INITIATING COVERAGE

Life Science & Diagnostic Tools: Life Science Tools

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CELLULAR DYNAMICS INTERNATIONAL INC

(NASDAQ:ICEL)

Initiation: Pioneering iPSC Technology with Vast Commercial Potential

Recommendation

Rating:	Outperform
Price Target (in $):	$16.00
Expected Return:	18.3%
Dividend:	NA
Enterprise Value (MM):	$305.0

Revenue (MM)

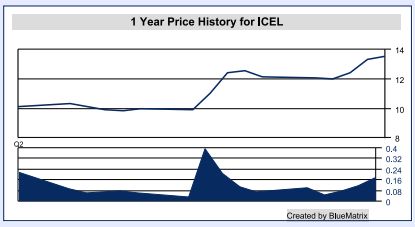
	2012A	2013E	2014E
Q1	1.1	2.4*A*	5.1
Q2	1.3	2.9	6.6
Q3	1.2	3.0	7.6
Q4	2.9	4.3	10.8
FY	6.6	12.5	30.0

Stock Statistics as of 08/16/2013 (in $)

Price:	$13.53
52W Range:	$14.47-$9.50
Shares Out (MM):	16.3
Market Cap (MM):	$212.9
Net Debt (MM):	$28.0

Fundamentals

Earnings Per Share ('12A)	*$(2.12)*
Earnings Per Share ('13E)	*$(1.59)*
Earnings Per Share ('14E)	*$(1.01)*



Cellular Dynamics is a pioneer in iPSC production enabling novel applications in broad end markets. While the revenue trajectory may be hard to predict, with validation from top biopharma customers and a vast runway for growth, we initiate with an Outperform rating.

Addressing Potentially Huge Market Opportunities

CDI currently addresses the (1) *in vitro* drug discovery, toxicity testing, and chemical safety, and (2) stem cell banking, markets, and has plans to enter the *in vivo* and cell-based therapeutic research market. Total market potential is estimated to be ~$10B in 2011, according to company-sourced research.

Technological and Process Advantage is Significant, and is Only Widening

We believe CDI is uniquely able to produce stable, high-purity iPSC's to precise specifications and at a scale that is unrivaled; its advantages are based on intellectual property, trade secrets, and proprietary manufacturing processes.

iCells Driving Growth; Adoption Sales Cycle Shortening

CDI's first iCell product, iCell Cardiomyocytes (Launched in Q1:2010), took over 8 quarters to reach a run rate of >$2MM per year; its next iCell product, iCell Neurons (Launched in Q4:11), only took 4 quarters to reach a similar run rate. Considering the number of new products in the company's pipeline, this acceleration in adoption could be very encouraging in fueling significant future revenue growth.

Validation Via Top Customer Adoption

CDI has >100 customers as of Q1:13, including 18 of the top 20 biopharmaceutical companies based on worldwide sales. Average revenue per top 10 customer has increased from <$200k in FY:11 to ~$500k in FY:12, and is on track to further improve over the near future.

Please see addendum of this report for important disclosures.

Investment Thesis

Cellular Dynamics (CDI; Nasdaq: ICEL) is a pioneer in the field of using induced pluripotent stem cells (iPSC) to produce potentially any cell type in the human body in a standardized and cost efficient way on an industrial scale. Via its low-cost, high-quality products, we believe CDI is well positioned to address various market opportunities including *in vitro* therapeutic research, stem cell banking, and *in vivo* therapeutic use. While we acknowledge visibility on the financial trajectory remains low, we believe these market opportunities are robust and that CDI is optimally positioned to address these market opportunities via its product offerings and seasoned management team. The company's early success including working with many of the top biopharmaceutical companies in the world is affirming. Accordingly, we are initiating coverage of ICEL with an Outperform rating as we believe shares are well positioned to outperform the market by at least 15% over the next 12 months.

Key Investment Highlights

- Rapidly evolving product line
- Top customers & competitive wins are validating
- Addressing Potentially Huge Market Opportunities
- Strong Management

Key Investment Risks

- Early stage
- Competition could intensify
- Difficult to define market opportunity
- Low visibility on financial trajectory

Valuation Summary

Relative to a comparable company group that includes Illumina, Cepheid, GenMark and Fluidigm, Cellular Dynamics trades at a ~10% discount on a 2014E revenue basis. On a 2015E basis, shares trade at a ~35% discount to the group. Factoring in the discount valuation relative to these companies but offset by low revenue trajectory visibility, we believe shares are well positioned to Outperform the market by 15% over the next 12-18 months.

COWEN TEARSHEET: CELLULAR DYNAMICS

KEY METRICS

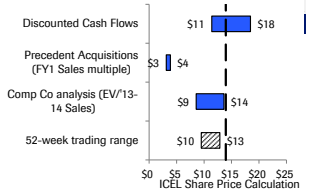
Company Ticker			ICEL
Cowen Rating	1	Price Target	$16
Share Price	8/16/2013		$14
Market Value (MM)			$234
Enterprise Value (MM)			$207
Current Debt/EBITDA			0.0x
Dividend Yield			0.0%
FCF Yield			(11.5%)
Share Repurchase			No
Short Interest			0.8%

STOCK PERFORMANCE

	YTD 2013	Q1'13	Q2'13
Absolute	38%	-	-
vs. S&P 500	22%	-	-

VALUATION (2013E)

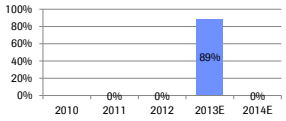
Company	EV/Sales 16.6x	EV/EBITDA (9.6x)	P/E (8.7x)
5 Year Avg.	NM	NM	NM
5 Year High	NM	NM	NM
5 Year Low	NM	NM	NM



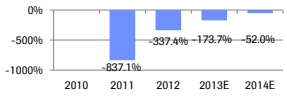
COWEN VS. CONSENSUS

	FQ3	FQ4	FY13
Revenue	N/A	N/A	N/A
Cowen	$3	$3	$12
Guidance	Not Provided	Not Provided	Not Provided
Gross Margin	N/A	N/A	N/A
Cowen	62.3%	62.1%	62.4%
Guidance	Not Provided	Not Provided	Not Provided
EPS	N/A	N/A	N/A
Cowen	($0.45)	($0.35)	($1.61)
Guidance	Not Provided	Not Provided	Not Provided

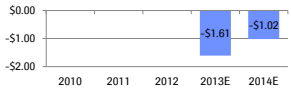
ORGANIC REVENUE GROWTH TRENDS



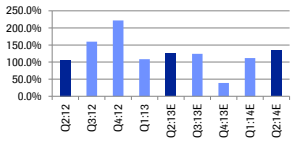
OPERATING MARGIN TRENDS



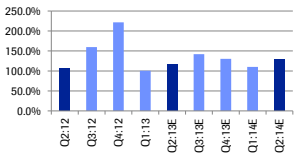
EPS TRENDS



Y/Y GROWTH COMPARISONS



2 YEAR STACKS (Y/Y GROWTH COMPARISONS)



COMPANY DESCRIPTION

Cellular Dynamics International (CDI) is a low cost, high quality, high volume developer and manufacturer of standardized, fullly functional human cells based on a method using induced pluripotent stem cells (iPSC). The company's products include iCells (Cardiomyocytes, Neurons, Endothelial Cells, Hepatocytes), iPSCs, and MyCells (custom iPSCs and iCells). These products have the potential to transform 3 markets: (1) in vitro drug development - to enable higher R&D success rate; (2) stem cell banking (cost effective manufacture of autologous cells); and (3) in vivo therapeutic use.

COWEN INVESTMENT THESIS

Cellular Dynamics (CDI; Nasdaq: ICEL) is a pioneer in the field of using induced pluripotent stem cells (iPSC) to produce potentially any cell type in the human body in a standardized and cost efficient way on an industrial scale. Via its low-cost, high-quality products, we believe CDI is well positioned to address various market opportunities including in vitro therapeutic research, stem cell banking, and in vivo therapeutic use. While we acknowledge visibility on the financial trajectory remains low, we believe these market opportunities are robust and that CDI is well positioned to address these market opportunities via its product offerings and seasoned management team. The company's early success including working with many of the top biopharmaceutical companies in the world is affirming. Accordingly, we are initiating coverage of ICEL with an Outperform rating as we believe shares are well positioned to outperform the market by at least 15% over the next 12 months.

AREAS OF FOCUS / KEY QUESTIONS

iCELL

- What's the revenue potential per large account per product line? How has this evolved with Cardiomyocytes and Neurons available? Will these two product be able to bring revenue to $1M over time? What's required for that to happen?
- Please describe a typical large account sale process to us. Where it starts, validation, publish paper, how it gets into screening process of large pharmas. How long does it take for a large account to go from initial small batch validation to large scale screening? 6 months? 12 months?
- What's the typical size of a large pharma order? At what ASP? How has ASP for iCELL been trending?
- You are on track to launch Hepatocyte by end of year. When do you plan to launch the remaining cell types in your R&D pipeline? When do you expect these product lines to start generate meaningful impact? Are you baking in any revenue for Hepatocyte in CY:13?

MyCell

- For MyCell, your 2014 $6.25M forecast was based on a 500 line placeholder that could be generated from many individual disease foundations, such as AZ, Huntington's, etc. What's your assumption underlying your rapid ramp into CY:15-16, where your revenue went up from $6.25M to $12.5M and then to $31.25M? (translate into 1000 line in 2015 and 2500 lines in 2016). Is that feasible?

