



Vito Marco Ranieri

20-07-1959

Bari

Italian

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Languages : Italian, English

Education

Type	Year	Institution	Notes (Degree, Experience)
University graduation	1985	University of Bari. Italy	Full marks and honors
Specialty	1988	University of Bari. Italy	Full marks and honors
Post-graduate fellowship	1989-1991	McGill University, MONTREAL, CANADA	Meakins Christie Laboratories, HopitalS.Luc, Royal Victoria Hospital
Licensure 01	1986 until now	Albo dei Medici della provincia di Bari	# 8084
Licensure 02	1997-1998	The College of Physicians and Surgeons of Ontario	# 72092

Appointments (Academic Appointments)

START	END	INSTITUTION	POSITION
March 1992	April 2000	University of Bari, Italy	Assistant Professor
August 1998	July 2000	University of Toronto, Canada	Visiting Professor
May 2000	October 2001	University of Pisa, Italy	Associate Professor
November 2001	Now	University of Turin, Italy	Full Professor

OtherAppointments

START	END	INSTITUTION	POSITION
Bari			
Toronto			
Pisa			
November 2001	Now	Azienda Ospedaliera-Universitaria S. Giovanni Battista, Molinette di Torino, ora Azienda Ospedaliera-Universitaria Citta delle Scienza e della Salute di Torino	Direttore Struttura Complessa: "Anestesia e Rianimazione 1": Sale Operatorie: chirurgia generale, urologia, otorino-laringoiatria, chirurgia d'urgenza, chirurgia toracica, chirurgia vascolare, cardiocirurgia; Trapianti: Cuore e Polmone; Terapia Intensiva: Terapia Intensiva Generale (14 letti), Terapia Intensiva Cardiocirurgica (12 letti)
May 2004	January 2013	Azienda Ospedaliera-Universitaria S. Giovanni Battista, Molinette di Torino	Direttore Dipartimento Anestesia e Rianimazione (vedi allegate lettere di dottori Monchiero, Galanzino e Davini)
February 2013	Now	Azienda Ospedaliera-Universitaria Citta delle Scienza e della Salute di Torino (nuova azienda risultante dalla aggregazione della Azienda Ospedaliera-Universitaria S. Giovanni Battista, Molinette di Torino, Molinette, Azienda OIRM S. Anna, Azienda CTO)	Direttore Dipartimento Anestesia e Rianimazione (vedi allegato decreto di nomina)

Teaching experience

START	END	INSTITUTION
1995-1998	University of Bari, Italy	Docente incaricato: terapia del dolore; Corso Integrato di Emergenze Medico-Chirurgiche, Corso di Laurea in Medicina e Chirurgia
Nov 2000-Oct 2001	University of Pisa, Italy	Docente di Anestesiologia e Rianimazione, Corso di Laurea in Odontoiatria
2003 a tutt'oggi	University of Turin, Italy	Direttore Scuola di Specializzazione Anestesia Rianimazione e Terapia Intensiva
2001-a tutt'oggi	University of Turin, Italy	Corso Integrato di Emergenze Medico-Chirurgiche, Corso di Laurea in Medicina e Chirurgia: Coordinatore
2001-a tutt'oggi	University of Turin, Italy	Corso Integrato di Emergenze Medico-Chirurgiche, Corso di Laurea in Medicina e Chirurgia: Titolare Insegnamento Anestesia, Rianimazione e Terapia Intensiva Canale A
2001-a tutt'oggi	University of Turin, Italy	Docente: Scuola di Specializzazione Anestesia Rianimazione e Terapia Intensiva Docente della Scuola di Specializzazione in Chirurgia Generale Docente della Scuola di Specializzazione in Nefrologia Docente della Scuola di Specializzazione in Medicina di Emergenza-Urgenza Docente della Scuola di Specializzazione in Cardiochirurgia
2010-2012	University of Turin, Italy	Master INFERMIERISTICA DI AREA CRITICA: coordinatore
2007-now	University of Turin, Italy	Docente del DOTTORATO DI RICERCA: Functional genomics applied to translational research

