

PMID	URL	Title	Journal/Book	Publication Year	Product(s)	Disease / Area of Study
38795029	38795029	From Collagen Mimetics to Collagen Hybridization and Back	Acc Chem Res	2024	N/A	N/A
39247402	39247402	Promoting chondrogenesis by targeted delivery to the degenerating cartilage in early treatment of osteoarthritis	Acta Biomaterialia	2024	RCHP	OA
39356750	39356750	Collagen denaturation in post-run Achilles tendons and Achilles tendinopathy: In vivo mechanophysiology and magnetic resonance imaging	Science Advances	2024	RCHP	Tendon Health
PREPRINT	PREPRINT	Targeting Molecular Collagen Defects from the Initiation of Knee Osteoarthritis	MedRxiv	2024	RCHP, sCy7.5CHP	OA
38264898	38264898	Evaluation of Extracellular Matrix Remodeling in Full-thickness Skin Grafts in Mice	J Histochem Cytochem	2024	BCHP	ECM Remodeling
38275401	38275401	Modulating TRPV4 Channel Activity in Pro-Inflammatory Macrophages within the 3D Tissue Analog	Biomedicines	2024	BCHP	Macrophage Activity
38487972	38487972	Salmonella-driven intestinal edema in mice is characterized by tensed fibronectin fibers	The FEBS Journal	2024	RCHP	Intestinal Edema
38557892	38557892	Investigating the dose-dependency of the midgut escape barrier using a mechanistic model of within-mosquito dengue virus particle transport	PLOS Pathogens	2024	FCHP	Midgut Escape Barrier (Dengue Virus)
38877492	38877492	Evaluating the pro-survival potential of apoptotic bodies derived from 2D- and 3D- cultured adipose stem cells in ischaemic flap	Journal of Nanobiotechnology	2024	FCHP	Ischaemic Flaps
38915575	38915575	Fluorescein-Based SynNotch Adaptors for Regulating Gene Expression Responses to Diverse Extracellular Cues	bioRxiv	2024	FCHP	Gene Expression Responses to Extracellular Cues
39092166	39092166	Collagen integrity of the annulus fibrosus in degenerative disc disease individuals quantified with collagen hybridizing peptide	JOR Spine	2024	RCHP	DDD
39354493	39354493	Most cells promote choroidal neovascularization in a model of age-related macular degeneration	J Neuroinflammation	2024	FCHP	nAMD
DISSERTATION	DISSERTATION	DRIVERS OF FATIGUE INDUCED DEGENERATION IN A MOUSE ACHILLES TENDON EXPLANT MODEL	Pennsylvania State University	2024	FCHP	Achilles Fatigue, Degeneration
THESIS	THESIS	MAS-RELATED G PROTEIN-COUPLED RECEPTOR B2 ACTIVATION MEDIATES BLADDER WALL BIOMECHANICS	University of Michigan	2024	FCHP	Bladder Wall Biomechanics
PREPRINT	PREPRINT	Keratinocyte-Driven Dermal Collagen Formation in the Axolotl skin	Nature Portfolio	2024	RCHP	Collagen Formation
ABSTRACT	ABSTRACT	Tbr1/Smad4 double knockout demonstrated that Smad4 played a pivotal role in Tbr1-dependent ECM synthesis and Tbr1-independent differentiation	ARVO ANNUAL ABSTRACTS	2024	FCHP	Cornea Homeostasis
THESIS	THESIS	Mechanisms and Functions of Lipodystrophy in Dermal Fibrosis	Yale University	2024	BCHP	Dermal Fibrosis
THESIS	THESIS	Analysis of the collagen matrix in periodontal Ehlers-Danlos syndrome	Medizinischen Universität Innsbruck	2024	FCHP	EDS
NO PMID	NO PMID	Zingerone promotes the survival of ischaemic flap via the KEAP1-Nrf2 pathway	Journal of Functional Foods	2024	FCHP	Ischaemic Flaps
THESIS	THESIS	The Effect of Cyclic Buckling on the Structure and Mechanical Properties of Ovine Tendon	Saint Mary's University, Halifax, Nova Scotia	2024	RCHP, FCHP	Tendon Health
38363214	38363214	Role of macrophages in regression of myocardial fibrosis following alleviation of left ventricular pressure overload	Am J Physiol Heart Circ Physiol	2024	FCHP	MI
38401775	38401775	Multimodal experimental studies of the passive mechanical behavior of human aortas: Current approaches and future directions	Acta Biomater	2024	FCHP	Vasculature (Cardiac)
38459660	38459660	Dihydrocapsaicin suppresses the STING-mediated accumulation of ROS and NLRP3 inflammasome and alleviates apoptosis in skin fibroblasts	Phytotherapy Research	2024	FCHP	Skin Injury
38519491	38519491	Versatile human cardiac tissues engineered with perfusable heart extracellular microenvironment for biomedical applications	Nature Communications	2024		Cardiac Tissue
38702003	38702003	Improving hemocompatibility of decellularized vascular tissue by structural modification of collagen fiber	International Journal of Biological Macromolecules	2024	RCHP, FCHP	Decellularized Tissue
38910439	38910439	Type VI Collagen Deficiency Causes Enhanced Periodontal Tissue Destruction	Journal of Dental Research	2024	FCHP	Connective Tissue
38989259	38989259	Collagen structures of demineralized bone paper direct mineral metabolism	ASMBR	2024	FCHP	Bone Mineral Metabolism
39043893	39043893	Inhibition of intrahepatic monocyte recruitment by Cenicriviroc and extracellular matrix degradation by MMP1 synergistically attenuates liver fibrosis	Scientific Reports	2024	FCHP	NASH
39060633	39060633	In vivo monitoring of active subretinal fibrosis in mice using collagen hybridizing peptides	Lab Anim (NY)	2024	RCHP, sCy7.5CHP	nAMD
39361472	39361472	Delineating, Imaging, and Assessing Pulmonary Fibrosis Remodeling via Collagen Hybridization	ACS Nano	2024	RCHP	IPF
