EDISON

Nuevolution

Initiation of coverage

Chemetics proof is in the deal making

Pharma & biotech

Nuevolution's proprietary Chemetics DNA-encoded screening platform technology enables fast and accurate small molecule drug discovery. The technology has received powerful external validation, including two recent collaborations (Amgen and Almirall) that could generate significant value in the coming years. In addition, we expect Nuevolution to progress at least one internally generated asset into clinical development in the near future. We value the company's recent deals with Amgen and Almirall, plus its cash position alone, at SEK901m ($102m); our valuation does not include the technology, other pipeline assets and future deal opportunities.

Year end	Revenue (SEKm)	PBT* (SEKm)	EPS* (SEK)	DPS (SEK)	P/E (x)	Yield (%)
06/16	21.3	(151.9)	(3.97)	0.0	N/A	N/A
06/17e	139.4	15.1	0.04	0.0	N/A	N/A
06/18e	186.0	56.4	0.86	0.0	21.9	N/A
06/19e	140.8	6.1	0.09	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments.

Existing deals validate the technology

Chemetics, a DNA-encoded screening platform, is designed to rapidly select drugs for an array of tough-to-drug disease targets; the technology has been validated by multiple collaborative deals (17 since inception). Notably, deals with Amgen (multi-target: value up to $410m per target and a tiered royalty on sales) and Almirall (up to €442m plus tiered royalties for RORyt inverse agonist [dermatology and psoriatic arthritis indications] programme) are pivotal in defining near-term value.

More deals likely in 2017

Lead programme RORyt (partner Almirall) should enter Phase I by late-2017. Other programmes focused on clinically validated targets (BET BRD1, Cytokine X, RORγt outside dermatology) provide further partnering opportunities. We expect further deal-driven newsflow to positively affect the share price in the next 12 months (we expect one deal: either an out-licensing, a risk-sharing or a platform agreement).

Longer-term plan to move own assets to POC

An early stage, pre-clinical portfolio of drugs is in development. While we expect more partnering deals, management also intends to develop one or two of these programmes to proof of concept (Phase I/II) in the lucrative therapeutic areas of inflammation, oncology, and/or immune-oncology.

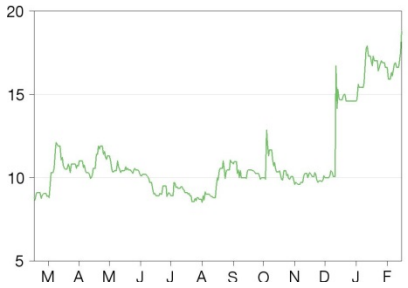
Valuation: rNPV values Amgen & Almirall deals only

Our valuation of SEK901m ($102m) including net cash of SEK229m ($26m) is exclusively based on a risk-adjusted model of the future milestone payments we expect from the Almirall and Amgen deals, with no contribution for the value of the technology, other pipeline assets or other deals including the ongoing Janssen collaboration. Our financial model suggests a cash runway into FY19 excluding any future milestone payments from Amgen and Almirall. Further deals should unlock significant value.

16 February 2017

Price	**SEK18.8**
Market cap	**SEK807m**
	SEK8.86/US$
Net cash (SEKm) at 31 December 2016, including Almirall upfront milestone	229
Shares in issue	42.9m
Free float	27.9%
Code	NUE
Primary exchange	Nasdaq First North Premier
Secondary exchange	N/A

Share price performance



%	1m	3m	12m
Abs	8.7	84.3	108.9
Rel (local)	4.6	69.2	73.3
52-week high/low	SEK18.8	SEK8.5	

Business description

Nuevolution is a Copenhagen-based biopharmaceutical company. Its patent protected Chemetics drug discovery platform enables the selection of drugs to an array of tough-to-drug disease targets. To date it has entered into 17 agreements with major pharmaceutical companies.

Next events

Q317results	17 May 2017
BET BRD1 preclinical data	Mid-2017
RORyt inverse agonist preclinical data (outside dermatology)	Mid-2017
Enter one new agreement	H217/H118

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Edison profile page

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Investment summary

Company description: Discovering tough-to-drug compounds

Nuevolution is a Scandinavia-based leader in small molecule drug discovery, co-founded in 2001 by CEO Alex Haahr Gouliaev. The company's internally innovated DNA-encoded drug discovery platform, Chemetics, has been designed to rapidly select drugs for an array of tough-to-drug disease targets; the technology has been validated by multiple collaborative deals, notably the deals in 2016 with Amgen and Almirall. In addition to out-licensing deals, Nuevolution is developing an early-stage portfolio of drugs that it intends to develop to proof of concept (targeting inflammation and oncology); we anticipate progress of at least one internally generated asset into the clinic in the near future. Nuevolution's headquarters are in Copenhagen, Denmark, and it employs about 40 people. To date the company has generated SEK525m ($59.3m) in revenues through collaborations (including the SEK109m Almirall upfront) with global pharmaceutical companies and raised net proceeds of SEK230.1m ($25.5m) from its IPO on Nasdaq First North Premier in Stockholm, Sweden in December 2015 (at SEK17.5/share).

Valuation: rNPV values Amgen and Almirall deals only

Assigning a fundamental valuation to Nuevolution requires consideration of the inherent value of the Chemetics technology platform, potential clinical pipeline candidates and future partnership deals. However, our valuation of SEK901m including net cash of SEK229m is exclusively based on a risk-adjusted model of the future milestones we expect from the Almirall (SEK8.8 per share) and Amgen (SEK6.9 per share) deals alone (ie excluding any value of the technology itself, other pipeline assets and excluding future deal opportunities), using a 12.5% discount rate. We have not ascribed value at this point to the unique platform and multiple candidates at an early stage in preclinical development; consequently, we see uplift potential as further deals are made and/or assets move into clinical development.

Sensitivities: Clinical validation required

Nuevolution is subject to drug development risks, including clinical development delays or failures; however, Nuevolution's large number (15+) of compounds in parallel development helps to reduce the risk typically associated with pure-play biotech. Additional sensitivities exist around IP protection, regulatory risks, competitor successes, partnering setbacks, and financing and commercial risks. While Nuevolution's strategy minimises the business risk associated with drug development by partnering early on in development, general risk still remains in the partner's willingness to progress these partnerships. One of the key sensitivities for Nuevolution relates to the successful transition of molecules discovered by its Chemetics programme into clinical-stage development; this will enable further validation of its technological capabilities. Financing needs depend on milestone revenues from existing partners and potential new partnering activities; delay or failure to receive future milestones would generate a funding gap during FY19.

Financials: Future milestones and deals will define profitability

Net cash as of 31 December 2016 was SEK142.9m ($16.1m); excluding the net (of withholding tax) SEK86.5m ($9.1m) upfront payment from Almirall in January 2017. Net cash including the Almirall upfront is c SEK229m, which suggests a cash runway into FY19. Revenues should benefit from milestone payments from the Amgen and Almirall deals as targets progress in the upcoming years and we forecast total revenues of SEK139.4m in FY17 (SEK21.3m FY16), and SEK186m in FY18. The Almirall upfront milestone translates to just above break-even in FY17 (SEK1.5m net income FY17e). We forecast a net profit of SEK36.7m in FY18 due to forecast income from the Almirall and Amgen deals. While it is inherently difficult to predict revenues from further deals, we note that any additional deals could significantly add to the current forecast revenue stream.