Society memberships, Awards and Honours

YEAR	TITLE
1990- now	Member of the “European Society of Intensive Care Medicine (ESICM)”
1993-now	Member of the “Italian Society of Anesthesia and Intensive Care Society (SIAARTI)”
2006-2008	President of the “European Society of Intensive Care Medicine (ESICM)”
1998-2004	EditorialBoard: Intensive Care Medicine
2005 - 2012	EditorialBoard: American Journal of Respiratory and Critical Care Medicine
2007 - now	EditorialBoard: Critical Care
2005- now	Reviewer for Critical Care Medicine
2005- now	Reviewer for JAMA
2005- now	Reviewer for Lancet

Funding Information[grants as PI-principal investigators or I-investigator]

GRANT	TITLE and POSITION	AGENCY	Grant value(€)
<u>PRIN 2002</u>	“Ruolo della PI3Kg nella prevenzione della risposta infiammatoria polmonare e sistemica indotta di Acute respiratory Di stress Sindrome (ARDS) PRINCIPAL INVESTIGATOR	MURST	71.100,00
<u>PRIN 2007</u>	Programma integrato di ricerca clinico-sperimentale per il miglioramento dell'outcome del trapianto di polmone PRINCIPAL INVESTIGATOR	MURST	143.750,00
<u>SIXTH FRAMEWORK PROGRAMME 2004</u>	“Genetics of Sepsis in Europe” INVESTIGATOR	COMUNITA' EUROPEA	83.000,00
<u>SEVENTH FRAMEWORK PROGRAMME 2012</u>	“Interferon-beta treatment of acute respiratory distress syndrome ARDS” INVESTIGATOR	COMUNITA' EUROPEA	721.120,000
RICERCA PROGETTI FINALIZZATI 2004	Meccanismi fisiopatologici e molecolari della riacutizzazione della broncopatia cronico ostruttiva PRINCIPAL INVESTIGATOR	MINISTERO DELLA SALUTE (CIPE)	80.000,00

<p>RICERCA PROGETTI FINALIZZATI 2007</p>	<p>Optimal ventilatory management of heart-beating organs and donors to increase the number of lungs available for transplantation PRINCIPAL INVESTIGATOR</p>	<p>MINISTERO DELLA SALUTE</p>	<p>80.500,00</p>
<p>RICERCA PROGETTI FINALIZZATI 2012</p>	<p>Integrated program of clinical research to reduce the mortality rate of patients on the waiting list for lung transplantation PRINCIPAL INVESTIGATOR</p>	<p>MINISTERO DELLA SALUTE</p>	<p>200.000,00</p>
<p>FONDAZIONE FIBROSI CISTICA 2010</p>	<p>SHORT INTERFERENCE RNA (SIRNA) TO PREVENT THE PULMONARY AND SYSTEMIC INJURY DUE TO ISCHEMIA-REPERFUSION IN AN EXPERIMENTAL MODEL OF LUNG TRANSPLANTATION PRINCIPAL INVESTIGATOR</p>	<p>FONDAZIONE FIBROSI CISTICA</p>	<p>65.000,00</p>

Research Activities

Keywords	Short Description
Acute Respiratory Failure	<p>We performed physiological, translational and clinical studies in critically ill patients. We initially investigated the cardio-pulmonary functions of critically ill patients. Later we focused on the translation of mechanical stimulus applied to the lungs into pro-inflammatory pathways; we developed a number of experimental models involving, isolated organs, intact small animals and cellular culture. We contributed to the development of the concept of “ventilator induced lung injury. Finally, we translated these results in randomized clinical trials that tested several interventions in patients with acute respiratory failure or septic shock, and in patients recovering from general anesthesia for major abdominal surgery. In the very recent years we focused on lung transplantation. We tested in a randomized trial the efficacy of a ventilatory strategy to enhance lungs harvest from hear-beating organ donors. Results of this study have changed current guidelines for management of brain death subjects. We were founded to develop a SiRNA-based therapy for the ischemia-reperfusion syndrome in an experimental model of lung transplantation. We obtained funds to test the efficacy of a multifactorial strategy to reduce mortality of patients in waiting list for lung transplant.</p>
ARDS	
LUNG TRANSPLANTATION	
Physiology	
Translational models Clinical Trials	

Summary of Scientific Achievements

Product type	Number	Data Base	Year/Start	End
	Number	Data Base	Year/Start	Year/End
Papers [international]	161 (excluding abstracts)	ISI Web of Science	1991	2013
Books [scientific]	2	Google books	1993	2011
Books [teaching]	5	Google books	1993	2011

Total Impact factor	1,032,853
Total Citations(without self citation)	8283
Average Citations per Product	51,44
Hirsch (H) index	39
Normalized H index*	1.444

*H index versus/divided by the academic seniority (time span from graduation)

Selected Publication

- 1) Racca F, Mongini T, Wolfler A, Vianello A, Cutrera R, Del Sorbo L, Capello EC, Gregoretti C, Massa R, De Luca D, Conti G, Tegazzin V, Toscano A, **Ranieri VM**.

