**DATE:** March 5th 2018

**NAME:** Dane Parker

**PRESENT TITLE:** Assistant Professor

**OFFICE ADDRESS:** 205 South Orange Ave, G-1208, Newark NJ 07103

**TELEPHONE NUMBER/E-MAIL ADDRESS:** 973-972-3047, dane.parker@rutgers.edu

**CITIZENSHIP:** Australian

**EDUCATION**:

A. Undergraduate Graduate and Professional

Monash University

Melbourne, Victoria Australia

Bachelor of Science (Microbiology and genetics) 2000

Monash University

Melbourne, Victoria Australia

Honours degree of Bachelor of Science (First class) 2001

B. Graduate and Professional

Monash University

Melbourne, Victoria Australia

PhD (microbiology) 2015

PI-Julian rood

**POSTGRADUATE TRAINING:**

A. Postdoctoral Appointments

Columbia University, Department of Pediatrics 08/2007-08/2010

PI-Alice Prince

Columbia University, Department of Pediatrics 01/2007-07/2007

PI-Cynthia Whitchurch

Columbia University, Department of Pediatrics 12/2005-12/2006

PI-Julian Rood

**ACADEMIC APPOINTMENTS:**

Department of Pathology and Laboratory Medicine

Center for Immunity and Inflammation

Rutgers University

Assistant Professor, tenure-track

04/2018-present

Department of Pediatrics

Columbia University

Assistant Professor of Microbial Pathogenesis, tenure-track

09/2015-04/2018

Department of Pediatrics

Columbia University

Associate Research Scientist

08/2010-08/2015

**MEMBERSHIPS, OFFICES AND COMMITTEE ASSIGNMENTS IN PROFESSIONAL SOCIETIES:**

International Society for Interferon and Cytokine Research

Member

2011-current

Awards Committee

International Society for Interferon and Cytokine Research

2015-current

The American Association of Immunologists

Member

2011-current

American Society for Microbiology

Member

2003-present

Leukocyte Biology Society

Member

2010-2017

Australian Society for Microbiology

Member

1999-2008

Genetics Society of Australia

Member

1999-2004

**HONORS AND AWARDS:**

Becton Dickinson Student Award

Australian Society for Microbiology

2004

PhD prize, best thesis, Department of Microbiology Monash University

CSL

2004

Deans Fellow

Monash University

1999-2001

**SERVICE ON NATIONAL GRANT REVIEW PANELS, STUDY SECTIONS, COMMITTEES:**

Wellcome Trust grant reviewer, 07/2015

British Lung Association grant reviewer, 03/2014

United Arab Emirates National Research Foundation grant reviewer, 11/2013

British Medical Research Council reviewer, 07/1010

National Health and Medical Research Council (NHMRC) (Australia), 04/2009-present

