Table F.16 - Athanasiou KA - Pattern of co-authorship

Author	1st year	Collaborative papers	Other papers	1st paper	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Athanasiou KA	**1995**	**11**								**1**	**3**	**1**	**2**	**3**	**1**	
Agrawal CM	1995	7	2	Yes						1	3		2	1		
Singhal AR	1995	2		Yes						1	1					
Boyan BD	1995	1	13							1						
Thompson DE	1996	1									1					
Niederauer GG	1996	1	3	Yes							1					
Schenck R	1997	1										1				
Korvick DL	1997	1	1	Yes								1				
Spain TL	1998	1											1			
Schmitz JP	1998	1	2										1			
Lebaron RG	2000	2	2											2		
Zhu CF	2000	1												1		
Wang X	2000	1												1		
Lanctot DR	2000	1												1		
Sweigart MA	2001	1													1	

Table F.18 - Green H - Pattern of co-authorship

Author	1st year	Collaborative papers	Other papers	1st paper	1975	1981	1984	1985	1987	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Green H	**1975**	**11**			**1**	**1**	**1**	**1**	**3**	**3**	**1**											
Rheinwald JG	1975	1			1																	
Kehinde O	1981	4		Yes		1	1			2												
Oconnor NE	1981	3	2	Yes		1	1			1												
Mulliken JB	1981	1	1	Yes		1																
Banks-schlegel S	1981	1				1																
Compton CC	1984	2	4	Yes			1			1												
Gallico GG	1984	2	3	Yes			1			1												
Barrandon Y	1985	4		Yes				1	3													
Morgan JR	1987	1	3	Yes					1													
Mulligan RC	1987	1	3	Yes					1													
Gilchrest BA	1989	1	1	Yes						1												
Phillips TJ	1989	1	2	No						1												
Remensnyder JP	1989	1								1												
Teumer J	1990	1									1											
Lindahl A	1990	1									1											

Table F.19 - Hansbrough JF - Pattern of co-authorship

Author	1st year	Collaborative papers	Other papers	1st paper	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Hansbrough JF	**1988**	**11**			**2**	**1**		**3**	**2**	**1**	**1**					**1**		
Boyce ST	1988	4	4	Yes	2	1		1										
Christianson DJ	1988	1			1													
Cooper ML	1989	5		Yes		1		3	1									
Foreman TJ	1989	2		Yes		1		1										
Bartel RL	1991	3	1	Yes				1	1	1								
Spielvogel RL	1991	2		Yes				1	1									
Naughton GK	1991	2	5					1	1									
Cohen R	1991	2		Yes				1	1									
Stayner N	1991	1						1										
Sakabu S	1991	1						1										
English KB	1991	1						1										
Greenleaf GE	1992	3		Yes					1	1	1							
Dore C	1992	1							1									
Hansbrough WB	1992	1							1									
Morgan JL	1993	2		Yes						1	1							
Wilkins L	1994	1									1							
Nolte CJM	1994	1	3								1							
Parikh M	1994	1									1							
Krejcipapa NC	1999	1														1		
Hoang A	1999	1														1		

Table F.20 - Wozney JM - Pattern of co-authorship

Author	1st year	Collaborative papers	Other papers	1st paper	1988	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Wozney JM	**1988**	**11**			**1**	**2**		**2**				**3**	**2**		**1**		
Wang EA	1988	4	2	Yes	1	2		1									
Rosen V	1988	4	1	Yes	1	2		1									
Hewick RM	1988	3		Yes	1	2											
Celeste AJ	1988	2		Yes	1	1											
Whitters MJ	1988	1			1												
Mitsock LM	1988	1			1												
Kriz RW	1988	1			1												
Mcquaid D	1990	1				1											
Luxenberg DP	1990	1	1	Yes		1											
Lapan P	1990	1				1											
Bauduy M	1990	1				1											
Kerns KM	1990	1				1											
Moutsatsos IK	1990	1				1											
Iannazzi JA	1990	1				1											
Harada T	1990	1				1											
Dalessandro JS	1990	1				1											
Cordes P	1990	1				1											
Israel DI	1990	1				1											
Taylor RC	1990	1				1											
Nove J	1990	1				1											
Lane JM	1992	2	2					1				1					
Yasko AW	1992	1	3	Yes				1									
Fellinger EJ	1992	1						1									
Hollinger JO	1996	2	12									1	1				
Hair G	1996	1										1					
Berberian W	1996	1										1					
Boden SD	1996	1										1					
Bostrom M	1996	1										1					
Browne M	1996	1										1					
Turek T	1996	1	3									1					
Tomin E	1996	1	1	Yes								1					
Titus L	1996	1										1					
Mccuaig K	1996	1										1					
Mayer M	1996	1										1					
Racine M	1996	1										1					
Ron E	1996	1	3									1					
Smith J	1996	1	1									1					

Author	1st year	Collaborative papers	Other papers	1st paper	1988	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Wozney JM	**1988**	**11**			**1**	**2**		**2**				**3**	**2**		**1**		
Schildhauer T	1996	1										1					
Nanes MS	1996	1										1					
Buck D	1997	1	3	Yes									1				
Hughes FJ	1997	1											1				
Zegzula HD	1997	1											1				
Cruchley AT	1997	1											1				
King GN	1997	1											1				
Brekke JH	1997	1	3										1				
King N	1997	1											1				
Boyan BD	1999	1	13												1		
Dean DD	1999	1	5												1		
Niederauer GG	1999	1	3												1		
Schwartz Z	1999	1	9												1		
Somers A	1999	1													1		
Lohmann CH	1999	1	2	Yes											1		
Carnes DL	1999	1	2												1		