[Recommendations for anesthesia and perioperative management of patients with neuromuscular disorders.](#)

MINERVA ANESTESIOLOGICA

Volume 79, Issue 4 Pages 419-433 PMID: 23419334 Published APRIL 2013. Epub 2013 Feb 18.

Times Cited: 0 (from Web of Science)

IF 2.656

- 2) **Ranieri VM**, Rubenfeld GD, Thompson BT.

[Defining ARDS: do we need a mandatory waiting period?](#)

INTENSIVE CARE MEDICINE

Volume 39, Issue 4 (2013), Page 775-778 PMID: 23370830 Published: 2013 JANUARY 31.

Times Cited: 0 (from Web of Science)

IF 5.399

- 3) Landoni G, Rodseth RN, Santini F, Ponschab M, Ruggeri L, Székely A, Pasero D, Augoustides JG, Del Sarto PA, Krzych LJ,

Corcione A, Slullitel A, Cabrini L, Le Manach Y, Almeida RM, Bignami E, Biondi-Zoccai G, Bove T, Caramelli F, Cariello C, Carpanese A, Clarizia L, Comis M, Conte M, Covello RD, De Santis V, Feltracco P, Giordano G, Pittarello D, Gottin L, Guarracino F, Morelli A, Musu M, Pala G, Pasin L, Pezzoli I, Paternoster G, Remedi R, Roasio A, Zucchetti M, Petrini F, Finco G, **Ranieri M**, Zangrillo A.

[Randomized Evidence for Reduction of Perioperative Mortality.](#)

JOURNAL OF CARDIOTHORACIC AND VASCULAR ANESTHESIA

Volume: 26 Issue: 5 Pages: 764-772 DOI: 10.1053/j.jvca.2012.04.018 Published: OCT 2012

Times Cited: 4 (from Web of Science)

IF 1.640

- 4) **Ranieri VM**, Rubenfeld GD, Thompson BT, Ferguson ND, Caldwell E, Fan E, Camporota L, Slutsky AS.

[Acute Respiratory Distress Syndrome The Berlin Definition.](#)

JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

Volume: 307 Issue: 23 Pages: 2526-2533 DOI: 10.1001/jama.2012.5669 Published: JUN 20 2012

Times Cited: 37 (from Web of Science)

IF 30.026

5) Del Sorbo L, **Ranieri VM**, Keshavjee S.

[Extracorporeal Membrane Oxygenation as "Bridge" to Lung Transplantation: What Remains in Order to Make It Standard of Care?](#)

AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE

Volume: 185 Issue: 7 Pages: 699-701 DOI: 10.1164/rccm.201202-0193ED Published: APR 1 2012

Times Cited: 3 (from Web of Science)

IF 11.080

6) Grasso S, Terragni P, Birocco A, Urbino R, Del Sorbo L, Filippini C, Mascia L, Pesenti A, Zangrillo A, Gattinoni L, **Ranieri VM**.

[ECMO criteria for influenza A \(H1N1\)-associated ARDS: role of transpulmonary pressure.](#)

INTENSIVE CARE MEDICINE

Volume: 38 Issue: 3 Pages: 395-403 DOI: 10.1007/s00134-012-2490-7 Published: MAR 2012

Times Cited: 11 (from Web of Science)

IF 5.399

7) Del Sorbo L, Boffini M, Rinaldi M, **Ranieri VM**.

