FTSE Russell

Reconstitution

Russell 3000® Index - Deletions

Company	Symbol	Industry
89BIO	ETNB	Health Care
9 METERS BIOPHARMA INC	NMTR	Health Care
ACACIA RESEARCH CORP	ACTG	Industrials
ACCELERATE DIAGNOSTICS	AXDX	Health Care
ACCURAY INC	ARAY	Health Care
ACUMEN PHARMACEUTICALS	ABOS	Health Care
ACUTUS MEDICAL	AFIB	Health Care
ADVENT TECHNOLOGIES (A)	ADN	Energy
ADVERUM BIOTECH INC	ADVM	Health Care
AEGLEA BIOTHERAPEUTICS	AGLE	Health Care
AGEAGLE AERIAL SYSTEMS	UAVS	Industrials
AKEBIA THERAPEUTICS INC	AKBA	Health Care
AKOUOS	AKUS	Health Care
ALAUNOS THERAPEUTICS INC	TCRT	Health Care
ALDEYRA THERAPEUTICS INC	ALDX	Health Care
ALIGOS THERAPEUTICS	ALGS	Health Care
ALLAKOS INC	ALLK	Health Care
ALTIMMUNE INC	ALT	Health Care
AMERICAN OUTDOOR BRANDS	AOUT	Consumer Discretionary
AMERICAN SUPERCONDUCTOR	AMSC	Energy
AMPIO PHARMACEUTICALS	AMPE	Health Care
ANGION BIOMEDICA	ANGN	Health Care
ANNEXON	ANNX	Health Care
APPLIED MOLECULAR TRANSP	AMTI	Health Care
APPLIED THERAPEUTICS INC	APLT	Health Care
APYX MEDICAL INC	APYX	Health Care
AQUABOUNTY TECHNOLOGIES	AQB	Consumer Staples
ARCIMOTO	FUV	Consumer Discretionary
ARDELYX INC	ARDX	Health Care
ASENSUS SURGICAL INC	ASXC	Health Care
ASPIRA WOMENS HEALTH INC	AWH	Health Care
ATHENEX	ATNX	Health Care
ATHERSYS INC	ATHX	Health Care
ATOSSA THERAPEUTICS INC	ATOS	Health Care
ATRECA INC	BCEL	Health Care
AVALO THERAPEUTICS INC	AVTX	Health Care
AVITA MEDICAL INC	RCEL	Health Care
AVROBIO INC	AVRO	Health Care
BARNES & NOBLE EDUCATION	BNED	Consumer Discretionary
BASSETT FURNITURE INDS		•
BEAM GLOBAL	BSET	Consumer Discretionary
BEYONDSPRING		Energy
	BYSI	Health Care
BIOATLA	BCAB	Health Care
BIODESIX PIOMEA FUSION	BDSX	Health Care
BIOMEA FUSION	BMEA	Health Care
BLACK DIAMOND THERAPEUTI	BDTX	Health Care
BOLT BIOTHERAPEUTICS	BOLT	Health Care
BROOKLYN IMMUNO THERAPEU	BTX	Health Care
BYRNA TECHNOLOGIES	BYRN	Industrials