**SERVICE ON MAJOR COMMITTEES:**

1. International *(Name, Inclusive Dates)*

B. National *(Name, Inclusive Dates)*

C. Medical School/University *(Name, Inclusive Dates)*

Faculty Council of Faculty of Medicine, Columbia University 2017-2018

Director Columbia University Program in Microbial Pathogenesis, 2015-2018

D. Hospital *(Name, Inclusive Dates)*

E. Department *(Name, Inclusive Dates)*

F. Editorial Boards *(Journal Name, Inclusive Dates)*

Journal of Interferon and Cytokine Research, 2018-present

Cytokines, 2017-present

Frontiers in Microbial Immunology, 2012-present

G. *AdHoc* Reviewer *(Journal Name, Inclusive Dates)*

EMBO, 2017-present

EMBO Reports, 2015-present

PLoS Pathogens, 2017-present

Mucosal Immunology, 2017-present

Journal of Leukocyte Biology, 2016-present

Infection and Immunity, 2018-present

PLoS One, 2016-present

Vaccine, 2017-present

Scientific Reports, 2017-present

Cytokine, 2017-present

Toxins, 2016-present

Virulence, 2017-present

European Respiratory Journal, 2016-present

Pediatric Pulmonology, 2011-present

Frontiers in Public Health, 2016-present

Antonie van Leeuwenhoek, 2012-present

Journal of Microbiology, 2016-present

American Journal of Pathology and Respiratory Research, 2016-present

International Journal of Molecular Sciences, 2017-present

African Journal of Microbiology Research, 2015-present

Frontiers in Microbiology, 2016-present

Mediators of Inflammation, 2017-present

Apoptosis, 2015-present

Experimental and Molecular Pathology, 2016-present

Annals of Clinical Microbiology and Antimicrobials, 2018-present

Acta biomateriala, 2016-present

Clinical Microbiology and Infection, 2017-present

**SERVICE ON GRADUATE SCHOOL COMMITTEES:**

Natalie Britto, Monash University, 2017

**SERVICE ON HOSPITAL COMMITTEES:**

**SERVICE TO THE COMMUNITY:**

Judge-New York City Science and Engineering Fair, 2014-present

**SPONSORSHIP (Primary Mentorship) OF CANDIDATES FOR POSTGRADUATE DEGREE: SPONSORSHIP (Primary Mentorship) OF POSTDOCTORAL FELLOWS:**

Silvia Pires, 2016-present

Vinodh Nadella-Currently hiring

Gyu Lee Kim-Currently hiring

**SPONSORSHIP (Primary Mentorship) OF PREDOCTORAL FELLOWS:**

Salomon Vainstein, 2017

Shivani Patel, 2017

Edwine Coulanges, 2017

Rafia Rifa, 2016

Alba Avoricani, 2015-2016

**SPONSORSHIP (Primary Mentorship) OF STAFF**

Rudy Jacquet, 2016

**TEACHING RESPONSIBILITIES:**

A. Lectures or Course Directorships

*School, course name, lecture title, hours*

2017, Columbia University, BIOL UN1908 Modern biology, The host-pathogen interaction, 1h

2017, Columbia University Pediatric Infectious Disease journal club, *Staphylococcus aureus* α-toxin response distinguishes respiratory virus-methicillin-resistant *S. aureus* connection in children, 1h

2017, Columbia University Pediatric Infectious Disease journal club, Intestinal calcium and bile salts facilitate germination of *Clostridium* *difficile* spores, 1h

2002-3, Monash University Department of Microbiology practical class demonstrator, 1st and 2nd year microbiology, molecular biology, biomedical science and bioinformatics, 300h total

2003-5, Monash University Department of Microbiology recombinant DNA techniques course tutor, 90h total.

B. Research Training (other than Primary Mentorship)

Post Doctoral Fellows:

Danielle Ahn, 2011-13

Candidates for Postgraduate Degree:

Kipyegong Kitur, 2012-16

Franklin Paulino, 2013-14

Pamela Nieto, 2013

Lindsey Tannenholz, 2010

Morten Alhede, 2010

Pre Doctoral Students:

Jeremy Kaplitt, 2015

Danial Saleem, 2013-14

Donghi Zhang, 2012

Leland Gill, 2010

Jonathan Brower, 2008

Ryan Prendergast, 2006

Staff:

Sarah Wachtel, 2014-16

Brian Harfenist, 2010-2

**GRANT SUPPORT:** *(Please list in either chronological order with newest or most current first OR in reverse chronological order, as desired)*

A. Principal Investigator

9. National Institutes of Health R01HL134870, Role of type III interferons, 07/15/2017-06/30/2021, $1,000,000.

This work aims to understand the role and mechanisms involved in the effect type III interferons have on *S. aureus* pneumonia.

8. American Association of Immunologist Careers in Immunology Fellowship, Effect of type III interferon on innate immunity to *Staphylococcus aureus,* 9/1/17-8/31/17, $47,844

This funding supports a postdoctoral scientist for one year to investigate the connection between type III interferon signaling and the inflammasome.

7. Columbia University Diabetes Research Center, The diabetic environment perpetuates *Staphylococcus* *aureus* infection, 02/01/2016-01/31/2018, $100,000

This work aims to determine the influence of diabetes on *S. aureus* infection and how glucose alters both immune cell function as well as *S. aureus* gene expression.

