

Institution Name	City	Country	PI(s)	Associated Consortium	Consortium Role	Commercial Partner(s)	Associated Device(s)	Overall Status	History	Publications	Active Funding?	CONTACT INFO	Website	Last Updated	Notes
Penetrating Transchoroidal implant?	I think just Gerding.	-	-	-	-	-	-	-	-	-	-	-	-	17.09.2016,	-
Bionics Institute	Melbourne	Australia	R. Shepherd, C. Williams, P. Blamey	BVA	Implant & leadwire design, preclinical development & studies including electrophysiology, psychophysics development and contribution to clinical trials	BVT	44ch Fully-Implantable Suprachoroidal, 24ch Prototype Suprachoroidal	Active	-	-	Y	-	http://www.bionicsinstitute.org/research/bionics-vision/Pages/bionics-vision.aspx	06.09.2016,	Abbott
Center for Eye Research Australia (CERA)	Melbourne	Australia	R. Guymer, P. Allen	BVA	Surgical development, Preclinical studies, Clinical trials, Development of low-vision assessment protocols	BVT	44ch Fully-Implantable Suprachoroidal, 24ch Prototype Suprachoroidal	Active	-	-	Y	-	http://www.cera.org.au/research/macular-research/	06.09.2016,	Abbott
Data61 (formerly NICTA)	Canberra	Australia	N. Barnes	BVA	Image processing	BVT	44ch Fully-Implantable Suprachoroidal, 24ch Prototype Suprachoroidal	Active	-	-	Y	-	https://www.data61.csiro.au/	06.09.2016,	Abbott
National Vision Research Institute Australia (NVRI)	Melbourne	Australia	M. Ibbotson	BVA	in vitro research	BVT	Diamond-based Epiretinal Device	Active	-	-	Y	-	http://www.nvri.org.au/	06.09.2016,	Abbott
Royal Victorian Eye & Ear Hospital	Melbourne	Australia	P. Allen	BVA	Clinical trial site	BVT	44ch Fully-Implantable Suprachoroidal, 24ch Prototype Suprachoroidal	Active	-	-	Y	-	http://www.eyearandear.org.au/	06.09.2016,	Abbott
University of Melbourne	Melbourne	Australia	A. Burkitt, S. Praver, H. Meffin, D. Grayden	BVA	Implant design & development, electronics, chip development, wireless development, External unit development	BVT and iBionics	44ch Fully-Implantable Suprachoroidal, Diamond-based Epiretinal Device	Active	-	-	Y	-	http://www.unimelb.edu.au/	06.09.2016,	Abbott
University of New South Wales	Sydney	Australia	G. Suaning, N. Lovell,	BVA	Implant & leadwire design, preclinical development and studies including electrophysiology	BVT	Phoenix 99 Suprachoroidal	Active	Australian Vision Prosthesis Group Formed in 1997, Bionic Vision Australia Funded in 2009	-	Y	-	https://www.engineering.unsw.edu.au/research/research-highlights/bionics-eye	06.09.2016,	Abbott
University Western Sydney	Sydney	Australia	J. Morley	BVA	Visual neuroscience	BVT	Phoenix 99 Suprachoroidal	Active	-	-	Y	-	http://www.westernsydney.edu.au/	06.09.2016,	Abbott
Alfred Hospital	Melbourne	Australia	J. Rosenfeld	MVG	Clinical trials	Grey Innovations, MiniFAB	Gennaris bionic vision system	Active, Preparing for first in human clinical trials	-	Refer to Annual Reports on MVG website	Y, Philanthropic donations, University funding	Jeffrey Rosenfeld: jeffrey.rosenfeld@monash.edu, Arthur Lowery: Arthur.Lowery@monash.edu, jeanette.pritchard@monash	www.monash.edu/bionice	14.09.2016,	Pritchard
Monash University	Melbourne	Australia	A. Lowery, J. Rosenfeld, M. Rosa, R. Rajan	MVG	Device development and testing	Grey Innovations, MiniFAB	Gennaris bionic vision system	Active, Preparing for first in human clinical trials	-	Refer to Annual Reports on MVG website	Y, Philanthropic donations, University funding	Jeffrey Rosenfeld: jeffrey.rosenfeld@monash.edu, Arthur Lowery: Arthur.Lowery@monash.edu, jeanette.pritchard@monash	www.monash.edu/bionice	14.09.2016,	Pritchard
University of Vienna	Vienna	Austria	P. Ahnelt	CORTIVIS	Retinal studies	Biomedical Technologies SL	CORTIVIS	-	-	-	-	-	-	08.09.2016,	Fernandez
Medical University Graz	Graz	Austria	M. Velikay-Parel	Independent	maze testing of patients	-	-	-	-	-	-	-	-	17.09.2016,	Rathbun
Vienna Technical University, Institut für Analysis und Scientific Computing	Vienna	Austria	F. Rattay	Tübingen Retinal Implant, previously SUB-RET	modeling - multicompart extracellular electrical stimulation	-	-	-	-	-	-	-	http://www.asc.tuwien.ac.at/old/index.php?id=62&L=&persid=21	10.08.2016,	Rathbun
Université Catholique de Louvain	Brussels	Belgium	J. Delbeke, C. Veraart	OptiVip	-	-	MiVip - Microsystem-based visual prosthesis, OptiVip Optic nerve visual prosthesis (ONVP)	-	-	-	-	-	-	07.12.2015,	Rathbun
After Sight	Edmonton	Canada	M. McWilliams	-	-	-	The vOICe for Raspberry Pi	-	-	-	-	-	-	12.08.2016,	Meijer