NO PMID	NO PMID	Pathogenesis of human atheroma necrotic core: degradation of connective tissue fibers and possible involvement of cathepsin B	Translational Medicine Communications	2024	BCHP	Connective Tissue
PREPRINT	PREPRINT	Oxidative stress induces intervertebral ECM remodeling, elevated tissue stiffness and idiopathic-like scoliosis	Nature Portfolio	2024	Unknown	ECM Remodeling
NO PMID	NO PMID	Molecular imaging of collagen remodeling in a murine model of lung fibrosis	Journal of Nuclear Medicine	2024	RCHP	IPF
PREPRINT	PREPRINT	Assessing microstructural damage in paediatric aortic coarctation tissue during benchtop balloon angioplasty and stenting	medRxiv	2024	FCHP	Microstructure Damage, Aortic Coarctation Tissue
NO PMID	NO PMID	Chiral Arginine Modified Electrospun Membrane for Enhancing Tendon Healing	Advanced Functional Materials	2024	RCHP	Tendon Health
36400348	36400348	Collagen fibrils from both positional and energy-storing tendons exhibit increased amounts of denatured collagen when stretched	Acta Biomater	2023	FCHP	Tendon Overuse
36244509	36244509	HPMA copolymer-collagen hybridizing peptide conjugates targeted to breast tumor extracellular matrix	J Control Release	2023	sCy7.5CHP	Cancer (Breast Tumor ECM)
36470429	36470429	A midposition NOTCH3 truncation in inherited cerebral small vessel disease may affect the protein interactome.	Journal of Biological Chemistry	2023	BCHP	Cerebral Small Vessel Disease
36711975	36711975	Apical expansion of calvarial osteoblasts and suture patency is dependent on graded fibronectin cues.	bioRxiv	2023	BCHP	Calvarial Osteoblasts
36724294	36724294	Targeting Intratibial Osteosarcoma Using Water-Soluble Copolymers Conjugated to Collagen Hybridizing Peptides	Mol Pharm	2023	Custom	OS
36958089	36958089	Development and application of a novel in vivo overload model of the Achilles tendon in rat	J Biomech	2023	BCHP	Tendon Overuse
37087677	37087677	Targeting damaged collagen for intra-articular delivery of therapeutics using collagen hybridizing peptides	J Orthop Res	2023	Unknown	OA, Drug Delivery
37090547	37090547	Desmoplastic stroma restricts T cell extravasation and mediates immune exclusion and immunosuppression in solid tumors	BioRxiv	2023	RCHP	PDAC, Desmoplastic Tumors
37092727	37092727	An Adolescent Murine In Vivo Anterior Cruciate Ligament Overuse Injury Model	Am J Sports Med	2023	RCHP	Ligament Overuse
37321327	37321327	Targeting collagen damage for sustained in situ antimicrobial activities	J Control Release	2023	Unknown	Antimicrobials
37399743	37399743	Denatured collagen inhibits neuroblastoma tumor-sphere migration and growth via the LOX/LOXL2 - FAK signaling pathway	Journal of Thermal Biology	2023	FCHP	Neuroblastoma Tumors
37615835	37615835	Natural Retinol Analogs Potentiate the Effects of Retinal on Aged and Photodamaged Skin: Results from In Vitro to Clinical Studies	Dermatology and Therapy	2023	BCHP	Skin Damage
37765538	37765538	Effect of Different Crosslinkers on Denatured Dentin Collagen's Biostability, MMP Inhibition and Mechanical Properties	Polymers (Basel)	2023	BCHP	Dentin Collagen
ABSTRACT	ABSTRACT	High Strain Rate Damage in Cerebral Arteries: A Molecular and Mechanical Analysis	University of Utah	2023	FCHP	Cerebral Arteries
NO PMID	NO PMID	Utilizing micro-CT imaging to define collagen modeling in murine aorta	Biophysical Journal	2023		Aorta Collagen Remodeling
35318675	35318675	Development of a cell-free strategy to recover aged skeletal muscle after disuse	The Journal of Physiology	2023		Muscle Recovery
36097314	36097314	Collagen Molecular Damage is a Hallmark of Early Atherosclerosis Development	J Cardiovasc Transl Res	2023	RCHP	Atherosclerosis
36272709	36272709	FOXL1+ Telocytes in mouse colon orchestrate extracellular matrix biodynamics and wound repair resolution.	J Proteomics	2023	FCHP	Wound Repair
36691905	36691905	Homeostatic, Non-Canonical Role of Macrophage Elastase in Vascular Integrity	Circulation Research	2023	RCHP	Vascular Health, Macrophages
36944295	36944295	Mouse Achilles tendons exhibit collagen disorganization but minimal collagen denaturation during cyclic loading to failure	Journal of Biomechanics	2023	FCHP	Tendon Loading and Failure
36948453	36948453	Damaged collagen detected by collagen hybridizing peptide as efficient diagnosis marker for early hepatic fibrosis	Biochim Biophys Acta Gene Regul Mech	2023	sCy7.5CHP	NASH
36960056	36960056	Degradation of collagen I by activated C1s in periodontal Ehlers-Danlos Syndrome	Frontiers in Immunology	2023	FCHP	Ehlers-Danlos Syndrome (EDS)
36967667	36967667	Controlling the Trimerization of the Collagen Triple-Helix by Solvent Switching	Biomacromolecules	2023	Custom	Collagen Trimerization
36998974	36998974	Myofibroblast Ccn3 is regulated by Yap and Wwtr1 and contributes to adverse cardiac outcomes	Frontiers in Cardiovascular Medicine	2023	RCHP	Cardiac Health, Myofibroblasts