6.National Institutes of Health R56HL125653, Role of interferons in *Staphylococcus* *aureus* upper respiratory tract infection, 09/01/2015-08/31/2016, $250,000

This work aims to understand the role interferons play in nasopharyngeal colonization with *S. aureus,* particularly during influenza infection.

5. American Lung Association, Dysregulation of T cells contributes to MRSA pneumonia,07/01/2014-06/31/2016 $80,000.

This works examines the roles T cell play in MRSA pneumonia examining both the host and bacterial factors involved.

4. Skin Disease Research Centre Columbia University, *Staphylococcus* *aureus* skin infection in humanized mice, 07/01/2014-06/31/2015, $20,000.

This project utilizes a humanized mouse model of infection with human skin grafts to determine the human immune response to *S. aureus* MRSA skin infection.

3. Stony Wold-Herbert Fund-Grant-in-aid, T-cells as a novel target for staphylococcal pneumonia, 2012-2014, $50,000.

The aim of this project is to reduce *Staphylococcus* *aureus* pneumonia by modifying the host response, using immunomodulatory therapy.

2. Thrasher Research Fund-early career researcher award, Identification of *Streptococcus* *pneumoniae* neuraminidase inhibitors, 2008-2009, $25,000.

This project aimed to identify neuraminidase inhibitors against *Streptococcus* *pneumoniae* to prevent colonisation.

1. National Health and Medical Research Council CJ Martin Overseas Fellowship, Bacterial activation of epithelial barrier function, 2008-2010, $331,689.

This project looked at the involvement of TLR receptors in response to bacteria and the effects on epithelial barrier function.

Predoctoral awards

2005-Monash University Postgraduate Publications Award, $4,000

2002-2005-Australian Postgraduate Award (APA), $55,500

- PhD scholarship

2002-2005-Monash University Faculty of Medicine, Postgraduate Excellence Award, $15,000

- Top 10 PhD candidate in faculty of medicine

2001-Vice-Chancellors Undergraduate Research Scholarship, Monash University, $5,000

-Top 10 honors student across entire university

Travel support

2017-Internation Cytokine and Interferon Society, Milstein Travel Award, $900

2015-International Cytokine and Interferon Society travel award, $1,500

2013-International Cytokine Society Milstein Travel award, $600

2013 American Association of Immunologists Early Career Faculty grant, $1,500

2012 American Association of Immunologists Early Career Faculty grant, $1,250

2010-Society of Leukocyte Biology/International Endotoxin and Innate Immunity Society travel award, $750

2010-International Symposium on Pneumococci and Pneumococcal Diseases travel grant, $2,000

2004-American Society for Microbiology Corporate activities student travel grant, $500

2004-Monash University postgraduate travel grant, $1,250

B. Co-Investigator

2. National Institutes of Health (PI-Lee), 08/01/2015-03/31/2018, $1,570,000, R01AR068353-Modification of bone grafts for orthopaedic procedures

This proposal formulates a therapeutic application of bisphosphonate-conjugated nano-micro-size-buddles (BNB) that can load vancomycin and inflammatory kinase inhibitors for the treatment of MRSA bone graft infections.

Role: Co-I, my role is to provide the microbiological skills and manage the S. aureus component on the grant

1. National Institutes of Health (PI-Prince), 05/12/2013-30/04/2017 $1,000,000

R01AI103854-MRSA activation of human kertatinocyte signaling

This proposal aims to gain a better understanding of how S. aureus activates innate immune pathways in the skin

Role: Co-I, my role is to provide the supervision and technical skills for in vivo studies

C. Pending

*1. Funding Organization, title, proposed funding date, proposed award*

*2.*

**PUBLICATIONS:**

A. Refereed Original Article in Journal

34. Hook, J.L, Islam, M.N, **Parker, D**, Prince, A.S, Bhattacharya, S and Bhattacharya, J. Disruption of staphylococcal aggregation protects against lethal lung injury. J Clin Invest. 128(3): 1074-1086, 2018. PMID: 29431734.

33. **Parker, D**. CD80/CD86 signaling contributes to the profinflammatory response of *Staphylococcus* *aureus* in the airway. Cytokine. 107: 130-136, 2018. PMID: 29402722.

