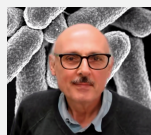


## **Curriculum vitae - Jeffrey B. Kaplan**



### **Jeffrey B. Kaplan, PhD**

Research Scientist, Laboratory for Skin Research  
Galilee Medical Center, 89 Nahariya-Kabari, Nahariya, 2210001 Israel  
**Phone:** +972 055 770 2551; **Email:** kaplanjb@american.edu

### **Education**

<b>Year</b>	<b>Degree</b>	<b>Field of study</b>	<b>Institution</b>
1980	B.S.	Biology	University of Illinois at Chicago
1985	Ph.D.	Biology	University of Illinois at Chicago

### **Postdoctoral Training**

<b>Years</b>	<b>Department</b>	<b>Institution</b>
1985-1986	Molecular Biology	Albert Einstein College of Medicine, Bronx NY
1986-1987	Microbiology	College of Physicians and Surgeons, Columbia University, New York NY
1987-1988	Microbiology and Immunology	Albert Einstein College of Medicine, Bronx NY

### **Employment History**

<b>Years</b>	<b>Position</b>	<b>Department</b>	<b>Institution</b>
1988-1998	Senior Scientist	Oncology Research	Pfizer Inc., Pearl River NY
1999-2012	Assistant/Associate Professor	Oral Biology	Rutgers School of Dental Medicine, Newark NJ
2012-2020	Associate/Full Professor	Biology	American University, Washington DC
2021-present	Professor Emeritus	Biology	American University, Washington DC
2023-present	Research Scientist	Laboratory for Skin Research	Galilee Medical Center, Nahariya, Israel

### **Other Positions**

<b>Years</b>	<b>Position</b>	<b>Department and Institution</b>
1990-1998	Adjunct Assistant Professor	Microbiology and Immunology, New York Medical College, Valhalla NY
2010	Visiting Scientist	Biochemistry of Aquatic Products, Université du Littoral - Côte d'Opale, Boulogne-sur-Mer, France
2015	Visiting Scientist	French National Center for Scientific Research, La Rochelle University, La Rochelle, France
2017-present	Managing Member	Kappa Biofilm LLC, Washington DC

### **Teaching Experience**

<b>Year(s)</b>	<b>Position</b>	<b>Institution</b>	<b>Courses</b>	<b>Level</b>
1980-1983	<i>Teaching Assistant</i>	University of Illinois at Chicago	Microbiology and Molecular Biology Laboratory, Evolution	Undergraduate
1987	<i>Teaching Assistant</i>	Columbia University	Microbiology	Medical
1991	<i>Lecturer</i>	New York Medical College, Valhalla NY	Immunology	Graduate
1999-2012	<i>Lecturer</i>	Rutgers School of Dental Medicine, Newark NJ	Oral Biology, Microbiology, Scientific Ethics	Graduate, Dental
2009	<i>Lecturer</i>	Stevens Institute of Technology, Hoboken NJ	Biomaterials	Graduate
2012-2020	<i>Lecturer</i>	American University	Microbiology with Laboratory, Mechanisms of Pathogenesis	Undergraduate, Graduate

## **Curriculum vitae - Jeffrey B. Kaplan**

### **Awards**

<b>Year(s)</b>	<b>Award or position</b>
1983	<i>Recipient</i> , University of Illinois Graduate Fellowship
1985-1986	<i>Recipient</i> , NIH National Research Service Award Fellowship
1987	<i>Invited Participant</i> , UCLA International School on Molecular Evolution
2008	<i>Recipient</i> , Top 10 Scientist Award, <i>New Jersey Business Magazine</i>
2010	<i>Recipient</i> , Fulbright Scholar Award