37029304	37029304	Developmental growth plate cartilage formation suppressed by artificial light at night via inhibiting BMAL1-driven collagen hybridization	Cell Death and Differentiation	2023	FCHP	Growth Plates
37067505	37067505	Structural and biofunctional evaluation of decellularized jellyfish matrices	J Mater Chem B	2023	Unknown	Biomaterials
37158802	37158802	The Chemistry and Biology of Collagen Hybridization	J Am Chem Soc	2023	FCHP, RCHP, BCHP, sCy7.5CHP	CHP chemistry/biology
37305034	37305034	Perturbations in fatty acid metabolism and collagen production infer pathogenicity of a novel MBTPS2 variant in Osteogenesis Imperfecta	Frontiers in Endocrinology	2023	RCHP	Osteogenesis Imperfecta
37352350	37352350	Optogenetic-induced muscle loading leads to mechanical adaptation of the Achilles tendon enthesis in mice	Science Advances	2023	FCHP	Tendon Loading
37361328	37361328	Galectin-3 and RAGE differentially control advanced glycation endproduct-induced collagen damage in murine intervertebral discs	JOR Spine	2023	BCHP	IVD Degeneration, AGE-induced collagen damage
37478857	37478857	Mechanical confinement promotes heat resistance of hepatocellular carcinoma via SP1/IL41/AHR axis	Cell Reports: Medicine	2023	FCHP	Hepatocellular Carcinoma (HCC)

37486024	37486024	Disuse-induced muscle fibrosis, cellular senescence, and senescence-associated secretory phenotype in older adults are alle	Aging Cell	2023	BCHP	Muscle Fibrosis
37555328	37555328	PROX1 Inhibits PDGF-B Expression to Prevent Myxomatous Degeneration of Heart Valves	Circulation Research	2023	RCHP	Heart Valves
37619896	37619896	An in vitro culture platform to study the extracellular matrix remodeling potential of human mesenchymal stem cells	Acta Biomater	2023	FCHP	ECM Remodeling
37653282	37653282	Cell mediated ECM-degradation as an emerging tool for anti-fibrotic strategy	Cell Regeneration	2023		
37696857	37696857	A thioacetamide-induced liver fibrosis model for pre-clinical studies in microminipig	Scientific Reports	2023	RCHP	Liver Fibrosis
37768341	37768341	Omentin-1 induces mechanically activated fibroblasts lipogenic differentiation through pkm2/yap/ppary pathway to promote li	Cellular and Molecular Life Sciences	2023	RCHP	IPF
37812574	37812574	Core-Shell Droplet-Based Angiogenic Patches for the Treatment of Ischemic Diseases: Ultrafast Processability, Physical Tunab	ACS Applied Materials & Interfaces	2023	RCHP	Ischemic Diseases
37850255	37850255	A snake cathelicidin enhances transcription factor EB-mediated autophagy and alleviates ROS-induced pyroptosis after ischae	British Journal of Pharmacology	2023	FCHP	Ischaemic Flaps
NO PMID	NO PMID	Hybrid hydrogel-extracellular matrix scaffolds identify distinct ligand and mechanical signatures in cardiac aging	BioRxiv	2023	RCHP	Cardiac Aging
35427958	35427958	Empirical evidence that bone collagen molecules denature as a result of bone fracture	J Mech Behav Biomed Mater	2022	FCHP	Bone Structure
34656007	34656007	Focusing on intramuscular connective tissue: Effect of cooking time and temperature on physical, textural, and structural prop	Meat Sci	2022	FCHP	Connective Tissue
34714974	34714974	Structurally abnormal collagen fibrils in abdominal aortic aneurysm resist platelet adhesion	J Thromb Haemost	2022	RCHP	Platelet Adhesion
34872436	34872436	Inhibition of PLA2G4E/cPLA2 promotes survival of random skin flaps by alleviating Lysosomal membrane permeabilization-Ind	Autophagy	2022	FCHP	Skin Necrosis
34918297	34918297	In Vivo and Ex Vivo Analysis of Omental Adhesion in Ovarian Cancer	Methods Mol Biol	2022	Unknown	OvCa
35232524	35232524	Self-Assembling Toroidal Cell Constructs for Tissue Engineering Applications	Microscopy and Microanalysis	2022		Tissue Engineering
35431088	35431088	Dentin collagen denaturation status assessed by collagen hybridizing peptide and its effect on bio-stabilization of proanthocya	Dent Mater	2022	FCHP	Dentin Collagen
35434632	35434632	Mechanotherapy Reprograms Aged Muscle Stromal Cells to Remodel the Extracellular Matrix during Recovery from Disuse	Function	2022	BCHP	ECM Remodeling
35457064	35457064	Quadruped Gait and Regulation of Apoptotic Factors in Tibiofemoral Joints following Intra-Articular rhPRG4 Injection in Prg4 Nu	Int J Mol Sci	2022	BCHP	CACP
35519279	35519279	Blue-LIRIC in the rabbit cornea: efficacy, tissue effects, and repetition rate scaling	Biomed Opt Express	2022	BCHP	LIRIC
35657618	35657618	Mechanisms that limit regression of myocardial fibrosis following removal of left ventricular pressure overload	Am J Physiol Heart Circ Physiol	2022	BCHP	MI
35992346	35992346	Intra-articular MMP-1 in the spinal facet joint induces sustained pain and neuronal dysregulation in the DRG and spinal cord, ar	Front Bioeng Biotechnol	2022	FCHP	Spinal Cord
36055109	36055109	Development of a continuum damage model to predict accumulation of sub-failure damage in tendons	J Mech Behav Biomed Mater	2022	FCHP	Tendon Overuse
37116635	37116635	Strain-induced collagen denaturation is rate dependent in failure of cerebral arteries	Social Science Research Network	2022	FCHP	Molecular Collagen Damage: Strain Rate