32. Pires, S, Jacquet, R and **Parker, D**. Inducible Costimulator contributes to methicillin-resistant *Staphylococcus* *aureus* pneumonia. J of Infectious Disease. doi: 10.1093/infdis/jix664, 2018. PMID: 29378030.

\* It was featured on the front cover.

31. Wickersham, M, Wachtel, S, Wong Fuk Long, T, Soong, G, Jacquet, R, Richardson, A, **Parker, D** and Prince, A. Metabolic stress drives keratinocyte defenses against *Staphylococcus* *aureus* infection. Cell Reports. 18(11): 2742-2751, 2017. PMID:28297676.

30. Ahn, D, Penaloza, H, Wang, Z, Wickersham, M, **Parker, D**, Patel, P, Koller, A, Chen, E, Bueno, S, Uhlemann, A-C and Prince, A. Acquired resistance to immune clearance promotes *Klebsiella* *pneumoniae* ST258 infection. JCI Insight. 1(17): e89704, 2016. PMID: 27777978.

29. Prince, A, Wang, H, Kitur, K and **Parker, D**. Humanized mice exhibit increased susceptibility to *Staphylococcus* *aureus* pneumonia. J of Infectious Disease. 215(9):1386-1395, 2016. PMID: 27638942.

\* This article was chosen by the editors as a feature, with an accompanying editorial article. It was also featured on the front cover.

28. Kitur, K, Wachtel, S, Brown, A, Wickersham, M, Paulino, F, Penaloza, H.F, Soong, G, Bueno, S, **Parker, D** and Prince, A. Necroptosis promotes *Staphylococcus* *aureus* clearance by inhibiting excessive inflammatory signaling. Cell Reports 16: 1-12, 2016. PMID: 27524612.

27. Planet, P.J#, **Parker, D**#, Cohen, T.S#, Smith, H, Leon, J.D, Ryan, C, Hammer, T.J, Fierer, N, Chen, E.I and Prince, A.S**. (2016).** Interferon-lambda restructures the nasal microbiome and increases susceptibility to *Staphylococcus* *aureus* superinfection. mBio 7(1). pii: e01939-15, 2016. PMID: 26861017.

#Joint first authors

26. Soong, G, Paulino, F, Wachtel, S, **Parker, D,** Wickersham, M, Zhang, D, Brown, A, Lauren, C.T, Dowd, M, West, E, Horst, B, Planet, P.J, and Prince, A. MRSA adaptation to human keratinocytes. mBio 6(2). pii: e00289-15, 2015. PMID: 25900653.

25. Kennan, R.M, Lovett, C, Han, X, **Parker, D** Turnbull, L, Whitchurch, C.B, and Rood, J. A two-component regulatory system modulates twitching motility in *Dichelobacter* *nodosus*. Veterinary Microbiology pii: S0378-1135(15)00140-6, 2015. PMID:26891425.

24. Kitur, K, **Parker, D**, Nieto, P, Ahn, D.S, Cohen, T.S, Chung, S, Wachtel, S, Bueno, S, and Prince, A. Toxin-induced necroptosis is a major mechanism of *Staphylococcus* *aureus* lung damage. PLoS Pathogens 11(4):e1004820, 2015. PMID:25880560.

23. Amaral, F, **Parker, D**, Randis, T, Kulkarni, R, Prince, A, Shirasu-Hisa, M and Ranter, A. Rational manipulation of mRNA folding free energy allows rheostat control of pneumolysin production by *Streptococcus* *pneumoniae*. PLoS One. DOI: 10.1371/journal.pone.0119823, 2015. PMID: 25798590.

22. **Parker, D,** Ryan, C, Alonzo, F, Torres, V, Planet, P and Prince, A. CD4 T cells contribute to the pathogenesis of MRSA pneumonia. Journal of Infectious Diseases 211(5): 835-45, 2014. PMID: 25240171.

21. **Parker, D**, LaRussa, S, Ryan, C, Prince, A and Planet, P. Genome of *Staphylococcus* *aureus* strain 502A. Genome announcements 2(2): e00284-14, 2014. PMID: 24723721.

