


Table 1: Sample of Belgian new biotechnology firms - strategic alliances portfolio [n=30]

(Red biotech: (bio)pharmaceutical and biomedical, services, technology platforms and medical diagnostics | non-exhaustive: data YTD 10/2019).


New Biotech- nology Firm 	Technology Platform	Product Portfolio Lead drug candidates	Strategic Alliances	Acquisitions of / Acquired by	Region (Location)
<p>OXURION* (former ThromboGenics)</p> <p>↓ <i>joint venture with VIB (spin-out)</i> ↓</p> <p>Oncurious</p>	<p>Ophthalmology (Ocrlplasmin platform) Diabetic retinopathy (DME)</p> <hr/> <p>Oncology Orphan drugs</p>	<p>Jetrea THR-317 THR-499</p> <p style="text-align: center;"><i>in-licensing</i></p> <p>THR-687 ← THR-149</p> <hr/> <p>TB-403 (former Roche pipeline)</p>	<p>Novartis BioInvent International AB Beta Therapeutics</p> <hr/> <p>Galàpagos* Bicycle Therapeutics</p> <hr/> <p>BioInvent International AB NMTRC (clinical trial network)</p>		<p>Flanders (Leuven)</p> <hr/> <p>Flanders (Leuven)</p>
<p>Ablynx*</p> <hr/> <p>Argen-X*</p>	<p>Nanobody technology platform (Ilama)</p> <hr/> <p>SIMPLE antibody platform (Ilama); Innovative Access Program; Enhance</p>	<p>Cablivi (Caplacizumab) ALX-0171 (RSV) <i>Vobarilizumab</i> (ALX-0061) (RA; lupus) Ozoralizumab (RA)</p> <hr/> <p>ARGX-113 (<i>efgartigimod</i>) ARGX-110 (<i>cusatuzumab</i>) ARGX-112 ARGX-117 ARGX-115 (GARP)</p>	<p>Sanofi; AbbVie; Eddingpharm; Taisho; Novartis; Merck KGaA; Merck & Co.; Novo Nordisk; Algeta; Boehringer Ingelheim</p> <hr/> <p>Janssen (Cilag); J&J Innovation; Bayer; Lonza; LEO Pharma; Shire; Eli Lilly; Bird Rock Bio (RuiYi); BioWa; Staten Biotech; Broteio; AbbVie; Halozyme</p>	<p>acquired by Sanofi</p> <hr/>	<p>Flanders (Gent)</p> <hr/> <p>Flanders (Gent)</p>
<p>Galàpagos* (<i>joint venture of Tibotec-Virco & Crucell</i>)</p> <p>↓</p> <p>Fidelta (drug discovery fee-for-service business)</p>	<p>Rheumatoid arthritis (RA) (inflammatory and autoimmune)</p> <hr/> <p>Cystic fibrosis</p> <hr/> <p>Osteoarthritis</p> <hr/> <p>IPF</p> <hr/> <p>Pleotherapy platform</p>	<p>Filgotinib</p> <hr/> <p>SilenceSelect platform / Ylanthia antibody technology</p> <hr/> <p>MOR106</p>	<p>Gilead Sciences</p> <hr/> <p>AbbVie; ProQR</p> <hr/> <p>Servier</p> <hr/> <p>MorphoSys; Novartis</p> <hr/> <p>Fibrocor Therapeutics; Evotec</p> <hr/> <p>Pharnext</p>	<p>2006: acquisition of ProSkelia</p> <hr/> <p>2013: acquisition of Cangenix</p> <hr/> <p>Biofocus + Argenta: drug discovery divisions (sold to Charles River Laboratories)</p>	<p>Flanders (Mechelen)</p>
<p>Tigenix*</p>	<p>Allogeneic stem cell platform</p> <hr/> <p>eASC platform technology</p>	<p>ChondroElect</p> <hr/> <p>Alofisel (Cx601 – Crohn's disease) Cx611</p>	<p>Cellerix; Grifols; Lonza; Sobi AB; Biolife Solutions;</p> <hr/> <p>Mesoblast Takeda</p>	<p>Cellerix (<i>reverse takeover</i>) acquisition of Coretherapix (Genetrix)</p> <hr/> <p>acquired by Takeda</p>	<p>Flanders (Leuven)</p>
<p>Movetis* (J & J spin-out)</p>	<p>Gastroenterology</p>	<p>Resolor</p>	<p>Shire-Movetis</p>	<p>2010: <u>Delisting</u> acquired by Shire</p>	<p>Flanders (Turnhout)</p>