NO PMID	NO PMID	Collagen Denaturation as a Toughening Mechanism in Cortical Bone	University of Waterloo	2022	FCHP	Cortical Bone
THESIS	THESIS	Galectin-3 Mediates Advanced Glycation Endproduct-Induced Collagen Damage in Intervertebral Discs.	Icahn School of Medicine at Mount Sinai	2022	BCHP	AGE induced Collagen damage (IVD)
THESIS	THESIS	Evaluation of Hemodynamic Induced Alterations in Extracellular Matrix Organization in Atherosclerosis	University of Utah	2022	RCHP	ECM Organization
THESIS	THESIS	The Effects of a Myocardial Hydrogel on Duchenne Muscular Dystrophy-Associated Cardiomyopathy	University of California, Los Angeles	2022	FCHP	Muscular Dystrophy-Associated Cardiomyopathy
DISSERTATION	DISSERTATION	The Lymphogenic and Hemangiogenic factors affecting The Human Sclera	Koln University	2022	RCHP	Sclera
THESIS	THESIS	A Novel Model to Study Adipose-Derived Stem Cell Differentiation	University of South Carolina	2022	FCHP	Stem Cells
DISSERTATION	DISSERTATION	Multiscale Characterization of Tendon Failure	University of Utah	2022	FCHP	Tendon Failure
PREPRINT	PREPRINT	Mouse Achilles Tendons are Resistant to Collagen Denaturation during Cyclic 3 and Monotonic Loading to Failure	Social Science Research Network	2022	FCHP	Tendon Loading and Failure
34561295	34561295	Intracellular hydroxyproline imprinting following resolution of bleomycin-induced pulmonary fibrosis	European Respiratory Journal	2022	RCHP	IPF
34580237	34580237	A New Murine Liver Fibrosis Model Induced by Polyhexamethylene Guanidine-Phosphate	Biomolecules & Therapeutics	2022	RCHP	NASH
34905511	34905511	Smad7 effects on TGF-β and ErbB2 restrain myofibroblast activation and protect from postinfarction heart failure	The Journal of Clinical Investigation	2022	FCHP	MI, Myofibroblast Activation
35108527	35108527	Gene silencing by EZH2 suppresses TGF-β activity within the decidua to avert pregnancy-adverse wound healing at the matern	Cell Reports	2022	RCHP	Wound Healing
35175105	35175105	Optimization of a pericyte therapy to improve muscle recovery after limb immobilization	Journal of Applied Physiology	2022	FCHP	Muscle Recovery
35189973	35189973	Modeling oxidative injury response in human kidney organoids	Stem Cell Research & Therapy	2022	RCHP	Oxidative Injury, Kidney
35230974	35230974	Remodeling the tumor microenvironment via blockade of LAIR-1 and TGF-β signaling enables PD-L1-mediated tumor eradicati	The Journal of Clinical Investigation	2022	BCHP, BCHPCTL	LAIR-1, Tumor Microenvironment Remodeling
35650319	35650319	Ablation of the miRNA cluster 24 in cartilage and osteoblasts impairs bone remodeling	Scientific Reports	2022	RCHP	Bone Remodeling
35893698	35893698	Matrix Metalloproteinases Expression Is Associated with SARS-CoV-2-Induced Lung Pathology and Extracellular-Matrix Remod	Viruses	2022	RCHP	COVID19
36063900	36063900	Smurf2 Regulates Inflammation and Collagen Processing in Cutaneous Wound Healing through Transforming Growth Factor-β	The American Journal of Pathology	2022	RCHP	Wound Healing, Inflammation
36111352	36111352	Age alters the oncogenic trajectory toward luminal mammary tumors that activate unfolded proteins responses	Aging Cell	2022	BCHP	Mammary Tumors
36188490	36188490	Another Wrinkle with Age: Aged Collagen and Intra-peritoneal Metastasis of Ovarian Cancer	Aging Cancer	2022	BCHP	Cancer (OvCa)
ABSTRACT	ABSTRACT	Use of collagen-hybridizing peptides to assess active fibrosis in 2 mouse models of choroidal neovascularization.	Investigative Ophthalmology & Visual Science	2022	sCy7.5CHP	Subretinal Fibrosis, Choroidal Neovascularization
33154166	33154166	4-Phenylbutyric acid enhances the mineralization of osteogenesis imperfecta iPSC-derived osteoblasts	J Biol Chem	2021	FCHP	OI
34058190	34058190	Post-translational activation of Mmp2 correlates with patterns of active collagen degradation during the development of the ze	Dev Biol	2021	RCHP	ECM Remodeling
34314888	34314888	Mechanical characterisation of the human dura mater, falx cerebri and superior sagittal sinus	Acta Biomater	2021	FCHP	TBI
34314889	34314889	Tendons exhibit greater resistance to tissue and molecular-level damage with increasing strain rate during cyclic fatigue	Acta Biomaterialia	2021	FCHP	Tendon Overuse
34393771	34393771	Adipose Stromal Cell-Secretome Counteracts Profibrotic Signals From IPF Lung Matrices	Front Pharmacol	2021	RCHP	IPF
NO PMID	NO PMID	Distinct fibroblast and pericyte lineages in skin development and repair	King's College London	2021	BCHP	Skin Repair, Fibroblasts
DISSERTATION	DISSERTATION	Growth and Mechanobiology of the Achilles Enthesis in Mice	University of Delaware	2021	sCy7.5CHP	Achilles Enthesis
DISSERTATION	DISSERTATION	Biomechanical & Biochemical Contributions of Matrix Metalloproteinases in Joint Pain: Models, Mechanisms, & Patients	University of Pennsylvania	2021	FCHP	Joint Pain
THESIS	THESIS	Mechanisms and Effects of Femtosecond Laser Micromachining in Ophthalmic Materials and Ocular Tissue	University of Rochester	2021	BCHP	Ophthalmologic Damage
