FTSE Russell

Reconstitution

Russell Microcap® Index - Deletions

Company	Symbol	Sector
22ND CENTURY GROUP INC	XXII	Consumer Staples
9 METERS BIOPHARMA INC	NMTR	Health Care
ABRAXAS PETE CORP	AXAS	Energy
ACER THERAPEUTICS INC	ACER	Health Care
ADAMIS PHARMACEUTICALS	ADMP	Health Care
ADDUS HOMECARE CORP	ADUS	Health Care
ADVERUM BIOTECH INC	ADVM	Health Care
AERPIO PHARMACEUTICALS	ARPO	Health Care
AETERNA ZENTARIS	AEZS	Health Care
AGEX THERAPEUTICS INC	AGE	Health Care
AILERON THERAPEUTICS	ALRN	Health Care
AKEBIA THERAPEUTICS INC	AKBA	Health Care
ALJ REGIONAL HOLDINGS	ALJJ	Producer Durables
ALKALINE WATER CO INC	WTER	Consumer Staples
ALTISOURCE ASSET MGMT	AAMC	Financial Services
AMERESCO INC	AMRC	Energy
AMERICAN RESOURCES CORP	AREC	Energy
ANTERIX INC	ATEX	Utilities
APPLIED THERAPEUTICS INC	APLT	Health Care
AQUA METALS INC	AQMS	Producer Durables
ARC DOCUMENT SOLUTIONS	ARC	Technology
ARCUS BIOSCIENCES	RCUS	Health Care
ARVINAS HOLDING	ARVN	Health Care
ASCENA RETAIL GROUP INC	ASNA	Consumer Discretionary
ASHFORD HOSPITALITY	AHT	Financial Services
ASHFORD INC	AINC	Financial Services
ASSERTIO HOLDINGS INC	ASRT	Health Care
AUTOWEB INC	AUTO	Technology
AXCELIS TECHNOLOGIES INC	ACLS	Technology
AXONICS MODULATION TECH	AXNX	Health Care
AXSOME THERAPEUTICS INC	AXSM	Health Care
AZURRX BIOPHARMA INC	AZRX	Health Care
BALLANTYNE STRONG INC	BTN	Technology
BBQ HOLDINGS INC	BBQ	Consumer Discretionary
BIG 5 SPORTING GOODS	BGFV	Consumer Discretionary
BIO PATH HOLDINGS INC	ВРТН	Health Care
BIOHITECH GLOBAL INC	BHTG	Producer Durables
BIOLASE INC	BIOL	Health Care
BIONANO GENOMICS INC	BNGO	Health Care
BOXLIGHT CORP	BOXL	Technology
CAPITAL SENIOR LIVING	CSU	Health Care
CARDLYTICS INC	CDLX	Consumer Discretionary
CASTLIGHT HEALTH INC	CSLT	Health Care
CBDMD INC	YCBD	Consumer Staples
CBL & ASSOC PPTYS INC	CBL	Financial Services
CEDAR REALTY TRUST INC	CDR	Financial Services
CENTRAL EUROPEAN MEDIA	CETV	Consumer Discretionary
CERUS CORP	CERS	Health Care
CHAPARRAL ENERGY INC	CHAP	Energy