Table F.21 - Bruder SP - Pattern of co-authorship

Author	1st year	Collaborative papers	Other papers	1st paper	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Bruder SP	**1990**	**10**			**1**				**1**			**4**	**3**	**1**		
Caplan AI	1990	3	24		1				1			1				
Goldberg VM	1990	2	17		1								1			
Nakahara H	1990	1	2	Yes	1											
Fink DJ	1994	1	1	Yes					1							
Jaiswal N	1997	5		Yes								3	2			
Haynesworth SE	1997	3	3									3				
Kadiyala S	1997	3	2									1	2			
Horowitz MC	1997	1										1				
Mosca JD	1997	1	1	Yes								1				
Zala J	1998	1											1			
Kraus KH	1998	1											1			
Barry FP	1998	1	2	Yes									1			
Kurth AA	1998	1											1			
Connolly TJ	1998	1											1			
Ricalton NS	1998	1											1			
Shea M	1998	1	1										1			
Boynton RE	1998	1											1			
Hayes WC	1998	1	4										1			
Fox BS	1999	1												1		

Table F.22 - Galletti PM - Pattern of co-authorship

Author	1st year	Collaborative papers	Other papers	1st paper	1977	1978	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Galletti PM	**1977**	**10**			**2**	**1**	**2**	**3**	**1**						**1**						
Lysaght MJ	1977	3	2	Yes	2										1						
Like AA	1977	2		Yes	2																
Whittemore AD	1977	2	1	Yes	2																
Chick WL	1977	2	2	Yes	2																
Colton CK	1977	2	2	Yes	2																
Panol G	1977	2		Yes	1	1															
Lauris V	1977	1			1																
Low D	1977	1			1																
Richardson PD	1977	1			1																
Perna JJ	1977	1			1																
Stoller R	1978	1				1															
Calabresi P	1978	1				1															
Porter LE	1978	1				1															
Carman R	1978	1				1															
Hager JC	1978	1				1															
Thayer WR	1978	1				1															
Leduc EH	1978	1				1															
Aebischer P	1987	7	19	Yes			2	3	1						1						
Winn SR	1987	3	11	Yes			1	2													
Valentini RF	1987	3	6	Yes			2	1													
Dario P	1987	1	1	Yes			1														
Domenici C	1987	1					1														
Chiu TH	1988	1	6					1													
Guenard LV	1988	1	6	Yes				1													
Sasken HF	1988	1						1													
Goddard MB	1988	1						1													
Christenson L	1989	1	1	Yes					1												
Mcmillan PN	1989	1	1						1												

Table G - Highly Cited Tissue Engineering Patents 1980-2001
(citations to US/EP/PCT families from US/EP/PCT documents)

CHI Patent Family	Earliest Pub Year	Priority Country	Standardized Assignee	Country	Representative Patent	Representative Title	Citation Index	Cites Received
CHI00053	1999	EP	Isotis Bv	US	6228117	Device for tissue engineering bone	7.50	11
CHI00166	1990	US	Advanced Tissue Sciences Inc	US	4963489	THREE-DIMENSIONAL CELL AND TISSUE CULTURE SYSTEM	5.73	162
CHI00190	1996	US	University Of Texas	US	5529914	Gels for encapsulation of biological materials	5.32	48
CHI00163	1991	US	Childrens Hospital	US	5041138	Neomorphogenesis of cartilage in vivo from cell culture	4.86	119
CHI00070	1999	FR	C R Bard Inc	US	5954767	Curved prosthetic mesh and its method of manufacture	4.77	7
CHI00352	1999	US	University Of Michigan	US	5885829	Engineering oral tissues	4.77	7
CHI00051	1999	EP	Roche Holding Ltd	EP	897010	Modified phytases	4.09	6
CHI00376	1999	US	Keraplast Technologies Ltd	US	5932552	Keratin-based hydrogel for biomedical applications and method of production	4.09	6
CHI00259	1998	US	Organogenesis Inc	US	5733337	Tissue repair fabric	3.94	18
CHI00173	1993	US	** Unassigned **	US	5226914	Method for treating connective tissue disorders	3.88	66
CHI00099	1991	US	Advance Tissue Sciences Inc	US	5032508	Three-dimensional cell and tissue culture system	3.80	93
CHI00200	1995	US	Rice Univ	US	5522895	Biodegradable bone templates	3.78	38
CHI00172	1993	US	** Unassigned **	US	5197985	Method for enhancing the implantation and differentiation of marrow-derived mesenchymal cells	3.59	61
CHI00180	1993	US	Regen Biologics Inc	US	5306311	Prosthetic articular cartilage	3.53	60
CHI00302	1997	US	N Shore Univ Hospital Research Corp	US	5700289	Tissue-engineered bone repair using cultured periosteal cells	3.46	21
CHI00274	1999	US	Cryolife Inc	US	5899936	Treated tissue for implantation and methods of preparation	3.41	5
CHI00335	1999	US	Osteobiologics Inc	US	5863297	"Moldable, hand-shapable biodegradable implant material"	3.41	5
CHI00265	1999	US	Childrens Medical Center Corp	US	5855610	"Engineering of strong, pliable tissues"	3.41	5
CHI00149	1989	US	** Unassigned **	US	4846835	TECHNIQUE FOR HEALING LESIONS IN CARTILAGE	3.19	102
CHI00328	1997	US	Advance Tissue Sciences Inc	US	5792603	"Apparatus and method for sterilizing, seeding, culturing, storing, shipping and testing tissue, synthetic or native, vascular grafts"	3.13	19
CHI00203	1995	US	Advance Tissue Sciences Inc	US	5443950	Three-dimensional cell and tissue culture system	3.09	31
CHI00330	1998	US	Genzyme Corporation	EP	920490	CHONDROCYTE MEDIA FORMULATIONS AND CULTURE PROCEDURES	3.06	14
CHI00329	1998	US	Genzyme Corporation	EP	920490	CHONDROCYTE MEDIA FORMULATIONS AND CULTURE PROCEDURES	3.06	14