PREPRINT	PREPRINT	Reprogramming adult tendon healing using regenerative neonatal regulatory T cells	BioRxiv	2021	BCHP	Tendon Healing
THESIS	THESIS	Role of Regulatory T-Cells in Tendon Regeneration	Icahn School of Medicine at Mount Sinai	2021	RCHP	Tendon Regeneration
33045326	33045326	Grape polyphenols and exercise training have distinct molecular effects on cardiac hypertrophy in a model of obese insulin-res	Journal of Nutritional Biochemistry	2021	RCHP	Cardiac Hypertrophy
33271356	33271356	Fabrication of centimeter-sized 3D constructs with patterned endothelial cells through assembly of cell-laden microbeads as e	Acta Biomaterialia	2021	FCHP	Bone Graft
33582160	33582160	Periostin-expressing Schwann cells and endoneurial cardiac fibroblasts contribute to sympathetic nerve fasciculation after bir	Journal of Molecular and Cellular Cardiology	2021	FCHP	Cardiac Fibroblasts
33869150	33869150	Dynamic Endothelial Stalk Cell-Matrix Interactions Regulate Angiogenic Sprout Diameter	Frontiers in Bioengineering and Biotechnology	2021	BCHP	Cell-Matrix Interactions
33966129	33966129	Scleraxis expressing scleral cells respond to inflammatory stimulation	Histochem Cell Biol	2021	RCHP	Sclera Inflammation
33986436	33986436	An intact complement system dampens cornea inflammation during acute primary HSV-1 infection	Scientific Reports	2021	BCHP	Cornea Inflammation
33999919	33999919	Effect of luminal surface structure of decellularized aorta on thrombus formation and cell behavior	PLoS One	2021	FCHP	Decellularized Tissue
34048934	34048934	Collagen denaturation in the infarcted myocardium involves temporally distinct effects of MT1-MMP-dependent proteolysis an	Matrix Biol	2021	FCHP	MI
34446744	34446744	Hydrolysis of a second Asp-Pro site at the N-terminus of NOTCH3 in inherited vascular dementia	Scientific Reports	2021	BCHP	Dementia, Cerebral Vasculature
34480023	34480023	Long-term treatment with senolytic drugs Dasatinib and Quercetin ameliorates age-dependent intervertebral disc degenerati	Nature Communications	2021	FCHP	IVD Degeneration
34584195	34584195	Human cardiac stem cells rejuvenated by modulating autophagy with MHY-1685 enhance the therapeutic potential for cardiac	Experimental and Molecular Medicine	2021	FCHP	Cardiac Repair
34622942	34622942	Cyclic helix B peptide promotes random-pattern skin flap survival via TFE3-mediated enhancement of autophagy and reductor	British Journal of Pharmacology	2021	FCHP	Skin Flaps
34645749	34645749	Ovariectomy Causes Degeneration of Perivascular Adipose Tissue	Journal of Oleo Science	2021	FCHP	Tissue Degeneration, Perivascular Adipose Tissue
34685639	34685639	Replacement of Lost Substance P Reduces Fibrosis in the Diabetic Heart by Preventing Adverse Fibroblast and Macrophage Ph	Cells	2021	FCHP	Cardiac Fibrosis, macrophage and fibroblast differentiation

34714551	34714551	T1p imaging as a non-invasive assessment of collagen remodelling and organization in human skeletal muscle after ligament	The Journal of Physiology	2021	FCHP	Ligament Injury, Skeletal Muscle
34738460	34738460	Molecular Imaging of Collagen Destruction of the Spine	ACS Nano	2021	RCHP, sCy7.5CHP, sCy7.5CHP CTL	Spine
34756877	34756877	C1r Upregulates Production of Matrix Metalloproteinase-13 and Promotes Invasion of Cutaneous Squamous Cell Carcinoma	Journal of Investigative Dermatology	2021	BCHP	Cutaneous Squamous Cell Carcinoma
34808238	34808238	Skin Fibrosis and Recovery Is Dependent on Wnt Activation via DPP4	Journal of Investigative Dermatology	2021	BCHP	Skin Fibrosis, Fibrosis Recovery
34826240	34826240	Toughening mechanisms for the attachment of architected materials: The mechanics of the tendon enthesis	Science Advances	2021	FCHP	Tendon Enthesis
34910928	34910928	Differential pre-malignant programs and microenvironment chart distinct paths to malignancy in human colorectal polyps	Cell	2021	RCHP	Colorectal Polyps
34939928	34939928	Role of distinct fibroblast lineages and immune cells in dermal repair following UV radiation induced tissue damage	eLife	2021	BCHP	Dermal Repair
PREPRINT	PREPRINT	Heterogeneous strains in tissue collagen show that high strains locally suppress degradation by collagenase	BioRxiv	2021	BCHP	Tissue Strain, Collagen Degradation
32500704	32500704	Enrichment of Collagen Fragments Using Dimeric Collagen Hybridizing Peptide for Urinary Collagenomics	J Proteome Res	2020	Custom	Urinary Collagenomics
31325483	31325483	Tendon tissue microdamage and the limits of intrinsic repair	Matrix Biol	2020	FCHP	Tendon Damage
31568155	31568155	Quantitative Liver Fibrosis Using Collagen Hybridizing Peptide to Predict Native Liver Survival in Biliary Atresia: A Pilot Study	J Pediatr Gastroenterol Nutr	2020	FCHP	Biliary Atresia
32439570	32439570	Aberrant structure of fibrillar collagen and elevated levels of advanced glycation end products typify delayed fracture healing in Bone		2020	RCHP	AGEs, Fracture Healing
