Muralidhar Padala

List of Publications by Year in Descending Order

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Version: 2024-04-17

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

63	931	15	29
papers	citations	h-index	g-index
76 ext. papers	1,131 ext. citations	2.7 avg, IF	4.01 L-index

#	Paper	IF	Citations
63	A Biohybrid Material With Extracellular Matrix Core and Polymeric Coating as a Cell Honing Cardiovascular Tissue Substitute <i>Frontiers in Cardiovascular Medicine</i> , 2022 , 9, 807255	5.4	
62	Effect of early versus late onset mitral regurgitation on left ventricular remodeling in ischemic cardiomyopathy in an animal model <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2021 ,	1.5	2
61	Image-Guided Targeted Mitral Valve Tethering with Chordal Encircling Snares as a Preclinical Model of Secondary Mitral Regurgitation. <i>Journal of Cardiovascular Translational Research</i> , 2021 , 1	3.3	O
60	Ultrastructural Adaptation of the Cardiomyocyte to Chronic Mitral Regurgitation. <i>Frontiers in Cardiovascular Medicine</i> , 2021 , 8, 714774	5.4	1
59	Commentary: Biomechanical remodeling of the pulmonary autograft after the Ross procedure. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2021 ,	1.5	
58	Commentary: Functional Mitral Stenosis After Undersizing Mitral Annuloplasty for Ischemic Mitral Regurgitation: Ignoring the Elephant in the Room. <i>Seminars in Thoracic and Cardiovascular Surgery</i> , 2021 ,	1.7	
57	Hemodynamic and transcriptomic studies suggest early left ventricular dysfunction in a preclinical model of severe mitral regurgitation. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2021 , 161, 961-97	6.e [.] 22	5
56	Commentary: Quantifying Paravalvular Aortic Regurgitation After Transcatheter Aortic Valve Replacement-Correlative Indices vs Causative Factors. <i>Seminars in Thoracic and Cardiovascular Surgery</i> , 2021 , 33, 931-932	1.7	
55	Commentary: The mitral valve and the left ventricle in functional mitral regurgitation: The puppet and the puppeteer. <i>JTCVS Open</i> , 2021 , 5, 63-65	0.2	
54	Commentary: Transaortic Mitral Valve Repair With Edge-to-Edge Technique. <i>Seminars in Thoracic and Cardiovascular Surgery</i> , 2021 ,	1.7	
53	Reply: Does papillary muscle approximation benefit both the mitral valve and the left ventricle in the repair of functional mitral regurgitation?. <i>JTCVS Open</i> , 2021 ,	0.2	
52	Papillary Muscle Approximation Reduces Systolic Tethering Forces and Improves Mitral Valve Closure in the Repair of Functional Mitral Regurgitation <i>JTCVS Open</i> , 2021 , 7, 91-104	0.2	1
51	Label-free optical biomarkers detect early calcific aortic valve disease in a wild-type mouse model. <i>BMC Cardiovascular Disorders</i> , 2020 , 20, 521	2.3	1
50	3-D Intravascular Characterization of Blood Flow Velocity Fields with a Forward-Viewing 2-D Array. <i>Ultrasound in Medicine and Biology</i> , 2020 , 46, 2560-2571	3.5	2
49	An Image Guided Transapical Mitral Valve Leaflet Puncture Model of Controlled Volume Overload from Mitral Regurgitation in the Rat. <i>Journal of Visualized Experiments</i> , 2020 ,	1.6	2
48	Commentary: Simple and effective subvalvular repair for ischemic mitral regurgitation: Yes, we can!. <i>JTCVS Techniques</i> , 2020 , 4, 138-139	0.2	
47	Ventricular reshaping with a beating heart implant improves pump function in experimental heart failure. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2020 ,	1.5	4

(2016-2020)