University of Western Ontario, Department of Clinical Neurological Sciences	London, Ontario	Canada	J. P. Girvin	Dobelle	-	The Dobelle Institute, Inc.	-	-	-	-	-	-	-	17.09.2016,	Rathbun
McGill University, Montreal Neurological Institute	Montreal	Canada	M. Sawan	Polystim-Cortivision	in vivo validation	-	-	Active.	-	-	-	-	-	13.08.2016,	Sawan
Polytechnique Montreal, Polystim Neurotechnologies Laboratory	Montreal	Canada	M. Sawan	Polystim-Cortivision	Design & invitro validation	-	Polystim, Electronic Visual Cortex Stimulator (EVCS)	Active. New flexible overall system	Started working on visual cortical implants in 1991	Several	Up/Down	M. Sawan	http://www.polystim.org/	13.08.2016,	http://www.polystim.polymtl.ca/Sawan
Department of Biomedical Engineering, Shanghai Jiao-Tong University	Shanghai	China	Q. Ren, P.-J. Liang, Y.-S. Zhu, J.-Y. Wang	C-Sight	-	-	-	-	-	-	-	-	-	17.09.2016,	Rathbun
Department of Ophthalmology, Beijing University School of Medicine	Beijing	China	X.-X. Li	C-Sight	-	-	-	-	-	-	-	-	-	17.09.2016,	Rathbun
Peking University, College of Engineering	Beijing	China	Q. Ren, X. Chai	C-Sight	-	-	-	-	-	-	-	-	-	01.08.2016,	Rathbun
Shanghai Inst. For Micro-System Fabrication Research of CAS	Shanghai	China	J.-L. Zhao	C-Sight	-	-	-	-	-	-	-	-	-	17.09.2016,	Rathbun
Shanghai University of Science and Technology	Shanghai	China	S.-L. Zhuang	C-Sight	-	-	-	-	-	-	-	-	-	17.09.2016,	Rathbun
Centre National de la Recherche Scientifique	Paris	France	L. Graham	CORTIVIS	Animal electrophysiology	Biomedical Technologies SL	CORTIVIS	-	-	-	-	-	-	08.09.2016,	Fernandez
University of Montpellier	Montpellier	France	P. Rabischong	CORTIVIS	Brain anatomy	Biomedical Technologies SL	CORTIVIS	-	-	-	-	-	-	08.09.2016,	Fernandez
Adolphe de Rothschild Foundation Hospital	Paris	France	Y. Le Mer	Pixium	surgery	Pixium Vision	-	-	-	-	-	-	-	17.09.2016,	Rathbun
The Vision Institute	Paris	France	C. Posch	Pixium	optics image capture	Pixium Vision	-	-	-	-	-	-	-	17.09.2016,	Rathbun
The Vision Institute	Paris	France	R. Benosman	Pixium	image processing	Pixium Vision	-	-	-	-	-	-	-	17.09.2016,	Rathbun
The Vision Institute	Paris	France	J. A. Sahel	Pixium	visual processing	Pixium Vision	-	-	-	-	-	-	-	17.09.2016,	Rathbun
Centre Hospitalier National D'Ophthalmologie	-	France	S. Picaud	Pixium	visual processing	Pixium Vision	-	-	-	-	-	-	-	17.09.2016,	Rathbun
Institut de la Vision	Paris	France	J. Sahel, S. Picaud	Pixium	-	-	-	-	-	-	-	-	-	17.09.2016,	Rathbun
University of Oldenburg	Oldenburg	Germany	J. Ammermueller	CORTIVIS	Retinal recordings	Biomedical Technologies SL	CORTIVIS	-	-	-	-	-	-	10.08.2016,	Rathbun
University of Bremen	Bremen	Germany	A. Kreiter, W. Lang, K. Pawelzik, U. Ernst, Steffen Paul	Creative Unit I-SEE / DFG Priority Project InAuKa	Independent	-	-	-	-	-	-	-	http://www.isee.uni-bremen.de/content/inauka	23.08.2016,	Electrical, Cortical Rotermund
Fraunhofer Institut für Biomedizinische Technik, St. Ingbert	-	Germany	J. U. Meyer, Stieglitz	EPI-RET	-	EpiRet GmbH	EPIRET (1)	-	-	-	-	-	-	10.08.2016,	Rathbun

Fraunhofer Institut für Mikroelektronische Schaltungen und Systeme	Duisburg	Germany	B. Hosticka, W. Mokwa	EPI-RET	-	EpiRet GmbH	EPIRET (1)	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
Institut für Neuroanatomie und C. und O. Vogt Institut für Hirnforschung, University of Düsseldorf	Düsseldorf	Germany	R. Eckmiller	EPI-RET	-	EpiRet GmbH	-	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
Institut für Neuroinformatik der Universität Bonn	Bonn	Germany	R. Eckmiller	EPI-RET	-	EpiRet GmbH	LRI Learning Retina Implant	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
RWTH Aachen, Institut für Pathologie	Aachen	Germany	C. Mittermayer, Richter	EPI-RET	-	EpiRet GmbH	EPIRET (1)	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
Universitäts-Augenklinik Essen	Essen	Germany	N. Bornfeld, Laube	EPI-RET	clinical	EpiRet GmbH	EPIRET (1)	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
Universitäts-Augenklinik Leipzig	Leipzig	Germany	P. Wiedermann	EPI-RET	-	EpiRet GmbH	EPIRET (1)	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
Universitäts-Augenklinik Marburg	Marburg	Germany	L. Hesse	EPI-RET	-	EpiRet GmbH	EPIRET (1)	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
Universitäts-Augenklinik Muenster	Muenster	Germany	H. Gerding	EPI-RET	-	EpiRet GmbH	EPI-RET, also a subretinal penetrating?	-	-	-	-	-	-	-	10.08.2016, Rathbun	later moved to Switzerland and worked on fixation tacks and intraretinal trodes.
