

## David Perrault

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- Resident in Surgery - Plastic & Reconstructive Surgery

### Publications

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#### PUBLICATIONS

- **Allometrically scaling tissue forces drive pathological foreign-body responses to implants via Rac2-activated myeloid cells.** *Nature biomedical engineering*  
Padmanabhan, J., Chen, K., Sivaraj, D., Henn, D., Kuehlmann, B. A., Kussie, H. C., Zhao, E. T., Kahn, A., Bonham, C. A., Dohi, T., Beck, T. C., Trotsyuk, A. A., Stern-Buchbinder, et al  
2023
- **T-Line mesh as a safe and effective option for abdominal wall reinforcement with autologous breast reconstruction.** *Journal of plastic, reconstructive & aesthetic surgery : JPRAS*  
Perrault, D., Arquette, C., Sharma, A., Cai, L., Camacho, L., Kim, J., Naga, H., Gurtner, G., Lee, G.  
2023; 84: 273-275
- **Comparing the Outcomes and Complication Rates of Biologic vs Synthetic Meshes in Implant-Based Breast Reconstruction: A Systematic Review.** *Annals of plastic surgery*  
Makarewicz, N., Perrault, D., Sharma, A., Shaheen, M., Kim, J., Calderon, C., Sweeney, B., Nazerli, R.  
2023; 90 (5): 516-527
- **The single-stage melolabial flap for internal lining of full thickness defects of the nasal ala.** *American journal of otolaryngology*  
Okland, T. S., Akkina, S. R., Perrault, D., Most, S. P.  
2023; 44 (3): 103804
- **Foot Burns and Diabetes: A Systematic Review of Current Clinical Studies and Proposal of a New Treatment Algorithm.** *Journal of burn care & research : official publication of the American Burn Association*  
Sharma, A., Perrault, D., Makarewicz, N. S., Pham, T., Sheckter, C., Gurtner, G.  
2023
- **Wireless, closed-loop, smart bandage with integrated sensors and stimulators for advanced wound care and accelerated healing.** *Nature biotechnology*  
Jiang, Y., Trotsyuk, A. A., Niu, S., Henn, D., Chen, K., Shih, C. C., Larson, M. R., Mermin-Bunnell, A. M., Mittal, S., Lai, J. C., Saberi, A., Beard, E., Jing, et al  
2022
- **Characterization of Mechanoresponsive Inflammatory Cells during Wound Healing**  
Chen, K., Griffin, M., Henn, D., Bonham, C. A., Fischer, K., Padmanabhan, J., Trotsyuk, A. A., Sivaraj, D., Leeolou, M., Kussie, H. C., Huskins, S., Steele, S., Perrault, et al  
WILEY.2022: A22
- **Epistaxis After Orthognathic Surgery: Literature Review and Three Case Studies.** *Craniofacial trauma & reconstruction*  
Girard, A., Lopez, C. D., Chen, J., Perrault, D., Desai, N., Bruckman, K. C., Bartlett, S. P., Yang, R.  
2022; 15 (2): 147-163
- **Disrupting mechanotransduction decreases fibrosis and contracture in split-thickness skin grafting.** *Science translational medicine*  
Chen, K., Henn, D., Januszyk, M., Barrera, J. A., Noishiki, C., Bonham, C. A., Griffin, M., Tevlin, R., Carlomagno, T., Shannon, T., Fehlmann, T., Trotsyuk, A. A., Padmanabhan, et al  
2022; 14 (645): eabj9152
- **Pullulan-Collagen Hydrogel Wound Dressing Promotes Dermal Remodeling and Wound Healing Compared to Commercially Available Collagen Dressings.** *Wound repair and regeneration : official publication of the Wound Healing Society [and] the European Tissue Repair Society*

Chen, K., Sivaraj, D., Davitt, M., Leeolou, M. C., Henn, D., Steele, S. R., Huskins, S. L., Trotsyuk, A. A., Kussie, H. C., Greco, A., Padmanabhan, J., Perrault, D. P., Zamaleeva, et al

2022

● **Surgical Applications of Materials Engineered with Antimicrobial Properties.** *Bioengineering (Basel, Switzerland)*

Perrault, D. P., Sharma, A., Kim, J. F., Gurtner, G. C., Wan, D. C.