CHI Patent Family	Earliest Pub Year	Priority Country	Standardized Assignee	Country	Representative Patent	Representative Title	Citation Index	Cites Received
CHI00196	1996	US	Mit/Mass Inst Of Technology	US	5514378	Biocompatible polymer membranes and methods of preparation of three dimensional membrane structures	2.99	27
CHI00213	1998	US	Mass Inst Of Tech Childrens Med Ctr Corp	US	5770193	Preparation of three-dimensional fibrous scaffold for attaching cells to produce vascularized tissue in vivo	2.84	13
CHI00168	1998	US	Mit/Mass Inst Of Technology	US	5736372	Biodegradable synthetic polymeric fibrous matrix containing chondrocyte for in vivo production of a cartilaginous structure	2.84	13
CHI00165	1991	US	Grace (Wr) & Co	US	5002661	Artificial pancreatic perfusion device	2.82	69
CHI00222	1997	US	Mit/Mass Inst Of Technology	US	5626861	Polymeric-hydroxyapatite bone composite	2.80	17
CHI00313	1997	US	Advance Tissue Sciences Inc	US	5842477	Method for repairing cartilage	2.80	17
CHI00386	1999	US	Advance Tissue Sciences Inc	US	6121042	Apparatus and method for simulating in vivo conditions while seeding and culturing three-dimensional tissue constructs	2.73	4
CHI00339	1999	US	University Of Massachusetts	US	5944754	Tissue re-surfacing with hydrogel-cell compositions	2.73	4
CHI00334	1999	US	Case Western Reserve University	US	5855619	Biomatrix for soft tissue regeneration	2.73	4
CHI00131	1984	US	Mit/Mass Inst Of Technology	US	4485096	Tissue-equivalent and method for preparation thereof	2.50	127
CHI00283	1997	US	Focal Inc	US	5662712	Apparatus for intraluminal photothermoforming	2.47	15
CHI00201	1996	US	Mit/Mass Inst Of Technology	US	5567612	Genitourinary cell-matrix structure for implantation into a human and a method of making	2.44	22
CHI00212	1998	US	Mit/Mass Inst Of Technology	US	5759830	Three-dimensional fibrous scaffold containing attached cells for producing vascularized tissue in vivo	2.41	11
CHI00224	1994	US	Mit/Mass Inst Of Technology	US	5709854	Tissue formation by injecting a cell-polymeric solution that gels in vivo	2.40	35
CHI00192	1995	US	Mit/Mass Inst Of Technology	US	5399665	Biodegradable polymers for cell transplantation	2.29	23
CHI00150	1989	US	Regen Biologics Inc	US	4880429	PROSTHETIC MENISCUS	2.28	73
CHI00167	1992	US	Northwestern University	US	5112354	Bone allograft material and method	2.27	47
CHI00188	1994	US	Boston Scientific Corp	US	5383925	Three-dimensional braided soft tissue prosthesis	2.26	33
CHI00191	1995	US	Advance Tissue Sciences Inc	US	5478739	Three-dimensional stromal cell and tissue culture system	2.19	22
CHI00272	1995	US	Advance Tissue Sciences Inc	US	5902741	Three-dimensional cartilage cultures	2.19	22
CHI00288	1998	US	Childrens Medical Center Corp	US	5741685	Parenchymal cells packaged in immunoprotective tissue for implantation	2.19	10
CHI00214	1998	US	Mass Inst Of Tech Childrens Med Ctr Corp	US	5770417	Three-dimensional fibrous scaffold containing attached cells for producing vascularized tissue in vivo	2.19	10
CHI00044	1998	DK	Novo Nordisk A/S	EP	937138	CELLULASE VARIANTS	2.19	10
CHI00287	1998	US	Baxter International Inc	US	5741330	Close vascularization implant material	2.19	10
CHI00346	1998	US	Mit/Mass Inst Of Technology	US	5766618	Polymeric-hydroxyapatite bone composite	2.19	10
CHI00239	1998	US	Mit/Mass Inst Of Technology	US	5716404	Breast tissue engineering	2.19	10
CHI00142	1988	US	Collagen Corp	US	4789663	Methods of bone repair using collagen	2.15	77