### **Oral Presentations at Symposia**

<b>Year</b>	<b>Symposium</b>
2003	American Society for Microbiology "Biofilms 2003" Conference, Victoria, BC, Canada
2004	Emerging Infectious Diseases Discussion Group, New York Academy of Sciences, New York NY
2004	Glycostructures in Biological Systems Symposium, University of Hamburg
2005	American Society for Microbiology " <i>Pasteurellaceae</i> 2005" Conference, Honolulu HI
2006	ISME "International Symposium for Microbial Ecology", Vienna, Austria
2008	American Society for Microbiology Annual Meeting, Boston
2008	163rd Meeting of the Society of General Microbiology, Trinity College Dublin
2009	EUROBIOFILMS 2009 Conference, Rome
2009	American Society for Microbiology "Biofilms 2009" Conference, Cancún, Mexico
2011	ESCMID "Biofilms in Nosocomial Fungal Infections" Conference, Paris
2011	Bacteria-Material Interactions Conference, Stevens Institute of Technology, Hoboken NJ
2011	<i>Xanthomonas</i> Genomics Conference, Angers, France
2012	American Society for Microbiology 6th Conference on Biofilms, Miami FL
2013	"Dose-Response 2013" conference, University of Massachusetts, Amherst MA
2015	15th Annual Meeting, NIH Network on Antimicrobial Resistance in <i>Staph. aureus</i> , Bethesda MD
2017	EUROBIOFILMS 2017 Conference, Amsterdam

### **Oral Presentations at Universities and Other Research Institutions**

<b>Year</b>	<b>Symposium</b>
2004	University of Southern California School of Dentistry, Los Angeles CA
2004	New York Medical College, Valhalla NY
2004	National Research Council, Ottawa, ON, Canada
2005	Stevens Institute of Technology, Hoboken NJ
2007	University of Pittsburgh Medical Center, Pittsburgh PA
2008	Virginia Tech, Blacksburg VA
2009	State University of New York, Binghamton NY
2010	Imperial College London, UK
2010	University of Rouen, Rouen, France
2010	National Institute of Agronomic Research, Villeneuve d'Ascq, France
2010	University of Southampton, Southampton, UK
2010	Staten Serum Institute, Copenhagen, Denmark
2010	University of Oslo, Oslo, Norway
2010	Umeå University, Umeå, Sweden
2011	Pasteur Institute, Paris
2011	Université d'Auvergne, Clermont-Ferrand, France
2011	ContraFect Corporation, Yonkers NY
2012	Middle Tennessee State University, Murfreesboro TN
2012	University of Southern California School of Dentistry, Los Angeles CA
2013	Howard University, Washington DC
2013	Guangxi University, Nanning, China
2015	Georgetown University, Washington DC
2015	University of Iowa, Iowa City IA
2016	George Mason University, Fairfax VA

## **Curriculum vitae - Jeffrey B. Kaplan**

### **Paid Consulting Positions**

<b>Year</b>	<b>Company</b>
1988	International Biotechnologies Inc., New Haven CT
2019	Colgate-Palmolive Company, Piscataway NJ
2019	Baker Botts LLP, New York NY

### **Patents**

<b>US Patent No. and Date</b>	<b>Patent Title</b>	<b>Inventor(s)</b>
7833523 Nov 16, 2010	Compositions and methods for enzymatic detachment of bacterial and fungal biofilms	JB Kaplan
7989604 Aug 2, 2011	Dispersin B polynucleotides and methods of producing recombinant DspB polypeptides	JB Kaplan
8580551 Nov 12, 2013	Dispersin B polypeptides and uses thereof	JB Kaplan
8617542 Dec 31, 2013	DispersinB™, 5-fluorouracil, deoxyribonuclease I and proteinase K-based antibiofilm compositions and uses thereof	S Madhyastha, PV Gawande, K Lovetri, N Yakandawala, JB Kaplan
8765123 July 1, 2014	Compositions and methods for the treatment and prevention of infections caused by bacteria	JB Kaplan
8821862 Sep. 2, 2014	Soluble $\beta$ -N-acetylglucosaminidase based antibiofilm compositions and uses thereof	S Madhyastha, N Yakandawala, PV Gawande, K Lovetri, JB Kaplan, D Rhoads, L Gogokhia
8906393 Dec. 9, 2014	Biofilm inhibiting composition	JB Kaplan, NV Balashova, SC Kachlany, E Vinogradov
PCT/CA2024/ 050963.Jul. 19, 2024	Composition, methods, and uses thereof for acne prevention, reduction, and treatment	JB Kaplan