Universität Bochum, Institut für Neurophysiologie	Bochum	Germany	U. Eysel	German Retina Implant Consortium	cat cortex optical recordings	-	SUB-RET, EPI-RET	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
Universität Marburg, AG Neurophysik	Marburg	Germany	R. Eckhorn	German Retina Implant Consortium	-	-	SUB-RET, EPI-RET	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
RWTH Aachen University, formerly Universitäts-Augenklinik, University of Köln	Aachen	Germany	P. Walter	OPTOEPIRET	-	-	OPTOEPIRET, EPIRET III, VLARS, (& Intrasccleral with Osaka)	-	-	-	-	-	-	http://www.nero.uni-bonn.de/projekte/ri/ri-index-en.htm	10.08.2016, Rathbun	-
Universität Duisburg, Zentrum für Halbleitertechnik und Optoelektronik, University Eye Hospital, Regensburg	Duisburg	Germany	D. Jaeger, R. Buss	OPTOEPIRET, EPI-RET	-	-	OptoEPIRET	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
University of Stuttgart, Institute for Physical Electronics	Stuttgart	Germany	M. Schubert	SUB-RET	animal biocompatibility, surgical technique, implantation, angiography chip development	-	MPDA	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
Augenklinik, Krankenhaus Dresden Friedrichstadt	Dresden	Germany	H.G. Sachs	Tübingen Retinal Implant, previously SUB-RET, previously German retina implant consortium	-	Retina Implant GmbH	Alpha-AMS, Alpha-IMS, Tübingen prototype, MPDA	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
Institut für Mikroelektronik Stuttgart	Stuttgart	Germany	B. Hoefflinger, later Werner, J. N. Burghartz	Tübingen Retinal Implant, previously SUB-RET, previously German retina implant consortium	chip manufacturing, chip development	Retina Implant GmbH	Alpha-IMS, MPDA	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
Multi Channel Systems	Reutlingen	Germany	K.-H. Boven, A. Moeller	Tübingen Retinal Implant, previously SUB-RET, previously German retina implant consortium	electrode development	Retina Implant GmbH	-	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
NMI Natural and Medical Sciences Institute	Reutlingen	Germany	G. Zeck	Tübingen Retinal Implant, previously SUB-RET, previously German retina implant consortium	electrode development	Retina Implant GmbH	Alpha-AMS, Alpha-IMS	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
NMI Natural and Medical Sciences Institute	Reutlingen	Germany	W. Nisch	Tübingen Retinal Implant, previously SUB-RET, previously German retina implant consortium	electrode development	Retina Implant GmbH	SUB-RET	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
NMI Natural and Medical Sciences Institute	Reutlingen	Germany	A. Stett	Tübingen Retinal Implant, previously SUB-RET, previously German retina implant consortium	electrode development	Retina Implant GmbH	Alpha-AMS, Alpha-IMS, Tübingen prototype, EPI-RET	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
NMI Natural and Medical Sciences Institute	Reutlingen	Germany	H. Haemmerle	Tübingen Retinal Implant, previously SUB-RET, previously German retina implant consortium	chip coating, in vitro functional testing	Retina Implant GmbH	MPDA	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
Retina Implant GmbH	Reutlingen	Germany	W. Wrobel, E. Zrenner	Tübingen Retinal Implant, previously SUB-RET, previously German retina implant consortium	Commercial partner, implant manufacturing	Retina Implant GmbH	Alpha-AMS, Alpha-IMS, Tübingen prototype	-	Founded 2003	-	-	-	-	-	10.08.2016, Rathbun	-
Ulm University	Ulm	Germany	A. Rothermel	Tübingen Retinal Implant, previously SUB-RET, previously German retina implant consortium	chip design	Retina Implant GmbH	Alpha-AMS	-	-	-	-	-	-	https://www.uni-ulm.de/in/mikro/mitarbeiter/rothermel.html	10.08.2016, Rathbun	Brought in midway through the project for later designs.