[Bridging to lung transplantation by extracorporeal support.](#)

MINERVA ANESTESIOLOGICA

Volume: 78 Issue: 2 Pages: 243-250 Published: FEB 2012

Times Cited: 1 (from Web of Science)

IF 2.656

8) **Ranieri VM**, Thompson BT, Barie PS, Dhainaut JF, Douglas IS, Finfer S, Gårdlund B, Marshall JC, Rhodes A, Artigas A, Payen D, Tenhunen J, Al-Khalidi HR, Thompson V, Janes J, Macias WL, Vangerow B, Williams MD.

[Drotrecogin Alfa \(Activated\) in Adults with Septic Shock.](#)

NEW ENGLAND JOURNAL OF MEDICINE

Volume: 366 Issue: 22 Pages: 2055-2064 DOI: 10.1056/NEJMoa1202290 Published: MAY 31 2012

Times Cited: 43 (from Web of Science)

IF 53.298

9) Cappabianca G, Rotunno C, de Luca TupputiSchinosa L, **Ranieri VM**, Paparella D.

[Protective Effects of Steroids in Cardiac Surgery: A Meta-Analysis of Randomized Double-Blind Trials.](#)

JOURNAL OF CARDIOTHORACIC AND VASCULAR ANESTHESIA

Volume: 25 Issue: 1 Pages: 156-165 DOI: 10.1053/j.jvca.2010.03.015 Published: FEB 2011

Times Cited: 7 (from Web of Science)

IF 1.640

10) Mascia L, Pasero D, Slutsky AS, Arguis MJ, Berardino M, Grasso S, Munari M, Boifava S, Cornara G, Della Corte F, Vivaldi N, Malacarne P, Del Gaudio P, Livigni S, Zavala E, Filippini C, Martin EL, Donadio PP, Mastromauro I, **Ranieri VM**.

[Effect of a Lung Protective Strategy for Organ Donors on Eligibility and Availability of Lungs for Transplantation A Randomized Controlled Trial.](#)

JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

Volume: 304 Issue: 23 Pages: 2620-2627 DOI: 10.1001/jama.2010.1796 Published: DEC 15 2010

Times Cited: 31 (from Web of Science)

IF 30.011

11) Martin EL, Souza DG, Fagundes CT, Amaral FA, Assenzio B, Puntorieri V, Del Sorbo L, Fanelli V, Bosco M, Delsedime L, Pinho JF, Lemos VS, Souto FO, Alves-Filho JC, Cunha FQ, Slutsky AS, Ruckle T, Hirsch E, Teixeira MM, **Ranieri VM**.

[Phosphoinositide-3 Kinase gamma Activity Contributes to Sepsis and Organ Damage by Altering Neutrophil Recruitment.](#)

AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE.

Volume: 182 Issue: 6 Pages: 762-773 DOI: 10.1164/rccm.201001-0088OC Published: SEP 15 2010

Times Cited: 5 (from Web of Science)

IF 10.191

12) Squadrone V, Massaia M, Bruno B, Marmont F, Falda M, Bagna C, Bertone S, Filippini C, Slutsky AS, Vitolo U, Boccadoro M, **Ranieri VM**.

[Early CPAP prevents evolution of acute lung injury in patients with hematologic malignancy.](#)

INTENSIVE CARE MEDICINE.

Volume: 36 Issue: 10 Pages: 1666-1674 DOI: 10.1007/s00134-010-1934-1 Published: OCT 2010

Times Cited: 14 (from Web of Science)

IF 4.996

13) Terragni PP, Antonelli M, Fumagalli R, Faggiano C, Berardino M, Pallavicini FB, Miletto A, Mangione S, Sinardi AU, Pastorelli M, Vivaldi N, Pasetto A, Della Rocca G, Urbino R, Filippini C, Pagano E, Evangelista A, Ciccone G, Mascia L, **Ranieri VM**.

[Early vs Late Tracheotomy for Prevention of Pneumonia in Mechanically Ventilated Adult ICU Patients A Randomized Controlled Trial.](#)

JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

Volume: 303 Issue: 15 Pages: 1483-1489 Published: APR 21 2010

Times Cited: 62 (from Web of Science)

IF 30.011

14) Pasero D, Martin EL, Davi A, Mascia L, Rinaldi M, **Ranieri VM**. [The effects of inhaled nitric oxide after lung transplantation.](#)

MINERVA ANESTESIOLOGICA.