### **Grant Review Activities**

<b>Year</b>	<b>Position</b>	<b>Agency</b>	<b>Study section</b>
2004	<i>Ad hoc reviewer</i>	NIH	Musculoskeletal Tissue Engineering
2006	<i>Panel member</i>	NIH	Small Business: Dentistry-Related
2007	<i>Panel member</i>	NSF	Small Business: Biomedical Devices and Bioengineering
2009	<i>Ad hoc reviewer</i>	Health Research Board of Ireland	Project grant
2009	<i>Panel member</i>	NIH	"Bugs and Drugs" Special Emphasis Panel
2009	<i>Ad hoc reviewer</i>	NIH	Challenge grant
2010	<i>Ad hoc reviewer</i>	Wellcome Trust, UK	Project grant
2010	<i>Ad hoc reviewer</i>	Michigan State University College of Veterinary Medicine	Project grant
2011	<i>Ad hoc reviewer</i>	Katholieke Universiteit, Leuven, Belgium	Project grant
2011	<i>Ad hoc reviewer</i>	French Research Agency	Project grant
2011	<i>Ad hoc reviewer</i>	National Commission for Scientific and Technological Development, Chile	Project grant
2011	<i>Ad hoc reviewer</i>	German Research Foundation	Project grant
2011	<i>Ad hoc reviewer</i>	NSF	International Science and Engineering
2012	<i>Ad hoc reviewer</i>	Israel Science Foundation	Project grant
2012	<i>Panel member</i>	NIH	Bacterial Pathogenesis
2012	<i>Ad hoc reviewer</i>	NIH	Mechanistic Research on CAM Natural Products

## Curriculum vitae - Jeffrey B. Kaplan

### Scientific Advisory Boards

Year(s)	Company
2009-2015	BioFilm Control, Saint Beauzire, France
2019-present	Kane Biotech, Winnipeg, MB, Canada

### Ad hoc Journal Reviewer (2000-2024)

<i>Acta Biomater</i>	<i>Gene</i>	<i>Microbiology</i>
<i>Anaerobe</i>	<i>Infect Immun</i>	<i>Mol Microbiol</i>
<i>Am J Infect Control</i>	<i>Int J Food Microbiol</i>	<i>Mol Oral Microbiol</i>
<i>Appl Environ Microbiol</i>	<i>J Adhesion Sci Technol</i>	<i>Nature Rev Microbiol</i>
<i>Biofouling</i>	<i>J Antimicrob Chemother</i>	<i>Oral Microbiol Immunol</i>
<i>Biotechniques</i>	<i>J Appl Microbiol</i>	<i>Pathogens</i>
<i>Can J Microbiol</i>	<i>J Bacteriol</i>	<i>PLoS ONE</i>
<i>Clin Vaccine Immunol</i>	<i>J Clin Microbiol</i>	<i>Proc Nat Acad Sci USA</i>
<i>Curr Microbiol</i>	<i>J Dent Res</i>	<i>Trends Microbiol</i>
<i>Eur J Clin Microbiol Infect Dis</i>	<i>J Med Microbiol</i>	<i>Vaccine</i>
<i>Eur J Oral Sci</i>	<i>J Microbiol</i>	<i>Vet Microbiol</i>
<i>FEMS Immunol Med Microbiol</i>	<i>mBio</i>	
<i>FEMS Microbiol Lett</i>	<i>Microb Pathogen</i>	

### Scientific Publications

# of peer-reviewed research articles	71
# of review articles	7
# of book chapters	3
<b>Total # of scientific publications</b>	<b>81</b>
<b># of citations (as of Aug. 15, 2024)</b>	<b>11,944</b>
<i>h</i> -index	50
i10 index	78



Updated citation indices  
and publications are  
available on  
Google Scholar

### List of Peer-Reviewed Research Articles

- Kaplan JB, Cywes-Bentley C, Pier GB, Yakandawala N, Sailer M, Edwards MS, Kridin K.** 2024. Poly- $\beta$ -(1 $\rightarrow$ 6)-*N*-acetyl-D-glucosamine mediates surface attachment, biofilm formation, and biocide resistance in *Cutibacterium acnes*. *Frontiers in Microbiology* 5:1386017.
- Kaplan JB, Horswill AR.** 2024. Micrococcal nuclease regulates biofilm formation and dispersal in methicillin-resistant *Staphylococcus aureus* USA300. *Mosphere* 9:e00126-24.
- Kaplan JB, Mlynek KD, Hettiarachchi H, Alamneh YA, Biggemann L, Zurawski DV, Black CC, Bane CE, Kim RK, Granick MS.** 2018. Extracellular polymeric substance (EPS)-degrading enzymes reduce staphylococcal surface attachment and biocide resistance on pig skin in vivo. *PloS One* 13:e0205526.
- Kaplan JB, Sampathkumar V, Bendaoud M, Giannakakis AK, Lally ET, Balashova NV.** 2017. *In vitro* characterization of biofilms formed by *Kingella kingae*. *Molecular Oral Microbiology* 4:341-353.
- Weiser J, Henke HA, Hector N, Both A, Christner M, Büttner H, Kaplan JB, Rohde H.** 2016. Sub-inhibitory tigecycline concentrations induce extracellular matrix binding protein Embp dependent *Staphylococcus epidermidis* biofilm formation and immune evasion. *International Journal of Medical Microbiology* 6:471-478.