Outlook: Evolution in drug discovery

Chemetics platform: Simple yet sophisticated…

Nuevolution's Chemetics technology platform enables the rapid development of small molecule drugs for 'tough-to-drug' targets. Key to this is the company's ability to generate small molecule drug libraries that are magnitudes larger than previously possible. Management believes that its proprietary DNA encoded libraries of close to 2bn small molecules enables 1,000-fold more compounds to be screened vs traditional high-throughput screening (HTS). The fact that Nuevolution has demonstrated via deals that its Chemetics technology is able to significantly accelerate the drug discovery phase, at a substantial cost saving, has been of considerable appeal to the global pharmaceutical industry as it battles to improve R&D productivity. Nuevolution's 17 collaborative partnerships include mid- and large-cap industry peers (including Amgen, Almirall, Novartis, Janssen Biotech, GSK, Boehringer-Ingelheim [BI], Merck and Co) in addition to world-class oncology research institutions Cancer Research Technology (CRT) and the Institute of Cancer Research (ICT). As evidenced by the list of Nuevolution's partners, DNA-encoded drug discovery continues to gain traction globally as multiple major pharmaceutical and biotechnology companies advance the technology.

…detection of novel targets for oral-based therapies

Costly but effective injectable biologic agents have revolutionised the treatment of chronic inflammatory conditions in particular. Nuevolution is focusing its development effort on small molecules for 'tough-to-drug' targets. Small molecules generally have four key advantages over biologics: the ability to target intracellular components (potential to reach novel targets), cheaper cost of production (lower pricing), oral dosing (improved compliance to injectable) and shorter half-life (important if side effects need to be controlled). While offering important practical advantages, novel drug candidates have high efficacy hurdles to meet, while ensuring low toxicity profiles.

Unique early-stage biotech business model

Nuevolution's business model embodies continuous revenue generation and risk mitigation, executed through a 'multiple shots on goal' approach to drug development. This translates to: 1) revenue generation through early partnership agreements, 2) an associated reduction in R&D costs and 3) financial and physical capability to continuously identify drug development candidates; management's focus is to develop several assets each year from its proprietary pipeline for partnering and revenue generating business opportunities while maintaining an internal development pipeline. We anticipate Nuevolution to progress at least one internally generated asset into clinical development in the near future; its aim is to have an abundant pipeline of partnered assets plus a focused clinical-stage pipeline.

The business model has evolved over time; it has moved away from its early deals that were more fee for service technology transfer deals (eg BI, Merck, Janssen and Novartis) or sublicensing an access to patents (eg Lexicon, GSK, Novartis deal) to a multi-pronged approach to value creation:

- Risk-sharing collaborations: partnering early in the search for targets; leverage partner capability and access potential commercial access through contingent milestones and royalties on future sales such as the company's recent Amgen deal.
- Licensing agreements: out-licensing development and commercialisation rights to lead preclinical candidates in its pipeline for upfront capital, and milestone payments and royalties on sales such as the company's recent Almirall deal.
- Developing own programmes to proof-of-concept stage before seeking partners.

All told, Nuevolution has delivered on two key IPO promises, signing at least one licensing agreement (Almirall) after 12 months and one risk-sharing collaboration (Amgen) after 10 months of IPO.

Risk-sharing collaborations: Step forward Amgen

In October 2016, Nuevolution announced a risk-sharing collaboration with Amgen focused on oncology and neuroscience. The company could receive up to $410m per target; specific targets and diseases were undisclosed. Under the terms of the deal, Nuevolution will carry out the initial research work before working collaboratively with Amgen in the later-stage research. Amgen is responsible for all preclinical and clinical development, in addition to worldwide commercialisation.

Licensing agreements: Almirall gains access to RORγt

The Almirall deal focuses on the development and commercialisation of RORγt inverse agonist for dermatological diseases and psoriatic arthritis (Nuevolution retains ownership of other indications). An upfront of €11.2m (SEK109.2m) gross, net (of Spanish withholding tax) €9.1m contributes to a total potential deal value of €442.0m (SEK4.3bn) from development, regulatory and sales milestones in addition to tiered royalties on future sales, which could generate significant revenue for Nuevolution. Almirall is responsible for both funding and undertaking all research and commercial activities.

Longer-term plan to build a broader clinical-stage pipeline

While the development of Nuevolution's lead candidate, the RORγt inverse agonist for dermatology and Psoriatic Arthritis (PsA) will transfer completely to Almirall (with potential IND filing in H217), we expect Nuevolution to continue to progress the rest of its pipeline (particularly BRD BD1, Cytokine X, and RORyt inverse agonist outside dermatology). Nuevolution's second most advanced programme is an inhibitor of BET bromodomain 1 (BRD BD1); it recently demonstrated positive preliminary toxicology and efficacy data in an animal mouse model for systemic lupus erythematosus.

Exhibit 1: Nuevolution's development pipeline

Indication	Stage	Target	Ownership	Notes
Chronic inflammatory diseases	Pre-clinical	RORyt inverse agonist	Partner Almirall in dermatology and psoriatic arthritis.	IL-17 is implicated in oncology, and in multiple inflammatory and auto-immune conditions. It is an oral-based therapeutic that has demonstrated high activity in an animal model in rheumatoid arthritis and psoriasis. The lead candidate is partnered with Almirall for dermatology and psoriatic arthritis. Clinical development in dermatology is expected to commence in 2017.
			Other indications 100% ownership NUE	Nuevolution retains rights to other non-dermatological indications. Proof-of-concept studies in mice are ongoing in indications outside dermatology with initial data expected in mid-2017.
Inflammatory diseases	Discovery: lead optimisation	BET bromodomain inhibitors	100% ownership NUE	The BET sub family of bromodomains is a novel biological disease target class offering a new mode of action for treatment of cancer and inflammatory diseases.
Inflammatory diseases	Discovery: hit-to-lead	Cytokine X	100% ownership NUE	The Cytokine X (target undisclosed) programme demonstrated proof-of-concept in an animal model for inflammation. The Cytokine X programme looks to offer tablet-based replacement for currently available but costly injectable medicines.
Cancer	Discovery: hit-to-lead	GRP78	50% ownership*	GRP78 is a member of the chaperone family of proteins; GRP78 is over expressed in many tumour types including breast cancer and brain tumours.
Cancer	Discovery: hit optimisation	RORyt agonist (inhibition)	100% ownership NUE	RORyt agonists may provide the immune system with a novel tumour attacking mechanism.
Various	Discovery: various	Various	100% ownership NUE	15+ discovery programmes in a range of undisclosed indications including oncology, inflammatory diseases and immune-oncology.

Source: Nuevolution, Edison Investment Research. Note: *Collaboration with CRT and ICR.

Additionally, we expect the collaboration with Amgen to be of focus in the short to medium term as Nuevolution generates drug candidates which, if successful in preclinical development, will be taken to the clinic by Amgen. One of the longer-term strategic aims of the company is to innovate and develop a pipeline of clinical assets in addition to a broader preclinical pipeline in the immunology,

immune-oncology and oncology therapeutic areas. Management will consider, for one or two programmes, advancing development up to Phase I/II clinical studies. Exhibit 1 highlights Nuevolution's development pipeline.