20. Ahn, D.S, **Parker, D**, Nieto, P, Planet, P and Prince, A. Secretion of IL-16 through TNFR1 and calpain-caspase signaling contributes to MRSA pneumonia. Mucosal Immunology 7(6): 1366-1374, 2014. PMID: 24736233.

19. **Parker, D,** Planet, P, Soong, G and Prince, A. Induction of type I interferon signaling determines the relative pathogenicity of *Staphylococcus* *aureus* strains. PLoS Pathogens. 10(2): e1003951, 2014. PMID: 24586160.

18. **Parker, D**, Prince A. Epithelial uptake of flagella initiates proinflammatory signaling. PLoS One. 8(3):e59932, 2013. PMID: 23527288.

17. **Parker, D**, Prince A. *Staphylococcus* *aureus* Induces Type I IFN Signaling in Dendritic Cells Via TLR9. J Immunol. 189(8):4040-6, 2012. PMID:22962685.

16. Lijek RS, Luque SL, Liu Q, **Parker D**, Bae T, Weiser JN. Protection from the acquisition of *Staphylococcus* *aureus* nasal carriage by cross-reactive antibody to a pneumococcal dehydrogenase. Proc Natl Acad Sci U S A. 109(34):13823-8, 2012. PMID: 22869727.

15. Soong G, Chun J, **Parker D**, Prince A. *Staphylococcus* *aureus* activation of caspase 1/calpain signaling mediates invasion through human keratinocytes. J Infect Dis 205(10):1571-9, 2012. PMID: 22457275.

14. **Parker, D**#, Cohen, TS#, Alhede M, Harfenist BS, Martin FJ, Prince A. Induction of Type I Interferon Signaling by *Pseudomonas* *aeruginosa* is Diminished in Cystic Fibrosis Epithelial Cells. Am J Respir Cell Mol Biol. 46(1): 6-13, 2012. PMID:21778412.

# joint first authors

\* This article was selected as a highlight from a junior investigator in the issue.

13. **Parker D**, Martin FJ, Soong G, Harfenist BS, Aguilar JL, Ratner AJ, Fitzgerald KA, Schindler C, Prince A. *Streptococcus* *pneumoniae* DNA Initiates Type I Interferon Signaling in the Respiratory Tract. mBio. May 17;2(3). pii: e00016-11, 2011. PMID:21586648.

12. Naughton S, **Parker D**, Seemann T, Thomas T, Turnbull L, Rose B, Bye P, Cordwell S, Whitchurch C, Manos J. *Pseudomonas* *aeruginosa* AES-1 Exhibits Increased Virulence Gene Expression during Chronic Infection of Cystic Fibrosis Lung. PLoS One. 2011;6(9):e24526, 2011. PMID: 21935417.

11. Martin FJ, **Parker D**, Harfenist BS, Soong G, Prince A. Participation of CD11c+ Leukocytes in Methicillin-Resistant *Staphylococcus aureus* Clearance from the Lung. Infection and Immunity 79(5):1898-904, 2011. PMID:21402768.

10. Kennan, RM, Wong, W, Dhungyel, O, Han, X, Wong, D, **Parker, D**, Rosado, CJ. Law, RHP, McGowan, S, Reeve, SB, Levina, V, Powers, GA, Pike, RN, Bottomley, SP, Smith, AI, Marsh I, Whittington, RJ, Whisstock, JC, Porter, CJ and Rood, JI. Virulence-associated subtilisin-like proteases that utilize a novel disulphide-tethered exosite to mediate substrate specificity. PLoS Pathogens 6(11):e1001210, 2010. PMID:21124876.

9. **Parker, D,** Soong Soong G, Planet P, Brower J, Ratner AJ, Prince A. The NanA neuraminidase of *Streptococcus pneumoniae* is involved in biofilm formation. Infection & Immunity 77(9): 3722-30, 2009. PMID:19564377.

8. Hsiao, Y-S, **Parker, D**, Ratner, A.J., Prince, A, Tong, L. Crystal structures of respiratory pathogen neuraminidases. Biochem Biophys Res Commun 380(3):467-71, 2009. PMID: 19284989.