## **Curriculum vitae - Jeffrey B. Kaplan**

- Mlynek KD, Callahan MT, Shimkevitch AV, Farmer JT, Endres JL, Marchand M, Bayles KW, Horswill AR, Kaplan JB.** 2016. Effects of low-dose amoxicillin on *Staphylococcus aureus* USA300 biofilms. *Antimicrobial Agents and Chemotherapy* 60:2639-2651.
- Shanmugam M, Gopal P, El Abbar F, Schreiner HC, Kaplan JB, Fine DH, Ramasubbu N.** 2015. Role of Exopolysaccharide in *Aggregatibacter actinomycetemcomitans*-induced bone resorption in a rat model for periodontal disease. *PLoS One* 10:e117487.
- Farmer JT, Shimkevitch AV, Reilly PS, Mlynek KD, Jensen KS, Callahan MT, Bushaw-Newton KL, Kaplan JB.** 2014. Environmental bacteria produce abundant and diverse antibiofilm compounds. *Journal of Applied Microbiology* 6:1663-1673.
- Chabane YN, Marti S, Rihouey C, Alexandre S, Hardouin J, Lesouhaitier O, Vila J, Kaplan JB, Jouenne T, Dé E.** 2014. Characterisation of pellicles formed by *Acinetobacter baumannii* at the air-liquid interface. *PLoS One* 9:e111660.
- Ng M, Epstein SB, Callahan MT, Piotrowski BO, Simon GL, Roberts AD, Keiser JF, Kaplan JB.** 2014. Induction of MRSA biofilm by low-dose  $\beta$ -lactam antibiotics: specificity, prevalence and dose-response effects. *Dose-Response* 12:13-021.
- Banerjee A, Kaplan JB, Soherwardy A, Nudel YI, Mackenzie GA, Johnson S, Balashova NV.** 2013. Characterization of TEM-1  $\beta$ -lactamase-producing *Kingella kingae* clinical isolates. *Antimicrobial Agents and Chemotherapy* 57:4300-4306.
- Karwacki MT, Kadouri DE, Bendaoud M, Izano EA, Sampathkumar V, Inzana TJ, Kaplan JB.** 2013. Antibiofilm activity of *Actinobacillus pleuropneumoniae* serotype 5 capsular polysaccharide. *PLoS One* 8:5 e63844.
- Coulon C, Sadovskaya I, Lencel P, Jabbouri S, Kaplan JB, Flahaut S.** 2012. Stress-induced dispersal of *Staphylococcus epidermidis* biofilm is due to compositional changes in its biofilm matrix. *Advances in Microbiology* 2:518-522.
- Pavlukhina S, Kaplan JB, Xu L, Chang W, Yu X, Madhyastha S, Yakandawala N, Mentbayeva A, Khan B, Sukhishvili S.** 2012. Non-eluting enzymatic antibiofilm coatings. *ACS Applied Materials & Interfaces* 4:4708-4716.
- Kaplan JB, Izano EA, Gopal P, Karwacki MT, Kim S, Bose JL, Bayles KW, Horswill AR.** 2012. Low levels of  $\beta$ -lactam antibiotics induce extracellular DNA release and biofilm formation in *Staphylococcus aureus*. *mBio* 3:e00198-12.
- Kaplan JB, Lo C, Xie G, Johnson SL, Chain PSG, Donnelly R, Kachlany SC, Balashova NV.** 2012. Genome sequence of *Kingella kingae* septic arthritis isolate PYKK081. *Journal of Bacteriology* 194:3017.
- Kaplan JB, LoVetri K, Cardona ST, Madhyastha S, Sadovskaya I, Jabbouri S, Izano EA.** 2012. Recombinant human DNase I decreases biofilm and increases antimicrobial susceptibility in staphylococci. *Journal of Antibiotics* 65:73-77.
- Ragunath C, Shanmugam M, Bendaoud M, Kaplan JB, Ramasubbu N.** 2012. Effect of a biofilm-degrading enzyme from an oral pathogen in transgenic tobacco on the pathogenicity of *Pectobacterium carotovorum* subsp. *carotovorum*. *Plant Pathology* 61:346-354.
- Bendaoud M, Vinogradov E, Balashova NV, Kadouri DE, Kachlany SC, Kaplan JB.** 2011. Broad spectrum biofilm inhibition by *Kingella kingae* exopolysaccharide. *Journal of Bacteriology* 193:3879-3886.
- Kaplan JB, Jabbouri S, Sadovskaya I.** 2011. Extracellular DNA-dependent biofilm formation by *Staphylococcus epidermidis* RP62A in response to subminimal inhibitory concentrations of antibiotics. *Research in Microbiology* 162:535-541.
- Lee J-H, Wang H, Kaplan JB, Lee WY.** 2011. Microfluidic approach to create 3D tissue models for biofilm-related infection of orthopaedic implants. *Tissue Engineering* 17:39-48.
- Fine DH, Kaplan JB, Furgang D, Karched M, Velliyagounder K, Yue G.** 2010. Mapping the epithelial cell binding domain of the *Aggregatibacter actinomycetemcomitans* autotransporter adhesin Aae. *Microbiology* 156:3412-3420.
- Lee J-H, Kaplan JB, Lee WY.** 2010. Effects of *Staphylococcus epidermidis* on osteoblast cell adhesion and viability on Ti alloy surface in microfluidic co-culture environment. *Acta Biomaterialia* 6:4422-4429.
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## **Curriculum vitae - Jeffrey B. Kaplan**