Academic collaborations expand platform reach

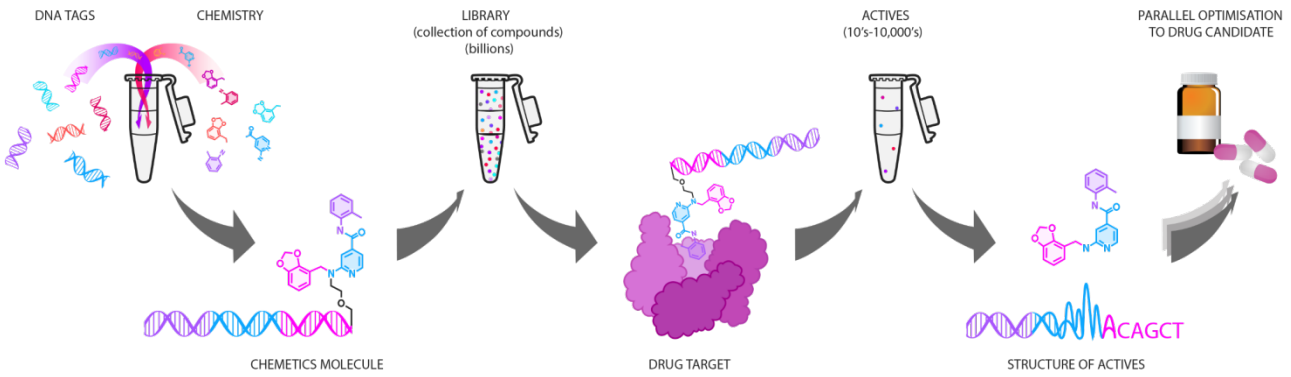
In addition to industry partnerships, Nuevolution has a range of ongoing academic collaborations. In December 2016, Nuevolution, in partnership with Professor Kristian Helin at the Biotech Research and Innovation Center (BRIC) (University of Copenhagen) received a three-year grant from Innovation Fund Denmark. The total budget is DKK24.4m (SEK32.3m), of which Innovation Fund Denmark will contribute DKK16.4m (SEK21.6m). Nuevolution will contribute with in-kind investments and is due to receive up to DKK5.2m (SEK6.8m) in funding over the project period. If the project is successful, Nuevolution will have the lead in commercialising any compounds. Together, Nuevolution and the Helin Group will aim to identify therapeutic small molecules for histone methyltransferase enzymes, an epigenetic target involved in a range of cancers.

Additional partnerships include the recently published paper by Nobel Laureate Dr Robert J Lefkowitz from Duke University, who isolated a beta-blocker, and a drug discovery collaboration with the Institute of Cancer Research (ICR), Cancer Research Technology (CRT) (signed in January 2014), which is focused on a key target within the stress response pathway.

Chemetics: Rapid and efficient drug discovery

Nuevolution's Chemetics technology platform enables the rapid development of small molecule drugs to 'tough-to-drug' targets. Key to this is the company's ability to generate small molecule drug libraries that are magnitudes larger than previously possible (Nuevolution recently announced the production of a 40 trillion compound library, potentially the largest ever produced). This is enabled by the tagging of chemical compounds with DNA that encodes for its chemical structure and composition. Entire libraries can be generated in one vial, assayed together and easily sequenced for hits (Exhibit 2).

Exhibit 2: Chemetics overview



Source: Nuevolution

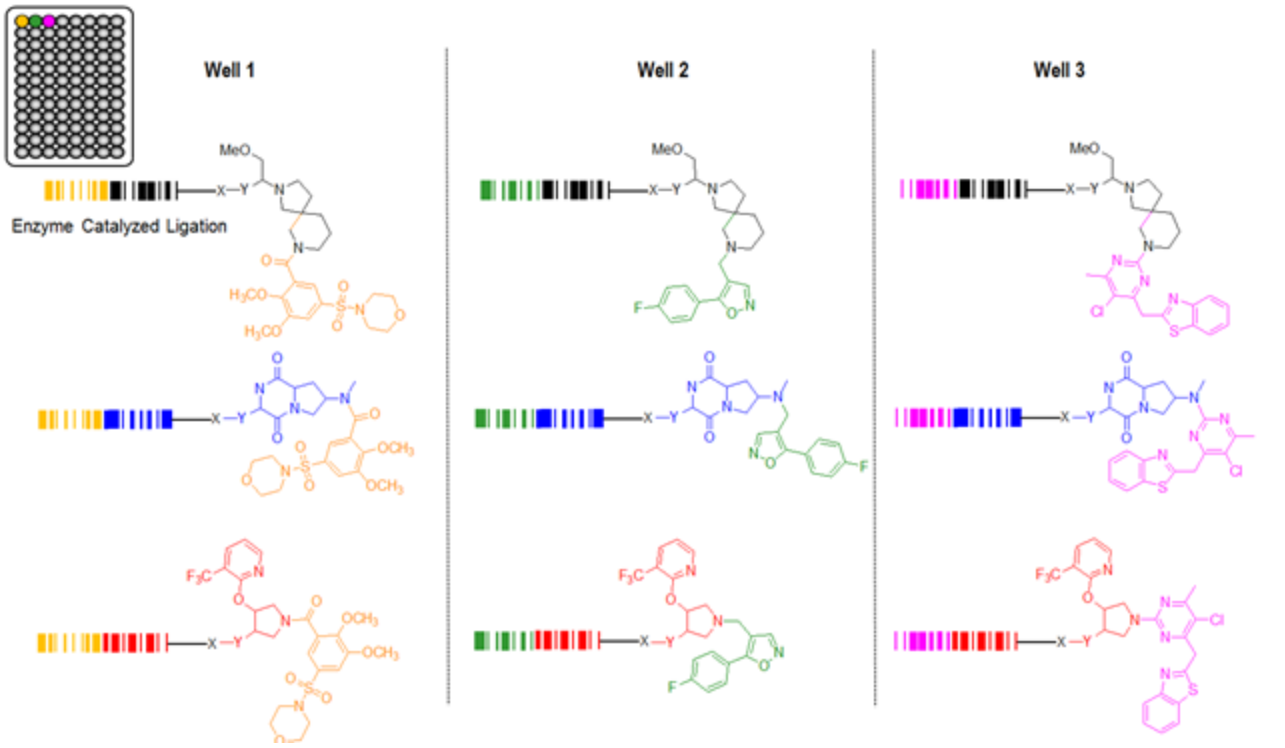
Classical high-throughput screening typically enables the screening of between 10,000 and 100,000 compounds at any one time, with a typical library of 1-3 million taking anywhere from a few weeks to a few months to screen. Molecules are screened individually in micro well plates, typically in 96-, 384- and 1,536-well formats. Due to advancements in robotics, solution handling and data readouts, the screening process has become one of the fastest components of the entire drug discovery process. Hit validation and progression in particular, along with assay development and data analysis, can often be the most time consuming. With traditional techniques the time and cost required for the supporting work is proportionally linked to the number of compounds tested; a

careful balance needs to be maintained between covering the whole target space and the time required to develop these molecules. Nuevolution believes it has overcome these bottlenecks with its Chemetics platform.