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Company	Symbol	Sector
CHARLES & COLVARD LTD	CTHR	Consumer Discretionary
CHEMOCENTRYX INC	CCXI	Health Care
CINEDIGM DIGITAL CINEMA	CIDM	Technology
CLEARONE INC	CLRO	Technology
CNS PHARMACEUTICALS	CNSP	Health Care
COCRYSTAL PHARMA	COCP	Health Care
COMMUNITY HEALTHCARE TR	СНСТ	Financial Services
COMSTOCK RESOURCES INC	CRK	Energy
CONFORMIS INC	CFMS	Health Care
CONSTELLATION PHARMA	CNST	Health Care
CONSTRUCTION PARTNERS	ROAD	Producer Durables
CORE MOLDING TECHN	CMT	Materials & Processing
CORTEXYME	CRTX	Health Care
COVIA HOLDINGS CORP	CVIA	Energy
CSW INDUSTRIALS INC	CSWI	Producer Durables
CURIS INC	CRIS	Health Care
CYNERGISTEK INC	СТЕК	Technology
CYREN	CYRN	Technology
CYTOKINETICS INC	СҮТК	Health Care
DATA IO CORP	DAIO	Technology
DECIPHERA PHARMACEUTICAL	DCPH	Health Care
DESTINATION XL GRP INC	DXLG	Consumer Discretionary
DHT HOLDINGS INC	DHT	Producer Durables
DICERNA PHARMACEUTICALS	DRNA	Health Care
DIGITAL ALLY INC	DGLY	Producer Durables
EASTSIDE DISTILLING INC	EAST	Consumer Discretionary
EIDOS THERAPEUTICS	EIDX	Health Care
EKSO BIONICS HOLDINGS	EKSO	Health Care
ELECTROCORE INC	ECOR	Health Care
ENDOLOGIX INC	ELGX	Health Care
EVERQUOTE	EVER	Technology
EXELA TECHNOLOGIES	XELA	Producer Durables
EYEPOINT PHARMACEUTICALS	EYPT	Health Care
FARO TECHNOLOGIES INC	FARO	Producer Durables
FLANIGANS ENTERPRISES	BDL	Consumer Discretionary
FLEXIBLE SOLUTIONS INTL	FSI	Materials & Processing
FLOTEK INDUSTRIES INC	FTK	Energy
FORTE BIOSCIENCES INC	FBRX	Health Care
FREIGHTCAR AMERICA INC	RAIL	Producer Durables
FUEL TECH INC	FTEK	Producer Durables
GENESIS HEALTHCARE INC	GEN	Health Care
GNC HLDGS INC	GNC	Consumer Staples
GSE SYSTEMS INC	GVP	Technology
GUARDION HEALTH SCIENCES	GHSI	Health Care
HALLADOR ENERGY CO	HNRG	Energy
HELIUS MEDICAL TECH	HSDT	Health Care
HERMITAGE OFFSHORE SERV	PSV	Producer Durables
HIGH POINT RESOURCES	HPR	Energy
HTG MOLECULAR	HTGM	Health Care
THO MICEOULAN	TITOW	Health Gale



Company	Symbol	Sector
HUDSON GLOBAL INC	HSON	Producer Durables
HUDSON TECHNOLOGIES INC	HDSN	Producer Durables
HV BANCORP INC	HVBC	Financial Services
ICC HOLDINGS INC	ICCH	Financial Services
IDEANOMICS INC	IDEX	Technology
IGM BIOSCIENCES	IGMS	Health Care
IND CONTRACT DRILLING	ICD	Energy
INDEPENDENCE RLTY TRUST	IRT	Financial Services
INDIA GLOBALIZATION CAP	IGC	Producer Durables
INGLES MARKETS INC	IMKTA	Consumer Staples
INNOVATIVE INDUSTRIAL	IIPR	Financial Services
INOVIO PHARMACEUTICALS	INO	Health Care
INSEEGO CORP	INSG	Technology
INUVO INC	INUV	Technology
IRIDEX CORP	IRIX	Health Care
JEWETT-CAMERON TRADING	JCTCF	Materials & Processing
JJILL INC	JILL	Consumer Discretionary
KADANT INC	KAI	Producer Durables
KARUNA THERAPEUTICS INC	KRTX	Health Care
KARYOPHARM THERAPEUTICS	KPTI	Health Care
KEWAUNEE SCIENTIFIC CORP	KEQU	Producer Durables
KINIKSA PHARMACEUTICALS	KNSA	Health Care
KIRKLANDS INC	KIRK	Consumer Discretionary
KODIAK SCIENCES	KOD	Health Care
KOPIN CORP	KOPN	Technology
KRYSTAL BIOTECH	KRYS	Health Care
LARIMAR THERAPEUTICS INC	LRMR	Health Care
LEE ENTERPRISES INC	LEE	Consumer Discretionary
LILIS ENERGY INC	LLEX	Energy
LIMBACH HOLDINGS INC	LMB	Producer Durables
LINEAGE CELL THERAPEUTIC	LCTX	Health Care
LIPOCINE INC	LPCN	Health Care
LONESTAR RESOURCES	LONE	Energy
LUBYS INC	LUB	Consumer Discretionary
MACROGENICS INC	MGNX	Health Care
MANNATECH INC	MTEX	Consumer Staples
MEDIACO HOLDING	MDIA	Consumer Discretionary
MEDLEY MANAGEMENT INC	MDLY	Financial Services
MESA LABS INC	MLAB	Producer Durables
MICROVISION INC	MVIS	Technology
MIDDLESEX WATER CO	MSEX	Utilities
MIRAGEN THERAPEUTICS INC	MGEN	Health Care
MITCHAM INDUSTRIES INC	MIND	Energy
MODEL N INC	MODN	Technology
MOLECULIN BIOTECH INC	MBRX	Health Care
MONAKER GROUP	MKGI	Consumer Discretionary
MR. COOPER GROUP INC	COOP	Financial Services
NANOSTRING TECH INC	NSTG	Health Care
NATIONAL HOLDINGS CORP	NHLD	Financial Services
NATIONAL HOLDINGS CORP	MILD	i manual Jervices