New Biotech- nology Firm	Technology Platform	Product Portfolio Lead drug candidates	Strategic Alliances	Acquisitions of / Acquired by	Region (Location)
Bone Therapeutics*	Stem cells Bone cell therapy	Preob (osteonecrose) Allob (spinal fusion) JTA-004	Asahi Kasei		Wallonia (Gosselies)
Promethera Biosciences	Stem cells Cell therapy; NASH	HepaStem H2Sreen; H3Screen Heparesc	Shire; Boehringer Ingelheim; Mitsubishi UFJ; Itochu; Cell Innovation Partners; Liveliver; Shibuya; Shinsei	Acquisition of Cytonet; Baliopharm	Wallonia (Mont-Saint- Guibert)
Celyad*	Stem cell therapy Immunotherapy CAR-T technology shRNA platform OptimAb	C-cure Allogeneic NKG2D CYAD-01 / CYAD-101 CYAD-02 / CYAD-200	Medisun; Institut Curie Novartis; Celdara Medical Horizon Discovery Group	Acquisition of CorQuest Medical Acquisition of OnCyte	Wallonia (Mont-Saint- Guibert)
Mithra* Pharmaceuticals ↓ <i>spinoff</i> Uteron Pharma [Mithra CDMO]	Estetrol (E4)- research platform Women's health (contraception, perimenopause and menopause)	Estelle; Donesta PeriNesta Alyssa; Colvir; Vaginate Tibelia; Daphne Continu; Zoreline; MyRing	Mayne; Gedeon Richter; Fuji; Libbs; Hyundai; GSP; Searchlight; Zheijang Xianju; Midas; Mediner; Gynial; Ceres; Adamed; Alvogen; Orifarm; Pei Li; Laboratorio Pasteur; Adcock Ingram; Neo Health; ITROM; CEVA; Saval; Hormosan; Dexcel	Acquisition of Donesta; Novalon Uteron acquired by Actavis (Allergan)	Wallonia (Liège)
ADx Neurosciences	Neurodegenera- tive disorders + companion diagnostics (Alzheimer – Parkinson)	Tau (biomarkers)	Quanterix Eli Lilly TauRx Therapeutics EuroImmun		Flanders (Gent)
MaSTherCell	Cell therapy platform cGMP manufacturing	Cell therapy products Re-regenerative medicine Type 1 Diabetes		Acquired by Orgenesis	Wallonia (Gosselies)
Confo Therapeutics	Camelid (llama) antibodies CONFO platform	Megabodies Confobodies G-Protein (GPCR)	VIB Lundbeck Roche DyNABind		Brussels
MDxHealth*	MSP molecular diagnostics (Urologic cancer) CLIA laboratory	ConfirmMDx SelectMDx Predict – Inform - Assure – MonitorMDx	Exact Sciences (Cologuard) LabCorp; Oncgnostics; Philips; SouthGenetics; Sumitomo Merck & Co.; GSK; Roche; Pfizer Qiagen; Unilabs; Ferrer; UgenTec	Acquisition of NovioGendix	Wallonia (Herstal)
Biocartis* ↓ <i>spinout</i> MyCartis ↓ <i>spinout</i> Antelope	molecular diagnostics platforms (oncology) Evaluation	Idylla mini-lab Companion Diagnostics (CDx) Biomarker assays Lab-on-chip	Bristol Myers Squibb; AstraZeneca; J & J (Janssen); Abbott; Merck KGaA; Amgen; Fast-Track Diagnostics; Microbiome; ETPL + A*STAR; Fisher Healthcare; LifeArc; Genomic Health; Nichirei Immunexpress; Guangzhou Wondfo Biotech; Kite/Gilead	Acquisition of Pronota ↓ MyCartis = Evaluation (Biocartis division) + Pronota	Flanders (Mechelen) Flanders (Gent)


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eTheRNA immuno- therapies	mRNA-based TriMix technology	TriMix-based immunotherapies	Boehringer Ingelheim Ventures Fund PCI Biotech Progress Pharma (former Movetis-Shire)		Brussels (Jette)
Ogeda [Euroscreen ↓ Euroscreen <i>fast</i>]	G-Protein Coupled Receptors (GPCR)	Endometriosis (female health) Fezolinetant	Pfizer; AstraZeneca Boehringer Ingelheim Novartis; Lilly Ortho-McNeil-Janssen (J&J) Cephalon (Teva) GSK; UCB; Merck & Co	Acquired by Astellas Pharma	Wallonia (Gosselies)
Asit Biotech*	Allergen-specific immunotherapy (allergy immuno- therapy) ASIT+ Platform	gp-ASIT+ hdm-ASIT+ pnt- ASIT+			Brussels
Q-Biologicals (former Innogenetics – Fujirebio)	cGMP manufacturing of Biologicals	Recombinant proteins Monoclonal antibodies Vaccines	Artes Biotechnology Epirus Biopharmaceuticals (Bioceros) JSR Life Sciences Virbac Bayer CropScience	Acquired by Amatsigroup	Flanders (Gent)
Complix	Alphabody Platform Oncology Autoimmune diseases	Cell Penetrating Alphabodies	Merck & Co. (MSD) Monsanto Company		Flanders (Diepenbeek)
ActoGeniX	Cellular therapeutics Allergen immunotherapy	ActoBiotics (biological drugs/ biopharmaceuticals)	Merck & Co. (MSD) Stallergenes Greer	Acquired by Intrexon Actobiotics	Flanders (Gent)
reMYND	Neurodegenera- tive disease: Alzheimer; Diabetes; Parkinson; NASH	TAU-models; RadarScreen ReS19-T ReS39	ProMIS Neurosciences Inc. (Amorfix Life Sciences) Novo Nordisk		Flanders (Leuven)

