



A woman with long brown hair is smiling and holding a brown and white speckled dog in a grassy field. The woman is wearing a striped shirt and has a tattoo on her arm. The dog is looking towards the camera. The background is a blurred green field with trees.

Wellness of your Companion animal

Metabolic disease breakthrough



I What we are doing



II How miRNA works



III What makes us develop new drugs?



IV What we have done until now for the drug development?

1. Diabetes mice Data (Rosvivo, USA)
2. Obesity mice Data (Rosvivo, USA)
3. Diabetes rat Data (RXBIO, S.Korea)
4. Obesity feline Data (RXBIO, S.Korea)



V Drug Development Roadmap



VI Who help us?



VII Related Articles



VIII Organization Chart

I. What we are doing?

Mission

Development and manufacturing of diabetes and obesity treatments for companion animals using miRNA technology

Details

| | |
|--------------------|--|
| Corporate name | RXBIO, Inc. |
| CEO | Myung-Suk Song |
| Establishment date | October 25 th , 2022 |
| Business domain | Veterinary drug development |
| Location | 3F, 8-6, Hwangsaeul-ro 319 Beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea |



FOUNDER, CEO
Myungsuk Song

✓ Education Background

- 1997: MS, Administration, Yonsei University, S. Korea
- 1988: BS, Political Diplomacy, Yonsei University, S. Korea

✓ Career

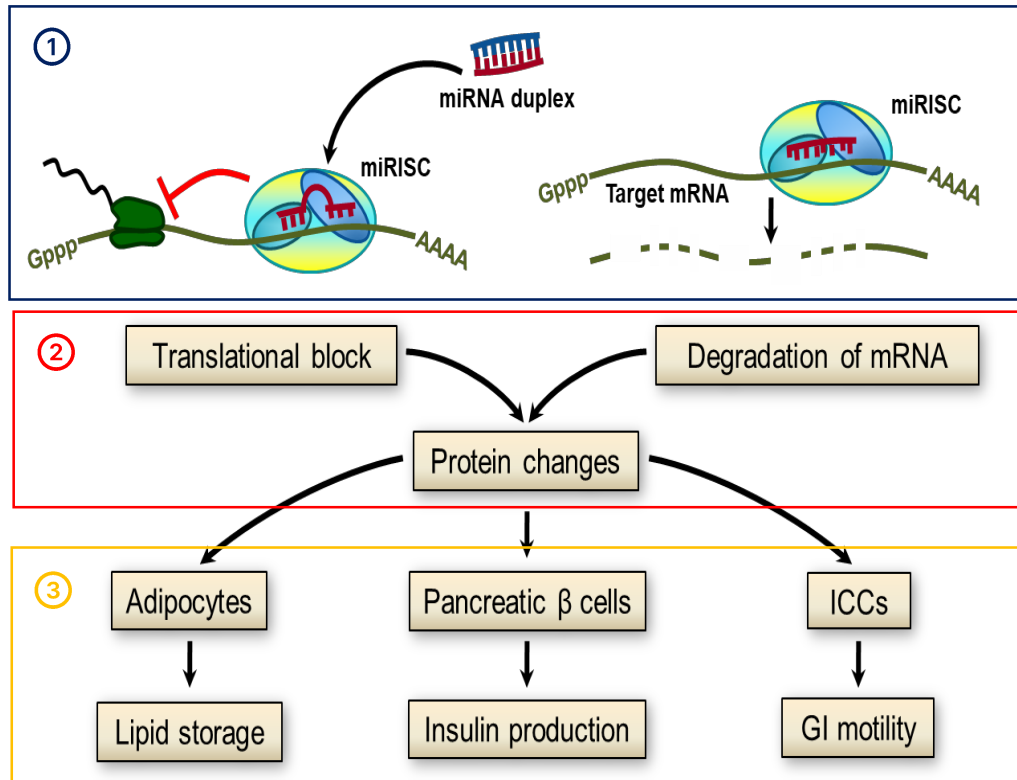
- 96. 07 ~ 16. 11: KEB Hana Bank
- 16. 12 ~ 20. 03: SillaJen (Vice president)
- 21. 03 ~ 22. 12: Nexturnbio (CEO)
- 21. 06 ~ Present: Rosvivo (BOD Member)
- 22. 11 ~ Present: RXBIO (CEO)

✓ Remark

- 21. 05: Nexturnbio acquires 50% stake in Rosvivo

II. How miRNA works?

- ✓ **Identify anti-diabetic miRNAs (miRNA-10a/b)** that act on pancreatic cells, adipocytes, and gastrointestinal cells to treat type 2 diabetes, obesity and gastroine disorders