32543401	32543401	Anisotropic properties of articular cartilage in an accelerated in vitro wear test	J Mech Behav Biomed Mater	2020	FCHP	Articular Cartilage
32570295	32570295	Effective enzymatic debridement of burn wounds depends on the denaturation status of collagen	Wound Repair Regen	2020	Unknown	Burn Wounds
32609496	32609496	Localization of Therapeutic Fab-CHP Conjugates to Sites of Denatured Collagen for the Treatment of Rheumatoid Arthritis	Bioconjug Chem	2020	Custom	RA
32923623	32923623	Accumulation of collagen molecular unfolding is the mechanism of cyclic fatigue damage and failure in collagenous tissues	Sci Adv	2020	FCHP	Cyclic Fatigue
33035697	33035697	Collagen denaturation is initiated upon tissue yield in both positional and energy-storing tendons	Acta Biomater	2020	FCHP	Tendon Overuse
33172983	33172983	Dopamine D1 receptor stimulates cathepsin K-dependent degradation and resorption of collagen I in lung fibroblasts	J Cell Sci	2020	BCHP, BCHP CTL	IPF
31775156	31775156	An acute immune response underlies the benefit of cardiac adult stem cell therapy.	Nature	2020	BCHP	Cardiac Health, Stem Cell Therapy
31819213	31819213	Successive blood meals enhance virus dissemination within mosquitoes and increase transmission potential	Nature Microbiology	2020	FCHP	Virus Transmission
31961823	31961823	Arp2/3 inactivation causes intervertebral disc and cartilage degeneration with dysregulated TonEBP-mediated osmoadaptatio	JCI Insight	2020	RCHP	IVD Degeneration
32432932	32432932	Thermal injury initiates pervasive fibrogenesis in skeletal muscle	American Journal of Physiology: Cell Physiology	2020	FCHP	Fibrogenesis, Skeletal Muscle
32785676	32785676	Loss of Osteopontin Expression Reduces HSV-1-Induced Corneal Opacity	Investigative Ophthalmology & Visual Science	2020	BCHP	Corneal Opacity
32817558	32817558	A specialized population of Periostin-expressing cardiac fibroblasts contributes to postnatal cardiomyocyte maturation and in	Proceedings of the National Academy of Sciences of the United States of America	2020	FCHP	Cardiac Fibroblasts
32987703	32987703	Spontaneous Right Ventricular Pseudoaneurysms and Increased Arrhythmogenicity in a Mouse Model of Marfan Syndrome	International Journal of Molecular Sciences	2020	FCHP	Cardiac Health, Marfan Syndrome
33097606	33097606	Mitochondrial dysfunction triggers a catabolic response in chondrocytes via ROS-mediated activation of the JNK/AP1 pathway	Journal of Cell Science	2020	FCHP	Mitochondrial Dysfunction
33321592	33321592	A new mechanism for reduced cell adhesion: Adsorption dynamics of collagen on a nanoporous gold surface	Materials Science and Engineering	2020	FCHP	Cell Adhesion
33392460	33392460	Advanced glycation end products cause RAGE-dependent annulus fibrosus collagen disruption and loss identified using in situ	JOR Spine	2020	BCHP, FCHP	IVD Degeneration
30474872	30474872	Microplate assay for denatured collagen using collagen hybridizing peptides	J Orthop Res	2019	FCHP	CHPs
30840240	30840240	In Situ Detection of Degraded and Denatured Collagen via Triple Helical Hybridization: New Tool in Histopathology	Methods Mol Biol	2019	N/A	N/A
31307223	31307223	An Anterior Cruciate Ligament Failure Mechanism	Am J Sports Med	2019	RCHP	Ligament Failure
31334527	31334527	Assessing collagen fibrils molecular damage after a single stretch-release cycle	Soft Matter	2019	FCHP	Connective Tissue
31438477	31438477	Developing Regenerative Treatments for Developmental Defects, Injuries, and Diseases Using Extracellular Matrix Collagen-Ta	Int J Mol Sci	2019	FCHP	Regenerative Medicine
31723936	31723936	Acoustic modification of collagen hydrogels facilitates cellular remodeling	Mater Today Bio	2019	FCHP	Hydrogels, ECM Remodeling
31788555	31788555	Molecular Detection and Assessment of Intervertebral Disc Degeneration via a Collagen Hybridizing Peptide	ACS Biomater Sci Eng	2019	FCHP	Intervertebral Disc Degeneration
31861331	31861331	Scar Formation with Decreased Cardiac Function Following Ischemia/Reperfusion Injury in 1 Month Old Swine	Journal of Cardiovascular Disease and Development	2019	RCHP	Reperfusion Injury, Scar Formation
THESIS	THESIS	The Use of Multiphoton Microscopy to Assess Collagen Quality and Advanced Glycation End-products in the Intervertebral Disc	Icahn School of Medicine at Mount Sinai	2019	FCHP	IVD Degeneration
30686120	30686120	Protective Effects of Activated Myofibroblasts in the Pressure-Overloaded Myocardium Are Mediated Through Smad-Dependen	Circulation Research	2019	FCHP	Myofibroblast Protective Effects, Myocardium
30710594	30710594	A window into the brain: Tools to assess pre-clinical efficacy of biomaterials-based therapies on central nervous system disord	Advanced Drug Delivery Reviews	2019		Biomaterials, CNS
30888851	30888851	Preservation of circadian rhythms by the protein folding chaperone, BiP	Federation of American Scientists for Experimental Biology Journal	2019	CF-CHP	Collagen Synthesis & Circadian Rhythms