Volume: 76 Issue: 5 Pages: 353-361 Published: MAY 2010

Times Cited: 3 (from Web of Science)

IF 2.581

15) Metnitz PG, Metnitz B, Moreno RP, Bauer P, Del Sorbo L, Hoermann C, de Carvalho SA, **Ranieri VM**
[Epidemiology of Mechanical Ventilation: Analysis of the SAPS 3 Database](#). **INTENSIVE CARE MEDICINE**
Volume: 35 Issue: 5 Pages: 816-825 DOI: 10.1007/s00134-009-1449-9 Published: MAY 2009
Times Cited: 22 (from Web of Science)
IF 5.168

16) Terragni PP, Del Sorbo L, Mascia L, Urbino R, Martin EL, Birocco A, Faggiano C, Quintel M, Gattinoni L, **Ranieri VM**.
[Tidal Volume Lower than 6 ml/kg Enhances Lung Protection Role of Extracorporeal Carbon Dioxide Removal](#).
ANESTHESIOLOGY.
Volume: 111 Issue: 4 Pages: 826-835 Published: OCT 2009
Times Cited: 83 (from Web of Science)
IF 5.354

17) Ferreyra G; Long Y; **Ranieri VM**.
[Respiratory complications after major surgery](#).
CURRENT OPINION IN CRITICAL CARE
Volume: 15 Issue: 4 Pages: 342-348 DOI: 10.1097/MCC.0b013e32832e0669 Published: AUG 2009
Times Cited: 12 (from Web of Science)
IF 2.665

18) Fanelli V, Mascia L, Puntorieri V, Assenzio B, Elia V, Fornaro G, Martin EL, Bosco M, Delsedime L, Fiore T, Grasso S, **Ranieri VM**.
[Pulmonary atelectasis during low stretch ventilation: "Open lung" versus "lung rest" strategy](#).
CRITICAL CARE MEDICINE
Volume: 37 Issue: 3 Pages: 1046-1053 DOI: 10.1097/CCM.0b013e3181968e7e Published: MAR 2009
Times Cited: 18 (from Web of Science)
IF 6.737

19) Ferreyra GP, Baussano I, Squadrone V, Richiardi L, Marchiaro G, Del Sorbo L, Mascia L, Merletti F, **Ranieri VM**.
[Continuous positive airway pressure for treatment of respiratory complications after abdominal surgery - A systematic review and meta-analysis](#).
ANNALS OF SURGERY.
Volume: 247 Issue: 4 Pages: 617-626 DOI: 10.1097/SLA.0b013e3181675829 Published: APR 2008
Times Cited: 34 (from Web of Science)
IF 8.460

20) Dellinger RP, Levy MM, Carlet JM, Bion J, Parker MM, Jaeschke R, Reinhart K, Angus DC, Brun-Buisson C, Beale R, Calandra T, Dhainaut JF, Gerlach H, Harvey M, Marini JJ, Marshall J, Ranieri M, Ramsay G, Sevransky J, Thompson BT, Townsend S, Vender JS, Zimmerman JL, Vincent JL.

[Surviving Sepsis Campaign: International guidelines for management of severe sepsis and septic shock: 2008.](#)

CRITICAL CARE MEDICINE

Volume: 36 Issue: 1 Pages: 296-327 DOI: 10.1097/01.CCM.0000298158.12101.41 Published: JAN 2008

Times Cited: 1,506 (from Web of Science)

IF 6.5994

21) Bosma K, Ferreyra G, Ambrogio C, Pasero D, Mirabella L, Braghiroli A, Appendini L, Mascia L, Ranieri VM.

[Patient-ventilator interaction and sleep in mechanically ventilated patients: Pressure support versus proportional assist ventilation.](#)

CRITICAL CARE MEDICINE

Volume: 35 Issue: 4 Pages: 1048-1054 DOI: 10.1097/01.CCM.0000260055.64235.7C Published: APR 2007

Times Cited: 68 (from Web of Science)

IF 6.2283

22) Terragni PP, Rosboch G, Tealdi A, Corno E, Menaldo E, Davini O, Gandini G, Herrmann P, Mascia L, Quintel M, Slutsky AS, Gattinoni L, Ranieri VM.

[Tidal hyperinflation during low tidal volume ventilation in acute respiratory distress syndrome.](#)

AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE.