CHI Patent Family	Earliest Pub Year	Priority Country	Standardized Assignee	Country	Representative Patent	Representative Title	Citation Index	Cites Received
CHI00095	1997	IT	Istituto Di Ricerche Di Biologia Molecolare P Ang	EP	846164	"METHODOLOGY TO PRODUCE, PURIFY AND ASSAY POLYPEPTIDES WITH THE PROTEOLYTIC ACTIVITY OF THE HCV NS3 PROTEASE"	2.14	13
CHI00273	1997	US	Cryolife Inc	US	5632778	Treated tissue for implantation and methods of preparation	2.14	13
CHI00170	1993	US	Advance Tissue Sciences Inc	US	5266480	Three-dimensional skin culture system	2.12	36
CHI00130	1985	US	Mit/Mass Inst Of Technology	US	4546500	FABRICATION OF LIVING BLOOD VESSELS AND GLANDULAR TISSUES	2.11	99
CHI00277	1999	US	** Unassigned **	US	5916265	Method of producing a biological extracellular matrix for use as a cell seeding scaffold and implant	2.05	3
CHI00353	1999	US	Brown University	US	5939323	Hyaluronan based biodegradable scaffolds for tissue repair	2.05	3
CHI00365	1999	US	Hadasit Medical Research Services And Developm	EP	1015570	FIBRIN MICROBEADS AND USES THEREOF	2.05	3
CHI00374	1999	US	Advance Tissue Sciences Inc	US	5858721	Three-dimensional cell and tissue culture system	2.05	3
CHI00426	1999	US	Keraplast Technologies Ltd	US	5948432	Keratin-based sheet material for biomedical applications and method of production	2.05	3
CHI00281	1996	US	Advance Tissue Sciences Inc	US	5863531	In vitro preparation of tubular tissue structures by stromal cell culture on a three-dimensional framework	1.99	18
CHI00290	1998	US	University Of Texas	US	5801033	Gels for encapsulation of biological materials	1.97	9
CHI00010	1992	CH	Sulzer Ag	US	5147402	Implant for ingrowth of osseous tissue	1.93	40
CHI00174	1992	US	Advance Tissue Sciences Inc	US	5160490	Three-dimensional cell and tissue culture apparatus	1.88	39
CHI00096	1997	IT	Fidia Advanced Biopolymers Srl	EP	863776	A BIOLOGIC MATERIAL COMPRISING AN EFFICIENT CULTURE OF BONE MARROW STEM CELLS PARTIALLY OR COMPLETELY DIFFERENTIATED INTO CONNECTIVE TISSUE CELLS AND A THREE-DIMENSIONAL BIOCOMPATIBLE AND BIODEGRADABLE MATRIX CONSISTING OF A HYALURONIC ACID DERIVATIVE	1.81	11
CHI00208	1995	US	Organogenesis Inc	US	5460962	Peracetic acid sterilization of collagen or collagenous tissue	1.79	18
CHI00136	1985	US	Mit/Mass Inst Of Technology	US	4505266	METHOD OF USING A FIBROUS LATTICE	1.79	84
CHI00278	1996	US	Advance Tissue Sciences Inc	EP	781116	THREE-DIMENSIONAL HUMAN CELL CULTURES ON CARDIAC VALVE FRAMEWORKS AND THEIR USES	1.77	16
CHI00129	1984	US	Mit/Mass Inst Of Technology	US	4458678	Cell-seeding procedures involving fibrous lattices	1.75	89
CHI00215	1998	US	Mit/Mass Inst Of Technology	US	5804178	"Implantation of cell-matrix structure adjacent mesentery, omentum or peritoneum tissue"	1.75	8
CHI00245	1998	US	Case Western Reserve University	US	5736396	Lineage-directed induction of human mesenchymal stem cell differentiation	1.75	8
CHI00304	1998	US	Focal Inc	US	5849035	Methods for intraluminal photothermoforming	1.75	8

CHI Patent Family	Earliest Pub Year	Priority Country	Standardized Assignee	Country	Representative Patent	Representative Title	Citation Index	Cites Received
CHI00135	1986	US	** Unassigned **	US	4609551	PROCESS OF AND MATERIAL FOR STIMULATING GROWTH OF CARTILAGE AND BONY TISSUE AT ANATOMICAL SITES	1.73	75
CHI00183	1993	US	Regen Biologics Inc	US	5263984	Prosthetic ligaments	1.71	29
CHI00251	1996	US	Advance Tissue Sciences Inc	US	5512475	Three-dimensional skin cell and tissue culture system	1.66	15
CHI00181	1993	US	Regen Biologics Inc	US	5258043	Method for making a prosthetic intervertebral disc	1.65	28
CHI00221	1997	US	Johns Hopkins University	US	5686091	Biodegradable foams for cell transplantation	1.65	10
CHI00269	1997	US	Advance Tissue Sciences Inc	US	5624840	Three-dimensional liver cell and tissue culture system	1.65	10
CHI00295	1996	US	Hmri/Clmf	US	5523228	Hydrodynamic cell culture environment for three dimensional tissue growth	1.55	14
CHI00002	1996	US	Childrens Medical Center Corp	US	5667778	Injectable bladder muscle cells-polymer suspension for treatment of vesicoureteral reflux and incontinence	1.55	14
CHI00267	1998	US	Cytotherapeutics Inc	US	5795790	Method for controlling proliferation and differentiation of cells encapsulated within bioartificial organs	1.53	7
CHI00097	1998	IT	Fidia Advanced Biopolymers Srl	EP	985029	HYALURONIC ACID DERIVATIVE BASED CELL CULTURE MATRIX AND BIODEGRADABLE THREE-DIMENSIONAL MATRIX	1.53	7
CHI00286	1998	US	Focal Inc	US	5741323	Polymeric article for intraluminal photothermoforming	1.53	7
CHI00161	1992	US	Nasa/Us Natl Aeronautic & Space Admin	US	5155034	Three-dimensional cell to tissue assembly process	1.49	31
CHI00159	1990	US	Regen Biologics Inc	US	5007934	Prosthetic meniscus	1.49	42
CHI00178	1993	US	Mit/Mass Inst Of Technology	EP	610423	PREVASCULARIZED POLYMERIC IMPLANTS FOR ORGAN TRANSPLANTATION	1.47	25
CHI00169	1991	US	Regen Biologics Inc	US	5108438	Prosthetic intervertebral disc	1.43	35
CHI00127	1985	US	Mit/Mass Inst Of Technology	US	4539716	FABRICATION OF LIVING BLOOD VESSELS AND GLANDULAR TISSUES	1.38	65
CHI00132	1987	US	Yeshiva University	US	4645669	CULTURING AND EMPLACEMENT OF DIFFERENTIATED CELLS IN VIVO	1.37	54
CHI00171	1992	US	Regen Biologics Inc	US	5116374	Prosthetic meniscus	1.25	26
CHI00160	1992	US	Nasa/Us Natl Aeronautic & Space Admin	US	5153132	Three-dimensional co-culture process	1.25	26
CHI00128	1983	US	Mit/Mass Inst Of Technology	US	4418691	Method of promoting the regeneration of tissue at a wound	1.12	61
CHI00146	1988	US	Mit/Mass Inst Of Technology	US	4787900	Process for forming multilayer bioreplaceable blood vessel prosthesis	1.12	40
CHI00156	1990	US	Clemson University	EP	359575	Soft tissue implant with micron-scale surface texture to optimize anchorage	1.06	30
CHI00179	1992	US	Regen Biologics Inc	US	5158574	Prosthetic meniscus	1.01	21
CHI00140	1986	US	Mit/Mass Inst Of Technology	US	4604346	SKIN-EQUIVALENT PREPARED BY THE USE OF PUNCH BIOPSY	0.86	37
CHI00155	1990	US	Mit/Mass Inst Of Technology	US	4902289	MULTILAYER BIOREPLACEABLE BLOOD VESSEL PROSTHESIS	0.78	22