STEM CELL BANKING

- Could you talk about your forecasted revenue allocation for the $22MM CIRM grant? (2013-2017)
- What's the key deliverables, milestones, and potential risks for this project? Could you elaborate on your relationship with CORIELL in this grant? What's the IP arrangement for the cell lines generated, and will you be able to capitalize on these products?

CUSTOMER ADOPTION

- How do you get confidence in ramp given you are at $6.6MM in revenue and already have 128 customers? ($50K each p.a) Revenue ramped from $2.7MM to $6.6MM from 2011-2012 – how much same store vs. new accounts?
- How much revenue contribution are you expecting from your top pharma accounts (you mentioned you have 18 out of the top 20), for CY:13, 14 and forward?
- Lilly is a very important contributor to growth. How do investors get comfortable with outlook?

TOTAL ADDRESSABLE MARKET

- What's your TAM for in vitro drug development, stem cell banking, and in vivo therapeutics? Whare are your assumptions built into these calculations? What level of market penetration do you expect to reach over the next 5 years?

OPERATIONS

- Gross margin: any improvement on GM from current level going forward?
- How many sales people do you have now? What's the progress and plan for sales team build up going in CY:14?

COMPETITION

- Are there any imminent competitors in the iPSCs field that we should be concerned about?

BULL CASE

2014 Revenue approaching or exceeding $30MM; at 6.5-7x F14E EV/Sales= 15% upside

- Customer adoption accelerates, multiple key accounts approach $2MM/year
- Adoption on Hepatocytes and other products in pipeline faster than expected
- Stem Cell Banking market potential materializes in line with management forecast
- Customized MyCell iPSC/iCELL products provides additional

NEUTRAL CASE

2014 Revenue approaching 30MM; at 6.0x multiple = Fair valued

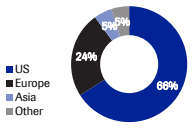
- Customer adoption accelerates, key top accounts exceed $1MM/year
- Adoption on Hepatocytes and other products in pipeline in line with expectations
- Stem Cell Banking market potential materializes slower than management forecast
- Customized MyCell iPSC/iCELL products provides additional growth drivers

BEAR CASE

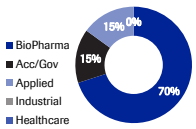
2014 Revenue ~$25MM; at 5.0x-5.5x multiple = 10-20% downside

- Customer adoption slower than anticipated, key top accounts remain under $1MM/year
- Adoption on Hepatocytes and other products in pipeline slower than expectations
- Stem Cell Banking market potential fail to materialize
- Customized MyCell iPSC/iCELL products gain limited traction

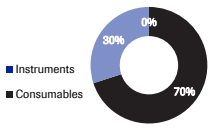
REVENUE BY GEOGRAPHY



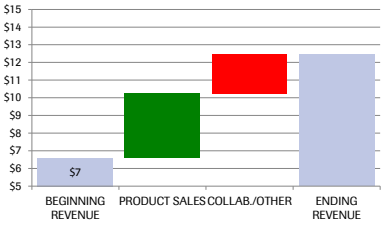
REVENUE BY END MARKET



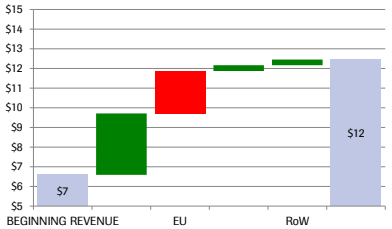
REVENUE BY PRODUCT CLASS



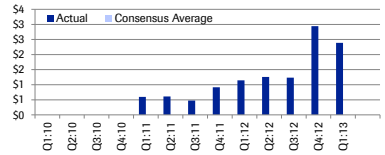
2013E REVENUE WATERFALL: PRODUCT SALES



2013E REVENUE WATERFALL: GEOGRAPHY



PERFORMANCE VS. EXPECTATIONS - REVENUE (MM)



PERFORMANC VS. EXPECTATIONS - EPS

NOT MEANINGFUL

Source: Company Reports and Cowen and Company estimates

Investment Highlights

Expanding Product Portfolio including iCells and MyCell iPSCs

CDI product portfolio is based on the next generation of induced Pluripotent Stem Cells (iPSCs) through its proprietary "footprint free" technology, discovered by one of its scientific founders, and human embryonic stem cell pioneer James Thomson. Key product lines include iCells (differentiated human cells based on iPSCs) and MyCell (customized iPSCs generation based on client provided donor samples). Currently, iCell products include Cardiomyocytes, Neurons, Endothelial Cells, and Hepatocytes; MyCell products include MyCell iPSCs and MyCell iCells (iCell products produced from customized MyCell iPSCs). There are an additional 7 iCell products under development. Given the 2-dimensional product combination potential (any combination of different iCell types and different MyCell iPSC lines), CDI is well positioned to continue to expand its product portfolio significantly over the next few years.

Top Customers & Competitive Wins Are Validating

CDI has >100 customers as of Q1:13 including 18 of top 20 biopharmaceutical companies based on worldwide sales. Average revenue per top 10 customer increased from <$200k in FY:11 to ~$500k in FY:12, and is on track to further improve over the near future. Product adoption also appears to be accelerating, as evidenced by product sales: CDI's first iCell product, iCell Cardiomyocytes (Launched in Q1:2010), took over 8 quarters to reach a run rate of >$2MM per year; its next iCell product, iCell Neurons (Launched in Q4:11), only took 4 quarters to reach a similar run rate. Considering the number of new products in the company's pipeline, this acceleration in adoption should be viewed as encouraging in the context of assessing future revenue growth potential.

Addressing Potentially Huge Market Opportunities

By providing highly pure, differentiated human cell types economically and in high quantity, CDI offers unmatched consistency and assembly of human biology than current models used in drug discovery and cell-based therapeutic research, including cadaver, live animals, and transformed cell lines.

As a result, CDI addresses the (1) *in vitro* drug discovery, toxicity testing, and chemical safety, and (2) stem cell banking, markets, and has plans to enter the *in vivo* and cell-based therapeutic research market. Total market potential is estimated to be ~$10B in 2011, according to company-sourced research. While the initial applications of CDI products have been more concentrated in the area of toxicity/safety, and disease modeling, additional applications opportunities exist in the areas of drug screening, industrial chemical potency QC, stem cell banking, and in vivo therapeutics

Seasoned Management

CDI was founded on significant technology advancements in human stem cells in the past decade, and is managed by a team of experienced industry executives with strong

entrepreneurial spirit and a proven track record. CDI's scientific founder, James Thomson developed the "footprint free" iPSC technology, forming the foundation of CDI's iCell and MyCell product portfolio. To date, Dr. Thomson remains a significant shareholder and a key consultant to the company. In addition, CDI has an experienced management team. Robert Palay (CDI's founder, CEO and Chairman), David Snyder (CFO), and Dr. Emile Nuwaysir (VP of R&D and COO) were in the same roles at Nimblegen prior to its sale to Roche in 2007. Chris Parker (VP –Sales, Marketing and BD, and CCO) was VP of Marketing and Sales for the Global Pharmaceutical Unit at Affymetrix from 1998-2007.

Investment Risks

Early Stage

CDI's products remains at an early stage of customer adoption, and revenue is still relatively concentrated in a few top 20 biopharmaceutical clients, including Lilly, AstraZeneca, GSK, and Roche. While customer adoption timeline appears to be shortening as customers gain confidence in CDI's novel product offering and start to realize benefits of iCell/MyCell products over existing research models, there are still significant risks for CDI to continue to deliver high quality products that proves to be beneficial to clients' drug discovery activities. While publications by iCell early adopters have helped validate the products' value, wider adoption will be dependent on continued publication/validation on experiences of both CDI's existing and expanding future product portfolios.

Competition Could Intensify

Despite the early state nature of the company and iPSC and iCell market development, competition could potentially intensify as new competitors enter the market through technology innovation, IP licensing, and M&A. While CDI clearly possess first mover advantage in this market, risks still exist if competitive products were developed and offered at a lower price. In addition, providers of existing drug discovery models could intensify the competitive landscape through product innovation, discount offering, and existing client relationship.

Difficult to Define Market Opportunity

Despite the multi-billion market opportunity targeted by CDI, it remains difficult to clearly define the market opportunity of CDI's iCell and MyCell products. For in vitro drug discovery, it is challenging to identify accurate spending on cells among top biopharmaceutical companies. For Stem Cell Banking, it is also difficult to forecast accurate market demand in customized human iPSC lines, given varied R&D priorities and funding capacity across different government/academic research institutions, disease-focused non-profit foundations and biopharmaceutical companies.

Low Visibility On Financial Trajectory

Based on existing revenue backlog data and the building momentum demonstrated in the first half of 2013, we are confident in our current year $12-13MM revenue forecast. As we turn to 2014, the CIRM agreement (detailed herein), plans for new product launches, and assumptions regarding continuations of recent trends support our one-year out revenue forecast. However, given the company's early stage of revenue development and the inherent lumpiness of the company's business relationships; visibility on revenue pacing remains lower than the norm both on a quarter-to-quarter as well as a year-to-year basis; the "error bars" on our annual revenue forecasts broaden quite a bit in the out years of our forecast period.