30995070	30995070	Anterior Cruciate Ligament Tear Promotes Skeletal Muscle Myostatin Expression, Fibrogenic Cell Expansion, and a Decline in	The American Journal of Sports Medicine	2019	FCHP	Ligament Tear, ACL
31132662	31132662	Molecular-level collagen damage explains softening and failure of arterial tissues: A quantitative interpretation of CHP data wit	J Mech Behav Biomed Mater	2019	FCHP	Arterial Damage
31182124	31182124	The impact of cholesterol deposits on the fibrillar architecture of the Achilles tendon in a rabbit model of hypercholesterolemia	J Orthop Surg Res	2019	BCHP	Tendon Health
31393098	31393098	Cell-specific ablation of Hsp47 defines the collagen-producing cells in the injured heart.	JCI Insight	2019	FCHP	Cardiac Injury
31433691	31433691	The impact of skeletal muscle contraction on CD146+Lin- pericytes	American Journal of Physiology: Cell Physiology	2019	FCHP	Skeletal Muscle Contraction
31443173	31443173	Clumps of Mesenchymal Stem Cell/Extracellular Matrix Complexes Generated with Xeno-Free Conditions Facilitate Bone Reg	International Journal of Molecular Sciences	2019	FCHP	Osteogenesis, Bone Regeneration
31763444	31763444	Microfluidic disc-on-a-chip device for mouse intervertebral disc—pitching a next-generation research platform to study disc de	ACS Biomater Sci Eng	2019	FCHP	IVD Degeneration
30149231	30149231	Visualizing collagen proteolysis by peptide hybridization: From 3D cell culture to in vivo imaging	Biomaterials	2018	FCHP	CHPs
30557395	30557395	Systematic in vitro comparison of decellularization protocols for blood vessels	PloS One	2018	FCHP	Tissue Decellularization, Blood Vessels
THESIS	THESIS	TRAUMA-INDUCED ALTERATIONS OF CEREBRAL VESSEL MECHANICS AND MICROSTRUCTURE.	University of Utah	2018	FCHP	CNS Vessel Mechanics, TBI
THESIS	THESIS	STRUCTURAL CHANGES IN STRETCHED COLLAGEN FIBRILS AS A FUNCTION OF RELAXATION TIMES.	Nova Scotia University	2018	CF-CHP	Collagen Fibril Structure
29225149	29225149	Detection and characterization of molecular-level collagen damage in overstretched cerebral arteries	Acta Biomater	2018	FCHP	Arterial Damage
29519673	29519673	Fatigue loading of tendon results in collagen kinking and denaturation but does not change local tissue mechanics	Journal of Biomechanics	2018	FCHP	Tendon Fatigue, Collagen Structure, Tissue Mechanics
29535366	29535366	In tendons, differing physiological requirements lead to functionally distinct nanostructures	Scientific Reports	2018	FCHP	Tendon Physiology
29631168	29631168	Decellularized materials derived from TSP2-KO mice promote enhanced neovascularization and integration in diabetic wound	Biomaterials	2018	FCHP	Diabetic Wounds, Neovascularization
29756312	29756312	Cyclic Peptides for Efficient Detection of Collagen	ChemBiochem: A European Journal of Chemical Biology	2018	CMP	Collagen Detection
29844169	29844169	How electrostatic networks modulate specificity and stability of collagen	Proceedings of the National Academy of Sciences of the United States of America	2018	CMP	Collagen Stability
29953488	29953488	Lox2 is dispensable for dermal development, homeostasis and tumour stroma formation	PLoS One	2018	RCHP	Dermal Homeostasis, Tumor Stroma Formation
30158243	30158243	Fibroblast state switching orchestrates dermal maturation and wound healing	Molecular System Biology	2018	BCHP	Wound Healing, Fibroblast State
30269950	30269950	Divergent Matrix-Remodeling Strategies Distinguish Developmental from Neoplastic Mammary Epithelial Cell Invasion Progran	Dev Cell	2018	CF-CHP	Cancer (Breast Cancer ECM)
30280599	30280599	Skeletal muscle fibrosis is associated with decreased muscle inflammation and weakness in patients with chronic kidney dise	Am J Physiol Renal Physiol	2018	FCHP	Skeletal Fibrosis
30498097	30498097	Dietary advanced glycation end-product consumption leads to mechanical stiffening of murine intervertebral discs	Dis Model Mech	2018	FCHP	Intervertebral Discs, AGEs
28161576	28161576	Molecular assessment of collagen denaturation in decellularized tissues using a collagen hybridizing peptide	Acta Biomater	2017	CF-CHP	CHPs
28327610	28327610	Molecular level detection and localization of mechanical damage in collagen enabled by collagen hybridizing peptides	Nature Communications	2017	CF-CHP	CHPs
28445649	28445649	High Serum Stability of Collagen Hybridizing Peptides and Their Fluorophore Conjugates	Mol Pharm	2017	sCy7.5CHP	CHPs
28877431	28877431	In Situ Imaging of Tissue Remodeling with Collagen Hybridizing Peptides	ACS Nano	2017	ALL	CHPs
29091434	29091434	Self-Assembled Water-Soluble Nanofibers Displaying Collagen Hybridizing Peptides	J Am Chem Soc	2017	CF-CHP	CHPs
28153760	28153760	Matrix-metalloproteinases as targets for controlled delivery in cancer: An analysis of upregulation and expression	Journal of Controlled Release	2017	CMPs	MMPs, Cancer Drug Delivery System
28865990	28865990	ECM turnover-stimulated gene delivery through collagen-mimetic peptide-plasmid integration in collagen	Acta Biomaterialia	2017	CMPs	ECM remodeling