Library generation: From millions to trillions

The creation of Chemetics libraries involves a range of technical steps that have been refined by Nuevolution since its inception. Every small molecule within a library is tagged with a double-stranded DNA that, much like a barcode, can be read to determine the structure and chemical makeup of the small molecule it is attached to. Library construction involves the repeated sequential addition of chemical building blocks by the split-and-mix method to enable the production of diverse chemical libraries. This involves splitting mixtures into individual wells where they are incubated with chemical fragments before remixing all solutions together and splitting them back out again for addition of new chemical fragments. This enables the creation of significantly larger libraries (trillions) than is possible with HTS (millions); however, of note is recent research that indicates productivity of a library may not correlate with library size; as such, Nuevolution's ability to design a library for diversity as well as size is key to generating hit compounds.

Exhibit 3: Split and mix synthesis



Source: Nuevolution

In detail, this involves a few keys steps:

1. Initially single building blocks are synthesised in separate wells, and each fragment is conjugated to a unique DNA sequence (Chemetics molecule) that encodes for the chemical structure.
2. These DNA conjugated fragments, which originally were in separate wells, are mixed together and then split back into separate wells. This ensures that each well has an equal mix of all starting compounds.
3. Each well is then incubated with new separate chemical fragments. This, as demonstrated in Exhibit 3, enables the creation of many different compounds. At each step, the conjugated DNA is ligated (extended) with another DNA strand that encodes for the new chemical fragment (Exhibit 3).

4. This method is then repeated and repeated until a predefined level of complexity has been achieved.

This process of adding a new chemical component with an accompanying barcode (DNA fragment) before remixing all the wells together and splitting the mixture back out again enables the creation of highly diverse libraries consisting of trillions of compounds. If this process is done over 96, 384 or 1,536 wells, a large and diverse library can be produced quickly. Libraries are designed to contain not just a wide variety of compounds but also many copies of each compound; this ensures that any singular binders accidently lost in affinity selection do not dramatically affect the identification of a hit compound. Library generation is estimated to take three to four weeks from a known design, while design of a library from scratch often requires nine to 12 months. Each library can be utilised typically more than 100 times.

Generating hits: Process knowledge defines value

Once the library is generated it is assayed against a target. This can take a range of formats and will be tailored to the target; generally it involves the incubation of the library with a target where non-binders are removed. The process is often repeated multiple times with increasing stringency until a fraction of the original library remains (still millions of compounds). This library is then analysed. In classical HTS this can be a slow and laborious process; however, as each Chemetics molecule is tagged with a strand of DNA that contains the chemical and structural information of the compound, the information can be quickly obtained. The strands of DNA are amplified in the presence of a DNA polymerase (enzyme) through cyclical temperature increases and decreases, a process known as polymerase chain reaction (PCR). One of the key problems with PCR is the preferential amplification of certain sequences; this could distort the sequenced library as certain strands may appear more abundant than they actually are. As such, the unique barcoding of the strands when the library is created is key to tracking specific amplification. The entire DNA library is sequenced utilising an outsourced next-generation sequencing platform like Illumina's 'Sequence by Synthesis' technology. This technology provides the sequence of every single DNA strand left in the library, often numbering into the millions. The analytical techniques involved in this whole process require careful tuning and development to be able to generate actionable leads, a process that has a high barrier of entry to new entrants.

Competitors: The next wave of small molecule development

DNA-encoded drug libraries until recently were viewed with scepticism by large pharma companies. However, an explosion of deal making in the sector has pushed many companies into the limelight. GSK, one of the first pharmaceutical companies to see the potential of the technology, acquired Praecis Pharmaceuticals (a developer of DNA-encoded drug libraries) in 2007 for $55m before subsequently entering into a licensing agreement with Nuevolution granting GSK further freedom to operate. Two main technological tranches have emerged since then: DNA barcoding and DNA templating. DNA barcoding, as carried out by Nuevolution, is the process where the chemical structure is encoded for with an attached DNA. DNA templating is the utilisation of DNA to physically bring together chemical fragments in an appropriate conformation. Generally, DNA templating enables more control over quality, while DNA barcoding allows the production of much larger libraries.

The competitive landscape is outlined in Exhibit 4. While this highlights the pure-play drug discovery companies, major strides are being taken by large pharmaceutical companies. GSK currently has one of the most advanced clinical candidates in the form of an epoxide hydrolase inhibitor for COPD (GSK2256294, Phase I completed, no current details on further development) and possesses some of the largest DNA encoded libraries in the sector, with over a trillion uniquely tagged molecules. Novartis meanwhile is also believed to be refining its DNA-encoded libraries after securing a technology transfer deal (in 2014) with Nuevolution. One needs to look no further

than the partners listed in Exhibit 4 to see the interest the industry has in these new discovery engines. As pharmaceutical companies often closely guard early stage assets, visibility of drugs generated from DNA encoded libraries remains limited; however, as pipelines advance we expect this to change.

While deal details and values in the sector often remain private, disclosed details highlight the value of the technology. In May 2016, DiCE Molecules (founded in 2013) entered the spotlight with its directed evolution DNA templating technology when it agreed a research collaboration with Sanofi to discover new therapeutics for up to 12 targets. Sanofi agreed to pay DiCE over $50m in an upfront and a further $184m in milestones per target. DiCE's technology focuses on tough-to-drug protein-protein interactions. In addition to DNA templating, it utilises directed evolution. Typically once a library has been screened, any binders are seen as hit and taken forward for optimisation. Directed evolution involves taking these binders, creating a new library with them and screening them against the target again. This process can be repeated again and again until only a select pool of target binding compounds remain; however, the speed and practicalities of this method are still being addressed.

Exhibit 4: DNA encoded drug developers

Company	Sector	Technology	Partners	Notes
HitGen (private)	Service/ pipeline	DNA barcoding	Cyclofluidic, Janssen Biotech (J&J)	Partnered with Cyclofluidic on GSK3β inhibitors, which are in lead optimisation. In September 2016, HitGen signed a multi-target collaboration with Janssen to discover new therapeutics in particular within oncology and metabolics.
X-Chem (private)	Service	DNA barcoding	Taiho Pharma, AbbVie, Bayer, Janssen (J&J), Sanofi, Roche, Pfizer	Multiple recent drug discovery deals include with Taiho Pharma (December 2016, worth up to $352m in total, plus royalties) and Bayer (July 2016, worth up to $528m plus royalties).
Philochem (subsidiary of Philogen)	Service	DNA barcoding	Pfizer, AbbVie, Jansen, Bayer, Boehringer Ingelheim, MedImmune, Merck Serono	Philochem is a subsidiary of Philogen group, focused on DNA-encoded libraries. Lead pipeline products are SPECT/CT imaging agents, PHC-102 for RCC/Hypoxia in planning for a Phase I trial. No details are available regarding terms or stage of any deals.
Ensemble Therapeutics (private)	Service/ pipeline	DNA templating	Novartis, Alexion, Genentech, Boehringer Ingelheim, Pfizer, Bristol-Myers Squib.	Novartis recently acquired rights to expand its access to Ensemble's IL-17 antagonist programme, which was previously part of a joint collaboration between the two companies. Novartis has taken over full responsibility; no financial details were disclosed.
Vipergen (private)	Service	DNA templating	Gilead, Merck, Amgen, Takeda, Bayer	Vipergen has entered into multiple multi-target drug discovery agreements in the last 24 months (no target or financial details disclosed).
DiCE Molecules (private)	Service	DNA templating (directed evolution)	Sanofi	Development programme with Sanofi to identify therapeutics for up to 12 targets. $50m upfront with further $184m in milestones per target. Signed March 2016.