Company Description

Cellular Dynamics International (CDI) is a low cost, high-quality, high-volume developer and manufacturer of standardized, fully functional human cells. Based on the science of the its scientific founder, James Thomson, CDI pioneered a method using induced pluripotent stem cells (iPSC) to produce potentially any cell type in the human body in a standardized and cost efficient way on an industrial scale. This approach has the potential to transform 3 markets: (1) *in vitro* drug development - to enable higher R&D success rates, (2) *in vivo* therapeutic use – for cost effective development and manufacturing of cell-based therapies, and (3) stem cell banking – for cost effective manufacture of autologous cells for research and therapeutic use replacing cord blood and banked tissues. CDI launched its first product in 2010, and currently has almost 200 customers including 18 of the top 20 biopharmaceutical companies. Additionally, the company just won a multi-year grant from the California Institute for Regenerative Medicine (CIRM). While at an early stage, the company more than doubled revenue in 2012 and is clearly addressing a number of rapidly growing market opportunities.

Product Classes

CDI currently focuses on 4 key product classes/areas:

- iCell – human cells (cardiomyocytes, neurons) derived from non-embryotic stem cells
- MyCell – customized iCells derived from samples provided by customers
- Stem Cell Banking Cells – cells from customers reprogrammed into iPSCs.
- Collaborations –use of aforementioned products for collaborative purposes (e.g. therapeutics)

Business Strategy

CDI intends to become the industry standard for manufactured human cells, displace imprecise and inaccurate existing surrogate models and enable unparalleled access to human cellular biology. CDI plans to pursue the following strategies to accomplish these objectives:

- Continue to advance the iCell O/S platform to maintain leadership position in developing and manufacturing human cells to precise specifications in high volume and at low cost.
- Become an integral part of customers' workflow from discovery through regulatory analysis to product commercialization.
- Enhance the iCell O/S product portfolio to reflect a wide range of human biology by offering new iCell product cell types and expanding the genetic background of each of iCell products.
- Develop novel applications and experimental assays to extend the utility of iCell O/S products in an expanding set of end markets.
- Use expertise in iPSC reprogramming in combination with MyCell products to fulfill the growing iPSC stem cell banking needs of government, academia and industry.
- Employ years of experience in cell differentiation and manufacturing to collaborate with biopharmaceutical partners in the development and manufacture of the next generation of cell-based therapeutics.

Product Overview

Cellular Dynamics, based in Madison, Wisconsin, develops and manufactures fully functioning human cells in industrial quantities to precise specifications. The company's proprietary iCell Operating System (iCell O/S) includes:

- **iPSCs:** iPSCs are human induced pluripotent stem cells (iPSCs). Put more simply, an iPSC is a cell that has the ability both to replicate indefinitely and to be transformed into any cell type in the human body. CDI develops and manufactures iPSCs from ordinary skin or other already differentiated cells using proprietary techniques that expand on those pioneered by CDI's scientific founder, Dr. James Thomson. Once CDI produces an iPSC, it becomes a renewable source of starting material for iCell products and stem cell banks.
- **iCells:** iCells are true human cells in multiple cell types (iCell products).iCell products are a consumable designed to be used once and then reordered. iCells are manufactured from iPSCs.
- **MyCells:** custom iPSCs and iCell products (MyCell products).

iCells

As highly purified cell lines, iCells can be used as model systems for pre-clinical drug discovery, toxicity testing, disease modeling, and other life science research purposes. iCells accounted for 79% of sales in 2012, and we forecast iCell sales to grow 66% to $8.6MM in 2013. Currently, CDI markets four different iCell product lines:

- **iCell Cardiomyocytes** are highly purified human heart cells that beat in a dish and behave identically to the heart cells found in the human body. They are typically comprised of a mixture of spontaneously electrically active atrial, nodal and ventricular-like cells. These cells provide a biologically relevant model system for in vitro drug discovery, toxicity testing and chemical safety, as well as in vivo cellular therapeutics research and stem cell banking. For instance, CDI iCell Cardiomyocytes were used in a recent study by Roche published in the journal *Toxicological Sciences* to successfully identify multiple compounds known previously to be false-negatives or false-positives from various Roche drug development programs.
- **iCell Neurons** are highly purified human neurons that are commonly found in the forebrain, comprised primarily of GABAergic and glutamatergic neurons. iCell Neurons provide a biologically relevant in vitro model for pre-clinical drug discovery, neurotoxicity testing and disease modeling for Alzheimer's disease, Parkinson's disease and Huntington's disease among others. For instance, as reported in *Stem Cell Research*, researchers at an affiliate of GSK utilized iCell Neurons to identify several small molecules as effective blockers of the toxicity caused by the abnormal protein deposits associated with Alzheimer's disease, suggesting new ways to develop medicines for Alzheimer's disease. This is the first demonstration in a peer-reviewed publication of a high-throughput toxicity screen using iPSC-derived neurons.

- **iCell Endothelial Cells** are highly purified human interior surface blood vessel cells exhibiting characteristic endothelial cell functions, including tubular formation, acetylated LDL uptake, barrier function and wound healing. iCell Endothelial Cells provide a biologically relevant in vitro model system for use in vascular biology research including angiogenesis, atherosclerosis, inflammation, and other life science research.
- **iCell Hepatocytes** are highly purified human liver cells that exhibit hepatocyte morphology and characteristic gene and protein expression, transporter function, and viral infectivity. Currently sold "fresh," or not cryopreserved, these cells provide a biologically relevant in vitro model system for pre-clinical drug discovery, hepatotoxicity testing, disease modeling, and other life science research.

CDI sold its first commercial product, iCell Cardiomyocytes, in March 2010. In Q3:11 and Q4:11, Endothelial cells and Neurons were released, respectively. Hepatocytes were released through early access agreements in 2012. iCell products represented ~80% of CDI's total revenue in 2012, with Cardiomyocytes and Neurons representing the bulk of the sales, both are projected to grow 50-100% in 2013, driven by accelerating customer adoption.

In addition, the company currently has 7 new iCell products under development: dopaminergic neurons, nociceptors, astrocytes, cardiac progenitors, blood progenitors, skeletal muscle cells, and CMP iPSC lines.

MyCell Products

In mid-2012, CDI launched a new product line, MyCell products, including MyCell iPSCs and associated iCell products derived from these cell lines. MyCell iPSCs are customized iPSCs manufactured from a customer-provided biological sample. The iPSCs generated in this process are often genetically engineered to meet customer designated specifications. These iPSCs can subsequently be differentiated into any of CDI's iCell product types. Different from the standard iCell products, which are derived from healthy, normal individual iPSCs, these MyCell-derived iPSCs can represent a specific genetic, ethnic, or disease population, or can be genetically engineered to repair a specific gene mutation, or express additional genes.

Key project examples involving MyCell include:

- **In Vitro:**

  1. To produce iPSCs and iCell products from human donors to study diseases such as heart failure and Parkinson's disease and to investigate potential cures.
  2. To make hepatocytes derived from patients suffering from drug-induced liver injury (DILI) to study the genetic basis of this disease.
  3. To produce iPSCs and iCell Cardiomyocytes from congenital muscular dystrophy patients to promote research into cures for this disease.
  4. To produce genetically engineered iPSCs that can be used to produce differentiated cells on the industrial scale needed for drug screening.

- **Stem Cell Banking:** to produce three iPSC lines from each of 3,000 different individuals for CIRM

Media and Reprogramming

CDI's medium, Essential 8, and substrate, Vitronectin, are optimized for the consistent, reproducible derivation, growth and maintenance of human iPSCs. The combination of Essential 8 Medium and Vitronectin provides a defined culture system for robust, cost-effective and scalable iPSC culture. Life Technologies is the selected vendor to manufacture and distribute these products as well as CDI's Episomal iPSC Reprogramming Vectors. The combination of these three components creates a "kit" for reprogramming tissue into iPSCs. The reprogramming vectors and kit, as currently sold, permits the customer to use the iPSCs for limited research use only.

Key Points of Product Differentiation

To achieve the strategy of enabling better and safer drug and cellular therapies development by biopharmaceutical clients, CDI does not currently plan to manufacture proprietary therapeutic products, and instead plans to operate on a model by providing customers human cells as both research tools and raw materials for their own proprietary cell-based products. CDI's objective is to replace the inadequate surrogate models of the past with the standardized, easy-to-use, and fully functioning human cells of the iCell O/S. CDI's key product differentiations include:

- **Precise specifications** CDI cells are manufactured to precise specifications and exacting standards from iPSCs CDI also produces.
- **Episomal iPSC reprogramming vectors** Today, all of CDI's iPSCs are derived in a "footprint free" manner with negligible residue or damage left in the cell after the reprogramming process is complete. CDI accomplishes this by using episomal vectors to deliver the reprogramming factors. CDI invented this method and has the exclusive right to practice it.
- **Cryopreserved** iCell Cardiomyocytes, iCell Neurons, and iCell Endothelial Cells are all shipped to the customer cryopreserved, allowing customers to store the cells and use them on their time schedule. iCell Hepatocytes currently are not shipped cryopreserved, but CDI intends to ship this product cryopreserved in the future.
- **Pure** All iCell products are at least 90% pure. If the cells were less pure, contaminants could soon outgrow the target cells and much of the cellular response observed by a researcher could be a result of the contaminating cells.
- **Formatted for 96 Well Plate** CDI fills a standard 1.5ml cryovial with a sufficient quantity of cells to fill the bottom of every well of a 96-well plate with a confluent monolayer of viable cells. The 96-well plate is a common format that researchers use to perform high throughput experiments.
- **Validated on other Tools platforms** CDI scientists have worked closely with other life science tool companies to validate protocols for utilizing CDI products on their cellular assays and automated instruments.
- **Extensive Patents** CDI's intellectual property strategy has included assembling a portfolio of patent rights and licenses intended to afford customers and CDI freedom to operate for all the products CDI sells, meaning that CDI products can be used without infringing on the valid intellectual property rights of others.
- **No Use of Human Embryotic Stem Cells** CDI uses iPSCs, not human embryonic stem cells (hESCs) to manufacture cells. CDI believes that the use of iPSCs eliminates ethical and moral concerns that have been raised by the fact that hESCs are derived by extracting pluripotent cells from the inner lining of a four-day old human blastocyst. Though scientifically useful, hESCs proved ethically divisive as the extraction method meant the destruction of the developing human embryo, making them particularly controversial as a basis for a therapeutic. In contrast to hESCs, CDI develops and manufactures its iPSCs from ordinary blood or skin provided by consenting adults.