2022; 9 (4)

● **Characterization of Mechanoresponsive Inflammatory Cells during Wound Healing**

Chen, K., Griffin, M., Henn, D., Bonham, C. A., Fischer, K., Padmanabhan, J., Trotsyuk, A. A., Sivaraj, D., Leeolou, M. C., Kussie, H. C., Huskins, S. L., Steele, S., Perrault, et al

WILEY.2022: A5

● **Mechanical Signaling Mediated by IQGAP1 Promotes Pathologic Foreign Body Response**

Sivaraj, D., Padmanabhan, J., Chen, K., Henn, D., Kussie, H. C., Leeolou, M. C., Trotsyuk, A. A., Fischer, K., Perrault, D., Gurtner, G. C.

WILEY.2022: A21

● **Application of No Releasing Gel Increases Fibronectin, TGF-beta 1, and Accelerates Wound Healing in Diabetic Mice**

Noishiki, C., Sivaraj, D., Kosaric, N., Leeolou, M. C., Kussie, H. C., Kiwanuka, H., Henn, D., Fischer, K., Trotsyuk, A. A., Padmanabhan, J., Perrault, D., Murad, F., Chen, et al

WILEY.2022: A8

● **Pullulan-Collagen Hydrogel Wound Dressing Promotes Dermal Remodeling and Healing in an Excisional Wound Model**

Leeolou, M. C., Sivaraj, D., Davitt, M., Henn, D., Steele, S., Huskins, S. L., Trotsyuk, A. A., Kussie, H. C., Greco, A., Perrault, D., Padmanabhan, J., Longaker, M. T., Chen, et al

WILEY.2022: A24

● **Characterization of Mechanoresponsive Inflammatory Cells during Wound Healing**

Chen, K., Griffin, M., Henn, D., Bonham, C. A., Fischer, K., Padmanabhan, J., Trotsyuk, A. A., Sivaraj, D., Leeolou, M. C., Kussie, H. C., Huskins, S. L., Steele, S., Perrault, et al

WILEY.2022: A31-A32

● **Galvanotactic Smart Bandage for Chronic Wound Management and Tissue Regeneration**

Trotsyuk, A. A., Jiang, Y., Niu, S., Henn, D., Chen, K., Larson, M., Beard, E., Saberi, A., Sivaraj, D., Mermin-Bunnell, A., Mittal, S., Jing, S., Kwon, et al

WILEY.2022: A36

● **Foot Burns in Persons With Diabetes: Outcomes From the National Trauma Data Bank.** *Journal of burn care & research : official publication of the American Burn Association*

Perrault, D., Cobert, J., Gadiraju, V., Sharma, A., Gurtner, G., Pham, T., Shekter, C. C.

2022

● **Reinforced Biologic Mesh Reduces Postoperative Complications Compared to Biologic Mesh after Ventral Hernia Repair.** *Plastic and reconstructive surgery. Global open*

Sivaraj, D., Henn, D., Fischer, K. S., Kim, T. S., Black, C. K., Lin, J. Q., Barrera, J. A., Leeolou, M. C., Makarewicz, N. S., Chen, K., Perrault, D. P., Gurtner, G. C., Lee, et al

2022; 10 (2): e4083

● **IQGAP1-mediated mechanical signaling promotes the foreign body response to biomedical implants.** *FASEB journal : official publication of the Federation of American Societies for Experimental Biology*

Sivaraj, D., Padmanabhan, J., Chen, K., Henn, D., Noishiki, C., Trotsyuk, A. A., Kussie, H. C., Leeolou, M. C., Magbual, N. J., Andrikopoulos, S., Perrault, D. P., Barrera, J. A., Januszzyk, et al

2022; 36 (2): e22007

● **Inhibiting Fibroblast Mechanotransduction Modulates Severity of Idiopathic Pulmonary Fibrosis.** *Advances in wound care*

Trotsyuk, A. A., Chen, K., Kwon, S. H., Ma, K. C., Henn, D., Mermin-Bunnell, A. M., Mittal, S., Padmanabhan, J., Larson, M. R., Steele, S. R., Sivaraj, D., Bonham, C. A., Noishiki, et al

2021

● **Epistaxis After Orthognathic Surgery: Literature Review and Three Case Studies** *CRANIOMAXILLOFACIAL TRAUMA & RECONSTRUCTION*

Girard, A., Lopez, C. D., Chen, J., Perrault, D., Desai, N., Bruckman, K. C., Bartlett, S. P., Yang, R.