Undersizing mitral annuloplasty alters left ventricular mechanics in a swine model of ischemic mitral regurgitation. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2020 ,	1.5	11
Commentary: Pouring life into dead tissues: A brief history of the porcine small intestine submucosa (SIS) in cardiovascular surgery-success, failures, hype, and hope. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2020 , 160, e217-e219	1.5	1
Commentary: Multifaceted challenges with choosing between mitral valve repair and replacement for rheumatic heart disease. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2020 ,	1.5	
Commentary: When all roads lead to the heart-which one to choose?. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2020 ,	1.5	
Hemodynamic outcomes after undersizing ring annuloplasty and focal suture annuloplasty for surgical repair of functional tricuspid regurgitation. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2020 ,	1.5	3
Left Ventricular Thinning and Distension in Pig Hearts as a Reproducible Ex Vivo Model of Functional Mitral Regurgitation. <i>ASAIO Journal</i> , 2020 , 66, 1016-1024	3.6	2
Mitral regurgitation worsens cardiac remodeling in ischemic cardiomyopathy in an experimental model. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2020 , 160, e107-e125	1.5	10
The Choice of Treatment in Ischemic Mitral Regurgitation With Reduced Left Ventricular Function. <i>Annals of Thoracic Surgery</i> , 2019 , 108, 1901-1912	2.7	9
Performance and healing of an expanded polytetrafluoroethylene multichordal device at 6 months after repair of mitral leaflet flail in swine. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2019 , 157, 93	32- 9 40.e	e3 ¹
Patient-specific computational biomechanical modeling to guide mitral valve repair strategy: Practicality and value?. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2018 , 155, 606-607	1.5	2
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Temporal changes in myocardial collagen, matrix metalloproteinases, and their tissue inhibitors in the left ventricular myocardium in experimental chronic mitral regurgitation in rodents. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2018 , 315, H1269-H1278	5.2	6
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the left ventricular myocardium in experimental chronic mitral regurgitation in rodents. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2018 , 315, H1269-H1278 Pathological Remodeling of Mitral Valve Leaflets from Unphysiologic Leaflet Mechanics after Undersized Mitral Annuloplasty to Repair Ischemic Mitral Regurgitation. <i>Journal of the American Heart Association</i> , 2018 , 7, e009777 Transcatheter Mitral Valve Repair Therapies: Evolution, Status and Challenges. <i>Annals of Biomedical Engineering</i> , 2017 , 45, 332-359	6 4·7	14
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the left ventricular myocardium in experimental chronic mitral regurgitation in rodents. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2018 , 315, H1269-H1278 Pathological Remodeling of Mitral Valve Leaflets from Unphysiologic Leaflet Mechanics after Undersized Mitral Annuloplasty to Repair Ischemic Mitral Regurgitation. <i>Journal of the American Heart Association</i> , 2018 , 7, e009777 Transcatheter Mitral Valve Repair Therapies: Evolution, Status and Challenges. <i>Annals of Biomedical Engineering</i> , 2017 , 45, 332-359 Invited Commentary. <i>Annals of Thoracic Surgery</i> , 2017 , 103, 827 Use of a New Expanded Polytetrafluoroethylene Multichordal Mitral Apparatus (MitraPatch) to Repair Complex Mitral Valve Lesions. <i>Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery</i> , 2017 , 12, 411-417 Use of a New Expanded Polytetrafluoroethylene Multichordal Mitral Apparatus (Mitrapatch) to Repair Complex Mitral Valve Lesions. <i>Innovations: Technology and Techniques in Cardiothoracic and</i>	6 4·7 2.7	14 7
	submucosa (SIS) in cardiovascular surgery-success, failures, hype, and hope. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2020, 160, e217-e219 Commentary: Multifaceted challenges with choosing between mitral valve repair and replacement for rheumatic heart disease. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2020, Commentary: When all roads lead to the heart-which one to choose?. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2020, Hemodynamic outcomes after undersizing ring annuloplasty and focal suture annuloplasty for surgical repair of functional tricuspid regurgitation. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2020, Left Ventricular Thinning and Distension in Pig Hearts as a Reproducible Ex Vivo Model of Functional Mitral Regurgitation. <i>ASAIO Journal</i> , 2020, 66, 1016-1024 Mitral regurgitation worsens cardiac remodeling in ischemic cardiomyopathy in an experimental model. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2020, 160, e107-e125 The Choice of Treatment in Ischemic Mitral Regurgitation With Reduced Left Ventricular Function. <i>Annals of Thoracic Surgery</i> , 2019, 108, 1901-1912 Performance and healing of an expanded polytetrafluoroethylene multichordal device at 6 months after repair of mitral leaflet flail in swine. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2019, 157, 93 Patient-specific computational biomechanical modeling to guide mitral valve repair strategy:	submucosa (SIS) in cardiovascular surgery-success, failures, hype, and hope. Journal of Thoracic and Cardiovascular Surgery, 2020, 160, e217-e219 Commentary: Multifaceted challenges with choosing between mitral valve repair and replacement for rheumatic heart disease. Journal of Thoracic and Cardiovascular Surgery, 2020, Commentary: When all roads lead to the heart-which one to choose?. Journal of Thoracic and Cardiovascular Surgery, 2020, Hemodynamic outcomes after undersizing ring annuloplasty and focal suture annuloplasty for surgical repair of functional tricuspid regurgitation. Journal of Thoracic and Cardiovascular Surgery, 2020, Left Ventricular Thinning and Distension in Pig Hearts as a Reproducible Ex Vivo Model of Functional Mitral Regurgitation. ASAIO Journal, 2020, 66, 1016-1024 Mitral regurgitation worsens cardiac remodeling in ischemic cardiomyopathy in an experimental model. Journal of Thoracic and Cardiovascular Surgery, 2020, 160, e107-e125 The Choice of Treatment in Ischemic Mitral Regurgitation With Reduced Left Ventricular Function. Annals of Thoracic Surgery, 2019, 108, 1901-1912 Performance and healing of an expanded polytetrafluoroethylene multichordal device at 6 months after repair of mitral leaflet flail in swine. Journal of Thoracic and Cardiovascular Surgery, 2019, 157, 932-940.60 Patient-specific computational biomechanical modeling to guide mitral valve repair strategy:

28	Invited Commentary. Annals of Thoracic Surgery, 2016, 101, 575	2.7	
27	Pre-clinical Experience with a Multi-Chordal Patch for Mitral Valve Repair. <i>Journal of Cardiovascular Translational Research</i> , 2016 , 9, 127-34	3.3	4
26	Swine (Sus scrofa) as a Model of Postinfarction Mitral Regurgitation and Techniques to Accommodate Its Effects during Surgical Repair. <i>Comparative Medicine</i> , 2016 , 66, 290-9	1.6	6
25	Invited Commentary on Ge et al. Ann Thorac Surg 2016;101:1691-9. <i>Annals of Thoracic Surgery</i> , 2016 , 101, e211	2.7	
24	The Impact of Intimal Tear Location and Partial False Lumen Thrombosis in Acute Type B Aortic Dissection. <i>Annals of Thoracic Surgery</i> , 2016 , 102, 1925-1932	2.7	16
23	Mitral valve diseasemorphology and mechanisms. <i>Nature Reviews Cardiology</i> , 2015 , 12, 689-710	14.8	172
22	Temporal changes in interpapillary muscle dynamics as an active indicator of mitral valve and left ventricular interaction in ischemic mitral regurgitation. <i>Journal of the American College of Cardiology</i> , 2014 , 64, 1867-79	15.1	60
21	Postsurgical hemodynamics of the aortic valve bypass operation evaluated with phase contrast magnetic resonance. <i>Journal of Magnetic Resonance Imaging</i> , 2014 , 40, 899-905	5.6	O
20	Side-specific mechanical properties of valve endothelial cells. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2014 , 307, H15-24	5.2	17
19	Abstract 18607: Intra-ventricular Papillary Muscle Banding vs. Undersized Mitral Annuloplasty to Treat Ischemic Mitral Regurgitation in a Chronic Swine Model. <i>Circulation</i> , 2014 , 130,	16.7	2
18	Impact of mitral valve geometry on hemodynamic efficacy of surgical repair in secondary mitral regurgitation. <i>Journal of Heart Valve Disease</i> , 2014 , 23, 79-87		20
17	Hemodynamic comparison of mitral valve repair: techniques for a flail anterior leaflet. <i>Journal of Heart Valve Disease</i> , 2014 , 23, 171-6		6
16	Comparison of artificial neochordae and native chordal transfer in the repair of a flail posterior mitral leaflet: an experimental study. <i>Annals of Thoracic Surgery</i> , 2013 , 95, 629-33	2.7	15
15	Transapical beating heart cardioscopy technique for off-pump visualization of heart valves. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2012 , 144, 231-4	1.5	14
14	Right ventricular papillary muscle approximation as a novel technique of valve repair for functional tricuspid regurgitation in an ex vivo porcine model. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2012 , 144, 235-42	1.5	24
13	Effect of anterior strut chordal transection on the force distribution on the marginal chordae of the mitral valve. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2012 , 144, 624-633.e2	1.5	15
12	Elevated cyclic stretch and serotonin result in altered aortic valve remodeling via a mechanosensitive 5-HT(2A) receptor-dependent pathway. <i>Cardiovascular Pathology</i> , 2012 , 21, 206-13	3.8	24
11	Letter regarding the article by Vismara et al published in Int J Artif Organs 2011; 34(4): 383-391. <i>International Journal of Artificial Organs</i> , 2012 , 35, 158-9; author reply 160-1	1.9	

LIST OF PUBLICATIONS

10	Innovations in therapies for heart valve disease. Circulation Journal, 2011, 75, 1028-41	2.9	19
9	Regional analysis of dynamic deformation characteristics of native aortic valve leaflets. <i>Journal of Biomechanics</i> , 2011 , 44, 1459-65	2.9	28
8	Mechanics of the mitral valve strut chordae insertion region. <i>Journal of Biomechanical Engineering</i> , 2010 , 132, 081004	2.1	38
7	An Engineering Review of Transcatheter Aortic Valve Technologies. <i>Cardiovascular Engineering and Technology</i> , 2010 , 1, 77-87	2.2	25
6	Mitral valve hemodynamics after repair of acute posterior leaflet prolapse: quadrangular resection versus triangular resection versus neochordoplasty. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2009 , 138, 309-15	1.5	66
5	Saddle shape of the mitral annulus reduces systolic strains on the P2 segment of the posterior mitral leaflet. <i>Annals of Thoracic Surgery</i> , 2009 , 88, 1499-504	2.7	71
4	Mitral weba new concept for mitral valve repair: improved engineering design and in-vitro studies. Journal of Heart Valve Disease, 2009 , 18, 300-6		6
3	Cleft closure and undersizing annuloplasty improve mitral repair in atrioventricular canal defects. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2008 , 136, 1243-9	1.5	14
2	Design of an ex vivo culture system to investigate the effects of shear stress on cardiovascular tissue. <i>Journal of Biomechanical Engineering</i> , 2008 , 130, 035001	2.1	52
1	A saddle-shaped annulus reduces systolic strain on the central region of the mitral valve anterior leaflet. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2007 , 134, 1562-8	1.5	90