

CURRICULUM VITAE
JAMES R. J. RAYNER MD, MEng

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EDUCATION

Undergraduate	Oxford University, Oxford, England Engineering and Computer Science Master of Engineering, MEng 1990 Smiths Associate Prize for best undergraduate project <i>The Machine Interpretation of Line Drawings</i>	<i>October 1988 – July 1992</i>
Medical School	St Bartholomews Hospital Medical School, London, England Graduated top 5% of class Distinction in Cardiovascular Physiology	<i>October 1992 – July 1997</i>

POSTGRADUATE TRAINING

Residency	Emergency Medicine Resident Warren Alpert School of Medicine, Brown University, Providence, RI Orthopedic Surgery Resident Warren Alpert School of Medicine, Brown University, Providence, RI General Surgical Intern Warren Alpert School of Medicine, Brown University, Providence, RI House Officer Royal London Hospital, London, England	<i>2001 – 2004</i> <i>1999 – 2000</i> <i>1998 – 1999</i> <i>1997 – 1998</i>
Other	Pediatric Emergency Medicine: State of the Art Harvard Medical School MAT Online Waiver Course American Academy of Addiction Psychiatry POCUS in Emergency Medicine Massachusetts ACEP Medsail Course Wilderness Medicine Society	<i>October 2019</i> <i>October 2019</i> <i>December 15, 2018</i> <i>January 2016</i>

POSTGRADUATE HONORS AND AWARDS

Foundation Leadership Award for Telehealth Program Brown Department of Emergency Medicine	2020
RIACEP Physician of the Year	2019
Miriam Hospital C.A.R.E Award Recognition for outstanding contribution to the Miriam Hospital in enhancing patient experience	2019
Best Oral Presentation 8th Annual Conference, New England Society for Academic Emergency Medicine	April 2004
Gregory D. Jay Research Award Brown University Department of Emergency Medicine	June 2004

PROFESSIONAL LICENSES AND BOARD CERTIFICATION

ABEM Board Certified in Emergency Medicine	May 2005, recertified 2015
Rhode Island Medical License	2004
United Kingdom Full Medical License	1998

ACADEMIC APPOINTMENTS

Assistant Professor at Warren Alpert School of Medicine	2006 - current
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HOSPITAL APPOINTMENTS

Attending Physician Emergency Medicine Miriam Hospital , Providence, RI	2005 - 2006, 2008 - present
Attending Physician Emergency Medicine Newport Hospital , Newport, RI	2005 - 2008, 2019 - present
Attending Physician Emergency Medicine Rhode Island Hospital , Providence, RI	2005 - 2006, 2008 - present
Attending Physician Emergency Medicine Kent County Hospital , Warwick, RI	2004 - 2008
Attending Physician Emergency Medicine Memorial Hospital , Pawtucket, RI	2004 - 2005

OTHER APPOINTMENTS

- Reviewer** Emergency Medicine Open Journal, OpenVentio Publishers 2016 - current
- Director of Bioinformatics**, Epivax Inc., Providence, RI 2000 -2001
Designed and developed algorithms and software tools for genomic and protein analysis. Created a reference database from published epitopes for algorithm proofing

HOSPITAL COMMITTEES

- Emergency Medicine Morbidity and Mortality Conference Organizer** 2009 – 2017, 2021
Miriam Hospital, Providence, RI

MEMBERSHIP IN SOCIETIES

- American College of Emergency Physicians (ACEP) 2004 - present
Society for Academic Emergency Medicine (SAEM) 2004 - present
Rhode Island ACEP (RIACEP) 2004 - present
Rhode Island Medical Society (RIMS) 2004 - present

PUBLICATIONS LIST

ORIGINAL PUBLICATIONS IN PEER-REVIEWED JOURNALS

1. De Groot AS, Saint Aubin CS, **Rayner J**, Martin W.
Rapid Determination of HLA B*07- ligands from the West Nile Virus genome.
Emerging Infectious Diseases, Vol. 7, No. 4, July-August 2001: 706-713
2. De Groot AS, Nene V, Hegde NR, Srikumaran S, **Rayner J**, Martin W.
T cell epitope identification for bovine vaccines: an epitope mapping method for BoLA A-11.
Int J Parasitol. 2003 May;33(5-6):641-53
3. Anne S. De Groot, **James Rayner**, William Martin.
Modeling the immunogenicity of therapeutic proteins using T cell epitope mapping.
Developments in Biologicals 2003;112:71-80
4. **Rayner J**, Trespalacios F, Machan J, Potluri V, Brown G, Quatrucci L, Jay G
Continuous Noninvasive Measurement of Pulsus Paradoxus Complements Medical Decision Making in Assessment of Acute Asthma Severity
Chest. 2006 Sep;130(3):754-65

