### Contents

#### General

**Original Article**

Naresh C. Rao, DO, FAOASM, Hallie Zwibel, DO, Jenny Berezanskaya, DO, Paul Pena, DO and Min-Kyung Jung, PhD  
**A comparative study of the effectiveness of an osteopathic primary care sports medicine led intervention on performance in men's collegiate lacrosse players** — 71

#### Medical Education

**Original Article**

Harris Ahmed, DO, MPH, Kim Vo, MS and Wayne Robbins, DO  
**AOA ophthalmology and otolaryngology program closures as a model to highlight challenges of maintaining GME in high need areas** — 79

#### Neuromusculoskeletal Medicine (OMT)

**Original Article**

Cherice N. Hill, PhD, M* Lindsey Romero, DO, Mark Rogers, DO, Robin M. Queen, PhD and Per Gunnar Brolinson, DO  
**Effect of osteopathic manipulation on gait asymmetry** — 85

**Brief Report**

Ramu Anandakrishnan, PhD, Hope Tobey, DO, Steven Nguyen, BS, Osscar Sandoval, BS, Bradley G. Klein, PhD and Blaise M. Costa, PhD  
**Cranial manipulation affects cholinergic pathway gene expression in aged rats** — 95

#### Pediatrics

**Case Report**

Katherine E. Guardado, OMS II and Shane Sergent, DO  
**Pediatric unilateral knee swelling: a case report of a complicated differential diagnosis and often overlooked cause** — 105

#### Public Health and Primary Care

**Brief Report**

Jay M. Pescatore, DO, Juan Sarmiento, MD, Ruben A. Hernandez-Acosta, MD, Britt Skaathun, PhD, MPH, Nancy Quesada-Rodriguez, MD and Katayoun Rezai, MD  
**Glycemic control is associated with lower odds of mortality and successful extubation in severe COVID-19** — 111

#### Clinical Image

Emilie Offerman, DO, Samantha Mahon, MD and Bradley Michael Golden, DO  
**Tracheobronchial cast** — 117