- ① Decomposes miRNA
(By combining with messenger RNA that makes proteins)
- ② Regulates the expression process
(By selectively blocking the expression of specific gene proteins)
- ③ Accumulation of fat in fat cells
Regulation of insulin synthesis in pancreatic cells
Motility in the digestive tract

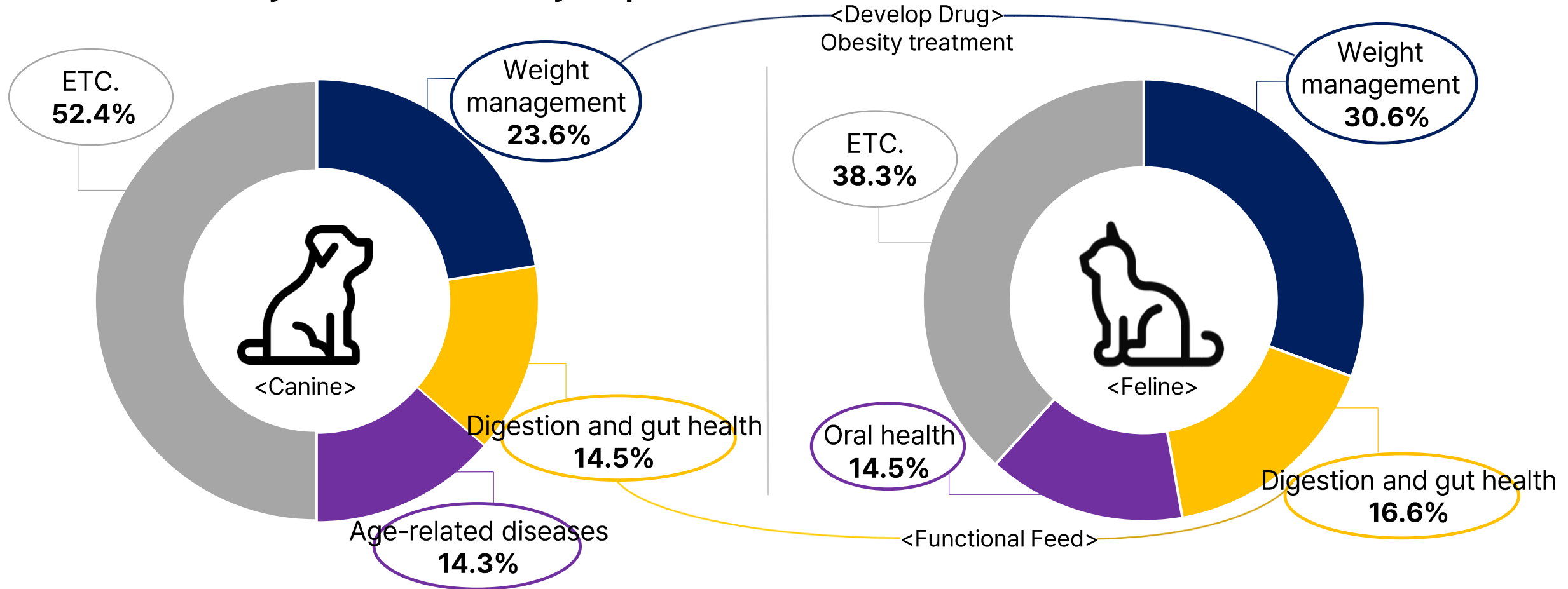


<miRNA-10a, b>

Block protein synthesis of transcriptional regulators
(Regulate the above mechanisms)
⇒ **Restoration of cell function**

III. What makes us develop new drug?

<What concerns you the most about your pet's health?>



Survey on current status of pets and health-related perceptions(2019)

IV. What we have done until now for the drug development?

[Rosvivo, USA]