Limitations of Existing Models

Each of CDI's target markets currently utilizes models that are arguably poorly suited to the emerging needs of the field:

In Vitro Therapeutic Research

Existing surrogate models include primary cells derived from human cadavers or sacrificed animals, transformed (immortalized) cells, and live animals. CDI believes these surrogate models are imprecise and inaccurate substitutes for human biology and have contributed to the high failure rates in human trials in the development of new therapeutics.

Stem Cell Banking

Current stem cell and tissue banks suffer from limitations in the number of cells and type of tissue that can be derived from the presently available starting samples.

In Vivo Therapeutic Use

Current cell and tissue therapies are based on harvested cells and tissues. The variable quality and limited expandability of such sample source restrict the reproducibility and effectiveness of these therapies.

Intellectual Property Position

CDI's competitive positioning is backed by 700+ patents related to stem cell reprogramming and the generation of iCells and MyCells. These patents include:

- **41 patents/patent applications** owned by CDI (none of which expires before 2029) relating to episomal reprogramming and CDI's footprint free reprogramming technology
- **9 episomal reprogramming patents** exclusively licensed from Wisconsin Alumni Research Foundation (WARF) relating to episomal reprogramming, none of which expires before 2029
- **14 Thomson reprogramming patents** non-exclusively licensed from WARF covering 4 Thomson reprogramming factors useful for episomal reprogramming, none of which expires before 2028
- **7 field patents** exclusively licensed from Indiana University research and Technology Corporation (IURTC), expiring between November 2013 and March 2015. These patents are important to make pure cultures of differentiated cells using a lineage purification technique
- **39 Yamanaka patents** non-exclusively licensed from iPS Academia Japan (iPS AJ) including 39 patents/patent applications expiring between 2026 and 2029 covering the Yamanaka set of reprogramming factors important for generation of MyCell and iCell products.

While certain patents are expected to expire in the near term, CDI believes the developed cell line production know-hows and trade secrets will offer sufficient protection from any potential competitive entries following certain patent expirations.

Target Market Potential and Key End User Segments

With 4 different iCell products and customizable MyCell iPSCs commercialized, CDI addresses the (1) *in vivo* drug discovery, toxicity testing, and chemical safety, and (2) stem cell banking, markets, and has plans to enter the *in vivo* and cell-based therapeutic research market.

In Vitro Therapeutic Research

Cells for *in vitro* use refers to cells studied under laboratory culture conditions for the purpose of drug discovery, toxicity testing, and chemical safety analysis. According to company sourced research, the total spent on cell-based technologies for *in vitro* use was approximately $10.8 billion in 2011, of which $3.5 billion was spent on cells. By 2020, these markets are expected to grow to $14.7 billion and $5.6 billion, respectively.

Currently, the biopharmaceutical industry and academic researchers use cells from human cadaveric tissue, immortalized cell lines, and sacrificed animals for both toxicological research and drug discovery. Because CDI's iCell products are fully functioning human cells, the company believes they are more predictive of actual human biology and therefore, better suited for use in biological and biopharmaceutical research than current surrogate models.

Customers in this market include: biopharmaceutical companies; government research institutions; academic and nonprofit research institutions; and clinical research organizations.

Key iCell applications in the in vitro therapeutic research segment include: 1) safety and toxicity profile evaluation (Cardiomyocytes); 2) disease modeling, including Alzheimer's, vascular disease, stroke and liver diseases (Neurons, Endothelial Cells, and Hepatocytes); 3) validation of an improved botulinum neurotoxin potency assay by replacing an inferior animal model (Neurons);

Stem Cell Banking

The stem cell banking market was approximately $1.3B in 2011 and is expected to grow to $4.4B in 2020, according to company sourced research. Currently, this market is composed of two lines of business. First, the National Heart, Lung, and Blood Institute, the California Institute for Regenerative Medicine (CIRM), the European Union's Innovative Medicines Initiative, other government entities, academic institutions and biopharmaceutical industry have requested proposals to build banks of dozens to thousands of cell lines derived from numerous backgrounds to reflect various forms of cell line diversity, including ethnic, racial, gender, genetic, disease, and drug reaction. These banks will permit researchers to choose the iPSC background from which to make manufactured the desired human cells. The iPSCs in these banks can later be differentiated into human cells for both research and therapeutic applications. CDI believes that there is significant revenue potential in manufacturing and differentiating the iPSCs that will be placed into these banks.

A second line of business in this market consists of cord blood banking. At birth, a newborn's umbilical cord blood can be saved and shipped to a facility that isolates and preserves the blood system stem cells found in the cord blood. Because cord blood stem cells are multipotent, not pluripotent, they have only a limited ability to replicate and are predisposed to differentiate only into cells of the blood system. CDI is positioned to augment the product offering of cord blood banks by creating iPSC lines for their existing and prospective customers.

CDI intend to manufacture MyCell iPSCs for this segment of the market. Due to the nature of the customers in this segment, the projects are typically initiated as multi-year grants.

Key project examples include 1) to Derive 250 MyCell iPSC lines from 250 patients with Left Ventricular Hypertrophy (a form of heart disease) for NHLBI; and 2) to produce three iPSC lines from each of 3,000 different individuals for CIRM.

In Vivo Therapeutic Use

Cells for *in vivo* use in humans generally refer to inserting cells, tissue, or whole organs into living persons to cure debilitating disorders or to regenerate damaged organs. According to Adivo Associates, the global human stem cell, tissue, and organ therapy market was $5.0B in 2011 and is projected to increase to $21.4B in 2020.

Current *in vivo* use and related research efforts generally involve the use of cells or organs harvested from animals, cadavers or living donors, with the limitations discussed previously. The lack of available manufactured human tissue matching the tissue to be repaired or regenerated particularly hinders the research to further develop in vivo cellular therapeutics. CDI's scalable iPSC-based manufacturing platform allows CDI to then produce fully functioning, carefully specified human cells in large volumes, thereby enabling the research that may lead to the substitution of manufactured cells and tissues for the currently harvested cells, tissue and organs.

Key customers include academic/government research institutions, as well as biopharma companies engaged in *in vivo* therapeutics research and development. Project examples include: 1) development of cardiomyocytes patch delivered to the damaged area of the heart after a myocardial infarction in animal studies; 2) preliminary regenerative medicine applications in areas of co-culturing with other cells, vascularization of three-dimensional matrices or decellularized organs for tissue engineering studies; and 3) function as cellular material in bio-artificial liver device and repopulate decellularized livers in the potential treatment of liver disease.

Key Customers

CDI's customers include biopharmaceutical companies, government research institutions, academic and nonprofit research institutions, clinical research organizations, and stem cell banks.

Biopharmaceutical Companies

In 2012, CDI sold products to 18 of the top 20 biopharmaceutical companies (based on worldwide revenue) and grew its customer base to 128 from 60 in 2011.

Currently, key biopharmaceutical clients for CDI include Eli Lilly, Roche, GSK, and AstraZeneca. Eli Lilly accounted for 10% of total revenue in 2011 and 18% of revenue in 2012. Roche accounted for 13% of total revenue in 2011 and GlaxoSmithKline accounted for 11% of total revenue in 2012. In Q1:13, LLY and AstraZeneca each accounted for 16% of total revenue.

Among CDI's key biopharmaceutical clients, the company has struck 2 Center of Excellence (COE) deals with Lilly and AstraZeneca. Both COE deals require clients to order a minimum number of units of iCell products each quarter through the end of the agreement period (YE14 for Lilly and YE13 for Astra) at a predetermined price, and CDI may invoice the clients for any shortfalls below the minimum units of cells. As for MyCell, CDI will also reprogram a specified number of donor samples provided by clients, and will invoice them at predetermined pricing tiers. Also included in the agreements are periodic milestone payments; in the case of Lilly, these payments will total $475,000 by end of 2014E.

CDI has also signed iCell supply agreements at predetermined pricing tiers without minimum purchase provisions with Roche and GSK. Both contracts were ended in 2012 and the customers have continued to purchase CDI's products.