7. Soong G, **Parker D**, Magargee M, Prince AS. The type III toxins of *Pseudomonas* *aeruginosa* disrupt epithelial barrier function. Journal of Bacteriology 190(8): 2814-21, 2008. PMID: 18165298.

6. Cheetham, B.F., **Parker, D**., Bloomfield, G.A., Shaw, B.E., Sutherland, M., Hyman, J.A., Druitt, J., Kennan, R.M., Rood, J.I. and Katz, M.E. Isolation of the bacteriophage DinoHI from *Dichelobacter* *nodosus* and its interactions with other integrated genetic elements. Open Microbiology Journal. 2:1-9, 2008. PMID: 19088904.

5. Keyburn, A.L, Boyce, J.D, Vaz, P., Bannam, T.L., Ford, M.E, **Parker, D**, Di Rubbo, A, Rood, J.I, and Moore, R.J. NetB, a New Toxin is Associated with Avian Necrotic Enteritis Caused by *Clostridium* *perfringens*. PLoS Pathogens 4(2): e26, 2008. PMID: 18266369.

4. Han X, Kennan RM, **Parker D**, Davies JK, Rood JI. Type IV fimbrial biogenesis is required for protease secretion and natural transformation in *Dichelobacter* *nodosus*. Journal of Bacteriology 189(14):5022-33, 2007. PMID: 17513472.

3. Myers GS#, **Parker D**#, Al-Hasani K, Kennan RM, Seemann T, Ren Q, Badger JH, Selengut JD, Deboy RT, Tettelin H, Boyce JD, McCarl VP, Han X, Nelson WC, Madupu R, Mohamoud Y, Holley T, Fedorova N, Khouri H, Bottomley SP, Whittington RJ, Adler B, Songer JG, Rood JI, Paulsen IT. Genome sequence and identification of candidate vaccine antigens from the animal pathogen *Dichelobacter* *nodosus*. Nature Biotechnology 25(5):569-75, 2007. PMID:17468768.

#joint first authors

2. **Parker, D**., Kennan, R.M., Myers, G.S., Paulsen, I.T., and Rood J.I. Regulation of type IV fimbriae in *Dichelobacter* *nodosus*. Journal of Bacteriology 188(13):4801-11, 2006. PMID: 16788189.

1. **Parker, D.,** Kennan, R.M., Myers, G.S., Paulsen, I.T and Rood, J.I. Identification of a *Dichelobacter* *nodosus* Ferric Uptake Regulator and Determination of Its Regulatory Targets. Journal of Bacteriology 187(1): 366-375, 2005. PMID:15601721.

B. Books, Monographs and Chapters

Books

1. **Parker, D** (ed). Bacterial Activation of Type I Interferons. Springer Press. 2014.

Chapters

3. **Parker, D**. Activation of type I IFN signaling by Staphylococcus aureus. In: Parker, D. Bacterial Activation of Type I Interferons. Springer Press. 2014.

2. Cohen, T.S, **Parker, D** and Prince, A. (2014). Pseudomonas aeruginosa Host Immune Evasion. In Ramos (ed) Pseudomonas: New Aspects of Pseudomonas Biology. Springer Press.

1. **Parker, D**. (2013). Type I Interferon Responses To Airway Pathogens. In: Prince, A. Mucosal Immunology of Acute Bacterial Pneumonia, Springer Press.

C. Patents Held

1. Identification of cross-protective vaccine candidates against *Dichelobacter nodosus,* Australian patent application No. 2006307224-A1, US patent application No. 2010068214-A1, EU patent application No. 2069394-A1, Al-Hasani, K, Boyce, J.D, **Parker, D**, Kennan, R.M, Adler, B.A, Rood, J.I.

D. Other Articles (Reviews, Editorials, etc.) In Journals; Chapters; Books; other Professional

Communications

Review articles

7. **Parker, D**. Humanized mouse models of Staphylococcus aureus infection. Frontiers in Immunology. 8:512, 2017. PMID: 28523002.