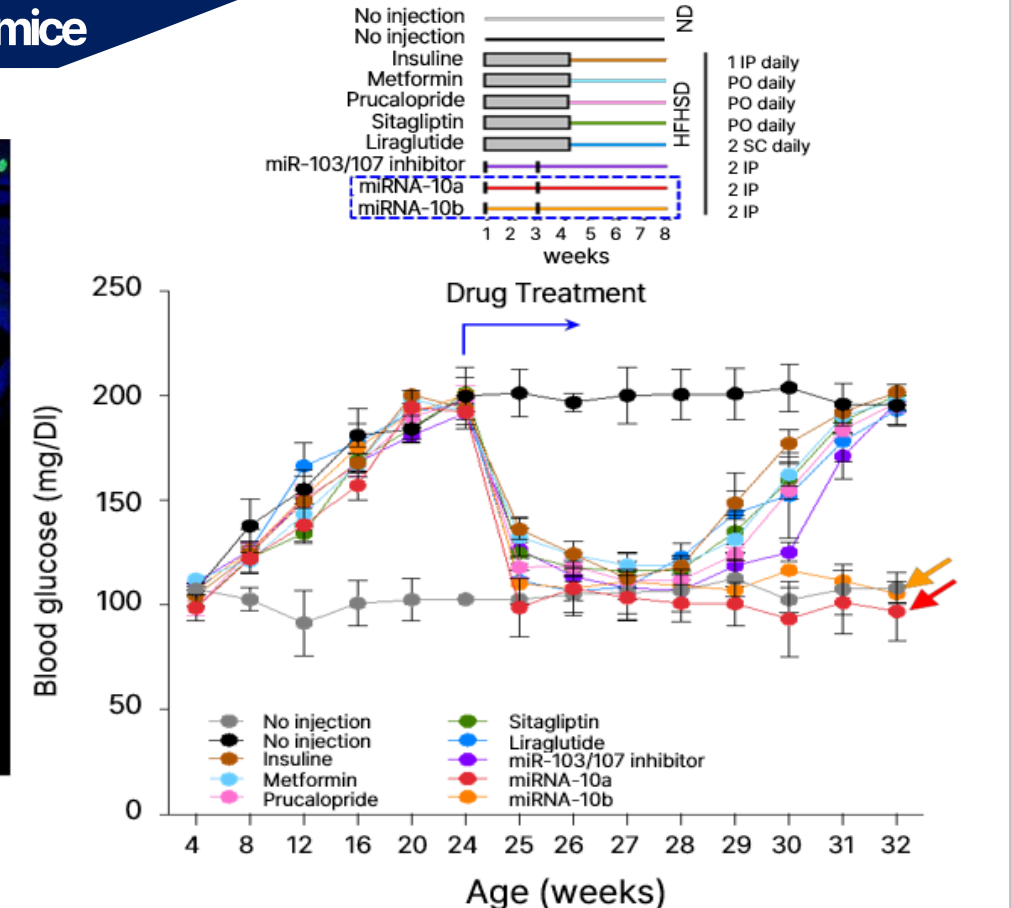
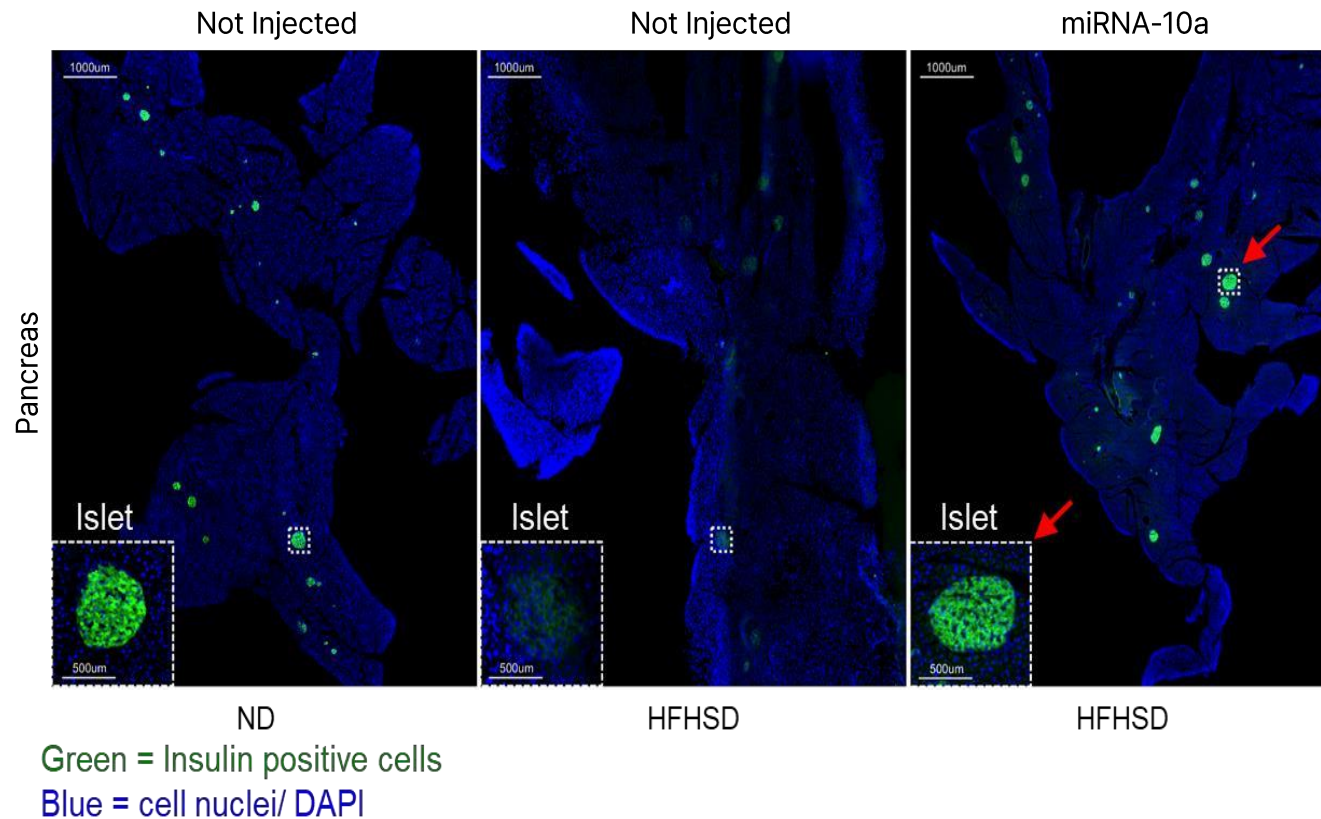
1. Diabetes mice Data
2. Obesity mice Data