Source: Edison Investment Research, DiCE Molecules, HitGen, X-Chem

Collaborative partnerships: Amgen

In October 2016, Nuevolution and Amgen announced an extensive strategic collaboration deal with a focus on small molecule drug discovery targets in the field of oncology and neuroscience. This represents a multi-target research alliance whereby Nuevolution utilises its proprietary Chemetics drug discovery platform to potentially identify drug candidates that Amgen may wish to develop beyond the drug discovery stage; thereby leveraging the strengths of the Chemetics drug discovery platform with Amgen's drug development capabilities. Nuevolution can receive up to $410m per target in licence fee payments upon option exercise and milestones alone (specified research, development, and commercial milestones); specific targets and diseases were undisclosed.

Under the terms of the deal, Nuevolution will carry out the initial discovery research work before working collaboratively with Amgen in the later-stage research. Amgen is responsible for all preclinical and clinical development, in addition to worldwide commercialisation. Nuevolution's collaborative process has started with Amgen in Q2 and management believes the early hit identification looks promising with target one; and expects further programme targets to start in Q3.

As a comparison, we highlight the Amgen and Inmatics strategic collaboration (announced 9 January 2017) to develop novel T-cell engaging bispecific immunotherapies; under the terms of the agreement, Inmatics will receive a $30m upfront payment plus over $500m in development milestones for each programme and additional tiered royalty rates up to a double-digit percentage of net sales.

Almirall deal: First Chemetics drug to enter the clinic

In December 2016 Nuevolution announced a global, strategic collaboration deal with Almirall for its internally generated RORγt inverse agonist (inhibitor) programme. Almirall is a Spain-based speciality pharmaceutical company with a focus on dermatology (~50% of sales in 2016). The company has been trading for over 70 years and maintains a strong international presence with ~2,000 employees worldwide. Almirall is increasing its focus in psoriasis with two late-stage products in development; LAS41008 and tildrakizumab (IL-23 antibody in-licensed from Sun Pharmaceuticals – originally from Merck & Co – in July 2016) are both at registration stage.

Almirall has obtained rights to the RORγt inverse agonist (inhibitor) programme to enable it to identify and develop novel small molecule drugs for inflammatory-based dermatological conditions in addition to psoriatic arthritis. Under the terms of the deal, Almirall will fund all further research and regulatory and commercial activities; Nuevolution has in exchange received an upfront payment of SEK86.5m (€9.1m), net of Spanish withholding tax, plus is eligible to receive up to SEK1.7bn (€172m) in development and regulatory milestones contingent on successful development. If approved Nuevolution would be entitled to a tiered royalty on net sales generated in addition to tiered commercial milestones of up to SEK2.6bn (€270m).

The deal with Almirall, in our view, is significant as it demonstrates:

- Management's ability to deliver on a strong and relevant partner for this particular programme; given Almirall's longstanding expertise in the dermatological field. Almirall has multiple dermatology products, both on the market and in late-stage development, and is well placed to advance the RORγt inverse agonist platform in dermatology and psoriatic arthritis.
- Value maximisation for the RORγt programme as other indications including rheumatoid arthritis have been retained by Nuevolution to progress or partner accordingly.
- Potential combined future revenue of up to SEK4.3bn (€442m) from development, regulatory and sales milestones in addition to tiered royalties on future sales.

We anticipate a potential IND filing for the product by Almirall in H217, and it would be the first internally generated asset to move into the clinic with one of its strategic partners. Nuevolution commenced production of the active pharmaceutical ingredient (API) in September 2016 for the first RORγt inverse agonist candidate. As part of the initial agreement, both companies will also establish a research collaboration to identify additional RORγt inhibitors; Almirall will retain the option to use it in dermatology and psoriatic arthritis.

RORγt as a target for auto-immune disease

The discovery of retinoid-acid receptor-related orphan receptor gamma t (RORγt) as an important master control switch of immune system activation translates to a potential novel class of drugs for the treatment of auto-immune diseases (by immune suppression) and for cancer immunotherapy (by immune activation). For auto-immune conditions such as psoriasis/psoriatic arthritis and rheumatoid arthritis, this represents a step towards finding novel treatment options (notably novel orally administered drugs) for these incurable, chronic debilitating conditions.

RORγt is a critical target in the regulation and development of Th17 immune cells. These cells are CD4 T helper effector cells that are involved in the expression of naturally occurring pro-

inflammatory cytokines such as interleukin-17A (IL-17); abnormalities in IL-17 expression (elevated levels) can be found in auto-immune conditions such as psoriasis. IL-17 as a target has been validated by the approval of Novartis's human IgG1 monoclonal antibody Cosentyx (secukinumab); the only approved IL 17A antagonist for severe plaque psoriasis, active psoriatic arthritis and ankylosing spondylitis. Targeting RORγt could theoretically reduce the IL-17 over expression in these disease states with a potential practical translation of disease modification. Novel disease modifying drugs that are efficacious without side effects or an increased risk of comorbidities have the potential to revolutionise treatment of these therapeutic areas.

Psoriasis market expected to double to $13.3bn by 2024

While opportunities will always exist for novel drugs with differential features, we highlight that the psoriasis biologics market will become more competitive over the next decade as novel biologic agents and biosimilars vie for position in the moderate to severe psoriasis space. The RORyt programme represents a novel mechanism of action.

Exhibit 5: Psoriasis background

Overview	Psoriasis is a chronic inflammatory (auto-immune) skin condition characterised by dry scaly skin lesions most commonly found (but not limited to) on the elbows, knees, scalp, hands and feet. In its worst form, but rarely psoriasis can affect the entire skin surface of the body, a condition that can be fatal. Around 10% of patients with psoriasis are diagnosed with psoriatic arthritis (PsA) (World Health Organisation), furthermore the relative risks of other conditions (comorbidities), such as heart disease, stroke, hypertension, diabetes and Crohn's disease, increase in patients with moderate to severe psoriasis.
Epidemiology	According to the World Health Organisation (WHO), the worldwide prevalence of psoriasis is 2%; one-third of patients have a moderate to severe form of the condition (moderate psoriasis covers 3-10% of the body, >10% coverage is classified as severe).
Severity	The PASI (Psoriasis Area and Severity Index) score is the most widely used method to measure severity of lesions in psoriasis; PASI 75 reflects a 75% improvement in the psoriasis area and severity index (PASI 90 reflects 90% improvement) and represents a familiar and useful standard to assess drug efficacy. Exhibit 6 highlights PASI 75 scores, dosing schedules and pricing of selected drugs approved to treat psoriasis and PsA.
Market size	According to Global Data, the psoriasis market is forecast to rise from $6.6bn in 2014 to over $13.3bn by 2024, driven by the availability of new therapies, increased uptake of biosimilar drugs where available and expansion of existing therapies across the globe. Small molecule and biologic drugs targeting IL-17 and IL-23 are expected to lead the way.
Treatment	Treatment of psoriasis depends on severity and the co-existence of the arthritis. Generally treatment modalities can be divided into three main types: ■ Topical treatments (eg corticosteroids, calcipotriol, anthralin) ■ Light therapy (UVB and PUVA) ■ Severe psoriasis: systemic therapies (retinoids, cyclosporine, methotrexate and drugs that alter the immune system; the biologics)
Biologic treatment	The advent of the biologic class of drugs has revolutionised the treatment of people with moderate to severe psoriasis who have concomitant PsA or have failed to respond to traditional therapy. Approved biologic agents have an established clinical efficacy record (PASI score), and largely differ by onset of action, PASI scores and maintenance impact and dosing schedules. Biologics are administered by subcutaneous injection; two main drawbacks include mode of administration and price.