University of Dortmund	Dortmund	Germany	K. Schumacher, A. Dollberg	Tübingen Retinal Implant, previously SUB-RET, previously German retina implant consortium	-	Retina Implant GmbH	Alpha-IMS	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
University of Tuebingen, Experimental Retinal Prosthetics Group	Tuebingen	Germany	D. Rathbun	Tübingen Retinal Implant, previously SUB-RET, previously German retina implant consortium	in vitro research	Retina Implant GmbH	Alpha-AMS	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
University of Tuebingen, Pathophysiology of Vision Lab	Tuebingen	Germany	E. Zrenner, K. Stingl	Tübingen Retinal Implant, previously SUB-RET, previously German retina implant consortium	clinical electrophysiology functional testing	Retina Implant GmbH	Alpha-AMS, Alpha-IMS, Tübingen prototype, MPDA	-	-	-	-	-	-	-	10.08.2016, Rathbun	-
K.N. Toosi Univ. of Technology, Research Laboratory for Integrated Circuits and Systems (ICAS), EE Department	Tehran	Iran	A. M. Sodagar	-	-	-	-	-	since 2009	-	-	-	-	http://www.kntu.ac.ir/ShowPage.aspx?page_form&order=show&lang=1&sub=90&PagelD=3814&codeV=1&tempname=azicas	12.08.2016, Rathbun	Electrical, Epiretinal, occasionally collaborates with M. Sawan on general topics
Bar Ilan University	-	Israel	Y. Mandel	-	-	-	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Tel Aviv University	Tel Aviv	Israel	D. Weinberger	NanoRetina	Consultant	NanoRetina	NanoRetina	-	-	-	-	-	-	-	04.09.2016, Hanein	-
Dept Neurology, Meir Medical Center	Kfar Saba	Israel	C. R. Gordon	NanoRetina?	Patient visual performance assessment	NanoRetina?	NanoRetina?	-	-	-	-	-	-	-	16.09.2016, Rathbun	Clinical Trial: NCT01282489: Evaluation of Methods to Asses Visual Prosthesis Systems Using Sighted Volunteers and Visual Reality Simulator
The Hebrew University	Jerusalem	Israel	A. Amedi	Pixium	Rehabilitation	Pixium Vision	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Hebrew University of Jerusalem, Institute of Chemistry, Center for Nanoscience and Nanotechnology	Jerusalem	Israel	U. Banin	QuantumRetina	collaborator	-	QuantumRetina	-	-	-	-	-	-	http://chem.ch.huji.ac.il/~nano/ProfBanin.html	04.09.2016, Hanein	-
Tel Aviv University, Micro and nano systems Laboratory	Tel Aviv	Israel	Y. Hanein	QuantumRetina, NanoRetina (consultant)	-	-	-	-	-	-	-	-	-	Yael Hanein: yaelha@tauex.tau.ac.il	04.09.2016, Hanein	-
Hebrew University of Jerusalem	Jerusalem	Israel	A. Amedi	The vOICE	-	-	The vOICE, Eyecane	-	-	-	-	-	-	-	12.08.2016, Meijer	-

Italian Institute of Technology, Department of Neuroscience and Brain Technologies,	Genova	Italy	F. Benfenati	-	-	-	-	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-	
Department of Neurosurgery, Osaka University Medical School, Osaka, Japan	Osaka	Japan	T. Yoshimine	-	-	-	-	-	-	-	-	-	-	-	-	16.08.2016, Fujikado	Magnetic, Transcranial	
Institute of Physical and Chemical Research RIKEN	Nagoya	Japan	T. Yagi	-	-	-	-	-	-	-	-	-	-	-	-	16.08.2016, Fujikado	Biohybrid	
Okayama University	Okayama	Japan	T. Matsuo, T. Uchida	-	-	Minori Industry Co., LTD.	OUReP - Okayama University-type retinal prosthesis	-	-	-	-	-	-	-	-	http://www.okayama-u.ac.jp/user/kouhou/ebulletin/ipe/vol8/ipe_001.htm	16.08.2016, Fujikado	-
Osaka University, Nara Institute of Science and Technology (NAIST)	-	Japan	T. Noda	-	-	-	-	-	-	-	-	-	-	-	-	16.08.2016, Fujikado	-	
Tohoku University	Sendai, Tohoku	Japan	M. Koyanagi, H. Kurino, H. Tomita, M. Tamai	-	-	-	Three Dimensions Stacked Retinal Prosthesis	-	-	-	-	-	-	-	-	16.08.2016, Fujikado	3D stacked, Electrical, Epiretinal, Penetrating	
Tokyo Institute of Technology	Tokyo	Japan	T. Yagi, T. Mukai	-	-	-	Biohybrid	-	-	-	-	-	-	-	-	16.08.2016, Fujikado	Biohybrid + Regenerated Neurons, Intracranial	
Osaka Univ. Med. School / NIDEK	Osaka	Japan	Y. Tano, Fujikado, K. Nishida, H. Sawai	VPP	-	NIDEK	STS retinal prosthesis	-	-	-	-	-	-	-	-	16.08.2016, Fujikado	-	
Osaka Univ. Med. School / NIDEK	Osaka	Japan	Y. Tano, K. Nishida, Sakaguchi, Fujikado, Ozawa	VPP	-	NIDEK	AV-DONE	-	-	-	-	-	-	-	-	16.08.2016, Fujikado	-	
Nara Institute of Science and Technology	Ikoma	Japan	J. Ohta, T. Noda	VPP, Artificial Vision System Project	-	NIDEK	STS retinal prosthesis	-	-	-	-	-	-	-	-	16.08.2016, Fujikado	See Humayun book, subretinal PFM photosensor?, 16 x 16 array, Pt trodes	
Instituto de Engenharia de Sistemas e Computadores	Lisbon	Portugal	M. Piedade	CORTIVIS	Wireless telemetry, chip design	Biomedical Technologies SL	CORTIVIS	-	-	-	-	-	-	-	-	08.09.2016, Fernandez	-	
-	-	Portugal	Dobelle	-	-	Dobelle Institute	Dobelle	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-	
Seoul National University, Nano-Bioelectronics & Systems Laboratory	Seoul	Republic of Korea	J.-S. Jeong	SNU Artificial Retina Project	-	-	Seoul Artificial Retina	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-	
Seoul National University, Nano-Bioelectronics & Systems Laboratory	Seoul	Republic of Korea	J.-H. Park	SNU Artificial Retina Project	-	-	Seoul Artificial Retina	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-	
Seoul National University, Nano-Bioelectronics & Systems Laboratory	Seoul	Republic of Korea	S.-W. Shin	SNU Artificial Retina Project	-	-	Seoul Artificial Retina	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-	
Seoul National University, Nano Bioelectronics and Systems Research Center	Seoul	Republic of Korea	J.-M. Seo, Y. S. Goo	SNU Artificial Retina Project	-	-	Seoul Artificial Retina	-	-	-	-	-	-	-	-	07.12.2015, Rathbun	Suprachoroidal (In collab with Suaning Lovell)	
Seoul National University, Nano Bioelectronics and Systems Research Center	Seoul	Republic of Korea	J.-M. Seo, S. J. Kim	SNU Artificial Retina Project	-	-	Seoul Artificial Retina	-	-	-	-	-	-	-	http://helios.snu.ac.kr/index.php?mid=page_ajUu25	17.09.2016, Rathbun	-	
Seoul National University, NanoBio-electronics and Systems Laboratory	Seoul	Republic of Korea	S. J. Kim	SNU Artificial Retina Project	-	-	Seoul Artificial Retina	-	-	-	-	-	-	-	http://nanobio.snu.ac.kr/	17.09.2016, Rathbun	-	
Seoul National University, School of Electrical Engineering and Computer Science	Seoul	Republic of Korea	S. J. Kim	SNU Artificial Retina Project	-	-	Seoul Artificial Retina	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	The first effort to form a retina prosthesis team in South Korea was done by Prof. Sung June Kim and by Prof. Hum Chung. This was recognized by the Korean Science and Engineering Foundation in 2000 and they, together with 20 faculty members with diverse backgrounds, were given a 9-yr grant, 1 million USD/yr, to establish an Engineering Research Center (ERC) on NanoBioSystems at SNU. More recently, another 6-yr grant, 0.6 million USD/yr, for the development of an artificial retina was given by the ministry of Wealth and Welfare of Korea in 2005.	