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KitoZyme  KiOmed Pharma (former Synolyne)	Plant-based Biopolymer Chitosan technology Medical devices and implants	Chitosan-based hydrogel microbeads Vegetech Inside/ KiOmedine Arthrovisc			Wallonia (Herstal)
iTeos Therapeutics	immuno-oncology	IDO1 inhibitor Adenosine	Pfizer ImaBiotech SAS		Wallonia (Gosselies)
Delphi Genetics	StabyDNA technology platform (antibiotic resistance)	Gene cloning DNA cloning Protein production Plasmid DNA vaccines	Merck & Co. (MSD) GSK Biologicals Sanofi-Aventis Eurogentec		Wallonia (Gosselies)
OncoDNA	Cancer research	Webplatform (big data) OncoKDM	CollabRx	Acquisition of BioSequence	Wallonia (Gosselies)
Multiplicom	molecular diagnostics	MASTR products (assays)	EURenOmics Consortium	Acquired by Agilent Technologies	Flanders (Niel)
Genkyotex*	NOX therapies Vaxiclase platform	GKT831 ProCervix	Serum Institute of India	Gentical-Genkyotex (reverse takeover)	Euronext Brussels/Paris

* **IPO** Brussels and/or Paris and/or Amsterdam EURONEXT stock exchange listing AND/OR Nasdaq listing (*Galàpagos – Celyad – Tigenix – Argenx – Ablynx*)

Global (bio) Pharmaceutical Company 	Technology Platform	Product Portfolio Lead drug candidates	Strategic Alliances	Acquisitions of / Acquired by	Region (Location)
<p>UCB*</p> <p>UCB Ventures</p> <p>↓</p> <p>StrideBio (gene therapy)</p> <p>Syndesi Therapeutics (spin-out)</p>	<p>Neurology Immunology</p> <p>Epilepsy</p> <p>Cognitive disorders (neurology/ alzheimer)</p> <p>Genomics and Epigenomics research platform (e.g. CRISPR) with advanced informatics</p> <p>Auto-Immune diseases (myasthenia gravis)</p> <p>Parkinson</p>	<p>Zyrtec, Xyzal Cimzia, Neupro</p> <p>Keppra, Briviact, Vimpat, Midazolam; Nayzilam; Padsevonil</p> <p>Epratuzumab; bimekizumab;</p> <p>Evenity (Romosozumab)</p> <p>SV2A modulators (epilepsy)</p> <p>Targeted therapies</p> <p>Rozanolixizumab</p> <p>“April” app: digital health coach platform (virtual - AI technology)</p>	<p>AstraZeneca; Pfizer; Bayer Neuropore Therapies; Lonza Oncodesign; Biogen; Q-State Biosciences; Proximagen</p> <p>Amgen; Amgen Astellas BioPharma (AABP)</p> <p>Novo Nordisk (Novo Seeds); Johnson & Johnson Innovation / Janssen (JLINX** > JLABS@BE)</p> <p>Verint Systems</p>	<p>Acquisition of Celltech: Cimzia and Schwarz Pharma: Vimpat and Neupro</p> <p>Acquisition of Element Genomics</p> <p>Acquisition of Ra Pharmaceuticals (Zilucoplan)</p>	<p>Brussels</p> <p>Wallonia (Louvain-L-N) Flanders (Beerse)</p> <p>Durham, North Carolina (USA)</p> <p>UCB (USA)</p>
<p>Janssen*</p> <p>↓</p> <p>JLINX** transition into JLABS@BE</p>	<p>HIV medicines Oncology Neuroscience Infectious Diseases & Vaccines Cardiovascular & Metabolism</p>	<p>http://www.janssen.com/products</p>	<p>http://www.janssen.com/partnerships/overview</p> <p>JLINX > Bioqube Ventures</p>	<p>Acquired by Johnson & Johnson</p> <p>↓</p> <p>JLABS & JPod (JLABS virtual networking)</p>	<p>Flanders (Beerse)</p>

Janssen  partnerships: Galapagos (2007-2015); Biocartis (2010-current); JLABS@BE [** e.g. Rejuvenate Biomed; Syndesi Therapeutics; ProteoFormiX; S-Biomedic]