Research Institutions and Disease Foundations (CIRM and NHLBI)

In March 2013, the California Institute for Regenerative Medicine (CIRM) awarded CDI a $16MM grant to derive 3 iPSC lines from each of 3,000 different individuals, as required by California's $32MM stem cell banking initiative. Upon creation, these iPSC lines will be owned by CIRM. CDI will also be the primary subcontractor on the $10MM grant the Coriell Institute for Medical Research received from CIRM to store and expand the Coriell iPSC bank.

In July 2011, the company has received a $6.3MM grant from the National Institute of Health – National Heart Lung and Blood Institute (NHLBI) for its "Disease in a Dish" initiative. The grant was awarded to the Medical College of Wisconsin (MCOW) involving the derivation and use of iPS-derived cardiomyocytes, and CDI is a sub-recipient of the grant. The project runs through June 2016, and is subject to annual budgetary approval, following which CDI enters a sub-award agreement with MCOW related to the work to be performed in that period. Initial two phases of the project involved $600,000 in funding and was completed in June 2013. The last

phase of the project runs three years and involves $3.5MM in funding to produce 250 MyCell iPSC lines from donor patients with Left Ventricular Hypertrophy.

In addition to CIRM and NHLBI, CDI believes significant market opportunity exists among various disease research foundations, in the areas of Parkinson's disease, Huntington's disease, etc.

Cord Blood Banking

In addition, CDI is positioned to augment the product offering of cord blood banks by creating iPSC lines for their existing and prospective customers.

Company Operations and Margins

CDI is still in early stage of product commercialization and in FY:12, COGS, R&D and SG&A represented 40%, 217%, and 189% of revenue respectively, down from 50%, 500%, and 350% of sales in FY:11. Total headcount is 115 as of March 31, 2013, including 20 in production, 56 in R&D, 26 in Sales and Marketing, and 13 in SG&A. As the company matures with production efficiency, leverage of scale, gross margin is expected to improve to ~70% of total revenue. As a component of COGS, royalty expenses as a percentage of sales is also expected to continue to decrease (down from 20% in Q1:12 to 12% in Q1:13). SG&A expenses as a percentage of sales is also expected to decline, with Y/Y increases primarily driven by material cost and intellectual property management spending.

Funding History

CDI raised over $70MM over the past 4 years, through 4 rounds of fund raising with investors including James Thomson, Tactics II Ventures (Robert and Thomas Palay), Sixth Floor, and EGI.

Financial Projections

Revenue Forecast

Our revenue forecast includes assumptions for (1) iCell volume and pricing, (2) Stem Cell banking, and (3) Other sources of revenue including the CIRM agreement, therapeutic partnerships, and collaborations.

Key Assumptions

- **iCells:** We are forecasting volumes and pricing for Cardiomyocytes (5 year volume CAGR: ~45%), Neurons (5 year volume CAGR: ~65%),, and Other iCells (growth from $2MM in 2014 to ~$27mm in 2017). We assume generally stable pricing beyond 2013 but note that management could make pricing concessions for volume without materially compromising margin. Our Other iCell revenue forecast assumes that Endothelial Cell and Hepatocyte revenue growth accelerates and that other pipeline products are rolled out on time.
- **Stem Cells:** Our forecast assumes that CDI sells 300-350 cell lines at $11K each in 2014, growing to about 1,500 cell lines in 2017 at stable pricing.
- **Other Revenue:** We factor contributions from CIRM through 2015, Therapeutic partnership revenue beginning in 2014E, and a continuation in momentum via other collaborations.

Visibility & Sanity Check

- **"Error Bars":** We believe the company's backlog, plans for new product lines, and the CIRM agreement likely render the bias to the upside relative to our current 2013 forecast. Along the same lines, we believe there is about 20-25% downside risk and 30-35% upside risk to our 2014 forecast.
- **Top-20 Customer Assumptions:** To put our 2013-2015 revenue assumptions into perspective, our forecasts are achievable if we assume revenue from customers other than the top-10 increases from about $20K per customer to about $70K per customer – this excludes collaborations. In such a scenario, product revenue from top-10 customers would need to grow from $90K to $245K each. We believe these assumptions are reasonable given an expanding sales force, an expanding product portfolio, and a shortening adoption cycle.

Income Statement

We are forecasting that gross margins decline to low-60s levels in 2013 due to CIRM, but improve to low-70s levels in the out-years of our forecast. We assume that R&D spend remains fairly stable at current levels and that SG&A increases to support the roll of new products. We assume that operating break even occurs at an annualized revenue run rate of approximately $50-60MM.

Valuation

Relative to a comparable company group that includes Illumina, Cepheid, GenMark and Fluidigm, Cellular Dynamics trades at a ~10% discount on a 2014 revenue basis. On a 2015E revenue basis, shares trade at a ~35% discount to the group. Factoring in the discount valuation relative to these companies but offset by low revenue trajectory visibility, we believe shares are well positioned to Outperform the market by 15% over the next 12-18 months.

Select Management Profiles

CDI has an experienced management team. Both Robert Palay (CDI's founder, CEO and Chairman), David Snyder (CFO), and Dr. Emile Nuwaysir (VP of R&D and COO) were in the same roles at Nimblegen prior to its sale to Roche in 2007. Chris Parker (VP –Sales, Marketing and BD, and CCO) was VP of Marketing and Sales for the Global Pharmaceutical Unit at Affymetrix from 1998-2007.

Robert J. Palay. – CEO

Mr. Palay is one of CDI's founders and has served as Chairman of the Board and as Chief Executive Officer since 2007. Mr. Palay previously served as chairman and CEO of each CDI's predecessors from their founding until 2008. He also co-founded NimbleGen Systems, Inc., a molecular biology tools company, and served as its chairman from 1999 to 2007 and as its chief executive officer from 1999 to 2000. Mr. Palay has also served as manager of each Tactics II entities, which are private investment vehicles and are among CDI's principal shareholders. He received a A.B. from Harvard, an M.M. from the Kellogg Graduate School of Management and a J.D. from the Northwestern University School of Law.

Thomas M. Palay, Ph.D. – President

Dr. Palay is one of CDI's founders and has served as Vice Chairman of the Board and as President since 2007. He also served as vice chairman and president of each of CDI's predecessors from their founding until 2008. He also co-founded NimbleGen Systems, Inc. and served as its vice chairman of the board, vice president and chief operating officer from 1999 to 2007. Since their inception, Dr. Palay has served as a manager of the general partner or manager of each of the Tactics II entities. Dr. Palay joined the faculty of the University of Wisconsin Law School in 1980. He retired as the Foley & Lardner–Bascom Professor of Law in 2010. Dr. Palay received a B.A., summa cum laude, from Tufts University, a J.D. from the University of Pennsylvania and a Ph.D. from the University of Pennsylvania.

Emile F. Nuwaysir, Ph.D. – COO, VP of R&D

Dr. Nuwaysir has served as CDI's Vice President of Research and Development, Manufacturing and Quality Systems and as the Chief Operating Officer since 2008. He is a founder and has served as director of Invenra, a Wisconsin-based early stage company developing technology for biopharmaceutical discovery, since its inception in 2011. He previously served as senior vice president of program management at Roche NimbleGen from 2007 to 2008, and held various scientific and managerial roles at NimbleGen Systems, Inc. from 2000 to 2007. Prior to NimbleGen Systems, Inc., he held a Postdoctoral Fellowship/research positions at NIH, the University of North Carolina-Chapel Hill and El DuPont de Nemours Stine-Haskell Laboratory. He earned his B.A. from the University of Delaware and his Ph.D. in Molecular and Environmental Toxicology with a focus in Oncology from the University of Wisconsin-Madison in the McArdle Laboratory for Cancer Research.

Christopher Parker – CCO, VP of Sales, Marketing & Business Development

Mr. Parker has served as CDI's Vice President of Sales, Marketing and Business Development and Chief Commercial Officer since 2008. He previously served as chief commercial officer of Stem Cell Products, Inc. from 2007 to 2009 and as vice president of Affymetrix, Inc. from 1998 to 2007, where he managed sales and marketing for the global pharmaceutical business unit. He also served on the drug discovery services team at Amersham Pharmacia Biotech Inc. and conducted research in molecular and cellular biology in the Department of Human Oncology at the University of Wisconsin-Madison for over a decade. He received a B.A. from the University of Wisconsin–Madison.

Nicholas J. Seay – CTO, VP

Mr. Seay has served as CDI's Vice President and Chief Technology Officer since 2007. Representing WARF from 1985 to 2005, Mr. Seay successfully established its human embryonic stem cell intellectual property portfolio. Mr. Seay has served on the board of directors of Epic Systems Corporation since 1983 and BellBrook Laboratories LLC since 2001. Prior to joining CDI, from 1989 to 2005, he advised biotechnology companies and worked on significant technologies at Quarles and Brady LLP, specializing in intellectual property law. Mr. Seay earned a B.S. from Cornell University and a J.D. from George Washington University Law School.

David S. Snyder – CFO, EVP

Mr. Snyder has served as CDI's Executive Vice President and Chief Financial Officer since 2008. He has served as director of Invenra since 2012. He has also served on the Board of Trustees of Ottawa University since 2012. He previously served as senior vice president of finance, site vice president and chief financial officer of Roche NimbleGen from 2007 to 2008. From 2006 to 2007, he served as vice president and chief financial officer of NimbleGen Systems, Inc. Mr. Snyder served as chief financial officer of The Cobalt Group, Inc., a publicly-traded internet software company, from 2000 to 2001, of Strategic Hotel Capital, LLC, a real estate company, from 1997 to 2000. Mr. Snyder received a B.A., summa cum laude, from Ottawa University and an MBA with high honors from Harvard Business School, where he was designated a George Fisher Baker Scholar.