- Yakandawala N, Gawande PV, LoVetri K, Romeo T, Kaplan JB, Madhyastha S.** 2009. Enhanced expression of engineered ACA-less  $\beta$ -1,6-*N*-acetylglucosaminidase (dispersin B) in *Escherichia coli*. *Journal of Industrial Microbiology and Biotechnology* 36:1297-1305.
- Di Bonaventura M, Rob DeSalle R, Pop M, Nagarajan N, Figurski D, Fine DH, Kaplan JB, Planet P.** 2009. Complete genome sequence of *Aggregatibacter (Haemophilus) aphrophilus* NJ8700. *Journal of Bacteriology* 191:4693-4694.
- Izano EA, Shah SM, Kaplan JB.** 2009. Intercellular adhesion and biocide resistance in nontypeable *Haemophilus influenzae* biofilms. *Microbial Pathogenesis* 46:207-213.
- Ganeshnarayan K, Shah SM, Libera MR, Santostefano A, Kaplan JB.** 2009. Poly-*N*-acetylglucosamine matrix polysaccharide impedes fluid convection and transport of the cationic surfactant cetylpyridinium chloride through bacterial biofilms. *Applied and Environmental Microbiology* 75:1308-1314.
- Krsko P, Kaplan JB, Libera M.** 2009. Spatially controlled bacterial adhesion using surface-patterned poly(ethylene glycol) hydrogels, *Acta Biomaterialia* 5:589-596.
- Kerrigan JE, Rangunath C, Kandra L, Gyémánt G, Lipták A, Jánossy L, Kaplan JB, Ramasubbu N.** 2008. Modeling and biochemical analysis of the activity of antibiofilm agent dispersin B. *Acta Biologica Hungarica* 59:439-451.
- Venketaraman V, Lin AK, Le A, Kachlany SC, Connell ND, Kaplan JB.** 2008. Both leukotoxin and poly-*N*-acetylglucosamine surface polysaccharide protect *Aggregatibacter actinomycetemcomitans* biofilm cells from macrophage killing. *Microbial Pathogenesis* 45:173-180.
- Isaza MP, Duncan MS, Kaplan JB, Kachlany SC.** 2008. A screen for leukotoxin mutants in *Aggregatibacter actinomycetemcomitans*: genes of the phosphotransferase system (PTS) are required for leukotoxin biosynthesis. *Infection and Immunity* 76:3561-3568.
- Lee J-H, Kaplan JB, Lee WY.** 2008. Microfluidic devices for studying growth and removal of *Staphylococcus epidermidis* biofilms. *Biomedical Microdevices* 10:489-498.
- Rupani D, Izano EA, Schreiner H, Fine DH, Kaplan JB.** 2008. *Aggregatibacter actinomycetemcomitans* serotype f O-polysaccharide mediates coaggregation with *Fusobacterium nucleatum*. *Oral Microbiology and Immunology* 23:127-130.