Seoul National University, School of Medicine	Seoul	Republic of Korea	H. Chung	SNU Artificial Retina Project	-	-	Seoul Artificial Retina	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-	
Biomedical Technologies S. L.	Elche	Spain	F. Garcia	CORTIVIS	Commercial partner, Brain stimulator manufacturing	Biomedical Technologies SL	CORTIVIS	-	-	-	-	-	-	-	-	08.09.2016, Fernandez	-	
Universidad Miguel Hernandez, Spain	Elche	Spain	E. Fernandez	CORTIVIS	Coordinator, Biocompatibility, Clinical Electrophysiology, Surgical Technique, Functional testing	Biomedical Technologies SL	CORTIVIS	-	Began in 2001	-	-	-	European project: QLK6-CT-2001-00279	http://cortivis.umh.es/	07.12.2015, Rathbun	-		
University of Granada	Granada	Spain	F. Pelayo	CORTIVIS	Bioinspired visual encoder, chip design	Biomedical Technologies SL	CORTIVIS	-	-	-	-	-	-	-	-	08.09.2016, Fernandez	-	
Complutense University of Madrid, Neurocomputing and Neurorobotics Research Group	Madrid	Spain	F. Panetsos	VISNE	Founder, pre-clinical trials	Nerve Biomed S.L.	VISNE	Preclinical studies	-	-	-	Y	Fivos Panetsos: fivos@ucm.es	https://www.ucm.es/grupos/grupo/120	10.09.2016, Panetsos	Electrical + Biohybrids		
The Institute Dobelle AG	Zurich	Switzerland	Dobelle (deceased 2004)	Dobelle	-	-	Dobelle	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-	
Geneva University, Medical Department	Geneva	Switzerland	D. C. Bertrand	LICOS/WATCH	-	-	LICOS/WATCH	-	-	-	-	-	Mazza M Renaud P Bertrand DC Ionescu AM CMOS pixels for subretinal implantable prosthesis IEEE Sensors 2005	-	-	17.09.2016, Rathbun	-	
Swiss Federal Institute of Technology	Lausanne	Switzerland	M. Mazza, A. M. Ionescu, P. Renaud	LICOS/WATCH	-	-	LICOS/WATCH	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-	
Klinik Pallas	Olten	Switzerland	H. Gerding	miRI Project	-	-	miRI (minimally invasive retina implant), EPIRET 1	-	-	-	-	-	Gerding H A new approach towards a minimal invasive retina implant J Neural Eng 2007.pdf	-	-	17.09.2016, Rathbun	-	
A-Neuron Electronic Corp.	Zhubei City, Hsinchu County	Taiwan	C.-F. Chiu	TSIC	Commercial partner, implant manufacturing	A-Neuron Electronic Corp.	AmazingVision	-	-	-	-	-	-	-	-	30.08.2016, Chin-Fong Chiu	-	
National Chiao Tung University	Hsinchu	Taiwan	C.-Y. Wu	TSIC	Chip Development	A-Neuron Electronic Corp.	AmazingVision	-	-	-	-	-	Prof. Chung-Yu Wu: peterwu@mail.nctu.edu.tw	http://betrc.nctu.edu.tw/	30.08.2016, Chin-Fong Chiu	Electrical, Subretinal		
National Tsing Hua University	Hsinchu	Taiwan	C.-C. Chiao	TSIC	Modeling - Electrical Stimulation	A-Neuron Electronic Corp.	AmazingVision	-	-	-	-	-	Chuan-Chin Chiao: ccchiao@life.nthu.edu.tw	http://life.nthu.edu.tw/~ccchiao/homepage.htm	30.08.2016, Chin-Fong Chiu	-		
Newcastle University, Institute of Neuroscience	Newcastle	UK	P. Degenaar	-	-	-	-	-	-	-	-	-	-	-	-	07.12.2015, Rathbun	Optogenetic, Cortical	
Physiological Laboratory, University of Cambridge	Cambridge	UK	G. S. Brindley, W. S. Lewin	-	-	-	Brindley Cortical Implant	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	First human implant 1967, 2nd 1972,	
University of Glasgow	Glasgow	UK	K. Mathieson, J. Morrison	-	-	-	-	-	-	-	-	-	-	-	-	01.08.2016, Rathbun	-	
Newcastle University, Institute of Neuroscience	Newcastle	UK	E. Sernagor	QuantumRetina	-	-	-	-	-	-	-	-	-	-	http://www.ncl.ac.uk/ion/staff/profile/evelynesernagor.html#background	13.08.2016, Rathbun	-	
Queen Mary University of London, Crossmodal Cognition Laboratory, School of Biological and Chemical Sciences	London	UK	A. Haigh, D. J. Brown	The vOICe	-	-	The vOICe	-	-	-	-	-	-	-	-	12.08.2016, Meijer	-	
University of Bath, Crossmodal Cognition Laboratory, Department of Psychology	Bath	UK	M. J. Proulx	The vOICe	-	-	The vOICe	-	-	-	-	-	-	-	-	12.08.2016, Meijer	-	
Cornell University / Scheie Eye Institute	Ithaca, NY	USA	S. Nirenberg, S. Jacobson	-	-	-	-	-	-	-	-	-	Yes DOD	-	-	02.05.2016, Rathbun	Focused on neural encoding strategies. Optogenetic, Ocular. Phase 1/2 2016-2017	
Department of Ophthalmology, Mayo Clinic	Rochester, MN	USA	R. Iezzi	-	-	-	Microfluidic Neurotransmitter	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-	