Source: Edison Investment Research

In placebo-controlled trials, Novartis's Cosentyx has posted the highest improvement in PASI 75 scores (see Exhibit 6) Cosentyx was approved for use in psoriasis in January 2015 by the US FDA and in March 2015 by the EMEA. Its label was widened to include ankylosing spondylitis and psoriatic arthritis in January 2016; Novartis reported sales of $1.1bn in 2016 across all indications. Celgene's Otezla (apremilast) small molecule, PDE4 inhibitor is an oral drug treatment for PsA and psoriasis that was approved in 2015. It has a wholesale price in the US of $22,500 a year, around a 30% discount to the injectable treatments Humira (AbbVie) and Enbrel (Amgen). Celgene reported that Otezla sales had exceeded $1bn in 2016, in its second full year on the market; uptake of the drug has been driven by price and its oral mode of administration despite its lower efficacy compared to biologic agents.

Exhibit 6: Comparison of approved immune modifying drugs for psoriasis and PsA

Brand name	Manufacturer	Generic name	Mode of administration/dosing schedule/ price*	PASI 75 scores (prescribing data, not head to head data)
Enbrel	Amgen	Etanercept	Subcutaneous, twice a week, $4,000 per four syringes of 50mg	46% achieved PASI 75 by week 12 in the Enbrel 50mg group
Stelara	Janssen	Ustekinumab	Subcutaneous, dosing at day 0, then 4 weeks, then every 12 weeks. $9,000 per syringe (45mg/0.5ml)	PHOENIX 2 Phase III trial results: 67% achieved PASI 75 by week 12 in the Stelara 45mg (after 2 doses) group; 76% achieved PASI 75 by week 12 in the Stelara 90mg group
Humira	AbbVie	Adalimumab	Subcutaneous, every 2 weeks, $4,150 per 2 syringes of 40mg/0.8ml	REVEAL Phase III study results: 53% achieved PASI 75 by week 12 in the Humira 40mg group
Cosentyx	Novartis	Secukinumab	Subcutaneous, once a week for 5 weeks, once a month thereafter, $8,300 per 2 syringes of 150mg/ml	71% achieved PASI 75 by week 12 in the Cosentyx 150mg group; 82% achieved PASI 75 by week 12 in the Cosentyx 300mg group
Otezla	Celgene	Apremilast	Oral, twice a day. $2,800 for 28 days' supply	33% achieved PASI 75 by week 16 in the Otezla 30mg twice a day group

Source: Edison Investment Research, Amgen, drug prescribing leaflets, www.goodrx.com. Note: *Retail price.

RORγt: Partnerships define sector

The three most advanced RORγt inverse agonist programmes in development have all been either out licensed or acquired; Nuevolution has out licensed its programme to Almirall, Vitae Pharmaceuticals was acquired by Allergan (for $639m in cash) and Phenex Pharma has out licensed its inverse agonist to Janssen. In May 2016, Vitae Pharmaceuticals reported top-line results from its Phase IIa clinical trial testing its small molecule RORγt inverse agonist (VTP-43742) in psoriatic patients. In the low dose cohort (350mg), VTP-43742 reported a 23% improvement in PASI score at day 28 from baseline (0.015); this compared favourably to a 1% deterioration for patients on placebo. Patients on the higher dose cohort demonstrated a 29% improvement from baseline at day 28 (p=0.003). There were no reported serious adverse events. This data is the first Phase II data to confirm the validity of RORγt as a drug target for the treatment of psoriasis. Allergan confirmed upon acquisition the plan to initiate a 16-week Phase II trial to determine the effect of VTP-43742 over a longer time period. No further details have been released since the acquisition in September 2016.

In 2012, Phenex Pharma entered into a research collaboration with Janssen Biotech to jointly discover compounds that target RORγt. Phenex Pharma is eligible to receive milestone payments of up to $135m and tiered royalties; most recently Phenex received $6m in December 2012 for reaching an undisclosed milestone. Janssen and Phenex are jointly responsible for the discovery of compounds, after which Janssen will take full control of development from the preclinical stage. Janssen has to-date not disclosed the progress of the programme.

We forecast peak sales potential of $1.9bn for RORγt in psoriasis and PsA

Our valuation of the Almirall deal largely focuses on the potential milestone payments in the near term, with a smaller contribution in value from royalties on sales (see valuation). For comprehensiveness we discuss the potential US and EU opportunity for RORγt, and estimate a $1.9bn peak sales opportunity in psoriasis and PsA. Although in early stages, the RORγt programme mode of action is closer scientifically to Cosentyx, with the oral dosing benefit conferred by Otezla. The US market potential alone is significant, with over 7.5 million psoriasis patients, of whom 35% require drug treatment. Given that 20% of patients fail first and second-line treatment, we believe 0.5m patients in the US and 1.0m patients in the EU represent the target population of RORγt. We assume RORγt could be used in 10% of eligible US patients at its peak and pricing of $20,000 a year (a small discount to the $22,500 a year Otezla pricing). In Europe we assume a 5% peak penetration rate and pricing of $15,000 per annum.

Transitioning to the clinic

While the development of Nuevolution's lead candidate, the RORγt inverse agonist, will transfer completely to Almirall (potential IND filing in H217), we expect Nuevolution to continue to progress the rest of its pipeline (particularly BRD BD1, Cytokine X and the RORγt agonist).

BETting on bromodomain inhibitors

Nuevolution's second most advanced programme is an inhibitor of BET bromodomain 1 (BRD BD1); it recently demonstrated positive preliminary toxicology and efficacy data in an animal mouse model for systemic lupus erythematosus (SLE), such that a second preclinical mouse model in human lupus has been initiated and data is expected mid-2017. Nuevolution has identified protein targets in the treatment of inflammation, and is aiming to create best in class drugs in these blockbuster indications, where efficacy, safety and ease of use will be critical to obtaining significant market share.

BET bromodomain is an extremely novel target for oncology and immunology; no drugs of this class have been approved in this setting to date. These inhibitors exert their effect by displacing BET bromodomain proteins (eg BRD4) from chromatin by competing with their acetyl-lysine recognition modules, resulting in the inhibition of oncogenic transcriptional programmes. Nuevolution's most advanced candidate is currently in the lead optimisation stage; the company is currently exploring the use of such compounds in multiple disease settings, including SLE and idiopathic pulmonary fibrosis; data from the latter is expected in Q417.

Cytokine: The X factor?

Drugs that avert inflammation by targeting the cytokine environment in the auto-immune family of diseases are well documented; approved drug classes include anti-TNF (tumour necrosis factor) alpha and interleukin receptor pathways. Given that multiple TNF alpha specific antibodies (J&J's Infliximab, AbbVie's Adalimumab, J&J's Golimumab, Amgen's Etanercept) are competing in the rheumatoid arthritis (RA), psoriatic arthritis, psoriasis and inflammatory bowel disease space, we postulate that 'Cytokine X' is likely a small molecule interleukin antagonist. The exact nature of the programme has not yet been declared for competitive reasons.