- Izano EA, Sadovskaya I, Wang H, Vinogradov E, Rangunath C, Ramasubbu N, Jabbouri S, Perry MB, Kaplan JB.** 2008. Poly-*N*-acetylglucosamine mediates biofilm formation and detergent resistance in *Aggregatibacter actinomycetemcomitans*. *Microbial Pathogenesis* 44:52-60.
- Izano EA, Amarante MA, Kher WB, Kaplan JB.** 2008. Differential roles of poly-*N*-acetylglucosamine surface polysaccharide and extracellular DNA in *Staphylococcus aureus* and *Staphylococcus epidermidis* biofilms. *Applied and Environmental Microbiology* 74:470-476.
- Rohde H, Burandt EC, Siemssen N, Frommelt L, Burdelski C, Wurster S, Scherpe S, Davies AP, Harris LG, Horstkotte MA, Knobloch JKM, Rangunath C, Kaplan JB, Mack D.** 2007. Polysaccharide intercellular adhesin and protein factors in biofilm accumulation of *Staphylococcus epidermidis* and *Staphylococcus aureus* isolated from prosthetic hip and knee joint infections. *Biomaterials* 28:1711-1720.
- Chaignon P, Sadovskaya I, Rangunath C, Ramasubbu N, Kaplan JB, Jabbouri S.** 2007. Susceptibility of staphylococcal biofilms to enzymatic treatments depends on their chemical composition. *Applied Microbiology and Biotechnology* 75:125-132.
- Izano EA, Sadovskaya I, Vinogradov E, Mulks MH, Velliyagounder K, Rangunath C, Kher WB, Ramasubbu N, Jabbouri S, Perry MB, Kaplan JB.** 2007. Poly-*N*-acetylglucosamine mediates biofilm formation and antibiotic resistance in *Actinobacillus pleuropneumoniae*. *Microbial Pathogenesis* 43:1-9.
- Izano EA, Wang H, Rangunath C, Ramasubbu N, Kaplan JB.** 2007. Detachment and killing of *Aggregatibacter actinomycetemcomitans* biofilms by dispersin B and SDS. *Journal of Dental Research* 86:618-622.
- Donelli G, Francolini I, Romoli D, Guaglianone E, Piozzi A, Rangunath C, Kaplan JB.** 2007. Synergistic activity of dispersin B and cefamandole nafate in inhibition of staphylococcal biofilm growth on polyurethanes. *Antimicrobial Agents and Chemotherapy* 51:2733-2740.
- Yu G, Kaplan JB, Furgang D, Mansfield KG, Fine DH.** 2007. A second *Aggregatibacter actinomycetemcomitans* autotransporter adhesin exhibits specificity for buccal epithelial cells of humans
- Manuel SGA, Rangunath C, Sait HBR, Izano EA, Kaplan JB, Ramasubbu N.** 2007. Role of active-site residues of dispersin B, a biofilm-releasing  $\beta$ -hexosaminidase from a periodontal pathogen, in substrate hydrolysis. *FEBS Journal* 274:5987-5999.