Kresge Eye Institute, Ligon Research Center of Vision, Wayne State University	Detroit, MI	USA	G. Auner, R. Iezzi, P. G. Finlayson, G. W. Abrams	-	-	-	Microfluidic Neurotransmitter	-	-	-	-	-	-	http://grantome.com/grant/NIH/R21-EY018709-01	01.08.2016, Rathbun	Project ran in 2008. microfluidic neurotransmitter 32x32 trode array
MIT	Cambridge, MA	USA	P. H. Schiller, E. J. Tehovnik, W. M. Slocum	-	-	-	-	-	-	-	-	-	-	-	01.08.2016, Rathbun	Electrical, Cortical, Penetrating
Salk Institute for Biological Studies	La Jolla, CA	USA	E. Chichilnisky	-	-	Second Sight (through 1999?)	-	-	-	-	-	-	-	-	28.11.2015, Rathbun	Electrical, Epiretinal?
Stanford	San Francisco, CA	USA	M. Marmor, M. Blumenkranz	-	-	-	-	-	-	-	-	-	-	http://ophthalmology.stanford.edu/research/basic_retinal_prosthesis.html	17.09.2016, Rathbun	Chemical, Retina
UCLA Department of Neurosurgery	Los Angeles, CA	USA	N. Pouratian	-	Surgery	-	Neuropace RNS	Clinical trial of 5 patients started in 2016	-	-	-	-	-	-	17.09.2016, Rathbun	Use of an epilepsy implant as a visual cortex stimulator.
UCSD	San Diego	USA	G. Silva	-	-	-	-	-	-	-	-	-	-	-	03.05.2016, Rathbun	Nanophotonic, Ocular. early work in rabbit
University of Michigan, Center for Wireless Integrated Microsystems	Ann Arbor, MI	USA	M. Ghovanloo, K. Najafi	-	-	-	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	3D Stacked Intracortical Probe
Argonne National Laboratory	Chicago, IL	USA	-	ARP	packaging, hermetic seal	Second Sight LLC	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Brookhaven National Laboratory	Upton, NY	USA	-	ARP	imaging?	Second Sight LLC	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
California Institute of Technology	Pasadena, CA	USA	-	ARP	image processing	Second Sight LLC	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Lawrence Livermore National Laboratory	Livermore, CA	USA	-	ARP	microfabrication	Second Sight LLC	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Los Alamos National Laboratory	Los Alamos, NM	USA	-	ARP	imaging and modeling of retinal function	Second Sight LLC	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
North Carolina State University	Raleigh, NC	USA	-	ARP	elctromagnetic and thermal modeling	Second Sight LLC	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Oak Ridge National Laboratory	Oak Ridge, TN	USA	-	ARP	electrical signal measurements	Second Sight LLC	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Sandia National Laboratories	Albuquerque, NM	USA	-	ARP	microelectromechanical systems (MEMS), application-specific integrated circuits (ASICs), packaging	Second Sight LLC	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
University California Santa Cruz	Santa Cruz, CA	USA	-	ARP	telemetry	Second Sight LLC	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
University of Southern California, Department of Ophthalmology (previously Doheny Eye Institute)	Los Angeles, CA	USA	M. Humayun, J. Weiland, E. de Juan	ARP	clinical	Second Sight LLC	-	-	Moved from Wilmer to Doheny in 2001.	-	-	-	-	-	17.09.2016, Rathbun	-
Johns Hopkins University School of Medicine, Wilmer Eye Institute, Lions Vision Research and Rehabilitation Center	Baltimore, MD	USA	G. Dagnelie	ARP, IRPG, ICVP, ASR	Patient psychophysics	-	-	-	Dagnelie joined IRPG after de Juan moved to Wilmer in 1991. Center Principal Investigator for clinical trials of the Optobionics Artificial Silicon Retina (2004-2007) and the Second Sight Argus™ 2 retinal implant (2007-	-	-	gislin@lions.med.jhu.edu	http://www.hopkinsmedicine.org/profiles/results/directory/profile/4045108/gislin-dagnelie	17.09.2016, Rathbun	-	
Atlanta VA Medical Center, Research Service	Atlanta, GA	USA	M. T. Pardue	ASR	in vitro testing	-	PRIMA, ASR	-	-	-	-	-	-	mpardue@emory.edu	24.08.2016, Pardue	-
Loyola University of Chicago, School of Medicine	Chicago, IL	USA	A. Chow, V. Chow	ASR	-	Optobionics	ASR	-	-	-	-	-	-	-	28.11.2015, Rathbun	Began in 1980s according to Dowling 2005, patent awarded 1991, By June 2000, Optobionics received approval from the US Food and Drug Administration (FDA) to commence safety and feasibility trials in six patients [53].