5. Rich C, Raukar N, **Rayner J**

Nondisplaced Pubic Ramus Fracture Associated with Exsanguination and Death
The American Journal of Emergency Medicine 2018 Feb;36(2):342.e1-342.e2

6. Selim Suner, **James Rayner**, Ibrahim U. Ozturan, Geoffrey Hogan, Caroline P. Meehan, Alison B. Chambers, Janette Baird, Gregory D. Jay

Prediction of anemia and estimation of hemoglobin concentration using a smartphone camera

PLoS ONE 16(7): e0253495 July 14 2021

MULTICENTER TRIAL

A Phase III, Randomized, Double-Blind, Placebo Controlled, Multicenter Clinical Study Evaluating the Safety and Efficacy of Icatibant as a Treatment for Angiotensin-Converting Enzyme (ACE-I) Inhibitor-Induced Angioedema in Adults
Investigator at Rhode Island Hospital Clinical site 2014

ABSTRACTS

1. Anne S. De Groot, Caitlin Saint-Aubin, **James Rayner**, William Martin **Rapid Determination of candidate HLA B*07- restricted CTL epitopes from the West Nile Virus NY99 genome.**

NFID Fourth Annual Conference on Vaccines, Arlington VA 2001.

Oral presentation Poster presentation P17

2. Hakima Sbai, Julie McMurry, Bill Martin, **James Rayner**, Julie Frost, Anne DeGroot. **Computational methods for mapping T cell epitopes: A streamlined approach to vaccine design.**

FOCIS Annual Meeting, Boston, 2001 May 4-7

3. **James Rayner**

Continuous and Non-invasive Pulsus Paradoxus Monitoring

June 2003

Society for Academic Emergency Medicine Annual National Meeting,
Boston, MA

Poster Presentation

4. **James Rayner**

Automated Pulsus Paradoxus: A Noninvasive Index of Work of Breathing that Predicts Admissions in Emergency Department Patients with Respiratory Complaints

Society for Academic Emergency Medicine Annual National Meeting, Orlando, FL
May 2004

Poster Presentation

GRANTS

Brown Emergency Medicine Research Grant 2019
I was awarded a 2019 research grant for my project to determine hemoglobin non-invasively from images of conjunctivae

Brown Physicians Incorporated Research Grant 2021
Smartphone analysis of conjunctivae to predict hemoglobin

UNIVERSITY TEACHING, ADVISING and MENTORING ROLES

Participating Physician: *Introduction to Medicine: Do you want to be a doctor?* 2015
Brown University. Students: Rawson Chase and Alexander Bellaus

Instructor: *Medical Student ACLS Course*, Warren Alpert School of Medicine 2018

Community Mentor: *Doctoring Course Year II*, Warren Alpert School of Medicine 2019
Mentee: Tobias Kirchwey

HOSPITAL TEACHING, ADVISING and MENTORING ROLES

Clinical Educator: Clinical education of emergency medicine residents and medical students. 500 hours yearly 2007 - current

Shift Transition Lecturer: I provided short lectures to medical students and resident on various clinical subjects at beginning of emergency medicine shifts at teaching hospitals of Warren Alpert Medical School. Approximately 100 lectures per year 2011 -2019

Lecturer: ACE inhibitor induced angioedema, treatment, and trial of Icatibant 2014

Examiner: Emergency Medicine Mock Oral Boards 2015 – current

Instructor: Airway course and lab practical for Emergency Medicine Residents 2019 - current
I have lectured on difficult airway and been instructor in the animal lab for cricothyrotomy, thoracotomy, thoracostomy, and lateral canthotomy procedures

Instructor: Simulation center 2019

- central venous catheter and pacemaker placement
- cardiorespiratory arrest and resuscitation

REGIONAL TEACHING ROLES

Instructor: RIACEP Clinical Skills Course

2019

I provided instruction for the cricothyrotomy station and helped attendees practice open cricothyrotomy on a simulation center mannequin