## **Curriculum vitae - Jeffrey B. Kaplan**

- Kaplan JB, Mulks MK.** 2005. Biofilm formation is prevalent among field isolates of *Actinobacillus pleuropneumoniae*. *Veterinary Microbiology* 108:89-94.
- Fine DH, Velliyagounder K, Furgang D, Kaplan JB.** 2005. The *Actinobacillus actinomycetemcomitans* autotransporter adhesin Aae exhibits specificity for buccal epithelial cells from humans and Old World primates. *Infection and Immunity* 73:1947-1953.
- Ramasubbu N, Thomas L, Ragunath, C, Kaplan JB.** 2005. Structural analysis of dispersin B, a biofilm-releasing glycoside hydrolase from the periodontopathogen *Actinobacillus actinomycetemcomitans*. *Journal of Molecular Biology* 349:475-486.
- Kaplan JB, Chandran R, Velliyagounder K., Fine DH, Ramasubbu N.** 2004. Enzymatic detachment of *Staphylococcus epidermidis* biofilms. *Antimicrobial Agents and Chemotherapy* 48:2633-2636.
- Kaplan JB, Velliyagounder K, Chandran R, Rohde H, Mack D, Knobloch JKM, Ramasubbu N.** 2004. Genes involved in the synthesis and degradation of matrix polysaccharide in *Actinobacillus actinomycetemcomitans* and *Actinobacillus pleuropneumoniae* biofilms. *Journal of Bacteriology* 186:8213-8220.
- Kaplan JB, Meyenhofer MF, Fine DH.** 2003. Biofilm growth and detachment of *Actinobacillus actinomycetemcomitans*. *Journal of Bacteriology* 185:1399-1404.
- Kaplan JB, Chandran R, Ramasubbu N, Fine DH.** 2003. Detachment of *Actinobacillus actinomycetemcomitans* biofilm cells by an endogenous  $\beta$ -hexosaminidase activity. *Journal of Bacteriology* 185:4693-4698.
- Schreiner HC, Sinatra K, Kaplan JB, Furgang D, Kachlany SC, Planet PJ, Perez BA, Figurski DF, Fine DH.** 2003. Tight-adherence genes of *Actinobacillus actinomycetemcomitans* are required for virulence in a rat model. *Proceedings of the National Academy of Sciences, U.S.A.* 100:7295-7300.
- Velliyagounder K, Kaplan JB, Furgang D, Legarda D, Diamond G, Parkin R, Fine DH.** 2003. One of two human lactoferrin variants exhibits increased antimicrobial and transcriptional activation activities and is associated with localized juvenile periodontitis. *Infection and Immunity* 71:6141-6147.
- Kaplan JB, Kokeguchi S, Murayama Y, Fine DH.** 2003. Sequence diversity in the major fimbrial subunit gene (*flp-1*) of *Actinobacillus actinomycetemcomitans*. *Oral Microbiology and Immunology* 17:354-359.
- Kaplan JB, Schreiner HS, Furgang D, Fine DH.** 2002. Population structure and genetic diversity of *Actinobacillus actinomycetemcomitans* strains isolated from localized juvenile periodontitis patients. *Journal of Clinical Microbiology* 40:1181-1187.
- Kaplan JB, Fine DH.** 2002. Biofilm dispersal of *Neisseria subflava* and other phylogenetically diverse oral bacteria. *Applied and Environmental Microbiology* 68:4943-4950.
- Kachlany SC, Planet PJ, DeSalle R, Fine DH, Figurski DH, Kaplan JB.** 2001. *flp-1*, the first representative of a new pilin gene subfamily, is required for non-specific adherence of *Actinobacillus actinomycetemcomitans*. *Molecular Microbiology* 40:542-554.
- Kaplan JB, Perry MB, MacLean LL, Furgang D, Wilson ME, Fine DH.** 2001. Structural and genetic analyses of O polysaccharide from *Actinobacillus actinomycetemcomitans* serotype f. *Infection and Immunity* 69:5375-5384.
- Fine DH, Furgang D, Kaplan JB, Charlesworth J, Figurski DH.** 1999. Tenacious adhesion of *Actinobacillus actinomycetemcomitans* strain CU1000 to salivary-coated hydroxyapatite. *Archives of Oral Biology* 44:1063-1076.
- Kaplan JB, Fine DH.** 1998. Codon usage in *Actinobacillus actinomycetemcomitans*. *FEMS Microbiology Letters* 163:31-36.
- Kaplan JB, Sridharan L, Zaccardi JA, Dougher-Vermazan M, Terman BI.** 1997. Characterization of a soluble vascular endothelial growth factor receptor-immunoglobulin chimera. *Growth Factors* 14:243-256.
- Dougher M, Wasserstrom H, Torley L, Sridharan L, Westdock P, Hileman RE, Fromm JR, Anderberg R, Lyman S, Linhardt RJ, Kaplan JB, Terman BI.** 1997. Identification of a heparin binding peptide on the extracellular domain of the KDR VEGF receptor. *Growth Factors* 14:257-268.
- Kaplan JB.** 1994. Biological activity of human N- and K-ras genes containing the Asn-17 dominant-negative mutation. *Oncology Research* 6:611-615.
- Van Ranst M, Kaplan JB, Burk RD.** 1992. Phylogenetic classification of human papillomaviruses: correlation with clinical manifestations. *Journal of General Virology* 73:2653-2660.
- Kaplan JB, Sass PM.** 1992. Posttranslational processing of purified human K-ras proteins in *Xenopus* oocytes. *Cancer Communications* 3:383-388.