Volume: 175 Issue: 2 Pages: 160-166 DOI: 10.1164/rccm.200607-915OC Published: JAN 15 2007

Times Cited: 182 (from Web of Science)

IF 11.080

23) Gattinoni L, Caironi P, Cressoni M, Chiumello D, Ranieri VM, Quintel M, Russo S, Patroniti N, Cornejo R, Bugedo G.

[Lung recruitment in patients with the acute respiratory distress syndrome.](#)

NEW ENGLAND JOURNAL OF MEDICINE

Volume: 354 Issue: 17 Pages: 1775-1786 DOI: 10.1056/NEJMoa052052 Published: APR 27 2006

Times Cited: 334 (from Web of Science)

IF 51.296

24) Lionetti V, Lisi A, Patrucco E, De Giuli P, Milazzo MG, Ceci S, Wymann M, Lena A, Gremigni V, Fanelli V, Hirsch E, Ranieri VM.

[Lack of phosphoinositide 3-kinase-gamma attenuates ventilator-induced lung injury.](#)

CRITICAL CARE MEDICINE

Volume: 34 Issue: 1 Pages: 134-141 DOI: 10.1097/01.CCM.0000190909.70601.2C Published: JAN 2006

Times Cited: 24 (from Web of Science)

IF 6.599

25) Lionetti, V; Recchia, FA; **Ranieri, VM**

[Overview of ventilator-induced lung injury mechanisms.](#)

CURRENT OPINION IN CRITICAL CARE

Volume: 11 Issue: 1 Pages: 82-86 DOI: 10.1097/00075198-200502000-00013 Published: FEB 2005

Times Cited: 60 (from Web of Science)

IF 2.514

26) Squadrone V, Coxa M, Cerutti E, Schellino MM, Biolino P, Occella P, Belloni G, Vilianis G, Fiore G, Cavallo F, **Ranieri VM.**

[Continuous positive airway pressure for treatment of postoperative hypoxemia - A randomized controlled trial.](#)

JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

Volume: 293 Issue: 5 Pages: 589-595 DOI: 10.1001/jama.293.5.589 Published: FEB 2 2005

Times Cited: 173 (from Web of Science)

IF 23.494

27) [Zupancich E](#), [Paparella D](#), [Turani F](#), [Munch C](#), [Rossi A](#), [Massaccesi S](#), **Ranieri VM.**

[Mechanical ventilation affects inflammatory mediators in patients undergoing cardiopulmonary bypass for cardiac surgery: A randomized clinical trial](#)

JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY. Volume: 130 Issue: 2 Pages: 378-383 DOI:

10.1016/j.jtcvs.2004.11.061 Published: AUG 2005

Times Cited: 56 (from Web of Science)

IF 3.727

28) Grasso S, Terragni P, Mascia L, Fanelli V, Quintel M, Herrmann P, Hedenstierna G, Slutsky AS, **Ranieri VM.**

[Airway pressure-time curve profile \(stress index\) detects tidal recruitment/hyperinflation in experimental acute lung injury.](#)

CRITICAL CARE MEDICINE

Volume: 32 Issue: 4 Pages: 1018-1027 DOI: 10.1097/01.CCM.0000120059.94009.AD Published: APR 2004

Times Cited: 61 (from Web of Science)

IF 4.182

29) Vincent, JL; Sakr, Y; **Ranieri, VM.**

[*Epidemiology and outcome of acute respiratory failure in intensive care unit patients.*](#)

CRITICAL CARE MEDICINE

Volume: 31 Issue: 4 Pages: S296-S299 DOI: 10.1097/01.CCM.0000057906.89552.8F Published: APR 2003

Times Cited: [51](#) (from Web of Science)

IF 4.195

30) Imai Y, Parodo J, Kajikawa O, de Perrot M, Fischer S, Edwards V, Cutz E, Liu M, Keshavjee S, Martin TR, Marshall JC, **Ranieri VM,**
Slutsky AS.

[*Injurious mechanical ventilation and end-organ epithelial cell apoptosis and organ dysfunction in an experimental model of acute respiratory distress syndrome.*](#)

JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

Volume: 289 Issue: 16 Pages: 2104-2112 DOI: 10.1001/jama.289.16.2104 Published: APR 23 2003

Times Cited: [250](#) (from Web of Science)

IF 21.455