2021

- **Risk Factors for Wound Complications After Soft Tissue Sarcoma Resection** *ANNALS OF PLASTIC SURGERY*  
Perrault, D. P., Lee, G. K., Yu, R. P., Carre, A., Chattha, A., Johnson, M. B., Gardner, D. J., Carey, J. N., Tseng, W. W., Menendez, L. R., Wong, A. K.  
2021; 86 (3S): S336-S341
- **The Impact of Plastic Surgery Volume on Inpatient Burn Outcomes.** *Plastic and reconstructive surgery*  
Perrault, D. P., Rochlin, D. H., Gillenwater, T. J., Karanas, Y. L., Sheckter, C. C.  
2021; 148 (6): 1001e-1006e
- **First reported case of *Wohlfahrtiimonas chitiniclastica* infection in California** *JAAD Case Reports* *Journal of the American Academy of Dermatology Case Reports*  
Leelou, M. C., Perrault, D. P., Siravaj, D., Chang, A. S., Chen, K., Trotsyuk, A., Padmanabhan, J., Gurtner, G. C.  
2021
- **Risk Factors for Wound Complications After Soft Tissue Sarcoma Resection.** *Annals of plastic surgery*  
Perrault, D. P., Lee, G. K., Yu, R. P., Carre, A. L., Chattha, A., Johnson, M. B., Gardner, D. J., Carey, J. N., Tseng, W. W., Menendez, L. R., Wong, A. K.  
2020
- **Supercharged Free Transverse Rectus Abdominis Myocutaneous Flap: An Autologous Reconstructive Option for the Thin Breast Reconstruction Patient** *CUREUS*  
Lee, G., Pourmoussa, A. J., Perrault, D., Wong, A. K.  
2020; 12 (6): e8776
- **Improvements in Cleft Lip Aesthetics with the Fisher Repair Compared to the Mohler Repair** *PLASTIC AND RECONSTRUCTIVE SURGERY-GLOBAL OPEN*  
Mittermiller, P. A., Martin, S., Johns, D. N., Perrault, D., Jablonka, E. M., Khosla, R. K.  
2020; 8 (6)
- **Improvements in Cleft Lip Aesthetics with the Fisher Repair Compared to the Mohler Repair.** *Plastic and reconstructive surgery. Global open*  
Mittermiller, P. A., Martin, S., Johns, D. N., Perrault, D., Jablonka, E. M., Khosla, R. K.  
2020; 8 (6): e2919
- **Ischemia and reperfusion injury in superficial inferior epigastric artery-based vascularized lymph node flaps** *PLOS ONE*  
Perrault, D. P., Lee, G. K., Bouz, A., Sung, C., Yu, R., Pourmoussa, A. J., Park, S., Kim, G. H., Jiao, W., Patel, K. M., Hong, Y., Wong, A. K.  
2020; 15 (1): e0227599
- **Timing of Flap Surgery in Acute Burn Patients Does Not Affect Complications.** *Journal of burn care & research : official publication of the American Burn Association*  
Perrault, D. n., Rochlin, D. n., Pham, C. n., Momeni, A. n., Karanas, Y. n., Sheckter, C. C.  
2020
- **Pelvic/Perineal Reconstruction: Time to Consider the Anterolateral Thigh Flap as a First-line Option?** *Plastic and reconstructive surgery. Global open*  
Perrault, D. n., Kin, C. n., Wan, D. C., Kirilcuk, N. n., Shelton, A. n., Momeni, A. n.  
2020; 8 (4): e2733
- **Prevalence of Ganglion Cyst Formation After Wrist Arthroscopy: A Retrospective Longitudinal Analysis of 2420 Patients.** *Hand (New York, N.Y.)*  
Rochlin, D. H., Perrault, D. n., Sheckter, C. C., Fox, P. n., Yao, J. n.  
2020: 1558944720939203
- **Evidenced-Based Practice Among Trainees: A Survey on Facial Trauma Wound Management.** *Journal of surgical education*  
Choi, J. n., Traboulsi, A. A., Okland, T. S., Sadauskas, V. n., Perrault, D. n., Spain, D. A., Lorenz, H. P., Weiser, T. G.  
2020
- **Small Peptide Modulation of Fibroblast Growth Factor Receptor 3-Dependent Postnatal Lymphangiogenesis** *LYMPHATIC RESEARCH AND BIOLOGY*  
Perrault, D. P., Lee, G. K., Park, S., Lee, S., Choi, D., Jung, E., Seong, Y., Park, E., Sung, C., Yu, R., Bouz, A., Pourmoussa, A., Kim, et al  
2019; 17 (1): 19-29
- **Complex Reconstruction of the Knee with a Free Vertical Rectus Abdominis Flap after Periprosthetic Soft Tissue Necrosis** *CUREUS*  
Perrault, D., Manrique, O. J., Lee, G., Carre, A. L., Oakes, D. A., Wong, A. K.  
2019; 11 (1): e3969