Sensitivities

Nuevolution is subject to drug development risks, including clinical development delays or failures; however, its large number (15+) of compounds in parallel development helps to reduce the risk typically associated with pure play biotech. Additional sensitivities exist around IP protection, regulatory risks, competitor successes, partnering setbacks, and financing and commercial risks. While Nuevolution's strategy minimises the business risk associated with drug development by partnering early on in development, general risk still remains in the partner's willingness to progress these partnerships. One of the key sensitivities for Nuevolution relates to the successful transition of molecules discovered by its Chemetics programme into clinical-stage development; this will enable further validation of its technological capabilities. While DNA-encoded library technologies such as Chemetics are gaining traction and are postulated to provide targets that can move swiftly in to the clinic, this is yet to be proven (industry wide) by an approved product reaching the market. Furthermore, the company's current drug development pipeline is focused on novel targets that have not yet been clinically validated, translating to additional risk.

Almirall will be solely responsible for further development of the RORγt inverse agonist for dermatology and PsA indications, such that Nuevolution will not be able to influence future development decisions in these indications. Additionally there is risk that the strategic drug delivery collaboration with Amgen fails to materialise into asset progression and thus the milestone

payments that have been included in our near-term financial forecasts would be at risk. For the earlier-stage pipeline, both pre-clinical development and partnering risks remain. We expect Nuevolution to develop its pipeline of assets in the discovery stage to the preclinical stage before partnering. However, we have limited visibility beyond that on the terms and timing of any potential deals.

Financing needs depend on milestone revenues from existing partners, potential new partnering activities, the scale of preclinical research and the potential start of clinical trials for one or two compounds. Critically, our model assumes that under the Amgen deal three assets move into preclinical development, precipitating an estimated ~SEK109.0m ($12.3m) in milestones per annum in 2018, 2019 and 2021; delay or failure to do so implies a funding gap during FY19.The shares trade on NASDAQ North, and are tightly held; as such liquidity can be an issue.

Valuation

Our valuation of SEK901m ($102m) including net cash of SEK229m ($26m) is based on a risk-adjusted model of the Almirall (SEK8.8/share) and Amgen (SEK6.9/share) deals alone, using a 12.5% discount rate (Exhibit 7) and excludes the valuation of the technology, other pipeline assets, and future deal opportunities. While we recognise the value in other deals including the Janssen collaboration, we do not currently ascribe value to these due to the lack of visibility on milestone payment and structure. Specifically for the Amgen deal, our valuation is based purely on potential development milestones, with no value included from product launches. For Almirall, the majority of the value lies in milestone payments (62%), given the long time frame to potential launch of the product, with a smaller contribution from royalties on sales (38%). We have not ascribed value at this point to the unique platform and multiple candidates at an early stage in preclinical development; consequently, we see uplift potential as further deals are made and/or assets move into clinical development.

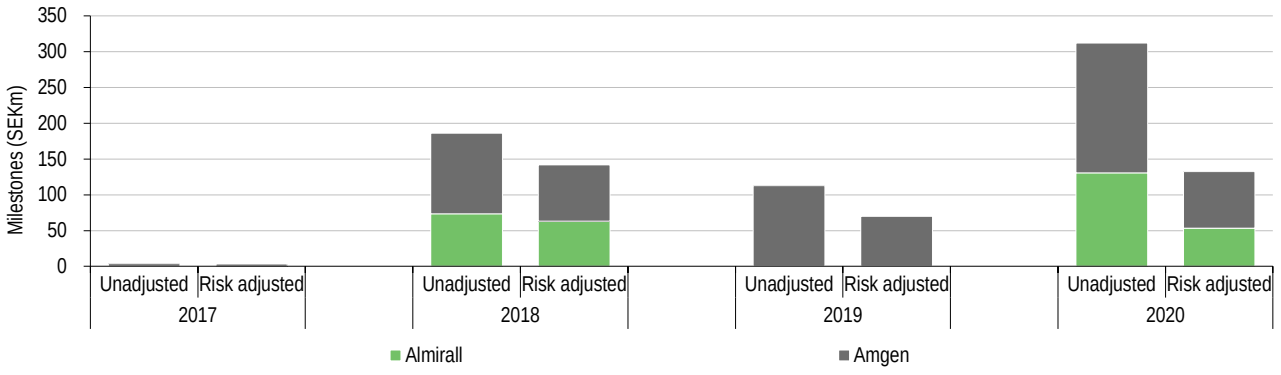
Exhibit 7: Sum of the parts NPV

Product	Partner	Indication	Phase	NPV of milestone payments (SEKm)	rNPV of milestone payments (SEKm)	NPV of royalties on sales (SEKm)	rNPV of royalties on sales (SEKm)	Total rNPV (SEKm)	Total rNPV/share (SEK)
RORyt inhibitor	Almirall	Psoriasis and PsA	Preclinical	1,005.6	233.3	1,417.7	141.8	375.0	8.8
Various	Amgen	Oncology & neuroscience	Drug discovery	641.5	296.8	0.0	0.0	296.8	6.9
Net cash (at 31 Dec 2016) including Almirall upfront								229.1	5.3
Valuation								900.9	21.0

Source: Edison Investment Research

Exhibit 8 displays our milestone expectations (on a risk-adjusted and non-risk adjusted basis) for both deals through to 2020.

Exhibit 8: Potential milestone revenue from Almirall and Amgen until 2020



Source: Edison Investment Research

Assumptions for the Almirall (RORyt inverse agonist programme)

We include $1.9bn indicative peak sales (2031), launch in 2027, an 8% royalty rate on sales and a 10% probability of achieving NDA and approval milestones. Our deal milestone estimates are $8m on start of Phase I in 2017; $15m on start of Phase II in 2019; $37m on start Phase III in 2022; $55m on NDA filing; and $70m on approval in 2027.

Assumptions for Amgen

Given the unknowns in the Amgen deal, in terms of timing, number of targets and specific therapeutic indications, we have made some general assumptions in our valuation, contributing SEK6.9 a share. We assume three assets move into preclinical development per annum in 2018, 2019 and 2021, precipitating an estimated ~SEK109.0m ($12.3m) in milestones each year as a result of Amgen exercising its option to take forward the individual assets. We assume that no products make it to the market; we believe this is realistic considering industry drug approval rates. However, we note that the majority of current value rests in near-term clinical achievements than would arise from any distant potential sales milestones. We assume that one product candidate makes it to a Phase III trial (20% probability), while the other two reach Phase II (30% probability) and Phase I (40% probability) trials. Revenue is inherently difficult to predict but we assume that milestones are activated upon classical development and business achievements (eg initiation of Phase I, II, III trials, NDA submission, launch, sales).

We highlight this is simply a theoretical scenario and the risk remains that zero programmes are progressed or even launched. Equally, as the Amgen deal is per target, additional candidates (above the three we have assumed) that progress into preclinical development could be a major value driver. Note that we only include milestone payments on our Amgen deal assumptions; we do not ascribe value to royalties on sales at this point as we do not know the potential indications.

Financials

Net cash at the half year results as of 31 December 2016 (accounting year end 30 June) was SEK142.9m ($16.1m); this includes the net proceeds of SEK230.1m ($25.5m) from the IPO financing round in December 2015 but excludes the upfront milestone payment (net of withholding tax) of SEK86.5m ($9.1m) from Almirall in January 2017. Net cash including the Almirall upfront is c SEK229m. Our model suggests this is sufficient to fund operations into FY19, assuming current burn rates. After that, financing needs will depend on the exact status of the internal pipeline; progressing one or more candidates into the clinical stage could require additional funding. The cash runway to FY2019 is not dependent on our expected milestone payments in the period.