CHI Patent Family	Earliest Pub Year	Priority Country	Standardized Assignee	Country	Representative Patent	Representative Title	Citation Index	Cites Received
CHI00126	1982	US	The University Of Medicine And Dentistry Of Nev	US	4329743	Bio-absorbable composite tissue scaffold	0.76	44
CHI00017	1988	DE	Mecron Medizinische Produkte Gmbh	EP	255797	Method of producing an individually designed prosthetic appliance	0.62	22
CHI00125	1980	US	** Unassigned **	US	4242460	Cell culture device	0.44	27
CHI00124	1980	US	** Unassigned **	US	4242459	Cell culture device	0.35	22

Figure A.1 - JA Hubbell

Hubbell's work combines biomaterials with peptides to enhance cell adhesion and development, earlier work is vascular and later work neural.

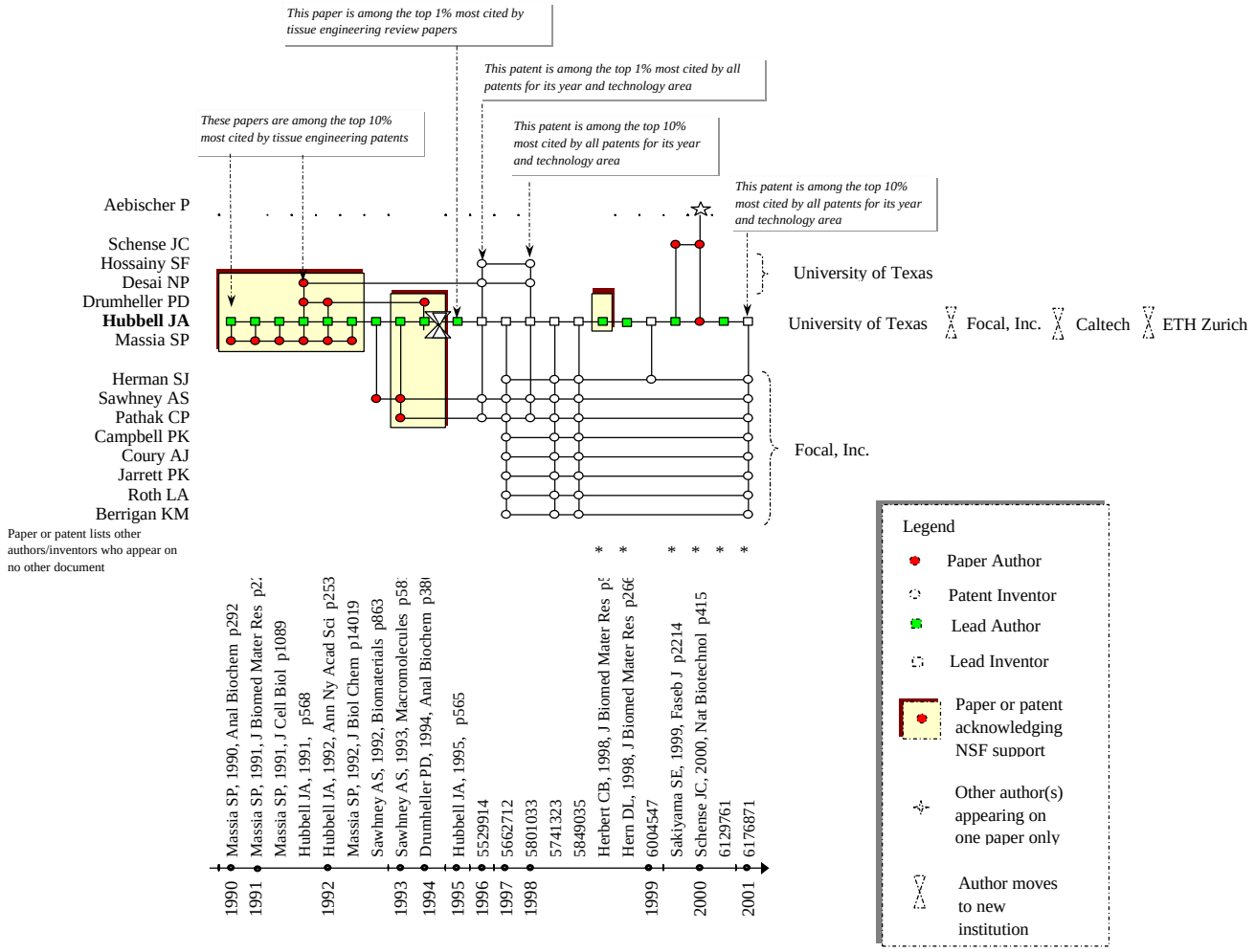

Figure A.2 - BD Boyan Z Schwarz

Boyan's work concerns osteoblasts and chondrocytes regulating events in their extracellular matrix. The work displayed here examined vitamin D metabolites, followed by the roles of materials surfaces and finally PLA/PGA scaffolds and growth factor BB. Athanasiou's work examines biodegradable implants and scaffolds using polylactic acid/polyglycolic-acid copolymers.