- **Risk Factors Associated with Reconstructive Complications Following Sacrectomy** *PLASTIC AND RECONSTRUCTIVE SURGERY-GLOBAL OPEN*  
Vartanian, E. D., Lynn, J. V., Perrault, D. P., Wolfswinkel, E. M., Kaiser, A. M., Patel, K. M., Carey, J. N., Hsieh, P. C., Wong, A. K.  
2018; 6 (11): e2002
- **Human Acellular Dermis as Spacer for Small-Joint Arthroplasty: Analysis of Revascularization in a Rabbit Trapeziectomy Model** *PLASTIC AND RECONSTRUCTIVE SURGERY*  
Banks, K., Squitieri, L., Bramos, A., Johnson, M. B., Gardner, D. J., Pourmoussa, A. J., Jung, E., Lee, G. K., Perrault, D. P., Fedenko, A., Kim, G. H., Han, B., Hong, et al  
2018; 142 (3): 679–86
- **Local Administration of Interleukin-1 Receptor Antagonist Improves Diabetic Wound Healing** *ANNALS OF PLASTIC SURGERY*  
Perrault, D. P., Bramos, A., Xu, X., Shi, S., Wong, A. K.  
2018; 80: S317–S321
- **Porcine Mesothelium-Wrapped Diced Cartilage Grafts for Nasal Reconstruction** *TISSUE ENGINEERING PART A*  
Bramos, A., Perrault, D. P., Fedenko, A. N., Kim, G. H., Bougioukli, S., Lieberman, J. R., Calvert, J. W., Wong, A. K.  
2018; 24 (7-8): 672–81
- **Development and Characterization of A Novel Prox1-EGFP Lymphatic and Schlemm's Canal Reporter Rat** *SCIENTIFIC REPORTS*  
Jung, E., Gardner, D., Choi, D., Park, E., Seong, Y., Yang, S., Castorena-Gonzalez, J., Louveau, A., Zhou, Z., Lee, G. K., Perrault, D. P., Lee, S., Johnson, et al  
2017; 7: 5577
- **Topical Fibronectin Improves Wound Healing of Irradiated Skin** *SCIENTIFIC REPORTS*  
Johnson, M. B., Pang, B., Gardner, D. J., Niknam-Benia, S., Soundarajan, V., Bramos, A., Perrault, D. P., Banks, K., Lee, G. K., Baker, R. Y., Kim, G. H., Lee, S., Chai, et al  
2017; 7: 3876
- **Surgical applications of three-dimensional printing: a review of the current literature & how to get started** *ANNALS OF TRANSLATIONAL MEDICINE*  
Hoang, D., Perrault, D., Stevanovic, M., Ghiassi, A.  
2016; 4 (23): 456
- **Prevention of Postsurgical Lymphedema by 9-cis Retinoic Acid** *ANNALS OF SURGERY*  
Bramos, A., Perrault, D., Yang, S., Jung, E., Hong, Y., Wong, A. K.  
2016; 264 (2): 353–61