James Thomson, Ph.D. – Founder & CSO

Dr. James Thomson is one of CDI's founders and has served as Chief Scientific Officer and as a member of the board of directors since 2007. He received a VMD and a Ph.D. from the University of Pennsylvania. He is a member of the National Academy of Sciences, and has served as the Director of Regenerative Biology at the Morgridge Institute for Research since 2008 and as the John D. MacArthur Professor of Anatomy at the University of Wisconsin-Madison since 2003. Dr. Thomson's derivation of human ES cells was featured as Science Magazine's "Scientific Breakthrough of the year" in 1999, and work from Dr. Thomson's laboratory has been cited in TIME Magazine's "Top 10 Discoveries of the Year" on three

separate occasions, including the isolation of human ES cells (1998, #1), the isolation of human iPS cells (2007, #1) and the collaborative mapping of the human epigenome (2009, #2). He was featured on the cover of TIME Magazine's "America's Best in Science and Medicine" in 2001, and in 2007 was named one of TIME Magazine's "100 Most Influential People in the World." Dr. Thomson has published over 150 scientific, peer-reviewed papers and has been an inventor on 30 issued patents. CDI selected Dr. Thomson to serve on CDI's board of directors due to his understanding of CDI and his seminal work and international recognition in the stem cell field.

Exhibit 1. ICEL – Revenue Model

(MM, except EPS)	Q1:12	Q2:12	Q3:12	Q4:12	Q1:13	Q2:13E	Q3:13E	Q4:13E	Q1:14E	Q2:14E	Q3:14E	Q4:14E	2011	2012	2013E	2014E	2015E	2016E	2017E	5Y CAGR
TOTAL REVENUE	**$1.1**	**$1.3**	**$1.2**	**$2.9**	**$2.4**	**$2.9**	**$3.0**	**$4.3**	**$5.1**	**$6.6**	**$7.6**	**$10.8**	**$2.6**	**$6.6**	**$12.5**	**$30.0**	**$55.0**	**$75.5**	**$100.0**	**72%**
Product Sales	$0.6	$1.2	$1.1	$2.3	$1.8	$1.9	$2.0	$3.1	$2.8	$3.3	$3.6	$5.8	$1.5	$5.2	$8.7	$15.5	$29.4	$48.0	$70.4	
Collaborations, Other	$0.5	$0.1	$0.2	$0.7	$0.6	$1.0	$1.0	$1.2	$2.3	$3.2	$4.0	$5.0	$1.1	$1.4	$3.8	$14.5	$25.6	$27.5	$29.6	
Revenue Growth	**92%**	**106%**	**160%**	**222%**	**109%**	**127%**	**140%**	**45%**	**112%**	**130%**	**156%**	**153%**		**153%**	**90%**	**141%**	**83%**	**37%**	**32%**	
Product Sales	165%	189%	235%	367%	173%	60%	85%	34%	57%	76%	83%	90%		255%	68%	79%	89%	63%	47%	
Collaborations, Other	42%	(58%)	3%	55%	26%	1,034%	517%	85%	262%	233%	307%	312%		23%	171%	282%	77%	7%	8%	
iCells	**$0.6**	**$1.2**	**$1.1**	**$2.3**	**$1.8**	**$1.9**	**$2.0**	**$3.1**	**$2.8**	**$3.3**	**$3.6**	**$5.8**	**$1.5**	**$5.2**	**$8.7**	**$15.5**	**$29.4**	**$48.0**	**$70.4**	**69%**
Growth	165%	208%	246%	347%	173%	57%	80%	34%	57%	76%	83%	90%		255%	68%	79%	89%	63%	47%	
Volume - cell lines	598	1,111	1,013	2,004	1,688	1,748	1,829	2,965	2,628	3,078	3,337	5,641	1,173	4,770	8,229	14,684	27,741	45,264	66,102	
Growth	208%	258%	297%	385%	182%	57%	80%	48%	56%	76%	82%	90%	NA	307%	73%	78%	89%	63%	46%	
ASP	$1,075	$1,075	$1,090	$1,141	$1,039	$1,075	$1,086	$1,034	$1,048	$1,075	$1,088	$1,035	$1,245	$1,086	$1,055	$1,058	$1,060	$1,061	$1,066	
Growth	(14%)	(14%)	(13%)	(8%)	(3%)	-	(0%)	(9%)	1%	-	0%	0%		(13%)	(3%)	0%	0%	0%	0%	
Stem Cell Banking	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.2**	**$0.3**	**$0.8**	**$1.0**	**$1.4**	**$0.0**	**$0.0**	**$0.2**	**$3.5**	**$7.0**	**$11.3**	**$16.9**	
Growth																	100%	60%	50%	
Volume - cell lines									30	70	90	130				320	640	1,024	1,536	
Growth																	100%	60%	50%	
ASP									$11,000	$11,000	$11,000	$11,000				$11,000	$11,000	$11,000	$11,000	
Growth																	-	-	-	
Other	**$0.5**	**$0.1**	**$0.2**	**$0.7**	**$0.6**	**$1.0**	**$1.0**	**$1.0**	**$2.0**	**$2.5**	**$3.0**	**$3.6**	**$1.1**	**$1.4**	**$3.6**	**$11.0**	**$18.6**	**$16.2**	**$12.7**	**55%**
Collaborations - existing business, other	$0.5	$0.1	$0.2	$0.7	$0.26	$0.6	$0.6	$0.6	$0.5	$0.5	$0.5	$0.5	$1.1	$1.4	$2.1	$1.9	**$5.0**	**$4.2**	**$4.5**	
CIRM/related					$0.4	$0.4	$0.4	$0.4	$1.5	$1.5	$1.5	$1.6	$0.0	$0.0	$1.5	$6.1	**$8.4**	**$5.0**	**$0.0**	
Therapeutic Partnerships									$0.0	$0.5	$1.0	$1.5	$0.0	$0.0	$0.0	$3.0	**$5.2**	**$7.0**	**$8.2**	

Source: Company Reports, Thomson One, and Cowen and Company.