[RXBIO, S.Korea]

3. Diabetes rat Data
4. Obesity feline Data

IV-1. Diabetes mice data

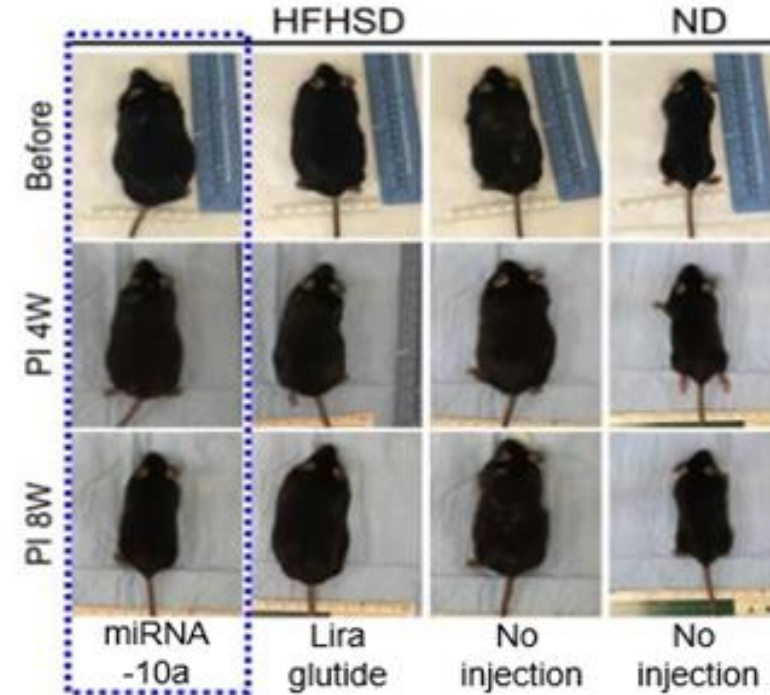
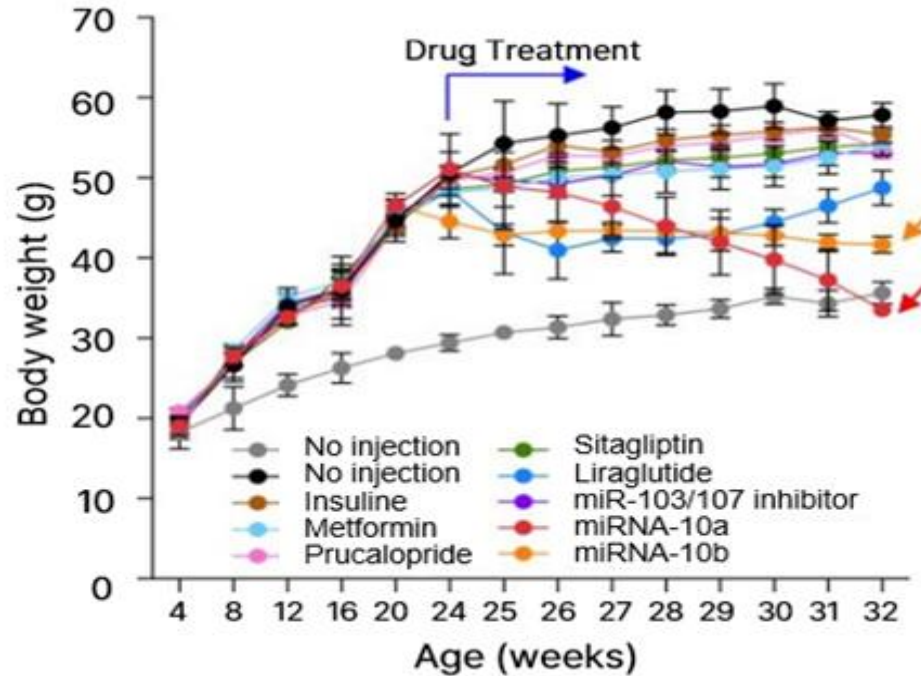
Effect of miRNA-10a on pancreatic β -cell insulin production of diabetic mice