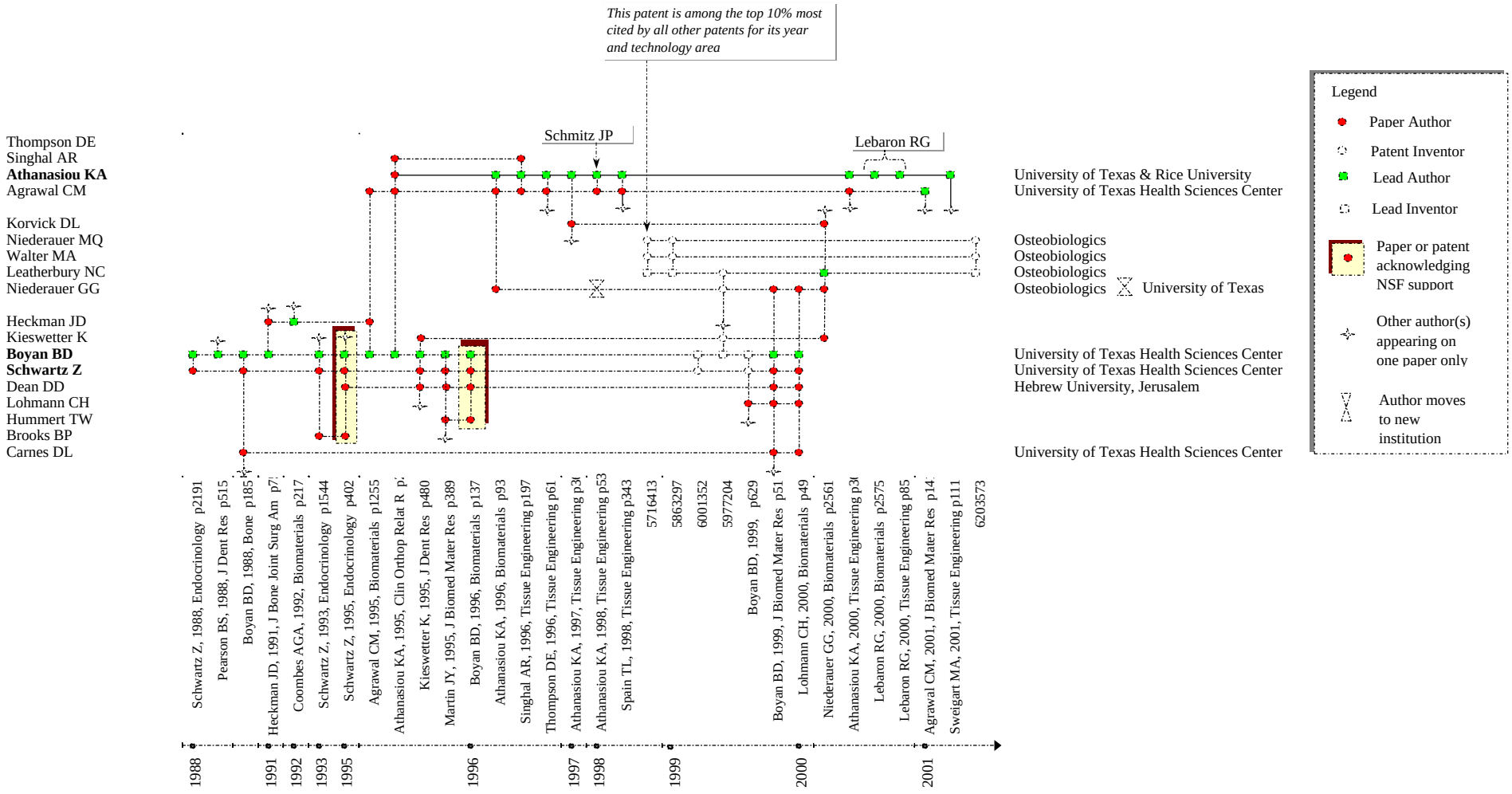

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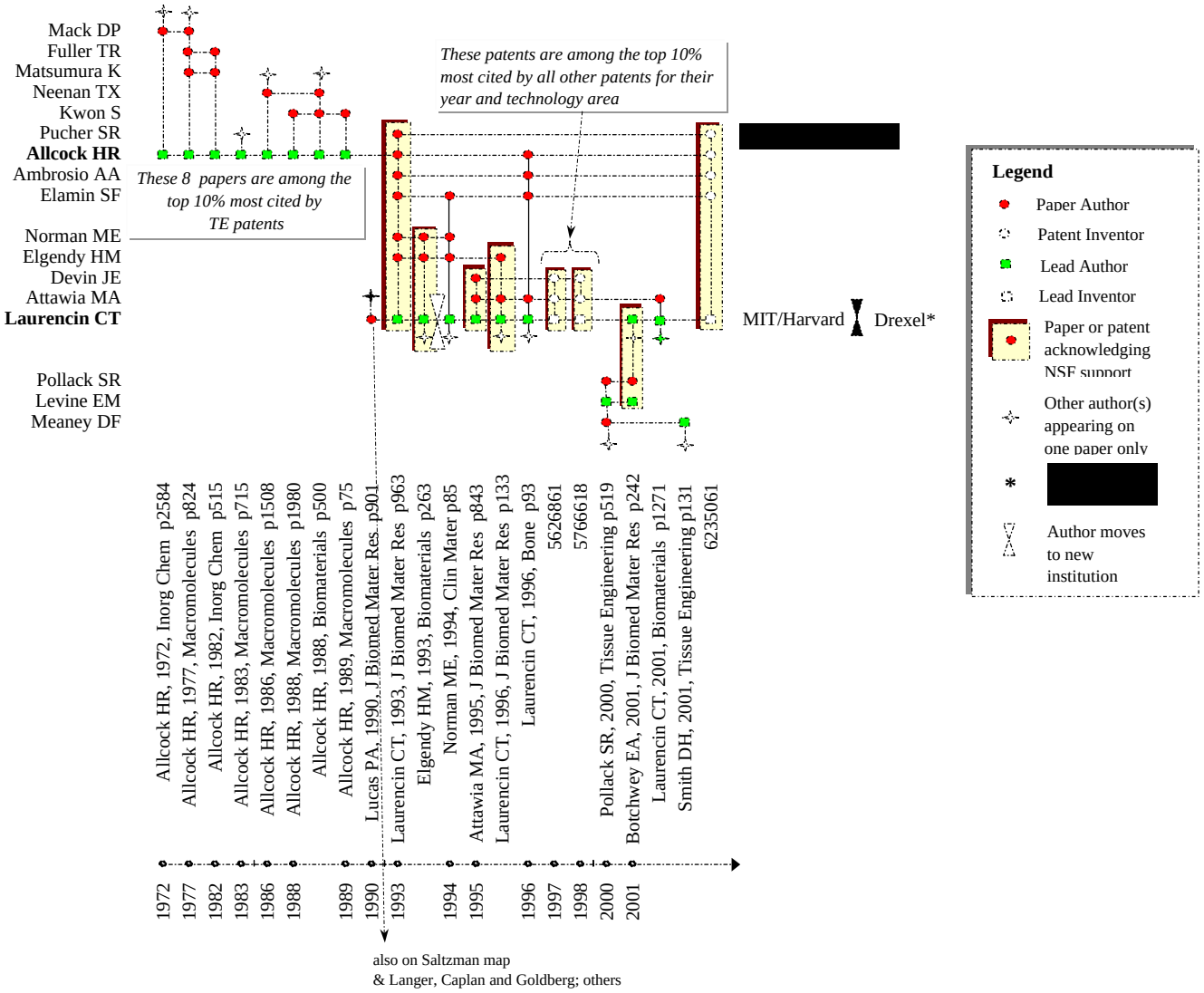
Figure A.3 - CT Laurencin Allcock

Laurencin appears to have done his PhD with Langer, reflected in the first paper. Allcock works on polyphosphazenes. Laurencin & Allcock worked on using polyphosphazenes in skeletal tissue replacement and obtained a patent. Laurencin's other work examined osteoblast growth on various scaffolds. Work with Levine brought in rotating bioreactors.

Laurencin's research interests are in the areas of new polymer development for biomedical purposes, drug delivery using polymeric materials (not examined here) and polymer-based tissue engineering. He produced seminal work in the late 1980s on drug delivery using the novel class of polymers, the poly(phosphazenes). In the early 1990s, his presentations and papers were among the first to study the development of tissue engineered matrices for bone.



also on Saltzman map
& Langer, Caplan and Goldberg; others

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Figure A.4 - WM Saltzman

Saltzman works on biocompatible polymeric materials for the controlled delivery of drugs, proteins, and genes -- which would not be included here. Here we see work on developing polymeric materials that influence the growth and aggregation of cells in various tissues.