Exhibit 2. ICEL – Income Statement

(MM, except EPS)	Q1:12	Q2:12	Q3:12	Q4:12	Q1:13	Q2:13E	Q3:13E	Q4:13E	Q1:14E	Q2:14E	Q3:14E	Q4:14E	2011	2012	2013E	2014E	2015E	2016E	2017E	5Y CAGR
TOTAL REVENUE	**$1.1**	**$1.3**	**$1.2**	**$2.9**	**$2.4**	**$2.9**	**$3.0**	**$4.3**	**$5.1**	**$6.6**	**$7.6**	**$10.8**	**$2.6**	**$6.6**	**$12.5**	**$30.0**	**$55.0**	**$75.5**	**$100.0**	**72%**
Reported Growth	92.3%	106.2%	159.6%	221.6%	108.6%	126.6%	140.2%	45.4%	111.6%	129.6%	156.4%	153.3%		NM	89.7%	NM	83.2%	37.2%	32.5%	
Cost of Sales	$0.1	$0.4	$0.3	$1.2	$0.6	$1.1	$1.1	$1.7	$2.0	$2.5	$3.0	$4.1	$0.7	$2.1	$4.5	$11.5	$20.0	$24.1	$28.7	
Gross Profit	**$1.0**	**$0.8**	**$0.9**	**$1.7**	**$1.8**	**$1.8**	**$1.8**	**$2.6**	**$3.1**	**$4.0**	**$4.6**	**$6.8**	**$1.9**	**$4.5**	**$8.0**	**$18.5**	**$35.1**	**$51.4**	**$71.3**	**74%**
% of sales	87.5%	66.8%	76.7%	57.8%	75.9%	61.5%	61.8%	60.4%	61.2%	61.3%	60.9%	62.6%	72.0%	68.3%	63.9%	61.6%	63.7%	68.0%	71.3%	
Growth	NM	NM	NM	NM	80.8%	NM	93.4%	51.9%	70.7%	NM	NM	NM	NM	NM	77.6%	NM	89.3%	46.5%	38.8%	
Incremental Margin	102.7%	70.9%	86.9%	46.3%	65.1%	57.2%	51.1%	66.0%	48.1%	61.2%	60.3%	64.0%	72.0%	65.8%	59.1%	60.0%	66.2%	79.7%	81.2%	
Research & Development	**$3.1**	**$3.8**	**$3.5**	**$3.9**	**$3.9**	**$3.7**	**$3.7**	**$3.7**	**$4.6**	**$4.6**	**$4.6**	**$4.6**	**$13.7**	**$14.3**	**$14.8**	**$18.3**	**$19.8**	**$21.5**	**$23.5**	
% of sales	266.8%	298.8%	286.2%	134.2%	161.3%	128.2%	123.6%	85.5%	90.2%	69.6%	60.1%	42.8%	526.0%	217.3%	118.8%	61.0%	36.0%	28.5%	23.5%	
Growth	(4.7%)	15.1%	(1.6%)	9.9%	26.1%	(2.8%)	3.7%	(7.3%)	18.3%	24.6%	24.6%	26.8%	NM	4.7%	3.7%	23.5%	NM	8.6%	9.2%	
Sales, General & Admin.	**$2.7**	**$3.3**	**$2.9**	**$3.6**	**$3.6**	**$3.5**	**$3.6**	**$3.9**	**$3.8**	**$3.9**	**$4.0**	**$4.1**	**$9.5**	**$12.4**	**$14.6**	**$15.7**	**$16.8**	**$18.3**	**$20.4**	
% of sales	238.5%	258.0%	234.2%	120.6%	152.1%	121.6%	120.9%	90.8%	75.3%	59.7%	52.1%	37.4%	366.3%	188.7%	116.7%	52.4%	30.5%	24.2%	20.3%	
Growth	23.3%	29.0%	24.1%	45.0%	33.0%	6.7%	24.0%	9.4%	4.8%	12.7%	10.6%	4.5%	NM	30.6%	17.3%	8.0%	6.7%	8.9%	11.2%	
Other/Intangible Amortization	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	
% of sales	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Growth	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
Total Operating Expenses	**$5.8**	**$7.0**	**$6.4**	**$7.5**	**$7.5**	**$7.1**	**$7.2**	**$7.5**	**$8.4**	**$8.5**	**$8.5**	**$8.7**	**$23.2**	**$26.7**	**$29.4**	**$34.1**	**$36.6**	**$39.8**	**$43.8**	
% of sales	505.3%	556.8%	520.4%	254.8%	313.5%	249.8%	244.5%	176.3%	165.5%	129.2%	112.2%	80.2%	892.3%	406.0%	235.5%	113.3%	66.5%	52.7%	43.8%	
Growth	6.7%	21.1%	8.5%	24.2%	29.4%	1.6%	12.8%	0.6%	11.7%	18.8%	17.7%	15.3%	NM	15.3%	10.0%	15.8%	7.4%	8.7%	10.1%	
EBITDA	**($4.8)**	**($6.2)**	**($5.5)**	**($5.8)**	**($5.7)**	**($5.4)**	**($5.4)**	**($5.0)**	**($5.3)**	**($4.5)**	**($3.9)**	**($1.9)**	**($21.3)**	**($22.2)**	**($21.4)**	**($15.5)**	**($1.5)**	**$11.6**	**$27.5**	**-**
% of sales	(417.8%)	(490.0%)	(443.7%)	(197.0%)	(237.6%)	(188.3%)	(182.7%)	(115.9%)	(104.3%)	(67.9%)	(51.3%)	(17.7%)	(820.3%)	(337.7%)	(171.6%)	(51.7%)	(2.8%)	15.3%	27.5%	
Growth	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
Depreciation & Amortization	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	
Operating Profit	**($4.8)**	**($6.2)**	**($5.5)**	**($5.8)**	**($5.7)**	**($5.4)**	**($5.4)**	**($5.0)**	**($5.3)**	**($4.5)**	**($3.9)**	**($1.9)**	**($21.3)**	**($22.2)**	**($21.4)**	**($15.5)**	**($1.5)**	**$11.6**	**$27.5**	**-**
% of sales	(417.8%)	(490.0%)	(443.7%)	(197.0%)	(237.6%)	(188.3%)	(182.7%)	(115.9%)	(104.3%)	(67.9%)	(51.3%)	(17.7%)	(820.3%)	(337.7%)	(171.6%)	(51.7%)	(2.8%)	15.3%	27.5%	
Growth	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
Incremental Margin	36.2%	(117.7%)	20.8%	(25.6%)	(71.6%)	50.1%	3.5%	62.5%	15.1%	25.0%	32.7%	46.4%	(820.3%)	(23.3%)	13.6%	33.5%	56.0%	64.1%	64.8%	
Other non-Operating Expense	**($0.0)**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**($0.0)**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	
Net Interest Expense	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.3**	**$0.3**	**$0.3**	**$0.3**	**$0.3**	**$0.3**	**$0.0**	**$0.0**	**$0.5**	**$1.0**	**$1.0**	**$0.0**	**$0.0**	
Earnings Before Taxes	**($4.8)**	**($6.2)**	**($5.5)**	**($5.8)**	**($5.7)**	**($5.4)**	**($5.7)**	**($5.2)**	**($5.5)**	**($4.7)**	**($4.2)**	**($2.2)**	**($21.3)**	**($22.3)**	**($21.9)**	**($16.6)**	**($2.5)**	**$11.6**	**$27.5**	**-**
Margin	(418.6%)	(490.7%)	(444.4%)	(197.2%)	(237.9%)	(188.3%)	(191.3%)	(121.8%)	(109.3%)	(71.8%)	(54.7%)	(20.0%)	(821.9%)	(338.3%)	(175.7%)	(55.1%)	(4.6%)	15.3%	27.5%	
Growth	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
Income Taxes	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$3.5**	**$8.2**	
Rate																		30.0%	30.0%	
Net Income	**($4.8)**	**($6.2)**	**($5.5)**	**($5.8)**	**($5.7)**	**($5.4)**	**($5.7)**	**($5.2)**	**($5.5)**	**($4.7)**	**($4.2)**	**($2.2)**	**($21.3)**	**($22.3)**	**($21.9)**	**($16.6)**	**($2.5)**	**$8.1**	**$19.2**	**-**
Margin	(418.6%)	(490.7%)	(444.4%)	(197.2%)	(237.9%)	(188.3%)	(191.3%)	(121.8%)	(109.3%)	(71.8%)	(54.7%)	(20.0%)	(821.9%)	(338.3%)	(175.7%)	(55.1%)	(4.6%)	10.7%	19.2%	
Growth	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
Non-GAAP Earnings Per Share	**($0.47)**	**($0.59)**	**($0.52)**	**($0.54)**	**($0.48)**	**($0.45)**	**($0.35)**	**($0.32)**	**($0.34)**	**($0.29)**	**($0.25)**	**($0.13)**	**($2.22)**	**($2.12)**	**($1.59)**	**($1.01)**	**($0.16)**	**$0.50**	**$1.18**	**-**
Shares Outstanding	10	10	10	11	12	12	16	16	16	16	16	16	10	10	14	16	16	16	16	
Growth	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	

Source: Company Reports, Thomson One, and Cowen and Company.

Exhibit 3. ICEL – Balance Sheet

(MM, except EPS)	2011	2012	2013E	2014E	2015E	2016E	2017E
ASSETS							
Cash & Equivalents	$36.7	$33.9	$62.7	$28.9	$3.0	$5.7	$20.9
Accounts Receivable	$0.9	$2.7	$3.3	$7.5	$12.9	$16.9	$21.3
Inventories	$2.7	$2.4	$3.5	$7.5	$10.4	$10.5	$10.4
Prepaid expenses and other current assets	$0.3	$0.7	$0.6	$1.5	$2.8	$3.8	$5.0
Total Current Assets	**$40.7**	**$39.6**	**$70.2**	**$45.4**	**$29.1**	**$36.8**	**$57.6**
Property & Equipment	$1.8	$0.9	$3.7	$5.6	$7.0	$8.0	$8.0
Goodwill	$6.8	$6.8	$6.8	$6.8	$6.8	$6.8	$6.8
Intangible assets	$2.2	$4.2	$4.2	$4.2	$4.2	$4.2	$4.2
Other assets	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total LT Assets	**$10.8**	**$11.9**	**$14.8**	**$16.6**	**$18.0**	**$19.0**	**$19.0**
TOTAL ASSETS	**$51.5**	**$51.5**	**$85.0**	**$62.0**	**$47.1**	**$55.9**	**$76.7**
LIABILITIES							
Accounts Payable	$1.1	$1.0	$1.7	$3.8	$5.7	$6.3	$6.8
Accrued liabilities	$1.5	$1.8	$1.8	$1.8	$1.8	$1.8	$1.8
Deferred Revenue and Reserves	$0.3	$0.6	$1.4	$2.2	$1.1	$0.3	($0.4)
Current Portion of LT Debt	$0.4	$0.3	$1.0	$1.0	$1.0	$1.0	$2.0
Total Current Liabilities	**$3.4**	**$3.8**	**$5.9**	**$8.8**	**$9.7**	**$9.4**	**$10.3**
LT Debt	$1.1	$0.7	$12.3	$8.3	($3.7)	($3.7)	($3.7)
Total LT Liabilities	**$1.1**	**$0.7**	**$12.3**	**$8.3**	**($3.7)**	**($3.7)**	**($3.7)**
Preferred stock - Series A	$28.2	$28.2	$0.0	$0.0	$0.0	$0.0	$0.0
Preferred stock - Series B	$70.4	$91.4	$0.0	$0.0	$0.0	$0.0	$0.0
Common Stock	$0.0	$0.0	$119.6	$119.6	$119.6	$119.6	$119.6
Additional Paid In Capital	$8.2	$9.4	$55.3	$56.1	$56.9	$57.6	$57.6
(Accumulated Deficit)/Retained Earnings	($59.8)	($82.1)	($100.3)	($105.4)	($98.7)	($66.3)	($65.3)
Shareholder Equity	**$47.0**	**$47.0**	**$66.7**	**$44.9**	**$41.0**	**$50.1**	**$70.1**
TOTAL LIAB. & SHAREHOLDER EQUITY	**$51.5**	**$51.5**	**$85.0**	**$62.0**	**$47.1**	**$55.9**	**$76.7**
TOTAL DEBT	**$1.5**	**$1.1**	**$13.3**	**$9.3**	**($2.7)**	**($2.7)**	**($1.7)**

Source: Company Reports and Cowen and Company.