29043304	29043304	A single stranded fluorescent peptide probe for targeting collagen in connective tissues	Chemical Communications	2017	CMPs	Connective Tissue
26773768	26773768	Targeting collagen for diagnostic imaging and therapeutic delivery	J Control Release	2016	N/A	CHPs
27403657	27403657	Nanoparticle Assembly and Gelatin Binding Mediated by Triple Helical Collagen Mimetic Peptide	ACS Appl Mater Interfaces	2016	N/A	CHPs
26686918	26686918	A graphene oxide-based FRET sensor for rapid and specific detection of unfolded collagen fragments.	Biosensors and Bioelectronics	2016	CMPs	Collagen Triple Helix
27981245	27981245	Integration of growth factor gene delivery with collagen-triggered wound repair cascades using collagen-mimetic peptides.	Bioengineering and Translational Medicine	2016	CMPs	Wound Repair
32262998	32262998	A highly specific graphene platform for sensing collagen triple helix.	Journal of Material Chemistry	2016		Collagen Triple Helix
32263567	32263567	Paper-based FRET for the direct detection of collagen triple helix.	Journal of Material Chemistry	2016		Collagen Triple Helix
25476588	25476588	Non-covalent photo-patterning of gelatin matrices using caged collagen mimetic peptides	Macromolecular Bioscience	2015	Custom	CHPs
25584990	25584990	Collagen-gelatin mixtures as wound model, and substrates for VEGF-mimetic peptide binding and endothelial cell activation	Acta Biomaterialia	2015	Custom	Wound Model
26184049	26184049	Uterine perfusion model for analyzing barriers to transport in fibroids	Journal of Controlled Release	2015	CMP	Perfusion Model
25941782	25941782	Tissue-engineered acellular small diameter long-bypass grafts with neointima-inducing activity	Biomaterials	2015	CMP	Vascular Grafts
24513868	24513868	Imaging denatured collagen strands in vivo and ex vivo via photo-triggered hybridization of caged collagen mimetic peptides	JoVE Journal of Visualized Experiments	2014		CHPs
25327307	25327307	Conducting polymer nanoparticles decorated with collagen mimetic peptides for collagen targeting	Chemical Communications	2014	Custom	CHPs
25541582	25541582	Capillary Network-Like Organization of Endothelial Cells in PEGDA Scaffolds Encoded with Angiogenic Signals via Triple Helica	Advanced Functional Materials	2014	Custom	CHPs
24633807	24633807	Review collagen-based biomaterials for wound healing	Biopolymers	2014		Wound Healing
25115789	25115789	Collagen mimetic peptide engineered M13 bacteriophage for collagen targeting and imaging in cancer	Biomaterials	2014	BCHP	Cancer Imaging
32262095	32262095	A CMP-based method for tunable, cell-mediated gene delivery from collagen scaffolds.	Journal of Material Chemistry	2014	CMPs	Gene Therapy
23253177	23253177	Direct detection of collagenous proteins by fluorescently labeled collagen mimetic peptides	Bioconjugate Chemistry	2013		CHPs
24210894	24210894	Targeting and mimicking collagens via triple helical peptide assembly	Current Opinions in Chemical Biology	2013		CHPs
22387389	22387389	On-the-resin N-terminal modification of long synthetic peptides	Anal Biochem	2012		CHPs
22927373	22927373	Targeting collagen strands by photo-triggered triple-helix hybridization	Proceedings of the National Academy of Sciences of the United States of America	2012		CHPs
23908674	23908674	Encoding Cell-Instructive Cues to PEG-Based Hydrogels via Triple Helical Peptide Assembly	Soft Matter	2012		CHPs, Hydrogels
22522497	22522497	Peptides that anneal to natural collagen in vitro and ex vivo	Organic & Biomolecular Chemistry	2012		CHPs
20740489	20740489	Template-tethered collagen mimetic peptides for studying heterotrimeric triple-helical interactions	Biopolymers	2011		CHPs
26312060	26312060	Matrix-Bound VEGF Mimetic Peptides: Design and Endothelial Cell Activation in Collagen Scaffolds	Advanced Functional Materials	2011	Custom	CHPs, Cell Activation
26316880	26316880	Collagen Mimetic Peptides: Progress Towards Functional Applications	Soft Matter	2011	Custom	CHPs
20715762	20715762	PEG-based hydrogels with collagen mimetic peptide-mediated and tunable physical cross-links	Biomacromolecules	2010		Hydrogels, Crosslinking
18547103	18547103	Spatio-temporal modification of collagen scaffolds mediated by triple helical propensity	Biomacromolecules	2008		Collagen Scaffold
18816098	18816098	Immobilization of growth factors on collagen scaffolds mediated by polyanionic collagen mimetic peptides and its effect on en	Biomacromolecules	2008		Collagen Scaffold
18826339	18826339	Enhanced chondrogenesis of mesenchymal stem cells in collagen mimetic peptide-mediated microenvironment	Tissue Engineering	2008		ECM Microenvironment
16511895	16511895	Nanoparticle-assisted visualization of binding interactions between collagen mimetic peptide and collagen fibers	Angew Chem Int Ed Engl	2006		CHPs
16797067	16797067	Collagen mimetic peptide-conjugated photopolymerizable PEG hydrogel	Biomaterials	2006		CHPs
15783169	15783169	Facile modification of collagen directed by collagen mimetic peptides	Journal of the American Chemical Society	2005		CHPs