- Regeneration of β -cells (green fluorescent regions) and increased insulin production observed in mice with high-fat-high-sugar diet (HFHSD) induced diabetes after miRNA-10a injection

IV-2. Obesity mice data

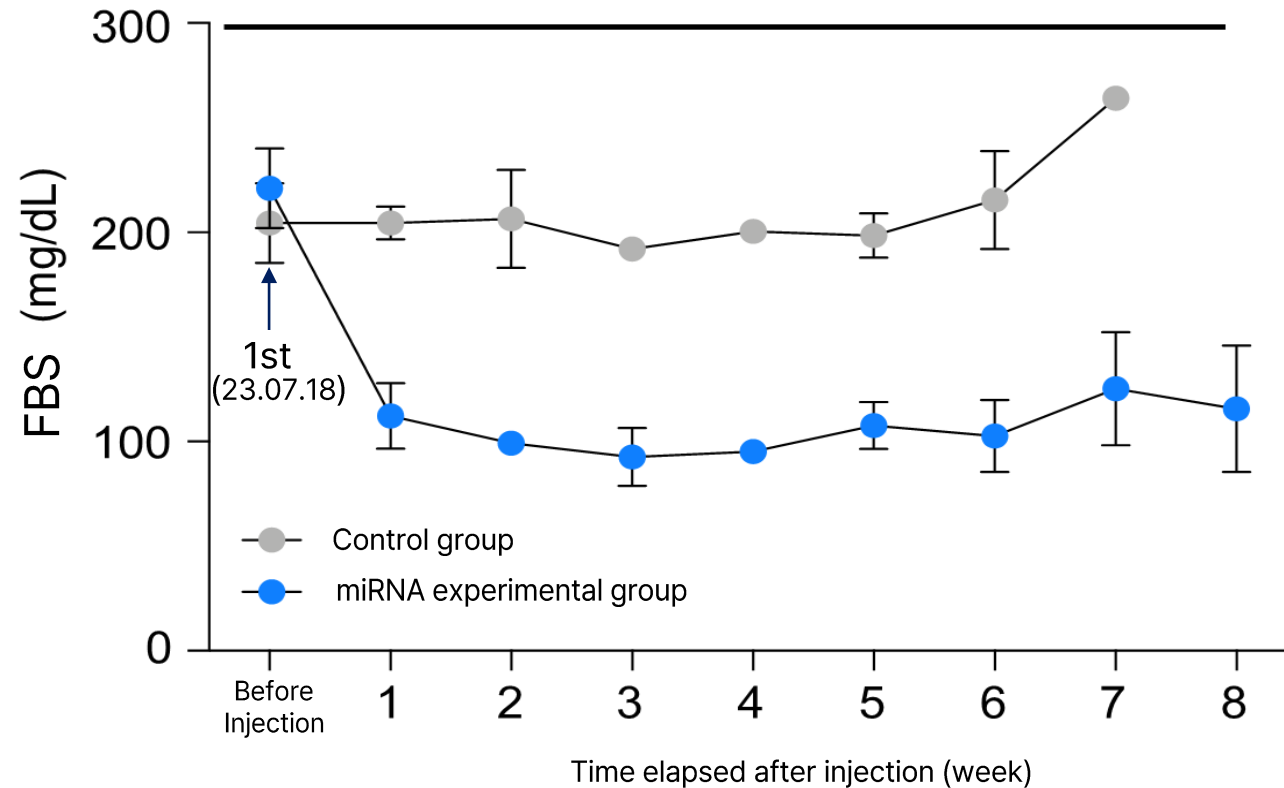
Comparison of body weight changes



| | miRNA (RosVivo 社) | Saxenda (Novo Nordisk 社) | Wegovy (Novo Nordisk 社) | Mounjaro (Lilly 社) |
|--------------------------|----------------------|-----------------------------|----------------------------|----------------------------|
| Main component | miRNA-10a | Liraglutide | Semaglutide | Tirzepatide |
| Administration frequency | Once (3 months) | Once every day (56 weeks) | Once every week (68 weeks) | Once every week (2 weeks) |
| Weight loss | ≤40% | Average 8% | Average 15% | Average 22.5% |