University of Texas Health Science Center	Houston, TX	USA	A. Ignatiev, Wu N.J.	Bionic Eye	-	-	Bionic Eye	-	-	-	-	-	-	http://www.svec.uh.edu/BIONIC.html	01.08.2016, Rathbun	https://www.google.com/patents/US7400021 http://www.google.ch/patents/US5873901 http://lubbockonline.com/stories/042701/upd_075-1727.shtml#.V6nbuph96Cg
University of Pittsburgh Medical Center, Eye Center	Middleton, WI	USA	A. Nau	BrainPort	Clinical Testing	Wicab Inc., USA	BrainPort V100, BrainPort V200	-	-	-	-	-	-	http://www.wicab.com/	07.12.2015, Rathbun	-
Carnegie Mellon Institute	-	USA	S. Kelly	BRIP	-	-	-	-	-	-	-	-	-	-	01.09.2016, Rathbun	-
Charles Stark Draper Laboratory	Cambridge, MA	USA	M. Socha	BRIP	mechanical design	-	Boston Retinal Prosthesis	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Harvard Medical School, Department of Ophthalmology, Massachusetts Eye and Ear Infirmary	Harvard	USA	J. Rizzo	BRIP	Founder, surgical	-	Boston Retinal Prosthesis	Founded in 1989, separated from other groups? 2002	-	-	-	-	-	Joseph_Rizzo@meei.harvard.edu	17.09.2016, Rathbun	-
Massachusetts Institute of Technology, Lincoln Laboratory	-	USA	J. Raffel D. Edell	BRIP	hardware	-	Boston Retinal Prosthesis	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Massachusetts Institute of Technology, Lincoln Laboratory	-	USA	J. Mann, T. Soares, T. Herndon	BRIP	prototype stimulator circuit	-	Boston Retinal Prosthesis	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Massachusetts Institute of Technology, Circuits and Systems Group of the Research Laboratory of Electronics	Harvard	USA	J. Wyatt (deceased)	BRIP	Founder	-	Boston Retinal Prosthesis	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Southern College of Optometry	Memphis, TN	USA	R. Jensen	BRIP	-	-	Boston Retinal Prosthesis	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
University of Texas, Dallas	Richardson, TX	USA	S. Cogan	BRIP, ICVP	-	-	-	-	BRIP collaborator since about 2000.	-	-	-	-	-	01.09.2016, Rathbun	-
Harvard Medical School, Massachusetts General Hospital	Boston	USA	S. Fried	BRIP? Independent?	-	NanoRetina?	Boston Retinal Prosthesis	-	-	-	-	-	-	-	28.11.2015, Rathbun	-
Columbia Presbyterian Medical Center, The Dobbelle Institute	New York, NY	USA	Dobbelle (deceased 2004)	Dobbelle	-	The Dobbelle Institute, Inc.	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Illinois Institute of Technology, Lewis College of Human Sciences	-	USA	F. Lane	ICVP, Dobbelle	Quality of life measures. Follow-up research with legacy Dobbelle implant patients.	-	-	-	-	-	-	-	lane@iit.edu	-	13.08.2016, Rathbun	-
The Dobbelle Institute, Inc.	Glen Cove, NY	USA	Dobbelle (deceased 2004), Mladejovsky	Dobbelle	-	The Dobbelle Institute, Inc.	-	Closed, but follow-up with patients by Frank Lane, Further development was to be pursued by Stony Brook and Avery Biomedical Devices. 1974 first implant?	-	-	-	No	-	http://www.artificialvision.com/etumble.htm	28.11.2015, Rathbun	Dowling 2005 says they had 37 patients implanted in 1974
University of Utah Medical Center, Division of Neurosurgery	Salt Lake City, UT	USA	T. S. Roberts	Dobbelle	-	The Dobbelle Institute, Inc.	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
University of Utah, Institute for Biomedical Engineering	Salt Lake City, UT	USA	Dobbelle (deceased 2004), Mladejovsky	Dobbelle	-	The Dobbelle Institute, Inc.	-	-	-	-	-	No. NIH-70-2278	-	-	17.09.2016, Rathbun	-
Illinois Institute of Technology	Chicago, IL	USA	P. Troyk	ICVP, NPP	-	MicroProbes, Alfred E. Mann Foundation, Sigenics	ICVP	Active	formerly NIH	-	-	-	troyk@iit.edu	-	07.12.2015, Rathbun	Decendant of the NIH project. Electrical, Cortical, Penetrating
Huntington Medical Research Institutes	Pasadena, CA	USA	D. McCreery	ICVP	-	-	ICVP	-	-	-	-	-	-	-	07.12.2015, Rathbun	-

Illinois Institute of Technology	Chicago, IL	USA	P. Nash	ICVP	-	-	ICVP	-	-	-	-	-	-	-	-	07.12.2015, Rathbun	-
Johns Hopkins University, Department of Biomedical Engineering	Baltimore, MD	USA	R. J. Greenberg	IRPG	-	-	-	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Johns Hopkins University, Wilmer Eye Institute, Department of Ophthalmology	Baltimore, MD	USA	E. de Juan, M. Humayun, R. Greenberg	IRPG	-	-	-	-	Moved to Doheny in 2001. de Juan moved from Duke to Wilmer in 1991. Between 1992 and 1994 hosted early human tests of IRPG.	-	-	-	-	-	-	17.09.2016, Rathbun	-
Johns Hopkins University, Wilmer Ophthalmological Institute	Baltimore, MD	USA	N. T. Iliff	IRPG	-	-	-	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Naval Research Laboratory	Washington, DC	USA	D. Scribner	IRPG	-	Second Sight LLC	IRP - Intraocular Retinal Prosthesis	Started in late 1990s	-	-	-	-	-	-	http://vample.com/medical-health/background-visual-prosthetics-distal-visual-pathway-pathologies/ http://www.nrl.navy.mil/nanoscience/programs/nanoelectronics/neural-electronic-interfaces	01.08.2016, Rathbun	microwire glass array, 80 x 40 array. Scribner et al Microelectronic array for stimulation of retinal tissue NRL Review 2005.pdf
North Carolina State University, University of California Santa Cruz	Raleigh, NC	USA	W. Liu	IRPG	-	Second Sight LLC	-	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Second Sight LLC	Sylmar, CA	USA	M. Humayun, J. Weiland	IRPG	implant manufacturing	Second Sight LLC	Argus I, Argus II, MARC1, MARC2, MARC3 multiunit artificial retina chipset, IRP intraocular retinal prosthesis, Model 1 Retinal Stimulator	CE and FDA approval, 2011 approved in UK and Switzerland according to Maghami et al. 2014, Retina Prosthesis Project disbanded in 2002 when Humayun moved to CA and formed the Intraocular Retinal Prosthesis Group. 2002 FDA approval for human testing. First implant Feb. 2002. 14.02.2013 FDA approved ARGUS II.	-	-	-	-	-	-	-	28.11.2015, Rathbun	First patient implanted 2002. Argus II has implanted 5 dry AMD patients as of ARVO 2016.
