importance of gene interaction on heritability estimates.
- Computer simulation to explore the impact of the bone remodelling transient on changes in BMD measured by DXA, and showing that BMD in untreated and treated disease can easily be misinterpreted if the transient effect of changes in remodelling rate is not considered.
- Influence of physical activity to meaningfully increase BMD in children, and implying that more active children may emerge from adolescence with 5-10% greater peak bone mass (PBM), which could yield an important decrease in the future incidence of osteoporotic fractures.
- Expression of parathyroid hormone-related protein (PTHrP), the causative factor for humoral hypercalcemia of malignancy (HHM), in squamous cell cancers, irrespective of location, and heralding a paracrine role of PTHrP in differentiation of tissue-specific cells.

- Presence of a circulating factor that regulates phosphorus homeostasis, by use of parabiosis to join the circulations of one mutant mouse (*Hyp*) having *X-linked hypophosphatemia* with a normal mouse.
- The anabolic and catabolic activities of parathyroid hormone (PTH), which were separable based on their pharmacokinetic profiles and provided essential feasibility data for the development of human PTH-1-34 (Forteo®) as the first FDA approved anabolic treatment of osteoporosis.

The subsequent 6 articles (February-July 2026) will similarly provide reflections and commentaries on the advances that occurred under the stewardships of each of the six other *JBMR* EiCs - Marc Drezner (1995-2003), John Eisman (2003-2007), Thomas Clemens (2008-2012), Juliet Compston (2013-2017), Roberto Civitelli (2018-2022) and Rajesh Thakker (2023-present).

To honour and commemorate *JBMR's* remarkable achievements over the past 4 decades and *JBMR's* legacy of constantly publishing the results of new knowledge, which continues unabated today, *JBMR* and ASBMR have also planned other celebration events including sessions at the ASBMR 2026 Annual Meeting in Boston, Massachusetts, USA, October 9 - 12, 2026. My colleagues (Bilezikian, Civitelli, Clemens, Compston, Drezner, Ebeling, Eisman) and I have enjoyed preparing these articles and events, and we look forward to your joining us in celebrating *JBMR's* 40th Anniversary throughout 2026.

Congratulations *JBMR* for an outstanding first 40 years! I keenly anticipate your further successes which will undoubtedly come in future years.

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Disclosures

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Rajesh Thakker (Conceptualization, Project administration, Supervision, Writing - original draft, Writing - review & editing).

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References:

1. Raisz LG. Announcement of First Issue. J Bone Miner Res. 1986;1:1. doi: <https://doi.org/10.1002/jbmr.5650010101>.
2. Bilezikian JP, Civitelli R, Clemens TL, Compston J, Drezner MK, Ebeling PR, Eisman JA, Thakker RV. Journal of Bone and Mineral Research (JBMR) 40th Anniversary Celebration: The Beginning and First Decade. J Bone Miner Res 2025; X: XXX- XXX. Doi:xxxx
3. Duncan E. ASBMR President's Editorial on the occasion of the 40th anniversary of JBMR. J Bone Miner Res 2025; X: XXX- XXX. Doi:xxxx