IV-3. Diabetes rat data

Institution: CORESTEMCHEMON (CRO)

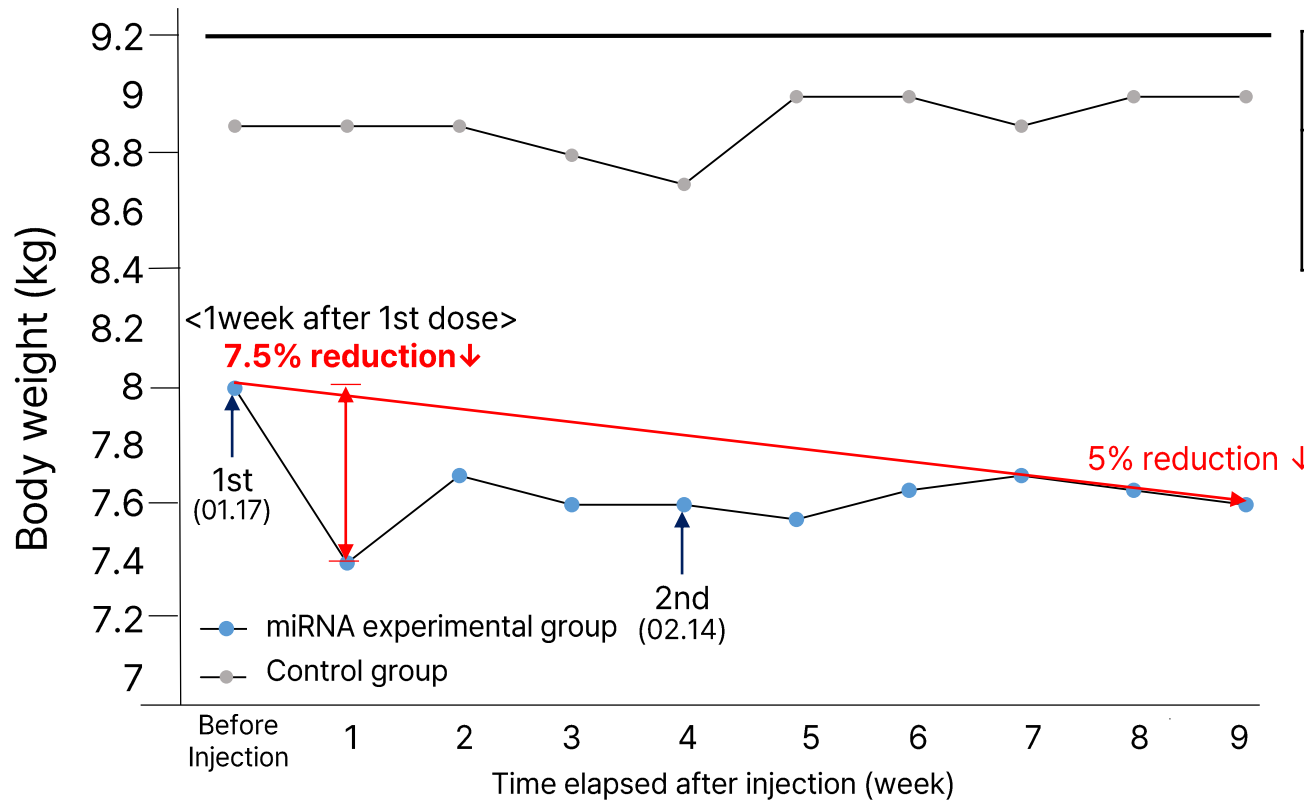


| Species | Injection period | Route of injection | Period (week) |
|---------|------------------|--------------------|---------------|
| RAT | 1time/8weeks | IV | 8 |

- Total 5 (Control group: 2, miRNA experimental group: 3)
- Experiment period: 2023. 07. 18 ~ 2023. 09. 19
- Experiment subject:
 - RAT with blood glucose level over 200 mg/dL after STZ induction
- Dosage administered: 250µg/kg
- Maintain blood glucose at an average of about 110mg/dL for 2months(8weeks) after one administration of miRNA