We forecast that through the ongoing collaborations with Amgen and Almirall, revenues should benefit from milestone payments and we forecast total revenues of SEK139.4m in FY17 (versus SEK21.3m reported in FY16) and SEK186.0m in FY18. We forecast R&D expenditure of SEK101.8m in FY17 (SEK115.7m FY16) and SEK106.9m in FY18. We expect costs to increase modestly from FY17 to FY18 as we expect one programme to enter the preclinical stage and discovery work to ramp up.

G&A spend increased in FY15, reflecting costs incurred following the IPO; we assume a gradual increase in the coming years from the 2014 base. The Almirall upfront milestone will contribute to profitability in 2017 (SEK1.5m net income FY17e); we forecast net income of SEK36.7m in FY18, which is entirely dependent on milestones from Amgen, which may not come to fruition.

Exhibit 9: Financial summary

Accounts: IFRS, Year-end: 30 June, SEK000s	2016	2017e	2018e	2019e
Income statement				
Total revenues	21,314	139,395	185,987	140,763
Reported gross profit	21,314	139,395	185,987	140,763
SG&A (expenses)	(57,493)	(24,261)	(24,504)	(24,749)
R&D costs	(115,707)	(101,822)	(106,913)	(112,259)
Other (includes exceptionals)	0	0	0	0
Adjusted EBIT	(151,886)	13,311	54,570	3,755
Reported EBIT	(151,886)	13,311	54,570	3,755
Finance income/ (expense)	(22)	1,824	1,827	2,326
Other income (expense) (includes exceptionals)	0	0	0	0
Adjusted PBT	(151,908)	15,136	56,397	6,081
Reported PBT	(151,908)	15,136	56,397	6,081
Income tax expense	6,911	(13,622)	(19,739)	(2,128)
Adjusted net income	(144,997)	1,514	36,658	3,953
Reported net income	(144,997)	1,514	36,658	3,953
Earnings per share				
Basic EPS (SEK)	(4.0)	0.0	0.9	0.1
Diluted EPS (SEK)	0.0	0.0	0.0	0.0
Adjusted basic EPS (SEK)	(4.0)	0.0	0.9	0.1
Adjusted diluted EPS (SEK)	0.0	0.0	0.0	0.0
Average number of shares - basic	36.5	42.9	42.9	42.9
Balance sheet	2016	2017	2018	2019
Property, plant and equipment	5,494	5,719	5,933	6,137
Goodwill	0	0	0	0
Intangible assets	0	0	0	0
Other non-current assets	8,585	8,585	1,618	1,618
Total non-current assets	14,079	14,304	7,551	7,755
Cash and equivalents	205,955	206,242	256,097	258,846
Inventories	0	0	0	0
Trade and other receivables	367	367	367	367
Other current assets	14,564	14,564	7,121	7,121
Assets classified for sale	0	0	0	0
Total current assets	220,886	221,173	263,585	266,334
Non-current loans and borrowings	3,482	3,482	3,482	3,482
Trade and other payables	0	0	0	0
Other non-current liabilities	0	0	0	0
Total non-current liabilities	3,482	3,482	3,482	3,482
Trade and other payables	12,162	12,162	12,162	12,162
Current loans and borrowings	1,222	1,222	1,222	1,222
Other current liabilities	20,044	19,044	18,044	17,044
Liabilities of assets held for sale	0	0	0	0
Total current liabilities	33,428	32,428	31,428	30,428
Equity attributable to company	198,055	199,568	236,226	240,179
Non-controlling interest	0	0	0	0
Cash flow statement				
Profit before tax	(151,908)	15,136	56,397	6,081
Depreciation of tangible assets	1,328	275	286	297
Share based payments	48,528	0	0	0
Other adjustments	22	(1,824)	(1,827)	(2,326)
Movements in working capital	19,593	0	0	0
Net cash from operating activities (pre-tax)	(82,437)	13,586	54,856	4,052
Interest paid / received	(224)	1,824	1,827	2,326
Income taxes paid	1,210	(13,622)	(5,329)	(2,128)
Cash from operations (CFO)	(81,451)	1,788	51,354	4,249
Capex (includes acquisitions)	(504)	(500)	(500)	(500)
Other investing activities	(51)	0	0	0
Cash used in investing activities (CFIA)	(555)	(500)	(500)	(500)
Net proceeds from issue of shares	242,061	0	0	0
Movements in debt	0	0	0	0
Other financing activities	(1,119)	(1,000)	(1,000)	(1,000)
Cash from financing activities (CFF)	240,942	(1,000)	(1,000)	(1,000)
Currency translation differences and other	0	0	0	0
Increase/(decrease) in cash and equivalents	158,936	288	49,854	2,749
Cash and equivalents at end of period	205,954	206,242	256,097	258,846

Source: Edison Investment Research, Nuevolution accounts

Contact details	Revenue by geography
Nuevolution Ronnegade 8 2100 Copenhagen Denmark +45 7020 0987 www.nuevolution.com	N/A

Management team

Chief Executive Officer: Alex Haahr Gouliaev	Chief Financial Officer: Henrik Damkjaer Simonsen
Alex Haahr Gouliaev holds an MSc and PhD in chemistry from Aarhus University, Denmark. He is a co-founder of Nuevolution and has served as executive vice president, chemistry and drug discovery from 2001 until he was appointed CEO in September 2005. Prior to co-founding Nuevolution, he was director of medicinal chemistry, member of the management group, and a member of the board of directors at NeuroSearch A/S, where he worked for six years.	Henrik Simonsen joined Nuevolution in August 2015. He has extensive experience as an analyst of pharmaceutical and biotech companies. His most recent position was at SEB, where he was director, responsible for life science, in SEB Corporate Finance. Prior to that, he was senior analyst at SEB Equities (2004-11). From 1990-2004, he was an equity analyst and senior equity analyst at Nordea Securities.
Chief Scientific Officer: Thomas Franch	**Chief Business Officer: Ton Berkien**
Thomas Franch holds an MSc and PhD in molecular biology from Odense University. Thomas joined Nuevolution in 2001, and has been a key scientist for the development and patent protection of the Chemetics technology. From 2006, he served both as chief technology officer and director of biology, leading the company's biology function and technological efforts including process optimisation. Thomas was appointed chief scientific officer in 2012. Prior to joining Nuevolution, Thomas was the CEO of RNA Tech Aps.	Ton Berkien joined the company in 2014. His most recent position was at Takeda/Nycomed, where he was acting head of corporate development/M&A, responsible for several M&A transactions. Prior to Takeda, he held a similar position at Nycomed Pharmaceuticals. During 2003-07, Ton was director of competitive intelligence at Ferring Pharmaceuticals.

Principal shareholders	(%)
SEB Venture Capital	23.5
Sunstone Capital	20.8
Industrifonden	20.0
SEB Utvecklingsstiftelse	7.8
LMK Forward	3.1

Companies named in this report

Amgen, Almirall, GlaxoSmithKline, Novartis, Janssen, Celgene, AbbVie, DiCE Molecules, Ensemble Therapeutics, HitGen.

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