Company	Symbol	Sector
NAVIOS MARITIME HOLDINGS	NM	Producer Durables
NCS MULTISTAGE HOLD	NCSM	Energy
NEOS THERAPEUTICS INC	NEOS	Health Care
NETSOL TECHNOLOGIES INC	NTWK	Technology
NEXTCURE	NXTC	Health Care
NORTHERN OIL & GAS INC	NOG	Energy
NOVAN INC	NOVN	Health Care
NOVAVAX INC	NVAX	Health Care
NOVUS THERAPEUTICS INC	NVUS	Health Care
NUVERRA ENVTL SOLUTIONS	NES	Energy
OCWEN FINANCIAL CORP	OCN	Financial Services
ODONATE THERAPEUTICS INC	ODT	Health Care
OMEGA FLEX INC	OFLX	Materials & Processing
OMEROS CORP	OMER	Health Care
ONTO INNOVATION INC	ONTO	Technology
OPTICAL CABLE	occ	Technology
OPTION CARE HEALTH INC	ОРСН	Health Care
ORASURE TECHNOLOGIES INC	OSUR	Health Care
ORBITAL ENERGY GROUP	OEG	Producer Durables
ORGANOVO HLDGS INC	ONVO	Health Care
OTELCO INC	OTEL	Utilities
P C CONNECTION	CNXN	Technology
PACIFIC ETHANOL INC	PEIX	Energy
PALATIN TECHNOLOGIES INC	PTN	Health Care
PALOMAR HOLDINGS	PLMR	Financial Services
PARETEUM	TEUM	Utilities
PATRIOT NATL BANCORP INC	PNBK	Financial Services
PEDEVCO CORP	PED	Energy
PERFICIENT INC	PRFT	Technology
PERFORMANT FINANCIAL COR	PFMT	Producer Durables
PHATHOM PHARMACEUTICALS	PHAT	Health Care
PHUNWARE INC	PHUN	Technology
PLUG POWER INC	PLUG	Producer Durables
PLX PHARMA INC	PLXP	Health Care
POLAR POWER INC	POLA	Producer Durables
PRECIPIO	PRPO	Health Care
PRINCIPIA BIOPHARMA	PRNB	Health Care
PROFIRE ENERGY INC	PFIE	Energy
PROPHASE LABS INC	PRPH	Health Care
QAD INC	QADA	Technology
QUEST RESOURCE HOLDING	QRHC	Producer Durables
QUINTANA ENERGY SERVICES	QES	Energy
QUMU CORPORATION	QUMU	Technology
RA MEDICAL SYSTEMS	RMED	Health Care
RCM TECHNOLOGIES INC	RCMT	Producer Durables
REALNETWORKS INC	RNWK	Technology
REEDS INC	REED	Consumer Staples
RENEWABLE ENER GROUP INC	REGI	Energy
REVANCE THERAPEUTICS INC	RVNC	Health Care