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Company	Symbol	Industry
CADIZ INC	CDZI	Utilities
CALAMP CORP	CAMP	Telecommunications
CARDIFF ONCOLOGY INC	CRDF	Health Care
CARLOTZ INC (A)	LOTZ	Consumer Discretionary
CARROLS RESTAURANT GRP	TAST	Consumer Discretionary
CECO ENVIRONMENTAL CORP	CECE	Industrials
CELCUITY	CELC	Health Care
CEL-SCI CORP	CVM	Health Care
CHICKEN SOUP ENTMNT INC	CSSE	Consumer Discretionary
CHROMADEX CORP	CDXC	Health Care
CITIUS PHARMACEUTICALS	CTXR	Health Care
CITIZENS INC	CIA	Financials
CLEARPOINT NEURO INC	CLPT	Health Care
CLENE INC	CLNN	Health Care
CLOVIS ONCOLOGY INC	CLVS	Health Care
CODEX DNA	DNAY	Health Care
CODIAK BIOSCIENCES	CDAK	Health Care
COMMERCIAL VEH GROUP INC	CVGI	Industrials
COMSCORE INC	SCOR	Technology
COOPER STD HLDGS INC	CPS	Consumer Discretionary
CORECARD CORP	CCRD	Technology
CORMEDIX INC	CRMD	Health Care
CORTEXYME	CRTX	Health Care
CUE BIOPHARMA INC	CUE	Health Care
CUREVAC NV	CVAC	Health Care
CURIOSITYSTREAM INC (A)	CURI	Consumer Discretionary
CURIS INC	CRIS	Health Care
CVRX	CVRX	Health Care
CYMABAY THERAPEUTICS INC	CBAY	Health Care
CYTEIR THERAPEUTICS	СҮТ	Health Care
CYTOMX THERAPEUTICS INC	СТМХ	Health Care
CYTOSORBENTS CORP	стѕо	Health Care
DAKTRONICS INC	DAKT	Technology
DARIOHEALTH	DRIO	Health Care
DERMTECH INC	DMTK	Health Care
DIGITAL MEDIA SOL (A)	DMS	Consumer Discretionary
DRIVE SHACK	DS	Consumer Discretionary
DURECT CORP	DRRX	Health Care
EARGO	EAR	Health Care
EBET INC	EBET	Consumer Discretionary
ELIEM THERAPEUTICS	ELYM	Health Care
EMCORE CORP	EMKR	Technology
EMERALD HOLDING INC	EEX	Consumer Discretionary
ENTRADA THERAPEUTICS	TRDA	Health Care
EOS ENERGY (A)	EOSE	Industrials
EPIZYME INC	EPZM	Health Care
EROS MEDIA WORLD PLC	EMWP	Consumer Discretionary
ESCALADE INC	ESCA	Consumer Discretionary
EVELO BIOSCIENCES	EVLO	Health Care



Company	Symbol	Industry
EVI INDUSTRIES	EVI	Industrials
EXAGEN	XGN	Health Care
FATHOM HOLDINGS	FTHM	Real Estate
FIDELITY D&D BANCORP INC	FDBC	Financials
FIESTA RESTAURANT GROUP	FRGI	Consumer Discretionary
FINCH THERAPEUTICS GROUP	FNCH	Health Care
FLEXSTEEL INDUSTRIES INC	FLXS	Consumer Discretionary
FLUENT INC	FLNT	Consumer Discretionary
FORIAN	FORA	Health Care
FORTE BIOSCIENCES INC	FBRX	Health Care
FORTRESS BIOTECH INC	FBIO	Health Care
FREQUENCY THERAPEUTICS	FREQ	Health Care
FS BANCORP INC	FSBW	Financials
G1 THERAPEUTICS	GTHX	Health Care
GAN	GAN	Technology
GATOS SILVER	GATO	Basic Materials
GEMINI THERAPEUTICS INC	GMTX	Health Care
GENIUS BRANDS INTL	GNUS	Consumer Discretionary
GOHEALTH	GOCO	Financials
GRAPHITE BIO	GRPH	Health Care
GREAT AJAX CORP	AJX	Financials
GREENBOX POS	GBOX	Industrials
GREENHILL & CO INC	GHL	Financials
GREENLANE HOLDINGS	GNLN	Consumer Staples
GREENWICH LIFESCIENCES	GLSI	Health Care
GRITSTONE BIO INC	GRTS	Health Care
GT BIOPHARMA	GTBP	Health Care
HAMILTON BEACH BRANDS	НВВ	Consumer Discretionary
HARPOON THERAPEUTICS	HARP	Health Care
HARVARD BIOSCIENCE INC	НВІО	Health Care
HEMISPHERE MEDIA GROUP	HMTV	Telecommunications
HERITAGE INS HLDGS INC	HRTG	Financials
HIREQUEST INC.	HQI	Industrials
HOF RSRT AND ENT COM (A)	HOFV	Consumer Discretionary
HOMOLOGY MEDICINES	FIXX	Health Care
HOOKER FURNISHINGS CORP	HOFT	Consumer Discretionary
HOOKIPA PHARMA	ноок	Health Care
HUMANIGEN	HGEN	Health Care
HYRECAR INC	HYRE	Consumer Discretionary
IBIO	IBIO	Health Care
ICAD INC	ICAD	Health Care
IDEANOMICS INC	IDEX	Industrials
IKENA ONCOLOGY	IKNA	Health Care
IMMUNEERING	IMRX	Health Care
IMMUNIC INC	IMUX	Health Care
IMPEL PHARMACEUTICAL INC	IMPL	Health Care
INFINITY PHARMACEUTICALS	INFI	Health Care
INFUSYSTEM HLDGS INC	INFU	Health Care
INNOVATE CORP	VATE	Industrials