IV-4. Obesity feline data

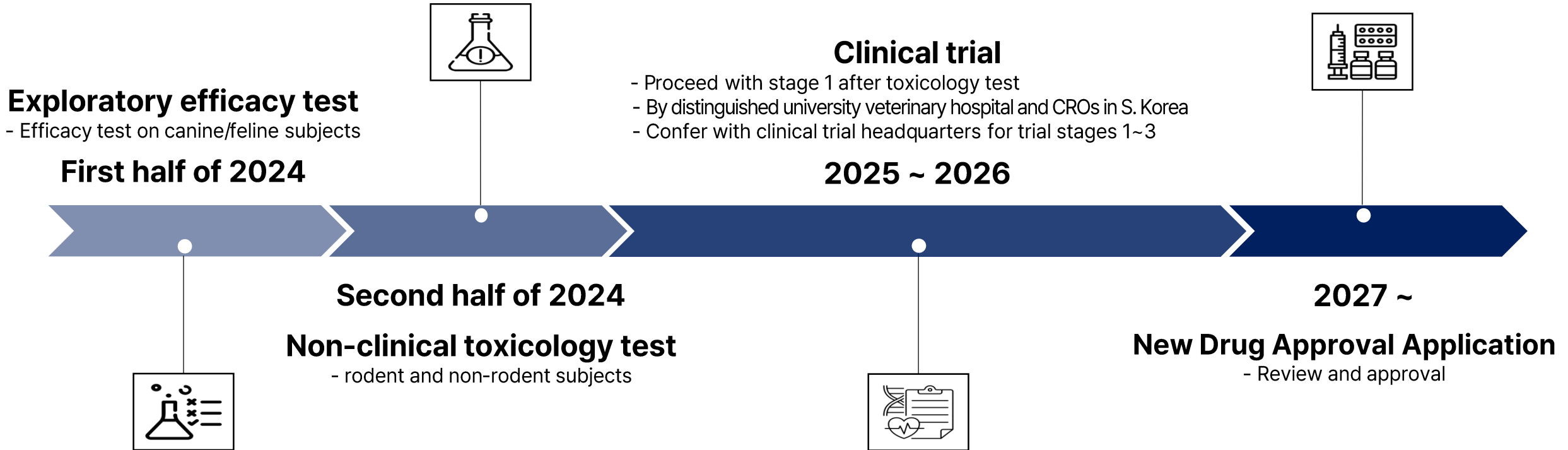
Institution: Huvet (CRO)



| Species | Injection period | Route of injection | Period (week) |
|---------|----------------------|--------------------|---------------|
| Cat | 1time/4week 9week | IP | 9 |

- Total 2 (Control group: 2, miRNA experimental group: 3)
- Experiment period: 2024. 01. 17 ~ 2024. 03. 20
- Experiment subject: Obese cats with BCS 9 or higher
- Dosage administered : 1st dose(2.5mg/8kg), 2nd dose(2.5mg/7.6kg)
- 1week after 1st dose: 7.5% reduction (8kg→7.4kg)
- Total reduction of 5% at the end of the experiment (8kg→7.6kg)

V. Drug Development Roadmap



VI. Who helps us?

<Scientific Advisory Board of Rosvivo>



Takara Leah Stanley, MD

- BA, Social Studies, Harvard University, Cambridge, MA
- MD, Medicine, Harvard Medical School, Boston, MA
- PhD Candidate, Epidemiology, Boston University School of Public Health
- Associate Professor of Pediatrics, Harvard Medical School
- Associate Pediatrician, Massachusetts General Hospital & Program Director, Pediatric Endocrine Fellowship Program



Linda Nguyen, MD

- BS, Biomedical Science, University of California Riverside
- MD, University of California, Los Angeles School of Medicine
- Director, GI Motility and Neurogastroenterology, Stanford Gastroenterology and Digestive Health Clinic
- Clinic Chief, Digestive Health Center
- Clinical Professor, Gastroenterology & Hepatology, Stanford Gastroenterology and Digestive Health Clinic



Arthur Beyder, MD

- BS, Mathematics & Biophysics, University at Buffalo
- MD & PhD, School of Medicine and Biomedical Sciences, University at Buffalo
- Residency, Internal Medicine, Mayo School of Graduate Medical Education
- Fellowship, Gastroenterology, Mayo School of Graduate Medical Education



Fadi Hendee, MD

- BS, University of Baghdad College of Medicine
- MD, Indiana University School of Medicine
- Associate Professor, University of Nevada, Reno School of Medicine
- Clinical Professor, Endocrinology, Kaiser Permanente South Bay Medical Center



Kenton M. Sanders, PhD

- BS, Chemistry, University of California, Santa Cruz
- PhD, Physiology, University of California, Los Angeles
- Professor, Physiology & Cell Biology, University of Nevada School of Medicine
- Chair, Physiology & Cell Biology, University of Nevada School of Medicine