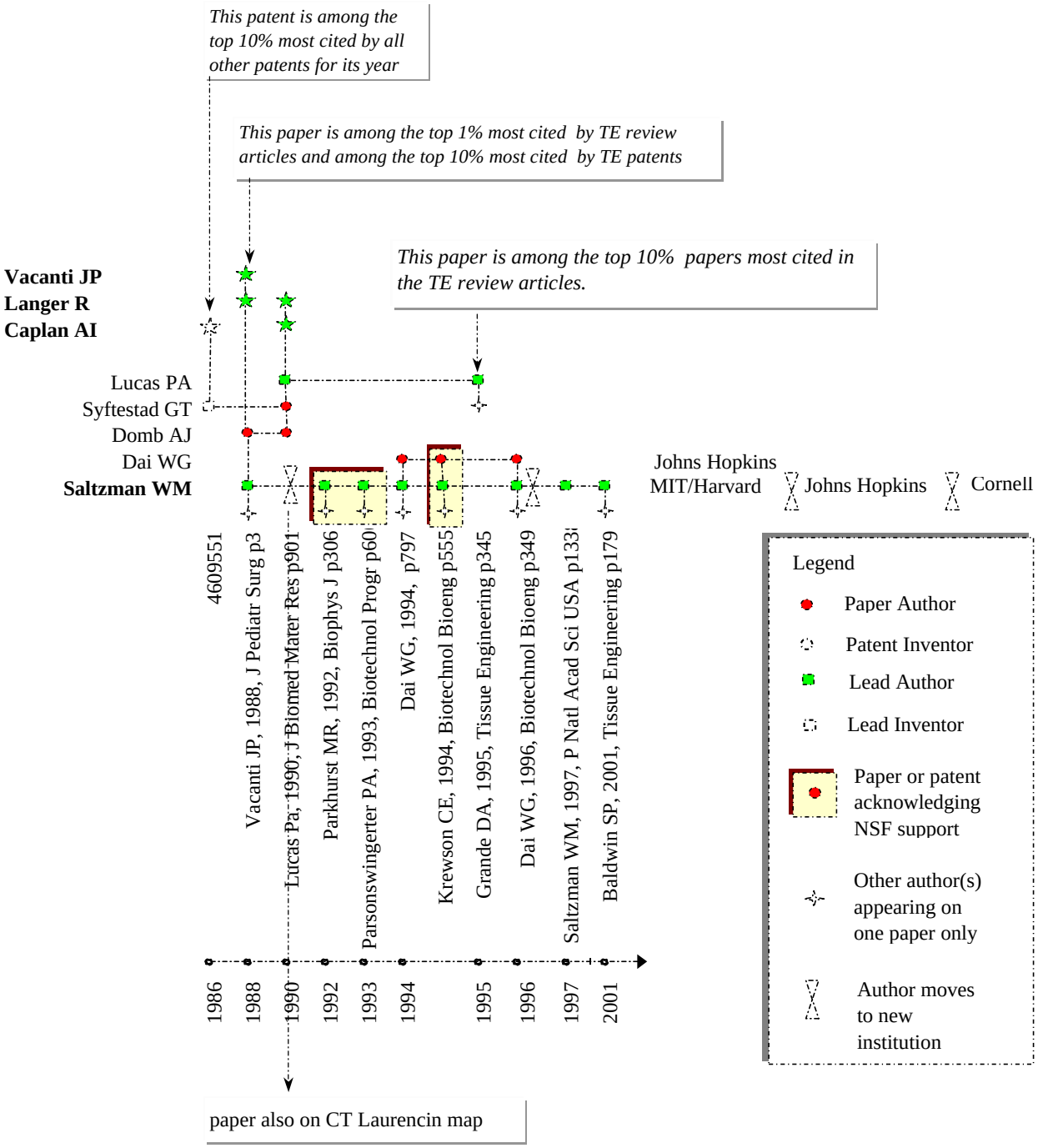

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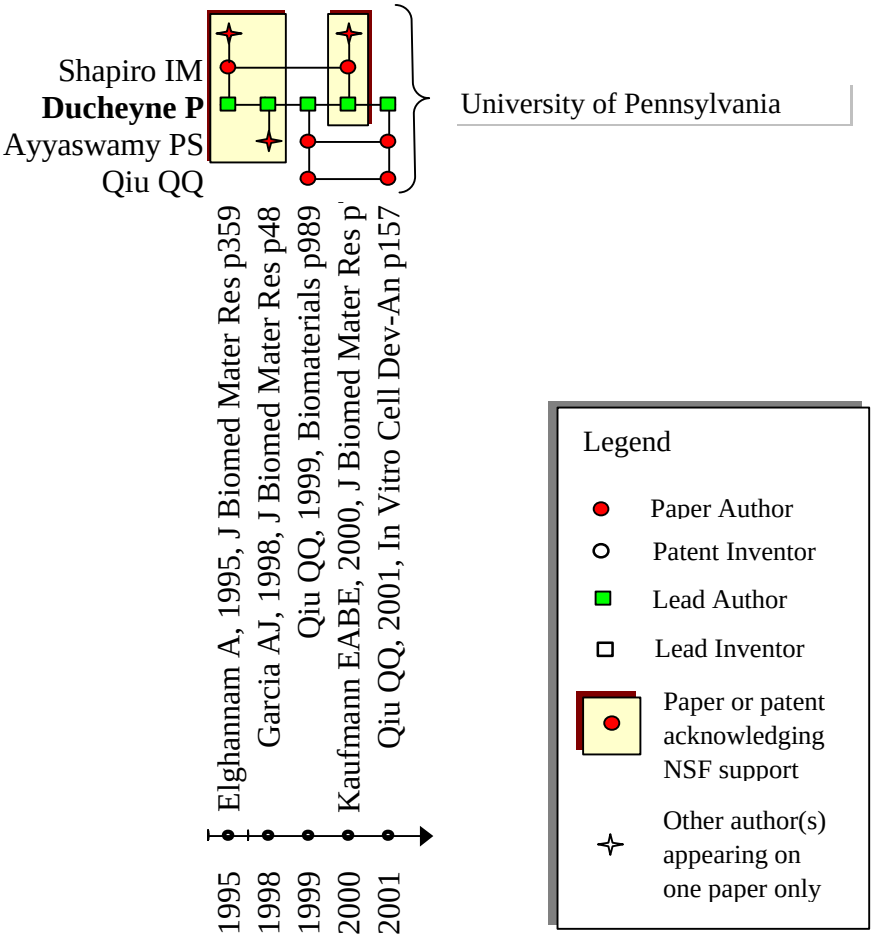
Figure A.5 - P. Ducheyne

Ducheyne investigates in vitro synthesis of musculoskeletal tissues, especially bone tissue; controlled release of growth factors and effect of material selection; bioactive ceramics, including hydroxyapatite, bioactive glass and bioactive composites.



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