Company	Symbol	Industry
INOZYME PHARMA	INZY	Health Care
INVACARE CORP	IVC	Health Care
ISOPLEXIS	ISO	Health Care
ITERIS INC	ITI	Industrials
JFROG	FROG	Technology
KALA PHARMACEUTICALS	KALA	Health Care
KALTURA	KLTR	Telecommunications
KEMPHARM	KMPH	Health Care
KIRKLANDS INC	KIRK	Consumer Discretionary
KOPIN CORP	KOPN	Technology
KVH INDUSTRIES INC	KVHI	Telecommunications
LAIRD SUPERFOOD	LSF	Consumer Staples
LANDOS BIOPHARMA	LABP	Health Care
LAZYDAYS HOLDINGS INC	LAZY	Consumer Discretionary
LIBERTY TRIPADVISOR HLDG	LTRPA	Consumer Discretionary
LIMONEIRA CO	LMNR	Consumer Staples
LINEAGE CELL THERAPEUTIC	LCTX	Health Care
LIVEONE INC	LVO	Consumer Discretionary
LUCID DIAGNOSTICS	LUCD	Health Care
LUNA INNOVATIONS INC	LUNA	Industrials
MAGENTA THERAPEUTICS INC	MGTA	Health Care
MAIDEN HOLDINGS LTD	MHLD	Financials
MARINUS PHARMACEUTICALS	MRNS	Health Care
MARRONE BIO INNOVATIONS	MBII	Basic Materials
MATRIX SERVICE CO	MTRX	Energy
MAYVILLE ENGINEERING	MEC	Industrials
MEDAVAIL HOLDINGS INC	MDVL	Consumer Staples
MEI PHARMA INC	MEIP	Health Care
MESA AIR GROUP INC	MESA	Consumer Discretionary
META MATERIALS INC	MMAT	Basic Materials
METROMILE INC (A)	MILE	Financials
MIND MEDICINE MINDMED	MNMD	Health Care
MINK THERAPEUTICS	INKT	Health Care
MISTRAS GROUP INC	MG	Industrials
MOLECULAR TEMPLATES	MTEM	Health Care
MUSTANG BIO	MBIO	Health Care
NANTHEALTH INC	NH	Health Care
NATHANS FAMOUS INC	NATH	Consumer Discretionary
NATIONAL CINEMEDIA INC	NCMI	Consumer Discretionary
NAUTILUS INC	NLS	Consumer Discretionary
NEOLEUKIN THERAPEUTICS	NLTX	Health Care
NEURONETICS INC	STIM	Health Care
NEUROPACE	NPCE	Health Care
NEWAGE INC	NBEV	Consumer Staples
NEXIMMUNE	NEXI	Health Care
NN INC	NNBR	Basic Materials
NORTHRIM BANCORP INC	NRIM	Financials
NVE CORP	NVEC	Technology
NXP SEMICONDUCTORS NV	NXPI	Technology



Company	Symbol	Industry
OCWEN FINANCIAL CORP	OCN	Financials
OIL DRI CORP OF AMERICA	ODC	Consumer Staples
OLEMA PHARMACEUTICALS	OLMA	Health Care
OMEGA THERAPEUTICS	OMGA	Health Care
OMEROS CORP	OMER	Health Care
ONCOCYTE CORP	ocx	Health Care
ONCORUS	ONCR	Health Care
ONCTERNAL THERAPEUTICS	ONCT	Health Care
ONTRAK INC	OTRK	Health Care
ORAMED PHARMACEUTICALS	ORMP	Health Care
ORIC PHARMACEUTICALS	ORIC	Health Care
OYSTER POINT PHARMA	OYST	Health Care
PARATEK PHARMACEUTICALS	PRTK	Health Care
PARK OHIO HOLDINGS CORP	РКОН	Industrials
PASSAGE BIO	PASG	Health Care
PAVMED INC	PAVM	Health Care
PERPETUA RESOURCES	PPTA	Basic Materials
PERSONALIS INC	PSNL	Health Care
PLAYAGS INC	AGS	Consumer Discretionary
PLIANT THERAPEUTICS	PLRX	Health Care
PORTAGE BIOTECH	PRTG	Health Care
POSEIDA THERAPEUTICS	PSTX	Health Care
PRECISION BIOSCIENCES	DTIL	Health Care
PRELUDE THERAPEUTICS	PRLD	Health Care
PULSE BIOSCIENCES INC	PLSE	Health Care
PUMA BIOTECHNOLOGY INC	PBYI	Health Care
PYXIS ONCOLOGY	PYXS	Health Care
QUANTUM CORP	QMCO	Technology
QUOTIENT LIMITED	QTNT	Health Care
RAFAEL HOLDINGS	RFL	Real Estate
RAIN THERAPEUTICS	RAIN	Health Care
RAPID MICRO BIOSYSTEMS	RPID	Health Care
RED ROBIN GOURMET BURGER	RRGB	Consumer Discretionary
REGIS CORP	RGS	Consumer Discretionary
REKOR SYSTEMS INC	REKR	Industrials
RENEO PHARMACEUTICALS	RPHM	Health Care
RETRACTABLE TECHNOLOGIES	RVP	Health Care
RHYTHM PHARMACEUTICALS	RYTM	Health Care
ROMEO POWER INC (A)	RMO	Consumer Discretionary
RUBIUS THERAPEUTICS	RUBY	Health Care
SCHOLAR ROCK HOLDING	SRRK	Health Care
SEELOS THERAPEUTICS INC	SEEL	Health Care
SELECTA BIOSCIENCES INC	SELB	Health Care
SENSEI BIOTHERAPEUTICS	SNSE	Health Care
SERA PROGNOSTICS	SERA	Health Care
SESEN BIO INC	SESN	Health Care
SHARPS COMPLIANCE CORP	SMED	Utilities
SHATTUCK LABS	STTK	Health Care
SHIFT TECHNOLOGIES (A)	SFT	Consumer Discretionary