VII. Related Articles

기업

알엑스바이오, 개 당뇨 치료제 개발을 위한 예비효능평가 연구 계약 체결

전욱 기자 economy03@mk.co.kr

입력 : 2023-03-27 12:30:00

가 ㉸ ㉸ ㉸



이투데이 > 기업 > 중기벤처

알엑스바이오, 휴벳과 고양이 당뇨·비만 치료제 예비효능평가 위한 연구계약 체결

입력 2023-03-24 15:14



가 ㉸ ㉸ ㉸ ㉸ ㉸

기업

반려동물 '위고비' 등장할까...개 비만·당뇨 치료제 국내 실험서 첫 효과

명순영 기자 msy@mk.co.kr

입력 : 2023-09-25 09:30:00

가 ㉸ ㉸ ㉸

알엑스바이오, 쥐 실험에서 당뇨병 치료 효과 입증
 향후 비글견을 대상으로 예비 효능 테스트
 송명석 대표 "부작용 적고 투약 편의성 충분"
 제약·바이오사 반려동물 의약품 시장 잇따른 출사표

매일경제 뉴스

기업

알엑스바이오·프록시헬스케어·대한수의사회, 반려동물 건강 증진 MOU 체결



VIP Q

머니투데이

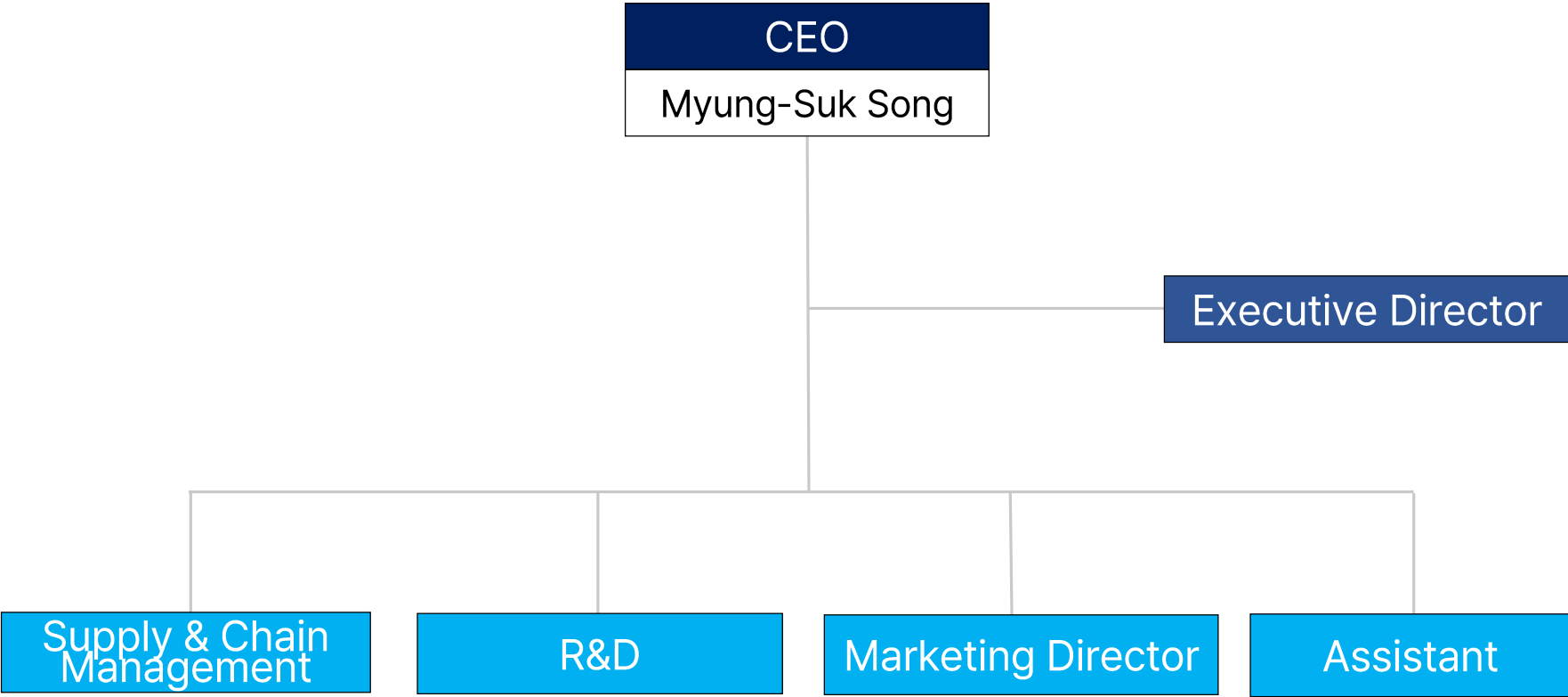
로그인

뉴스 증권 정치 법률 유니콘팩토리 헬스바이오 칼럼 연예 이슈 MT리포트 속보 일진일보 아시아 중시... 뉴욕 휴강으로

반려동물산업 육성 '민관합동협의회' 출범...매달 펫기업R 개최



VIII. Organization Chart



THANK YOU