Company	Symbol	Sector
RHYTHM PHARMACEUTICALS	RYTM	Health Care
RIGNET INC	RNET	Energy
RING ENERGY INC	REI	Energy
ROCKET PHARMACEUTICALS	RCKT	Health Care
ROCKY MOUNTAIN CHOCOLATE	RMCF	Consumer Staples
ROSEHILL RESOURCES INC	ROSE	Energy
RTW RETAILWINDS INC	RTW	Consumer Discretionary
RUMBLEON INC	RMBL	Technology
SAFEHOLD INC	SAFE	Financial Services
SALEM MEDIA GROUP INC	SALM	Consumer Discretionary
SANFILIPPO JOHN B & SON	JBSS	Consumer Staples
SCWORX CORP	WORX	Technology
SCYNEXIS INC	SCYX	Health Care
SEADRILL LIMITED	SDRL	Energy
SEELOS THERAPEUTICS INC	SEEL	Health Care
SENESTECH INC	SNES	Materials & Processing
SENSEONICS HOLDINGS INC	SENS	Health Care
SEQUENTIAL BRANDS GROUP	SQBG	Consumer Discretionary
SERVOTRONICS INC	SVT	Producer Durables
SESEN BIO INC	SESN	Health Care
SHILOH INDUSTRIES INC	SHLO	Consumer Discretionary
SMART SAND INC	SND	Energy
SONIM TECHNOLOGIES	SONM	Technology
SPRING BANK PHARMA	SBPH	Health Care
SPRINGWORKS THERAPEUTICS	SWTX	Health Care
SRAX INC	SRAX	Consumer Discretionary
STARRETT L S CO	SCX	Producer Durables
STEEL CONNECT INC	STCN	Technology
SUNESIS PHARMACEUTICALS	SNSS	Health Care
SUNNOVA ENERGY INTL INC	NOVA	Utilities
SUNWORKS INC	SUNW	Energy
SUPER LEAGUE GAMING	SLGG	Technology
SUPPORT.COM INC	SPRT	Technology
T2 BIOSYSTEMS INC	ттоо	Health Care
TAITRON COMPONENTS INC	TAIT	Producer Durables
TEEKAY CORP	тк	Producer Durables
TEEKAY TANKERS LTD	TNK	Producer Durables
TETRA TECHNOLOGIES INC	TTI	Energy
TETRAPHASE PHARMA INC	ТТРН	Health Care
TG THERAPEUTICS INC	тстх	Health Care
TORCHLIGHT ENERGY	TRCH	Energy
TOWN SPORTS INTL	CLUB	Consumer Discretionary
TRANSENTERIX INC	TRXC	Health Care
TRANSLATE BIO INC	TBIO	Health Care
TREVENA INC	TRVN	Health Care
TWIST BIOSCIENCE	TWST	Health Care
U.S. WELL SERVICES	USWS	Energy
UNUM THERAPEUTICS	UMRX	Health Care
URBAN ONE INC	UONEK	Consumer Discretionary



Company	Symbol	Sector
VAALCO ENERGY INC	EGY	Energy
VERTEX ENERGY INC	VTNR	Producer Durables
VIVUS INC	VVUS	Health Care
VOLT INFORMATION SCIENCE	VOLT	Producer Durables
WESTELL TECHNOLOGIES INC	WSTL	Technology
WILHELMINA INTL INC	WHLM	Consumer Discretionary
WILLAMETTE VLLY VINEYARD	WVVI	Consumer Staples
WIRELESS TELECOM GROUP	WTT	Producer Durables
XTANT MEDICAL HOLDINGS	XTNT	Health Care
Y-MABS THERAPEUTICS	YMAB	Health Care
ZOSANO PHARMA CORP	ZSAN	Health Care



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