6. **Parker, D**. Impact of type I&III interferons on MDR respiratory superinfections. J Infect Diseases. 215(suppl\_1): S58-S63, 2017. PMID: 28375519

5. Cohen, T.S, and **Parker, D**. Microbial pathogenesis and type III interferons. Cytokine Growth Factor Rev. 29: 45-51, 2016. PMID: 26987613

4. **Parker, D**, Ahn, D, Cohen, T and Prince, A. Innate immune signaling activated by MDR pathogens in the lung. Phys Rev 96: 19-53, 2016 PMID: 26582515.

3. **Parker, D**, and Prince, A. Immunpathogenesis of Staphylococcus aureus pulmonary infection. Seminars in Immunopathology 34(2): 281-97, 2012. PMID:22037948.

2. **Parker, D**, Prince, A. The type I IFN response to extracellular bacteria in the airway epithelium. Trends in Immunology. 32(12):582-8, 2011. PMID:21996313.

1. **Parker D**, Prince A. Innate Immunity in the Respiratory Epithelium. Am J Respir Cell Mol Biol. 45(2):189-201, 2011 PMID:21330463.

Invited editorials

3. **Parker, D**. A live vaccine to Staphylococcus aureus infection. Vaccine. 9(01): 700-702, 2018. PMID: 29402722.

2. **Parker, D** and Prince, A. Immunoregulatory effects of necroptosis in bacterial infections. Cytokine. 88: 274-5, 2016. PMID: 27710879.

1. **Parker, D** and Prince, A. A new approach to toxin neutralization in Staphylococcus aureus therapy. EMBO reports 17(3): 284-5, 2016. PMID: 26882555.

Thesis

**Parker, D**. Regulation and genomics of *Dichelobacter nodosus*. Monash University, 2005.

E. Abstracts

29. Pires, S, Kaiser, K and **Parker, D**. Regulation of the innate immune response to *Staphylococcus aureus* in the airway by type IIII interferons. International Cytokine and Interferon Society. Kanazawa, Japan. 2017.

28. Jacquet, R, Wong, T, Patel, S and **Parker, D**. The diabetic environment perpetuated *Staphylococcus aureus* infection. GRC Staphylococci and Staphylococcal Diseases. Waterville Valley, NH USA. 2017.

27. Jacquet, R, Pires, S and **Parker, D**. ICOS expression contributes to MRSA pneumonia. American Thoracic Society. Washington DC, USA. 2017.

26. Pires, S and **Parker, D**. Type III interferons inhibit neutrophil activity in response to *Staphylococcus aureus*. American Association of Immunologists. Washington DC, USA. 2017.

25.Jacquet, R, Prince, A and **Parker, D**. ICOS signaling contributes to *Staphylococcus aureus* pneumonia. Society for Leukocyte Biology. Verona, Italy. 2016.

24. Prince, A, Kitur, K and **Parker, D**. Humanized mice exhibit increased susceptibility to *Staphylococcus aureus* pneumonia. Gordon Research Conference on Staphylococci and Staphylococcal diseases. Barga, Italy. 2015.

23. Ahn, D, **Parker, D** and Prince, A. *Klebsiella pneumoniae* Producing Carbapenemases ST258 Evade Macrophage Activation to Persist in the Airway. American Thoracic Society. Denver, Colorado, USA. 2015.

22. Hook, J, Islam, M, Westphalen, K, **Parker, D**, Prince, A and Bhattacharya. Alveolar curvatures determine *Staphylococcus aureus*-induced lung injury. American Thoracic Society. Denver, Colorado, USA. 2015.

21. **Parker, D**, Planet, P, Cohen, T, Ryan, C, Smith, H, Orjuela, D, Hammer, T, Fierer, N, Cheng, E and Prince, A. Influenza induced type I and III interferon signaling increases nasal colonization and lung aspiration of *Staphylococcus aureus*. American Thoracic Society. Denver, Colorado, USA. 2015.

20. **Parker, D** and Prince, A. Humanizing *Staphylococcus aureus* infections. Lorne Infection and Immunity Conference. Lorne, Victoria, Australia. 2015.

19. Kitur, K., **Parker, D**, Ahn, D and Prince, A. Blockade of macrophage necroptosis improves outcome in MRSA pneumonia. Gordon Research Conference on Cell Death. Mount Snow, VT, USA. 2014.