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- EIAwady MK, Kaplan JB, O'Brien S, D. Burk RD.** 1987. Molecular analysis of integrated human papillomavirus type 16 in the cervical cancer cell line SiHa. *Virology* 159:389-398.
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### **List of Review Articles**

- Kaplan JB, Sukishvili SA, Sailer M, Kridin K, Ramasubbu N.** 2024. *Aggregatibacter actinomycetemcomitans* dispersin B: the quintessential antibiofilm enzyme. *Pathogens* 13:668.
- Rendueles O, Kaplan JB, Ghigo J-M.** 2013. Antibiofilm polysaccharides. *Environmental Microbiology* 15:334-346.
- Kaplan JB.** 2011. Antibiotic-induced biofilm formation. *International Journal of Artificial Organs* 34:737-751.
- Kaplan JB.** 2010. Biofilm dispersal: mechanisms, clinical implications, and potential therapeutic uses. *Journal of Dental Research* 89:205-218.
- Kaplan JB.** 2009. Therapeutic potential of biofilm-dispersing enzymes. *International Journal of Artificial Organs* 32:545-554.
- Fine DH, Kaplan JB, Kachlany SC, Schreiner HC.** 2006. How we got attached to *Actinobacillus actinomycetemcomitans*: a model for infectious diseases. *Periodontology 2000* 42:114-157.
- Kaplan JB.** 2005. Methods for the treatment and prevention of bacterial biofilms. *Expert Opinion on Therapeutic Patents* 15:955-965.

### **List of Book Chapters**

- Kaplan JB.** 2014. Biofilm matrix-degrading enzymes. In *Microbial Biofilms*, Donelli G (ed.), Humana Press, New York NY.
- Fine DH, Figurski DH, Kachlany SC, Kaplan JB.** 2008. Molecular windows into the pathogenic properties of *Aggregatibacter actinomycetemcomitans*: a status report with a view to the future. In *Molecular Oral Microbiology*, Anthony H, Rogers AH (eds.), Horizon Scientific Press, Norwich, UK.
- Van Ranst M, Kaplan JB, Sundberg JP, Burk RD.** 1995. Molecular evolution of papillomaviruses. In *Molecular Basis of Virus Evolution*, Gibbs A, Calisher CH, & Garcia- Arenal F (eds.), Cambridge University Press, Cambridge, UK.



## ***Curriculum vitae - Jeffrey B. Kaplan***

### **Research Funding**

NIH R01 Award # AI097182

TITLE: "Biofilm matrix-degrading enzymes for the treatment and prevention of skin and soft tissue infections"

AWARD AMOUNT: \$702,000

AWARD PERIOD: 04/01/12-03/31/15

NIH R21 Award # AI082392

TITLE: "Anti-staphylococcal activities of *A. actinomycetemcomitans* dispersin B"

AWARD AMOUNT: \$427,000

AWARD PERIOD: 07/22/09-07/21/12

Genentech, Inc.

TITLE: "Anti-biofilm activities of Pulmozyme®"

AWARD AMOUNT: \$11,100

AWARD PERIOD: 07/01/09-12/31/11

NIH R01 Award # DE15124

TITLE: "Biofilm growth and detachment of an oral pathogen"

AWARD AMOUNT: \$857,651

AWARD PERIOD: 07/01/04-03/31/08

Kane Biotech Inc.

TITLE: "Effects of dispersin B on *Cutibacterium acnes* biofilms and cells"

AWARD AMOUNT: \$30,000

AWARD PERIOD: 01/10/21-05/30/23

Kane Biotech Inc.

TITLE: "Role of PNAG in *Cutibacterium acnes/Staphylococcus epidermidis* dual-species biofilms"

AWARD AMOUNT: \$63,534

AWARD PERIOD: 11/15/24-11/14/29