Exhibit 4. ICEL – Cash Flow

(MM, except EPS)	2011	2012	2013E	2014E	2015E	2016E	2017E
CASH FLOWS FROM OPERATING ACTIVITIES	**($19.2)**	**($21.0)**	**($22.7)**	**($24.7)**	**($8.2)**	**$8.5**	**$21.0**
Net Income	($21.3)	($22.3)	($22.2)	($16.6)	($2.6)	$8.0	$19.1
Depreciation	$1.1	$1.1	$1.4	$2.6	$3.6	$4.0	$5.0
Growth			33%	77%	40%	11%	25%
Amortization	$0.3	$0.3	$0.4	$0.5	$0.6	$0.5	$1.5
Growth			22%	16%	14%	-9%	198%
Write-off of licenses	($0.0)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Share-Based Comp	$0.9	$1.1	$0.9	$0.8	$0.8	$0.8	$0.8
Change in Working Capital (Op. assets and liabilities):	**($0.2)**	**($1.3)**	**($3.3)**	**($11.9)**	**($10.4)**	**($4.8)**	**($5.4)**
Accounts Receivables	$0.2	($1.7)	($0.7)	($4.2)	($5.4)	($4.0)	($4.4)
Inventories	($0.4)	$0.3	($1.1)	($4.0)	($2.9)	($0.1)	$0.1
Prepaid; Other Cur. Assets	($0.0)	($0.3)	$0.0	($0.9)	($1.3)	($1.0)	($1.2)
Accounts Payable	($0.3)	($0.1)	($0.7)	($2.1)	($1.9)	($0.6)	($0.5)
Accrued Liabilities; interests	$0.3	$0.3	$0.0	$0.0	$0.0	$0.0	$0.0
Deferred revenue	$0.2	$0.2	($0.8)	($0.8)	$1.0	$0.8	$0.7
CASH FLOWS FROM INVESTING ACTIVITIES	**($0.9)**	**($2.5)**	**($5.1)**	**($5.1)**	**($5.8)**	**($5.8)**	**($5.8)**
Purchases of property & equipment	($0.6)	($0.1)	($4.3)	($4.4)	($5.0)	($5.0)	($5.0)
Payments to acquire licenses	($0.4)	($2.4)	($0.8)	($0.8)	($0.8)	($0.8)	($0.8)
CASH FLOWS FROM FINANCING ACTIVITIES	**$29.7**	**$20.7**	**$56.6**	**($4.0)**	**($12.0)**	**$0.0**	**$0.0**
Principal payments on ST and LT obligations, net	($0.3)	($0.4)	($0.4)	($4.0)	($12.0)	$0.0	$0.0
Proceeds from exercise of stock options	$0.0	$0.2	$0.0	$0.0	$0.0	$0.0	$0.0
Proceeds from issuance of preferred stock	$29.9	$21.0	$45.0	$0.0	$0.0	$0.0	$0.0
Payments of deferred offering costs	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Proceeds from issuance of debt	$0.0	$0.0	$12.0	$0.0	$0.0	$0.0	$0.0
FX IMPACT	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
NET INCR. (DECR.) IN CASH & EQUIV.	**$9.5**	**($2.8)**	**$28.8**	**($33.9)**	**($25.9)**	**$2.7**	**$15.2**
CASH & EQUIVALENTS - BEG OF PERIOD	**$27.2**	**$36.7**	**$33.9**	**$62.7**	**$28.9**	**$3.0**	**$5.7**
CASH & EQUIVALENTS - END OF PERIOD	**$36.7**	**$33.9**	**$62.7**	**$28.9**	**$3.0**	**$5.7**	**$20.9**

Source: Company Reports and Cowen and Company.

Valuation Methodology & Investment Risks

Valuation Methodology

Life Science & Diagnostic Tools:

Price targets are based on several methodologies which may include: analysis of market risk, growth rate, revenue stream, discounted cash flows (DCF), EBITDA, EPS, cash flow (CF), free cash flow (FCF), EV/EBITDA, P/E, PE/growth, P/CF, P/FCF, premium (discount) / average group EV/EBITDA, premium (discount) / average group P/E, sum of the parts, net asset value, dividend returns, and return on equity (ROE) over the next 12 months.

Investment Risks

Life Science & Diagnostic Tools:

Risks to the Medical and Life Science Tools sector may include: reduction or delay in research and development budgets and government funding, reduced or delayed purchasing from health care / hospital customers, increased or extended regulatory hurdles or processes for regulated products, increased dependence on volatile emerging markets for revenues and profitability, and general macroeconomic challenges.

Company Specific Risks

Risks include but are not limited to: product is in early stage and customer adoption could be slower than expected, competition could intensify, market opportunity is difficult to define, and low visibility on financial trajectory.

Addendum

STOCKS MENTIONED IN IMPORTANT DISCLOSURES

Ticker	Company Name
ICEL	Cellular Dynamics International Inc

Analyst Certification

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Cowen and Company Rating System effective May 25, 2013

Outperform (1): The stock is expected to achieve a total positive return of at least 15% over the next 12 months

Market Perform (2): The stock is expected to have a total return that falls between the parameters of an Outperform and Underperform over the next 12 months

Underperform (3): Stock is expected to achieve a total negative return of at least 10% over the next 12 months

Assumption: The expected total return calculation includes anticipated dividend yield

Cowen and Company Rating System until May 25, 2013

Outperform (1): Stock expected to outperform the S&P 500

Neutral (2): Stock expected to perform in line with the S&P 500

Underperform (3): Stock expected to underperform the S&P 500

Assumptions: Time horizon is 12 months; S&P 500 is flat over forecast period

Cowen Securities, formerly known as Dahlman Rose & Company, Rating System until May 25, 2013

Buy – The fundamentals/valuations of the subject company are improving and the investment return is expected to be 5 to 15 percentage points higher than the general market return

Sell – The fundamentals/valuations of the subject company are deteriorating and the investment return is expected to be 5 to 15 percentage points lower than the general market return

Hold – The fundamentals/valuations of the subject company are neither improving nor deteriorating and the investment return is expected to be in line with the general market return

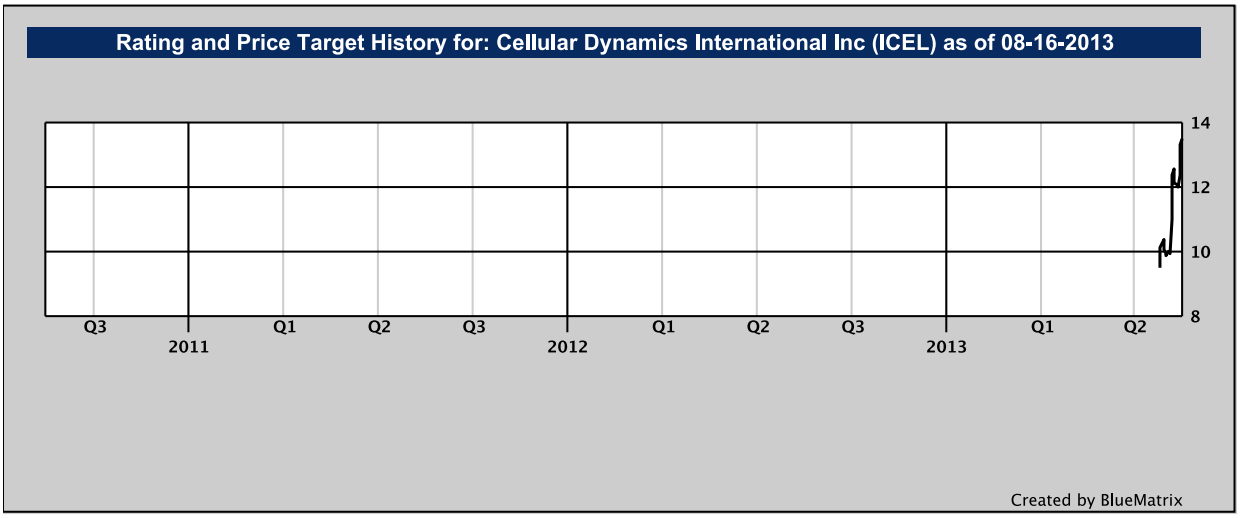
COWEN AND COMPANY RATING ALLOCATION

Distribution of Ratings/Investment Banking Services (IB) as of 06/30/13

Rating	Count	Ratings Distribution	Count	IB Services/Past 12 Months
Buy (a)	380	58.37%	48	12.63%
Hold (b)	247	37.94%	2	0.81%
Sell (c)	24	3.68%	1	4.17%

(a) Corresponds to "Outperform" rated stocks as defined in Cowen and Company, LLC's rating definitions. (b) Corresponds to "Market Perform" as defined in Cowen and Company, LLC's ratings definitions. (c) Corresponds to "Underperform" as defined in Cowen and Company, LLC's ratings definitions.

Note: "Buy", "Hold" and "Sell" are not terms that Cowen and Company, LLC uses in its ratings system and should not be construed as investment options. Rather, these ratings terms are used illustratively to comply with FINRA and NYSE regulations.



Legend for Price Chart:

I = Initation | 1 = Outperform | 2 = Market Perform | 3 = Underperform | T = Terminated Coverage | $xx = Price Target | NA = Not Available