18.Kitur, K., **Parker, D.,** Nieto, P., Ahn, DS., Cohen, TS., Bueno, S and Prince. A. Macrophage necroptosis contributes to pathogenesis of MRSA pneumonia. Experimental Biology (ASBMB) Conference. San Diego, CA, USA. 2014.

17.Kitur, K., **Parker, D.,** Nieto, P., Ahn, DS., Cohen, TS., Bueno, S and Prince. A. *Staphylococcus aureus*-induced macrophage necroptosis adds to pathogenesis of pneumonia. Gordon Research Seminars: Biology of Acute Respiratory Infection. Lucca (Barga), Italy. 2014.

16. **Parker, D**, Soong, G, Planet, P and Prince, A. Type I interferon signaling distinguishes commensal from virulent *Staphylococcus aureus*. International Cytokine and Interferon Society. San Francisco, CA, USA. 2013.

15. **Parker, D** and Prince, A. Role of superantigens in methicillin-resistant *Staphylococcus* *aureus* pneumonia. American Association of Immunologists. Honolulu, HI, USA. 2013.

14. Kitur, K., **Parker, D**, Ahn, D and Prince, A. Macrophage destruction and loss-of-immunoregulatory function contributes to the pathology associated with MRSA pneumonia. Experimental Biology (ASBMB) Conference. Boston, MA, USA. 2013.

13. Kitur, K., **Parker, D**., Ahn, D and Prince, A. MRSA-induced macrophage destruction contributes to pathology. 14th NARSA Annual Investigators Meeting. Bethesda, MD, USA. 2013.

12. Ahn, D, **Parker, D**, Planet, P and Prince, A. Release of a T cell cytokine, IL-16, by MRSA contributes to the pathogenesis of pneumonia. Critical Care Congress. San Juan, Puerto Rico. 2013.

11. **Parker, D** and Prince, A. T cell contribute to the pathogenesis of *Staphylococcus aureus* pneumonia. American Association of Immunologists annual meeting. Boston, MA, USA. 2012.

10. **Parker, D** and Prince, A. Induction of IFN-β Signaling by *Staphylococcus aureus* USA300 is Mediated by TLR9. American Society for Microbiology annual general meeting. San Francisco, CA, USA. 2012.

9. **Parker, D** and Prince, A. T cell contribute to the pathogenesis of *Staphylococcus aureus* pneumonia. Gordon research conference on biology of acute respiratory infections. Ventura, CA, USA. 2012.

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1. **Parker, D**., Kennan, R.M and Rood, J.I. Identification and Characterisation of a Fimbrial Regulatory System in *Dichelobacter nodosus*. ASM General Meeting. New Orleans, LA, USA. 2004.

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**PRESENTIONS:** *(Please list in either chronological order with newest or most current first OR in reverse chronological order, as desired)*

1. Scientific *(Basic Science)*:

2017. **Parker, D.** Role of interferons in Staphylococcus aureus infection. Department of Microbiology and Immunology, University of Melbourne, Melbourne, Australia.

2017. **Parker, D**. Role of interferons in the pathogenesis of MRSA pneumonia. Columbia Medicine Infectious Diseases

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2015. **Parker, D**. Role of the host in the pathogenesis of MRSA pneumonia. Department of Microbiology, Monash University, Melbourne, Australia.

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2013. **Parker, D.** Type I IFNs and *Staphylococcus aureus*. American Association of Immunologists. Honolulu, HI, USA.

2010. **Parker, D**, Martin, F.J, Soong, G, Harfenist, B, Aguilar, J, Ratner, A.J, Fitzgerald, K, Schindler, C and Prince, A. *Streptococcus pneumoniae* induces type I interferon signaling in the respiratory tract. International Symposium on Pneumococci and Pneumococcal Diseases. Tel Aviv, Israel.

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2004. **Parker, D**., Kennan, R.M and Rood, J.I. Determining the role of a *Dichelobacter nodosus* ferric uptake regulator homologue. 7th Australian Bacterial Pathogenesis Conference. Jamberoo, NSW, Australia.