Company	Symbol	Industry
SIENTRA INC	SIEN	Health Care
SIGILON THERAPEUTICS	SGTX	Health Care
SILVERBACK THERAPEUTICS	SBTX	Health Care
SMITH MICRO SOFTWARE INC	SMSI	Technology
SOCIETY PASS INC	SOPA	Technology
SOLID BIOSCIENCES INC	SLDB	Health Care
SPECTRUM PHARMACEUTICALS	SPPI	Health Care
SPERO THERAPEUTICS INC	SPRO	Health Care
SPRUCE BIOSCIENCES	SPRB	Health Care
SQZ BIOTECHNOLOGIES	SQZ	Health Care
STANDARD BIOTOOLS INC	LAB	Health Care
STARTEK INC	SRT	Industrials
STEREOTAXIS	STXS	Health Care
STRONGHOLD DIGITAL MININ	SDIG	Technology
SUMMIT THERAPEUTICS INC	SMMT	Health Care
SURFACE ONCOLOGY	SURF	Health Care
SYROS PHARMACEUTICALS	SYRS	Health Care
TABULA RASA HEALTHCARE	TRHC	Health Care
TALIS BIOMEDICAL	TLIS	Health Care
TAYSHA GENE THERAPIES	TSHA	Health Care
TCR2 THERAPEUTICS	TCRR	Health Care
TEAM INC	TISI	Industrials
TELESAT CORPORATION	TSAT	Telecommunications
TERNS PHARMACEUTICALS	TERN	Health Care
THERAPEUTICSMD INC	TXMD	Health Care
TONIX PHARMACEUTICALS	TNXP	Health Care
TREVENA INC	TRVN	Health Care
UNITED INS HLDGS CORP	UIHC	Financials
UROGEN PHARMA	URGN	Health Care
US XPRESS ENTERPRISES	USX	Industrials
VAPOTHERM	VAPO	Health Care
VERA BRADLEY INC	VRA	Consumer Discretionary
VERASTEM INC	VSTM	Health Care
VERRICA PHARMACEUTICALS	VRCA	Health Care
VIEMED HEALTHCARE	VMD	Health Care
VIGIL NEUROSCIENCE	VIGL	Health Care
VIKING THERAPEUTICS INC	VKTX	Health Care
VINCERX INC	VINC	Health Care
VIRACTA THERAPEUTICS INC	VIRX	Health Care
VIRNETX HOLDING CORP	VHC	Technology
VOR BIOPHARMA	VOR	Health Care
VOXX INTERNATIONAL CORP	VOXX	Consumer Discretionary
VROOM	VRM	Technology
WAVE LIFE SCIENCES LTD	WVE	Health Care
WEREWOLF THERAPEUTICS	HOWL	Health Care
WILLIS LEASE FINANCE	WLFC	Industrials
XBIOTECH INC	XBIT	Health Care
XILIO THERAPEUTICS	XLO	Health Care
XL FLEET CORP (A)	XL	Consumer Discretionary
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Company	Symbol	Industry
XOMA CORP	XOMA	Health Care
YELLOW CORPORATION	YELL	Industrials
YUM CHINA HOLDINGS INC	YUMC	Consumer Discretionary
ZEVIA PBC	ZVIA	Consumer Staples
ZYMERGEN	ZY	Basic Materials



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FTSE Russell 8