University of Michigan	-	USA	J. Weiland	IRPG	electrode materials, neural stimulation	-	-	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
University of North Carolina Chapel Hill, Department Engineering Technology	Charlotte, NC	USA	D. H. Phillips	IRPG	-	-	-	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Massachusetts General Hospital, Harvard Medical School	Boston, MA	USA	J. Pezaris, R. C. Reid, E. N. Eskandar	MGH Thalamc Visual Prosthesis, BRIP	-	Bionic Eye Technologies, Inc.	-	Active	-	-	-	NIH / DoD / private	John Pezaris, john@pezaris.com	http://sight2blind.org/	05.09.2016, Pezaris	Electrical, Thalamc	
NIH	Bethesda, MD	USA	T. Hambrecht	NPP	-	-	NPP "hat-pin"	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	Contiuation of the Brindley tradition. Formal connections?
NIH	Bethesda, MD	USA	E.M. Schmidt	NPP	-	-	NPP "hat-pin"	Discontinued 2001 according to Dowling - 2005, Troyk continues the research	-	-	-	-	-	-	-	01.08.2016, Rathbun	Electrical, Cortical, Penetrating. at least 1 patient according to Dowling 2005
University of Michigan Ann Arbor?	Ann Arbor, MI	USA	K. D. Wise	NPP	-	-	NPP "hat-pin"	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Stanford University, Dept. of Neurosurgery and Hansen Exp. Phys. Lab.	Stanford, CA	USA	E. J. Chichilnisky	Pixium	image processing	-	-	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Stanford University, Dept. of Ophthalmology and Hansen Exp. Phys. Lab.	Stanford, CA	USA	D. Palanker	Pixium	microengineering, microelectronics	Pixium Vision	PRIMA	-	-	-	-	-	Daniel Palanker <palanker@stanford.edu>	-	12.08.2016, Palanker	Evolved from Optobionics' ASR device.	
University California Santa Cruz, Dept. of Physics	Santa Cruz, CA	USA	A. Sher	PRIMA	MEA recordings	-	PRIMA	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Duke Eye Center	Durham, NC	USA	E. de Juan	RTNC, IRPG	Foundational	-	-	-	Began in 1987.	-	-	-	-	-	-	17.09.2016, Rathbun	-
Duke University	Durham, NC	USA	E. Javel	RTNC, IRPG	consultant from cochlear implant research	-	-	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
North Carolina State University	Raleigh, NC	USA	W. Lu	RTNC, IRPG	consultant	-	-	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Semiconductor Research Corporation (SRC)	-	USA	H. Phillips, R. Cavin	RTNC, IRPG	Foundational	-	-	-	Began in 1987.	-	-	-	-	-	-	17.09.2016, Rathbun	-
Univeristy of North Carolina	Chapel Hill, NC	USA	R. Propst, M. Humayun	RTNC, IRPG	Foundational	-	-	-	Began in 1987.	-	-	-	-	-	-	17.09.2016, Rathbun	-
University of North Carolina Chapel Hill, Department Biomedical Engineering	Charlotte, NC	USA	R. H. Propst	RTNC, IRPG	-	-	-	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Duke University	Durham, NC	USA	W. Grill	Second Sight?	-	-	-	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
Arizona State University	Phoenix, AZ	USA	B. Greger	UIEA	-	-	-	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
University of Utah	Salt Lake City, UT	USA	R. Normann	UIEA	-	-	Utah Cortical Prosthesis, Utah Intracortical Electrode Array (UIEA)	-	-	-	-	-	Richard Normann: normann@utah.edu	http://neuroscience.med.utah.edu/Faculty/Normann.html http://www.microsystems.utah.edu/inip	07.12.2015, Rathbun	-	
Lomonosov State University	Moscow	USSR	A. V. Latanov, V. B. Polyanskii, G. L. Ruderman, D. N. Rushton, B. S. Everitt	-	-	-	-	-	-	-	-	-	-	-	-	17.09.2016, Rathbun	-
									Latanov AV Polyanskii VB Response of rabbit visual cortex neurons to direct stimulation by current of different intensities Neurophysiol 1989.pdf, Polyanskii VB Latanov AV Ruderman GL Responses of rabbit visual cortical neurons to intracortical electrical stimulation Neurophysiol 1983.pdf								